

IBM SPSS Decision Management 6.2 Application Designer's Guide



Note: Before using this information and the product it supports, read the general information under Notices on p. 466.

This edition applies to IBM SPSS Decision Management 6 and to all subsequent releases and modifications until otherwise indicated in new editions.

Adobe product screenshot(s) reprinted with permission from Adobe Systems Incorporated.

Microsoft product screenshot(s) reprinted with permission from Microsoft Corporation.

Licensed Materials - Property of IBM

© Copyright IBM Corporation 2010, 2011.

U.S. Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Preface

About IBM Business Analytics

IBM Business Analytics software delivers complete, consistent and accurate information that decision-makers trust to improve business performance. A comprehensive portfolio of [business intelligence](#), [predictive analytics](#), [financial performance and strategy management](#), and [analytic applications](#) provides clear, immediate and actionable insights into current performance and the ability to predict future outcomes. Combined with rich industry solutions, proven practices and professional services, organizations of every size can drive the highest productivity, confidently automate decisions and deliver better results.

As part of this portfolio, IBM SPSS Predictive Analytics software helps organizations predict future events and proactively act upon that insight to drive better business outcomes. Commercial, government and academic customers worldwide rely on IBM SPSS technology as a competitive advantage in attracting, retaining and growing customers, while reducing fraud and mitigating risk. By incorporating IBM SPSS software into their daily operations, organizations become predictive enterprises – able to direct and automate decisions to meet business goals and achieve measurable competitive advantage. For further information or to reach a representative visit <http://www.ibm.com/spss>.

Technical support

Technical support is available to maintenance customers. Customers may contact Technical Support for assistance in using IBM Corp. products or for installation help for one of the supported hardware environments. To reach Technical Support, see the IBM Corp. web site at <http://www.ibm.com/support>. Be prepared to identify yourself, your organization, and your support agreement when requesting assistance.

Contents

| | | |
|----------|---|-----------|
| 1 | <i>Designing and configuring applications</i> | 1 |
| | About IBM SPSS Decision Management | 2 |
| | Available documentation | 2 |
| 2 | <i>Configuring the application template</i> | 3 |
| | Configuring applications | 3 |
| | XML templates | 3 |
| | Creating an application | 4 |
| | Configuring the user-interface | 7 |
| | Defining dimensions | 9 |
| | Configuring the optimization equation | 10 |
| | Configuring scoring output for deployment | 16 |
| | Returning the allocations for each dimension | 17 |
| | Outputs from models and rules | 18 |
| | Outputs from prioritization | 22 |
| | Input fields, annotations, and “Return with” fields | 22 |
| | Example: IBM SPSS Decision Management for Customer Interactions output configuration .. | 23 |
| | Example: IBM SPSS Decision Management for Claims output configuration | 24 |
| | Prompting the user for scoring parameters | 27 |
| | Application template examples | 27 |
| | IBM SPSS Modeler Advantage Template | 27 |
| | IBM SPSS Rules Management template | 30 |
| | IBM SPSS Decision Management for Customer Interactions template | 31 |
| | IBM SPSS Decision Management for Claims template | 37 |
| 3 | <i>Customizing the user interface</i> | 40 |
| | File locations | 40 |
| | User interface text | 42 |
| | Language support | 42 |
| | Coach text | 43 |
| | Message text | 45 |
| | Screen text | 46 |
| | Terminology | 47 |

| | |
|--|----------------|
| Look and feel | 48 |
| Customizing style sheets and graphics. | 50 |
| Examples. | 51 |
| 4 Scoring Service configuration | 54 |
| IBM SPSS Decision Management and the Scoring Service. | 54 |
| 5 Using rules from ILOG Business Rule Management System | 60 |
| Downloading project metadata | 60 |
| Creating external rule references | 61 |
| Using external rules in applications | 62 |
| Appendices | |
| A XML Schema | 63 |
| Element Reference | 63 |
| Attribute Element. | 63 |
| child Element. | 65 |
| DataSet Element | 65 |
| Expression Element | 73 |
| Member Element | 74 |
| PredictiveApplication Element. | 77 |
| Rule Element | 258 |
| Value Element | 272 |
| Extended Types | 273 |
| B Notices | 466 |
| Index | 468 |

Designing and configuring applications

IBM® SPSS® Decision Management provides a framework for building configurable, content-driven applications that automate and prioritize decisions using models and rules, and integrate with existing IT infrastructures to deploy results in real time.

The capabilities available in each application, and the basic look and feel, are determined by the application designer who configures the application template XML file and other associated files.

This guide describes the steps for configuring and customizing an application template to meet specific requirements as defined by the business user. A basic understanding of SPSS Decision Management applications is assumed before configuring your own. For more information, click the Help link in each application, or see the application guides which can be found in the IBM® SPSS® Collaboration and Deployment Services installation directory after installation (for example, *C:\Program Files\IBM\SPSS\Collaboration and Deployment Services\4.2\help\en\DecisionManagement*).

The Application Designer:

- Determines which capabilities are available to solve the business problem, such as the ability to build and score predictive models, the ability to define business rules, and the ability to combine rules and models in an end-to-end predictive application. These capabilities are configured in the application template XML.
- Defines and customizes the user interface text, style sheets, and graphics that determine the look and feel of the application.
- Specifies the dimensions that define the business problem. These dimensions provide the context in which rules and models are applied. Dimensions are configured in the application template XML. Some applications, such as a IBM® SPSS® Rules Management or IBM® SPSS® Modeler Advantage, may not use dimensions.

The Application Administrator:

- Configures data and other settings for the application. For details, see the *Administering Applications* chapter of each application guide.

The Business User or Analyst:

- Builds predictive models to gain insight into your company's business problems by discovering patterns in your data.
- Defines the range of possible solutions to the business problem (such as campaigns and offers available) and specifies how records are selected and allocated for each using business rules.

- Experiments with different combinations (performs “what if” analysis) to identify the best solution.
- Deploys the application and monitors the results.

About IBM SPSS Decision Management

IBM® SPSS® Decision Management brings the benefit of predictive analytics to real business problems, allowing you to build custom applications tailored to your customers or industry. While applications are typically configured to solve very specific problems, all are based on a common set of capabilities:

- Automate decisions using business rules.
- Add insight using predictive models.
- Use prioritization or simulation to reach the best decision based on the above.

A number of packaged applications are available, tailored to solving specific business problems. Please contact your sales representative for more information.

Available documentation

Documentation is included on the DVD for each product or application, or provided in a separate download file for each language and application (for example, *SPSS_Decision_Mgmt_61_doc_en.zip*). Documentation is also available in the IBM® SPSS® Collaboration and Deployment Services installation directory after installation (for example, *C:\Program Files\IBM\SPSS\Collaboration and Deployment Services\4.2\help\en\DecisionManagement*).

Configuring the application template

Configuring applications

All IBM® SPSS® Decision Management applications are formed from a combination of seven possible basic steps, as shown in the following figure. Think of each step as a screen or tab in the user interface. Some simple applications might only include two or three steps, while others might include all seven.

Figure 2-1



Each application is defined by an XML template that defines the capabilities and dimensions available to the business user. Each template defines a different application, as presented to business users on the *Applications launch page*. Users can then launch these applications to create their own projects. For more information, see the application guides.

XML templates

An application template includes a single **PredictiveApplication** element, which specifies the name and version of the application template used, the name of the application to use in the user interface, and other attributes. The **PredictiveApplication** element can have the following child elements:

- **InterfaceControl element.** Specifies the items displayed in the user interface. This element is key to any application. For example, it includes the `InterfacePages` element that controls which tabs are included in an application's user interface.
- **EntityDimension element.** Specifies the entity dimension for the application (the dimension that defines the entity of interest). Typically this is the thing being managed or allocated, such as customers, products, shipments, or claims.
- **Dimension element.** Specifies the dimensions or factors that can be used in solving the business problem, such as campaigns, channels and offers. The dimensions define the possible decisions, recommendations, or actions that can be taken on each record or entity processed by the application.
- **Optimization element.** Specifies how optimization is performed, including the algorithm used and the objective function that determines what value is being optimized.
- **Deployment element.** Specifies options for deploying the application, such as the label used.

A number of additional elements are available, as defined in the XML schema. Many of these other elements are typically handled by the application UI, and are not included in the application template in most cases. [For more information, see the topic Element Reference in Appendix A on p. 63.](#)

Sample application template

```

<?xml version="1.0" encoding="UTF-8"?>
<PredictiveApplication xmlns="http://com.spss.pasw.dms/workspace" templateName="ClaimsManagement"
templateVersion="1" appsVersion="6.1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <InterfaceControl>
    <InterfacePages>
      <DataStep stepIncluded="true"/>
      <GlobalSelectionStep stepIncluded="true"/>
      <DefineStep stepIncluded="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="typeDecisionHierarchyDefineStep">
        <SelectionSection enabled="true" enableModels="true"/>
        <AggregateRuleSection enabled="true"/>
        <PredictiveModelSection enabled="true"/>
        <AllocationRuleSection enabled="false"/>
        <PlanningSection enableInteractionPoints="true" enableStartEndDates="true"/>
      </DefineStep>
      <CombineOptimizeStep stepIncluded="true" hasInteractionPointSection="true"
lockInteractionPointSection="false" enableSimulation="true" enableTest="true">
        <CombineOptimizeMethod/>
      </CombineOptimizeStep>
      <DeployScoreStep stepIncluded="true">
        <RealTimeScoring enableInteractiveQuestions="true"/>
      </DeployScoreStep>
      <ReportStep stepIncluded="true"/>
    </InterfacePages>
    <InterfaceFeature id="Collaboration"/>
    <InterfaceFeature id="UploadDownload"/>
  </InterfaceControl>
  <EntityDimension name="Claim"/>
  <Dimension name="Claim Area"></Dimension>
  <Dimension name="Action" parentDimension="Claim Area"></Dimension>
  <Optimization algorithm="None">
    <ObjectiveFunction/>
  </Optimization>
  <Deployment>
    <OutputAttribute referenceType="DimensionMember" name="Claim Area"
returnValue="Claim Area.Allocation-Value">Claim Area</OutputAttribute>
    <OutputAttribute referenceType="DimensionMember" name="Action"
returnValue="Action.Allocation-Value">Action</OutputAttribute>
  </Deployment>
</PredictiveApplication>

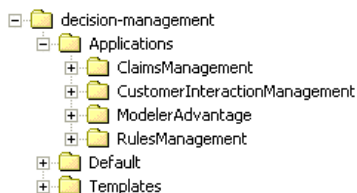
```

Creating an application

The process for creating your own application includes the following general steps:

- ▶ Create an application template (XML file) in the *Templates* directory.
- ▶ Create an application directory inside the *Applications* directory. Modify certain files in the directory to define the application shortcut displayed on the launchpad and to customize the look and feel of the application, if desired, by overriding the default settings.

All files are stored and edited on the machine where IBM® SPSS® Collaboration and Deployment Services is installed (for example, *C:\Program Files\IBM\SPSS\Collaboration and Deployment Services\4.2\components\decision-management*).



Important: Before starting, it is recommend that a backup copy of the entire *decision-management* directory be created.

To create an application

You can install prebuilt applications with IBM® SPSS® Decision Management. Rather than creating an application from scratch, it's easiest to copy an existing prebuilt application that best matches your desired application and then modify it to fit your needs.

1. Copy an existing application template XML file and give it a new file name. This example uses the file name *YourApp.xml*. XML templates are stored in the *Templates* directory shown in the [previous figure](#).
2. Open the XML template you renamed. Change the value for `templateName` to the file name you gave the new XML template in step 1 (you don't need to include the file extension):

```
templateName="YourApp"
```

Tip: Although XML files can be edited using any text editor, a number of XML editing tools are available that have options to display annotations and/or validate the XML markup.

3. Configure the rest of the XML application template to meet your needs, and save the file. See the rest of this chapter for more information.
4. Each application has a corresponding folder in the *Applications* directory. Copy the folder for an application that best matches your application and give it a new name— usually the same as your application template file name (for example, copy the *ClaimsManagement* folder and rename as *YourApp*). You do not need to stop any servers while doing this.

Rather than copying an entire folder, you can also create your own new folder and copy over only the pieces you plan to customize.

5. Each application directory contains a file called *appGroup.xml*. The file defines the location of various resources specific to an application. Edit your application's *appGroup.xml* file. For example:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ApplicationGroups xmlns:ns2="http://com.spss.pasw.dms/dataset" xmlns="http://com.spss.pasw.dms/appGroups">
<Group mustDisplay="true" template="YourApp">
```

```

<CssFileSpec>/Applications/YourApp/CSS/branded.css</CssFileSpec>
<MessageFileSpec>/Applications/YourApp/Message/</MessageFileSpec>
<ScreenTextFileSpec>/Applications/YourApp/ScreenText/</ScreenTextFileSpec>
<CoachTextFileSpec>/Applications/YourApp/CoachText/</CoachTextFileSpec>
<TermFileSpec>/Applications/YourApp/Terminology/</TermFileSpec>
<HelpFileSpec>/Applications/ClaimsManagement/HelpLinks/HelpLinks.properties</HelpFileSpec>
</Group>
</ApplicationGroups>

```

Where:

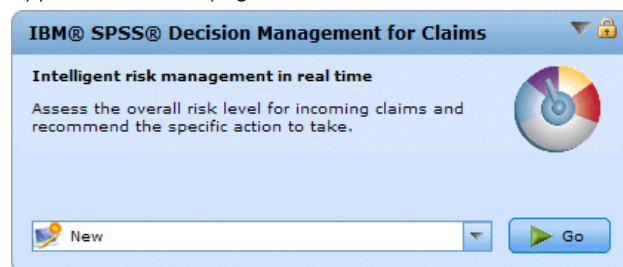
- `mustDisplay="true"` determines whether a shortcut to the new application appears on the launch page for all users by default. Users can then choose to remove the shortcut if they wish, unless an administrator has locked it.
- `TitleEntry`, `ShortDescription`, and `LongDescription` are used in the *Applications launch page* shortcut box, if the values cannot be read from the application's *description.xml* file.
- `CssFileSpec`, `MessageFileSpec`, `ScreenTextFileSpec`, `CoachTextFileSpec`, `TermFileSpec`, and `HelpFileSpec` can point to the location of customized user interface files, if applicable. The customized files will override the default files. These sections are only required if you customize one or more files in those folders. In this example, almost all files are being customized. A typical application might only customize some CSS, coach text, and screen text, in which case *appGroup.xml* would only contain those lines and the default settings would be applied for everything else. For complete details and instructions, see [Chapter 3](#) after completing the steps in this chapter.

A separate help system is provided for each packaged application, along with a generic help system that describes all features supported by the SPSS Decision Management. The `HelpFileSpec` can be used to specify which of these help systems is used. To provide custom help for a specific application, coach text is recommended. Coach text is distinct from help, and is more easily customized. [For more information, see the topic Coach text in Chapter 3 on p. 43.](#)

6. Each application directory contains a file called *description.xml*. The file defines the text displayed in the *Applications launch page* shortcut box:

Figure 2-2

Application launch page shortcut box



The file contains sections for English, German, and Japanese. You can add a different language section of your choice, using a language code according to W3C standards (see the table under [Language support on p. 42](#) for examples). Edit your application's *description.xml* file. For example:

```
<en>
  <TitleEntry>App for Handling Claims</TitleEntry>
  <ShortDescription>Intelligent risk management in real time</ShortDescription>
  <LongDescription>Assess the overall risk level for incoming claims and recommend the specific action to take.</LongDescription>
</en>
```

Tip: While configuring your application(s), you may find it convenient to share the entire *decision-management* directory so you can edit the files from any other machine on your network. See your operating system documentation for details about sharing directories.

7. When you finish configuring your application, enter the following URL in a supported web browser to launch SPSS Decision Management and verify your work. You should see the SPSS Decision Management login screen.

http://hostname:port/DM

Where *hostname* is the name or IP address of the machine where IBM SPSS Collaboration and Deployment Services is installed and *port* is your application server port number.

Configuring the user-interface

The user interface for an application is defined by the `InterfaceControl` element in the XML template.

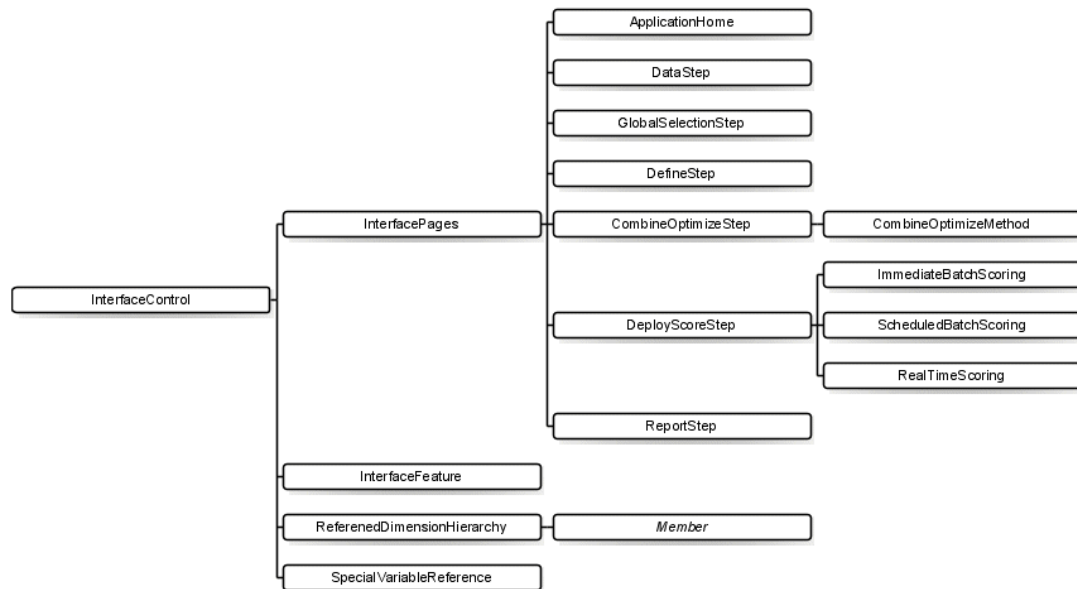
```
<InterfaceControl>
  <InterfacePages>
    <ApplicationHome stepIncluded="true" showGallery="true"/>
    <DataStep stepIncluded="true"/>
    <GlobalSelectionStep stepIncluded="true"/>
    <DefineStep stepIncluded="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="typeDecisionHierarchyDefin
      <PlanningSection enableInteractionPoints="true" enableStartEndDates="true"/>
      <SelectionSection enabled="true" enableModels="true"/>
      <AllocationRuleSection enabled="true"/>
      <AggregateRuleSection enabled="false"/>
      <PredictiveModelSection enabled="false"/>
    </DefineStep>
    <CombineOptimizeStep stepIncluded="true">
      <CombineOptimizeMethod enableNumReturnsByIP="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="f
    </CombineOptimizeStep>
    <DeployScoreStep stepIncluded="true">
      <RealTimeScoring enableInteractiveQuestions="true"/>
    </DeployScoreStep>
    <ReportStep stepIncluded="true"/>
  </InterfacePages>
  <InterfaceFeature id="Collaboration"/>
  <InterfaceFeature id="UploadDownload"/>
```

```
</InterfaceControl>
```

The first-level children of `InterfacePages` represent the main tabs in the user interface. You can set them to `true` or `false` to control which tabs make up your application. [For more information, see the topic XML templates on p. 3.](#)

The `InterfaceFeature` element defines capabilities that are available to the application, such as building and reuse models and rules, ability to collaborate with other users through IBM® SPSS® Collaboration and Deployment Services Repository, and the ability to upload and download files.

Figure 2-3
InterfaceControl element



When configuring applications, keep the following guidelines in mind:

- You can only have one of each tab type in an application.
- You can only have one of each “widget” within an application (for example, if your application has a Score tab it can only include one `RealTimeScoring` section).
- If more than one allocation method is enabled on the Define tab, the Combine/Prioritize step can be used to determine how final decisions or recommendations are determined. For example if both the `AggregateRule` and `PredictiveModel` sections are enabled, a combine matrix (`CombineOptimizeMethod`) can be used to reconcile cases where rules and models may return different decisions. If only one allocation method is enabled on the Define tab, the Combine/Prioritize step is not needed.

The following table describes some of the general items that can be configured on each tab of an application.

| Tab/Screen | Configurable Items |
|------------|--|
| Home | <ul style="list-style-type: none"> ■ Whether screen is included in the application ■ Whether Gallery is included |

| Tab/Screen | Configurable Items |
|-----------------------|--|
| Data | <ul style="list-style-type: none"> ■ Whether tab is included in the application ■ Whether user can derive new attributes |
| Global Selections | <ul style="list-style-type: none"> ■ Whether tab is included in the application ■ Whether business user can create rules, or only the administrator ■ Whether models are on or off (if on, can also indicate whether global selections will apply to model build operations or not) |
| Define/Modeling/Rules | <ul style="list-style-type: none"> ■ Whether tab is included in the application ■ Whether tab includes a decision hierarchy (for customer interaction management or claims management applications), model-only (for modeling applications), or rules-only (for rules management applications) ■ Other options are also available depending which tab-type you use. <p>Note that <code>AggregationRuleSection</code> and <code>PredictiveModelSection</code> may not both be enabled when using more than 2 dimensions.</p> |
| Combine/Optimize | <ul style="list-style-type: none"> ■ Whether tab is included in the application ■ Whether prioritization or a combine (decision) matrix is used ■ Whether Test feature is included ■ Whether Simulation feature is included <p>Note that the <code>MatrixCombine</code> method may not be used with more than 2 dimensions.</p> |
| Score/Deploy | <ul style="list-style-type: none"> ■ Whether tab is included in the application ■ Whether immediate batch scoring (including scoring options) or real-time deployment (including ability to specify interactive questions) is used |
| Reporting | <ul style="list-style-type: none"> ■ Whether tab is included in the application ■ Whether results summary report is included on the Home screen |

Defining dimensions

Application dimensions define the factors or outcomes that can be used in solving the business problem, such as campaigns, channels and offers. These are configured using the `EntityDimension` and `Dimension` elements in the XML template.

```
<EntityDimension name="Claim"/>
<Dimension name="Claim Area"></Dimension>
  <Dimension name="Action" parentDimension="Claim Area"></Dimension>
```

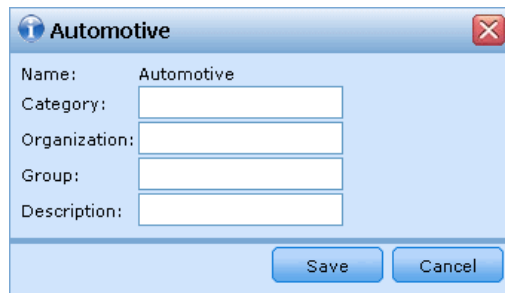
- The `EntityDimension` element defines the thing being processed by the application, such as customers, claims, or packages. In practical terms, this is what each row in the Project Data Model represents.
- The `Dimension` elements define the factors or outcomes that can be used in solving the business problem, such as campaigns, channels and offers. In practical terms, these are the possible recommendations or decisions that can be returned for each entity, and are displayed on the dimension tree on the Define tab in the application UI.

- Dimensions can be nested using the parentDimension attribute.
- If no dimensions are specified, there will not be a dimension tree on the Define tab, and the application will only be able to produce rules or models. No specific outputs or recommendations will be returned, as none have been defined.

Optionally, you can specify properties for each dimension, such as name, description, or category. Any properties will be displayed in the Dimension Properties dialog box, which can be accessed by clicking the “information” icon for the dimension on the Define tab.

```
<Dimension name="Claim Area">
  <Property>Name</Property>
  <Property>Category</Property>
  <Property>Organization</Property>
  <Property>Group</Property>
  <Property>Description</Property>
</Dimension>
```

Figure 2-4
Dimension properties



Configuring the optimization equation

The prioritization equation is defined in the Optimization element, and displayed on the Prioritize tab in the application.

```
<Optimization algorithm="Heuristic">
  <ObjectiveFunction Domain="double" Functor="-" Name="Expected Profit">
    <Expression xmlns="http://com.spss.pasw.dms/rules" Domain="double" Functor="*">
      <Expression Domain="double" Functor="variableReference">
        <Expression>
          <Value>value</Value>
        </Expression>
        <Expression>
          <Value>Variable</Value>
        </Expression>
        <Expression>
          <Value>Prob.to Respond</Value>
        </Expression>
        <Expression>
          <Value>Value</Value>
        </Expression>
      </Expression>
    </ObjectiveFunction>
  </Optimization>
```



```

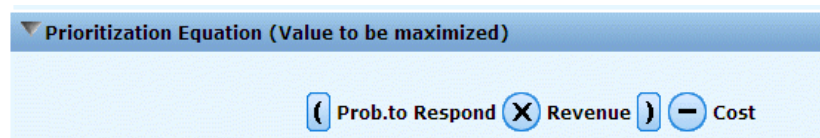
<Expression Domain="double" Functor="variableReference">
  <Expression>
    <Value>value</Value>
  </Expression>
  <Expression>
    <Value>Variable</Value>
  </Expression>
  <Expression>
    <Value>Revenue</Value>
  </Expression>
  <Expression>
    <Value>Value</Value>
  </Expression>
</Expression>
</Expression>
<Expression xmlns="http://com.spss.pasw.dms/rules" Domain="double" Functor="variableReference">
  <Expression>
    <Value>value</Value>
  </Expression>
  <Expression>
    <Value>Variable</Value>
  </Expression>
  <Expression>
    <Value>Cost</Value>
  </Expression>
  <Expression>
    <Value>Value</Value>
  </Expression>
</Expression>
</ObjectiveFunction>
</Optimization>

```

In the current release, the only supported algorithm is Heuristic (or None).

The resulting equation is displayed on the Prioritize tab in the user interface:

Figure 2-5
Prioritization equation



Understanding prefix notation

Expressions in IBM® SPSS® Decision Management are defined in *Prefix* notation (also known as *Polish* notation). *Infix* and *Prefix* notations are two different but equivalent ways of writing expressions. The *Infix* column displays formulas people are used to, and the *Prefix* column displays the equivalent notation that would be used in SPSS Decision Management expressions.

All parentheses are implied in the *Prefix* column; they've been included to make the table easier to read by showing the order of evaluation.

| Infix Notation | Prefix (Polish) Notation |
|-----------------------|--------------------------|
| $((A * B) + (C / D))$ | $(+ (* A B) (/ C D))$ |
| $((A * (B + C)) / D)$ | $(/ (* A (+ B C)) D)$ |
| $(A * (B + (C / D)))$ | $(* A (+ B (/ C D)))$ |

It would be coded as follows:

"_"

"*"

ProbabilityToRespond

Revenue

Cost

The actual expression starts with the `ObjectiveFunction` element that specifies the storage data type of the result, its name, and the initial `Functor`—which is our *Prefix* notation for subtraction.

```
<ObjectiveFunction Domain="double" Functor="-" Name="Predicted Profit">
```

Unless otherwise specified, the subtraction functor will be applied to all expressions with this objective function.

The next operation specifies multiplication as the functor, overriding the default. Within this expression, two variable references are defined, inserting the values of the Prob.to Respond and Revenue variables and multiplying them together.

```
<Expression xmlns="http://com.spss.pasw.dms/rules" Domain="double" Functor="*">
  <Expression Domain="double" Functor="variableReference">
    <Expression>
      <Value>value</Value>
    </Expression>
    <Expression>
      <Value>Variable</Value>
    </Expression>
    <Expression>
      <Value>Prob.to Respond</Value>
    </Expression>
    <Expression>
      <Value>Value</Value>
    </Expression>
  </Expression>
  <Expression Domain="double" Functor="variableReference">
    <Expression>
      <Value>value</Value>
    </Expression>
    <Expression>
      <Value>Variable</Value>
    </Expression>
    <Expression>
      <Value>Revenue</Value>
    </Expression>
```

```

    </Expression>
    <Expression>
      <Value>Value</Value>
    </Expression>
  </Expression>
</Expression>

```

In other words, the example expression is referencing a simple value of a Variable named ProbabilityToRespond in order to use its output field named Value in this spot of the equation.

A third variable reference inserts the value of the Cost variable. Because it is a child of the top-level ObjectiveFunction element (and not the multiplication expression) its value is subtracted.

```

<Expression xmlns="http://com.spss.pasw.dms/rules" Domain="double" Functor="variableReference">
  <Expression>
    <Value>value</Value>
  </Expression>
  <Expression>
    <Value>Variable</Value>
  </Expression>
  <Expression>
    <Value>Cost</Value>
  </Expression>
  <Expression>
    <Value>Value</Value>
  </Expression>
</Expression>

```

Defining equations using the expression builder

As a shortcut to building expressions While the prefix notion takes a bit of time to learn, you can build expressions using the Expression Builder, and then copy the resulting code.

For example, suppose you want to define the following equation:

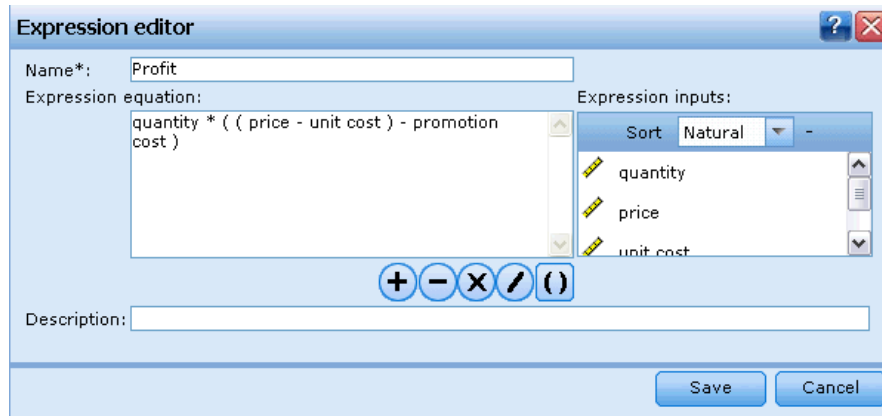
```
profit = quantity * (price - unit cost - promotion cost)
```

Create a project using any valid application template. (This can be a custom template, or a sample application such as IBM® SPSS® Decision Management for Customer Interactions or IBM® SPSS® Decision Management for Claims.)

On the Data tab, choose a data source that includes the fields you want to use in your equation, and choose this for the Project Data Model. (For this example you would need fields named quantity, price, unit cost, and promotion cost. You don't need any real data — you just need these fields to exist in the data model so you can choose them in the Expression Editor.)

From the Define tab, choose Expression Manager, and then Add expression.

Figure 2-6
Defining an expression



Specify the desired expression.

Save the project and download to a local drive, for example profitexpression.str.

Change the filename extension to *.zip (for example, profitexpression.zip) and extract using a tool that can handle this type of file. (Stream files are compressed *.zip files and can be extracted to access the component parts, which include a primary file named ClementineStream.xml along with a number of *.dat files.)

Open the extracted file `\data\0001.dat` in an XML or text editor, and search for an expression element such as the following:

```
<Expression Functor="*" Domain="double">
  <Expression Domain="long"><Attribute>quantity</Attribute></Expression>
  <Expression Functor="-" Domain="double">
    <Expression Functor="-" Domain="double">
      <Expression Domain="long"><Attribute>price</Attribute></Expression>
      <Expression Domain="double"><Attribute>unit cost</Attribute></Expression>
    </Expression>
    <Expression Domain="double"><Attribute>promotion cost</Attribute></Expression>
  </Expression>
</Expression>
```

Copy the expression code into your XML template, replace the attributes with variable references, and add variable definitions and output attributes as needed (see below).

Defining variables

Define any variables that will be used as inputs to the optimization. Any variable referenced in the optimization function must be defined in a Variable element which can be a child of either EntityDimension or Dimension. In practical terms, the location of the variable definition determines the level at which the input is specified (though the user can change this on the Prioritize tab).

For example, suppose you are prioritizing campaigns and offers based on expected profit, computed as follows:

expected profit = probability to respond * revenue - cost

To do this, the required inputs (probability, revenue, and cost) must be specified for each campaign or offer, as appropriate. In the user interface, you specify these inputs on the Prioritize tab.

Figure 2-7
Prioritize tab

bank_customer_interaction

Lock project (other users will be unable to edit)

Prioritization Parameters

Max number of offers: 1

Customize table

| Campaign/Offer | Prob.to Respond | Revenue | Cost | Min.Profit | Override | Order |
|-----------------|-----------------|---------|------|------------|--------------------------|-------|
| Retention | | | | | | |
| Theater | 0.1 | 180 | 22 | 10 | <input type="checkbox"/> | |
| Racing | 0.1 | 180 | 21 | 10 | <input type="checkbox"/> | |
| Cross Sell | | | | | | |
| Credit Card | 0.04 | 60 | 3 | 10 | <input type="checkbox"/> | |
| Personal Loan | 0.04 | 200 | 3 | 10 | <input type="checkbox"/> | |
| Home Equity ... | 0.04 | 400 | 3 | 10 | <input type="checkbox"/> | |

Prioritization Equation (Value to be maximized)

(Prob.to Respond * Revenue) - Cost

If you want the same value to be used for all offers within a campaign, you can specify that input at the campaign level. To do this, select Customize table on the Prioritize tab. (Offer is the child of campaign, thus by specifying at the campaign level then the value is applied to all offers within that campaign.) Alternatively, you can specify different inputs for each offer, then

Figure 2-8
Customizing the table

Customize Prioritization Table

Choose at which level you wish to define each parameter

| Parameter | Campaign | Offer |
|-----------------|-----------------------|----------------------------------|
| Prob.to Respond | <input type="radio"/> | <input checked="" type="radio"/> |
| Min.Profit | <input type="radio"/> | <input checked="" type="radio"/> |
| Revenue | <input type="radio"/> | <input checked="" type="radio"/> |
| Cost | <input type="radio"/> | <input checked="" type="radio"/> |

Save Cancel

In the XML template, the same inputs are defined as variables on the relevant dimension.

```

<Dimension name="Offer">
  <Variable name="Prob.to Respond" dataType="double" simulateName="Offers Accepted" simulateAction="sum" optimizationInputItem="true" prompt="">
    <ValueSource xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="ConstantValueSource">
      <Value>0</Value>
    </ValueSource>
  </Variable>
  <Variable name="Revenue" dataType="double" optimizationInputItem="true" prompt="">
    <ValueSource xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="ConstantValueSource">
      <Value>0</Value>
    </ValueSource>
  </Variable>
  <Variable name="Cost" dataType="double" simulateAction="sum" simulateName="Total Cost" optimizationInputItem="true" prompt="">
    <ValueSource xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="ConstantValueSource">
      <Value>0</Value>
    </ValueSource>
  </Variable>
</Dimension>

```

Alternatively, if you want to specify one or more inputs at the Campaign level, you can add these as variables on the Campaign dimension instead. Moving the variable definition from Offer to Campaign is the same as selecting Campaign in the UI.

```

<Dimension name="Campaign">
  <Variable name="Prob.to Respond" dataType="double" simulateName="Offers Accepted" simulateAction="sum" optimizationInputItem="true" prompt="">
    <ValueSource xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="ConstantValueSource">
      <Value>0</Value>
    </ValueSource>
  </Variable>
</Dimension>

```

Defining constraints

Variables can also be referenced in constraints. The same general rule applies — you have to define the variable before you can use it. But in this case the variable definition and constraint may both be children of the dimension to which they apply (though I don't know if it always has to work this way).

Configuring scoring output for deployment

For applications that will be deployed for batch or real-time scoring, the `Deployment` element in the XML template specifies which model outputs are available to the scoring service. These can include:

- The final allocations or decisions for each dimension, whether determined via rules, prioritization, or combine matrix.
- Outputs from the models and rules within the stream, which typically serve as inputs to those decisions.
- Any prioritization variables defined.
- Input fields, Annotations, and “Return with” fields specified for each dimension.

Each output is defined using a separate `OutputAttribute` element within the `Deployment` element of the XML template. Outputs defined in this manner can be selected for inclusion in the result set when creating the scoring configuration. [For more information, see the topic IBM SPSS Decision Management and the Scoring Service in Chapter 4 on p. 54.](#)

Figure 2-9
Sample `OutputAttribute` specification

```
<Deployment>
  <OutputAttribute referenceType="DimensionMember" name="Claim Area"
    returnValue="Claim Area.Allocation-Value">Claim Area</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation-Value">Action</OutputAttribute>
</Deployment>
```

Comments

- When scoring within the workspace (using the Score Now functionality which is enabled by specifying `ImmediateBatchScoring enableScoringOptions="true"` under the `DeployScoreStep` element in the template), any `OutputAttribute` elements specified in the template are ignored. All fields in the stream will be available for scoring, including model outputs as well as inputs.
- To view the available fields in any stream, you can open the stream file in IBM® SPSS® Modeler, open the terminal node at the end of the stream, and select the Format tab. Any of the fields listed can be included in scoring output. (When you save an application, a IBM® SPSS® Modeler stream file (*.str) is automatically created in the IBM® SPSS® Collaboration and Deployment Services Repository.)
- If any of the outputs defined in `Deployment` element are not recognized by the score provider, null values will be returned for that output. (This can happen, for example, if the specified output does not exist in the stream.)
- Some streams may contain an additional field named *entity*. This is for internal use only and should not be referenced or included in output.

Returning the allocations for each dimension

The allocations for each dimension typically represent the “final answer” returned by the application, such as the offer to be presented to a customer, or the action to take on a claim. A separate allocation field is returned for each dimension. These fields can be configured for scoring in the `Deployment` element as follows:

```
<Deployment>
  <OutputAttribute referenceType="DimensionMember" name="Claim Area"
    returnValue="Claim Area.Allocation-Value">Claim Area</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation-Value">Action</OutputAttribute>
</Deployment>
```

Where:

- `referenceType` is `DimensionMember`.

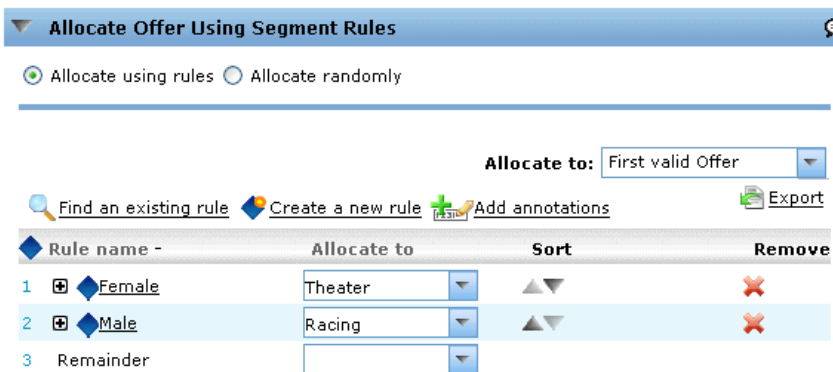
- `name` is the name of the dimension being allocated.
- `returnValue` is the name of the field being returned. By convention this matches the name of the dimension, with `.Allocation-Value` appended.

Outputs from models and rules

Each model or rule used in an allocation returns one or more output fields. When combined with the final allocation for each dimension, these outputs may be useful in understanding how a particular result was determined. For example, if a claim is referred for investigation based on the total number of risk points, you might want to know which rules contributed to the total. The available fields depend on the dimensions being allocated, and the types rules and models used, as detailed below.

Allocation using segment rules

Figure 2-10
Allocation using segment rules



When used in an allocation (`<AllocationRuleSection enabled="true" />`), segment rules return the following fields:

- `<<Dimension>>.Allocation-Segment`. The list of index values for all segments returning a value of `true`.
- `<<Dimension>>.Allocation-Segment Name`. The list of names for all segments returning a value of `true`, in the same order as the `Allocation-Segment` field.

These fields can be configured for scoring in the `Deployment` element, as follows:

```
<Deployment>
  <OutputAttribute referenceType="DimensionMember" name="Offer"
    returnValue="Offer.Allocation-Segment">Segment</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Offer"
    returnValue="Offer.Allocation-Segment Name">Segment Name</OutputAttribute>
</Deployment>
```

Where:

- `referenceType` is `DimensionMember`.

- name matches the name of the dimension being allocated.
- returnValue matches the name of the field being returned.

Allocation using random percentages

Figure 2-11
Random allocation

| | Probability | Allocate to | |
|---|---------------|-------------|---|
| 1 | 40 | Theater | ✘ |
| 2 | 60 | Racing | ✘ |
| 3 | Remainder(0%) | | |

When used in an allocation, random percentage rules (`<AllocationRuleSection enabled="true" />`) return the following field:

- `<<Dimension>>.Allocation-Segment Name`. The list of names for all segments returning a value of *true*.

This field can be configured for scoring in as follows:

```
<Deployment>
  <OutputAttribute referenceType="DimensionMember" name="Offer"
    returnValue="Offer.Allocation-Segment Name">Offer Segment Name</OutputAttribute>
</Deployment>
```

Allocation using aggregated point totals

Figure 2-12
Allocation based on aggregated point rules

The screenshot shows a configuration interface for rules. At the top, there's a title bar 'Use Rules to Decide Which Action is Triggered'. Below it, a 'Remainder' dropdown is set to 'Apply when no rules hit'. There are several action buttons: 'Find an existing rule', 'Create a new rule', 'Add annotations', 'OR', 'Split OR', and 'Export'. The main part of the interface is a table with columns: 'Rule name -', 'Risk points', 'Sort', and 'Remove'. Below this table are buttons for '+ Add Action' and '+ Add annotations'. At the bottom, there's another table with columns: 'Sum of Points>= ↓', 'Allocate to', and 'Remove'.

| Rule name - | Risk points | Sort | Remove |
|-----------------------------|-------------|------|--------|
| 1 Police Intervention | 1 | ▲▼ | ✖ |
| 2 Multiple Claims | 3 | ▲▼ | ✖ |
| 3 Cost over 5k | 2 | ▲▼ | ✖ |
| 4 Cost over 3k | 1 | ▲▼ | ✖ |
| 5 Material and Injury Claim | 1 | ▲▼ | ✖ |
| 6 Remainder | 0 | | |

| | Sum of Points>= ↓ | Allocate to | Remove |
|---|-------------------|-------------|--------|
| 1 | 5 | Refer | ✖ |
| 2 | 3 | Standard | ✖ |
| 3 | 0 | Fast Track | |

Rules that allocate decisions based on aggregated point totals (<AggregateRuleSection enabled="true"/>) return the following fields:

- <<Dimension>>.Allocation.Rule-Value. The final allocation returned by the rule.
- <<Dimension>>.Allocation.Rule.Aggregate-Value. The aggregated point total across all segments that returned a value of *true*. This is the sum of the values listed for Aggregate-Segment Points.
- <<Dimension>>.Allocation.Rule.Aggregate-Segment. The list of index values for all segments returning a value of *true*.
- <<Dimension>>.Allocation.Rule.Aggregate-Segment Name. The names of all segments returning *true*, in the same order as the Aggregate-Segment field
- <<Dimension>>.Allocation.Rule.Aggregate-Segment Points . The ‘points’ list for all segments returning *true*, in the same order as the Aggregate-Segment field
- <<Dimension>>.Allocation.Rule-Threshold. The index of the segment to which the record was allocated based on the sum of points.
- <<Dimension>>.Allocation.Rule-Threshold Segment. The minimum number of points needed to be included in that segment.
- <<Dimension>>.Allocation.Rule-Threshold Test Value. The aggregate value tested. This should match the total points returned for Aggregate-Value.

These fields can be configured for scoring as follows:

```
<Deployment>
  <OutputAttribute referenceType="DimensionMember" name="Action">
```

```

returnValue="Action.Allocation.Rule-Value">Rule Action</OutputAttribute>
<OutputAttribute referenceType="DimensionMember" name="Action"
returnValue="Action.Allocation.Rule-Aggregate-Value">Total Risk Points</OutputAttribute>
</Deployment>

```

Allocation based on model scores

Figure 2-13

Allocation using model scores

The screenshot shows the 'Define' tab of the 'insurance_claims_management' application. The interface includes a navigation bar with tabs for 'Data', 'Global Selections', 'Define', 'Combine', 'Deploy', and 'Reports'. Below the navigation bar, there are options to 'Lock project' and a project name 'insurance_claims_manageme...'. The main workspace is divided into a left sidebar and a main content area. The sidebar shows a tree view with 'Automotive' selected, and buttons for 'Refer', 'Fast Track', and 'Standard'. The main content area has a list of configuration steps: 'Automotive Properties', 'Choose Who This Claim Area Applies to', 'Use Rules to Decide Which Action is Triggered', and 'Use a Model to Decide Which Action is Triggered'. The 'Use a Model to Decide Which Action is Triggered' step is expanded, showing a table with columns 'Model', 'Target', 'Measure', and 'Remove'. A row is visible with 'fraud_model.strfraudulent' as the model and 'Propensity' as the measure. Below this, there is a table for 'Add Action' with columns 'Propensity >= ↓', 'Allocate to', and 'Remove'. The table has three rows: 1 with propensity 0.5 and 'Refer', 2 with propensity 0.3 and 'Standard', and 3 with propensity 0 and 'Fast Track'.

When used in an allocation, predictive models (<PredictiveModelSection enabled="true" />)return the following fields:

- <<Dimension>>.Allocation.Model-Value. The probability, propensity, or confidence value returned by the model.
- <<Dimension>>.Allocation.Model-Threshold. The index of the segment to which the record was allocated based on model value.
- <<Dimension>>.Allocation.Model-Threshold Segment. The minimum value needed to be included in that segment.
- <<Dimension>>.Allocation.Model-Threshold Test Value. The model value tested. This should match the value returned for Model-Value.

These fields can be configured for scoring as follows:

```

<Deployment>
  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation.Model-Value">Model Action</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation.Model-Threshold">Model Threshold</OutputAttribute>
</Deployment>

```

Outputs from prioritization

Outputs from prioritization include the result of the prioritization equation, such as profit, as well as any prioritization variables or constraints.

Prioritization equation

The result of the prioritization equation is output to a field named `<<objective function>>-Value`. This field can be configured for scoring as follows:

```
<Deployment>
  <OutputAttribute referenceType="Objective" name="Expected Profit"
    returnValue="Expected Profit-Value">Expected Profit</OutputAttribute>
</Deployment>
```

Where:

- `referenceType` is `Objective`.
- `name` matches the value of the `Name` attribute specified for the `ObjectiveFunction` element.
- `returnValue` matches the name of the field being returned. By convention this is the name of the `ObjectiveFunction` element, with `-Value` appended.

Prioritization variables

Variables can be configured for scoring as follows:

```
<Deployment>
  <OutputAttribute referenceType="Variable" name="MaxOffersNum"
    returnValue="MaxOffersNum.Variable-Value">Max Offer</OutputAttribute>
  <OutputAttribute referenceType="Variable" name="Min.Profit"
    returnValue="Min.Profit.Variable-Value">Min Profit</OutputAttribute>
</Deployment>
```

Where:

- `referenceType` is `Variable`.
- `name` matches the name of the variable.
- `returnValue` is the name of the variable with `.Variable-Value` appended.

Input fields, annotations, and “Return with” fields

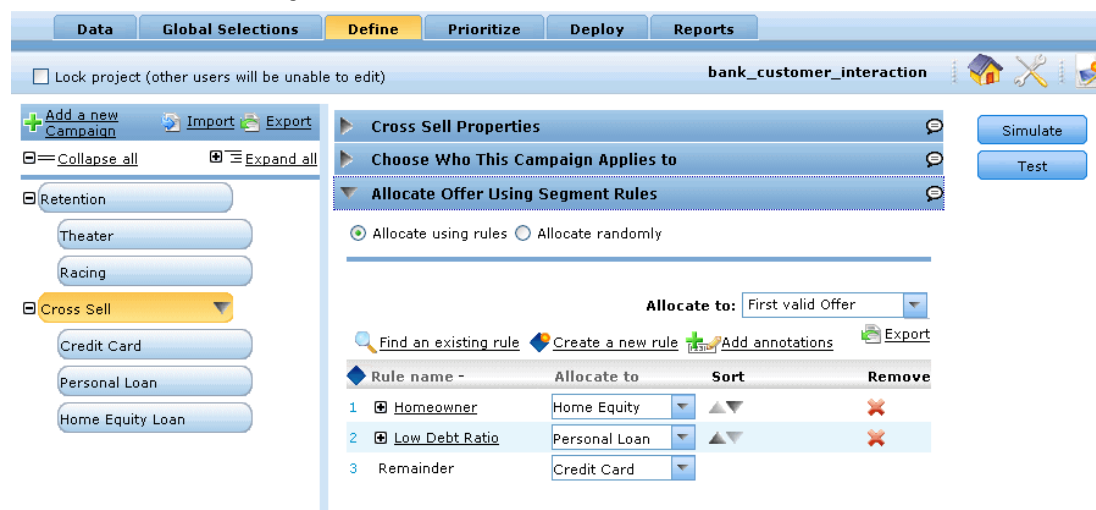
Fields read in from the data source (model inputs) are always available to the scoring service, and do not need to be defined in the XML template. No `OutputAttribute` specification is required to use these fields in scoring.

The same is true for annotations and “Return with” fields specified on the Define tab in the application, and associated with a specific dimension or rule segment. Once defined, these are automatically available to the scoring service and do not need to be specified in the XML template.

Example: IBM SPSS Decision Management for Customer Interactions output configuration

When scoring IBM® SPSS® Decision Management for Customer Interactions, available output fields include the campaigns and offers returned for each customer, along with allocation and prioritization outputs that may be useful in determining why a particular recommendation was made.

Figure 2-14
IBM SPSS Decision Management for Customer Interactions



Outputs for this application can be configured in the Deployment element as follows:

```
<Deployment>
  <OutputAttribute referenceType="DimensionMember" name="Campaign"
    returnValue="Campaign.Allocation-Value">Campaign</OutputAttribute>

  <OutputAttribute referenceType="DimensionMember" name="Offer"
    returnValue="Offer.Allocation-Value">Offer</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Offer"
    returnValue="Offer.Allocation-Segment">Segment</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Offer"
    returnValue="Offer.Allocation-Segment Name">Segment Name</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Offer"
    returnValue="Offer.Allocation-Annotation">Annotation</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Offer"
    returnValue="Offer.$ReturnWithVariable">Age Youngest Child</OutputAttribute>

  <OutputAttribute referenceType="Objective" name="Expected Profit"
    returnValue="Expected Profit-Value">Expected Profit</OutputAttribute>
  <OutputAttribute referenceType="Variable" name="MaxOffersNum"
    returnValue="MaxOffersNum.Variable-Value">Max Offer</OutputAttribute>
  <OutputAttribute referenceType="Variable" name="Min.Profit"
    returnValue="Min.Profit.Variable-Value">Min Profit</OutputAttribute>
  <OutputAttribute referenceType="Variable" name="Prob.to Respond"
    returnValue="Prob.to Respond.Variable-Value">Prob to Respond</OutputAttribute>
```

```

<OutputAttribute referenceType="Variable" name="Revenue"
  returnValue="Revenue.Variable-Value">Revenue</OutputAttribute>
<OutputAttribute referenceType="Variable" name="Cost"
  returnValue="Cost.Variable-Value">Cost</OutputAttribute>
</Deployment>

```

This configuration might return the following scores:

| Field | Customer 1 | Customer 2 |
|--------------------|---|--|
| Campaign | Cross Sell | Cross Sell |
| Offer | Personal Loan | Home Equity Loan |
| Segment | 2 | 1 |
| Segment Name | Low Debt Ratio | Homeowner |
| Annotation | Congratulations, you have qualified for a low interest loan | Congratulations, you have qualified for a home equity loan |
| Age Youngest Child | | |
| Expected Profit | 200 | 400 |
| Max Offer | 2 | 2 |
| Min Profit | 10 | 10 |
| Prob to Respond | 0.19 | 0.09 |
| Revenue | 200 | 400 |
| Cost | 3 | 3 |

Reviewing this output, the following can be determined:

- Customer 1 received the *Personal Loan* offer; customer 2 received the *Home Equity Loan* offer. These outcomes were determined by the *Low Debt Ratio* and *Homeowner* rules, which were the second and first segments in the allocation set, respectively.
- The annotations are returned with each offer, and are specific to that offer.
- The *Expected Profit* field lists the value returned by the prioritization equation, and is used to determine whether the offer is made. The other fields include the variables and constraints used in this calculation.

Example: IBM SPSS Decision Management for Claims output configuration

When scoring IBM® SPSS® Decision Management for Claims, available output fields include the final claim area and action returned for each claim, along with rule and model outputs that may be useful in determining why a particular recommendation was made.

Figure 2-15
Allocation based on aggregated point rules

Use Rules to Decide Which Action is Triggered

Remainder:

Find an existing rule Create a new rule Add annotations OR Split OR Export

| Rule name - | Risk points | Sort | Remove |
|-----------------------------|-------------|------|--------|
| 1 Police Intervention | 1 | ▲▼ | ✖ |
| 2 Multiple Claims | 3 | ▲▼ | ✖ |
| 3 Cost over 5k | 2 | ▲▼ | ✖ |
| 4 Cost over 3k | 1 | ▲▼ | ✖ |
| 5 Material and Injury Claim | 1 | ▲▼ | ✖ |
| 6 Remainder | 0 | | |

+ Add Action Add annotations

| Sum of Points>= ↓ | Allocate to | Remove |
|-------------------|-------------|--------|
| 1 5 | Refer | ✖ |
| 2 3 | Standard | ✖ |
| 3 0 | Fast Track | |

Outputs for this application can be configured in the `Deployment` element as follows:

```
<Deployment>
  <OutputAttribute referenceType="DimensionMember" name="Claim Area"
    returnValue="Claim Area.Allocation-Value">Claim Area</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation-Value">Action</OutputAttribute>

  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation.Rule-Value">Rule Action</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation.Rule.Aggregate-Value">Aggregate Value</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation.Rule.Aggregate-Segment">Rule Segment</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation.Rule.Aggregate-Segment Name">Rule Segment Name</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation.Rule.Aggregate-Segment Points">Rule Segment Points</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation.Rule-Threshold">Rule Threshold</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation.Rule-Threshold Segment">Rule Threshold Segment</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation.Rule-Threshold Test Value">Rule Threshold Test Value</OutputAttribute>

  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation.Model-Value">Model Action</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Action"
    returnValue="Action.Allocation.Model-Threshold">Model Threshold</OutputAttribute>
</Deployment>
```

```

<OutputAttribute referenceType="DimensionMember" name="Action"
  returnValue="Action.Allocation.Model-Threshold Segment">Model Threshold Segment</OutputAttribute>
<OutputAttribute referenceType="DimensionMember" name="Action"
  returnValue="Action.Allocation.Model-Threshold Test Value">Model Threshold Test Value</OutputAttribute>
</Deployment>

```

This configuration might return the following scores:

| Field | Claim 1 | Claim 2 |
|----------------------------|-----------------|---|
| Claim Area | Automotive | Automotive |
| Action | Standard | Standard |
| Rule Action | Standard | Standard |
| Aggregate Value | 3.0 | 3.0 |
| Rule Segment | 2 | 1 4 5 |
| Rule Segment Name | Multiple Claims | Police Intervention Cost Over 3K Claim Type |
| Rule Segment Points | 3 | 1 1 1 |
| Rule Threshold | 2 | 2 |
| Rule Threshold Segment | 2 | 2 |
| Rule Threshold Test Value | 3.0 | 3.0 |
| Model Action | Fast Track | Standard |
| Model Threshold | | 0.3 |
| Model Threshold Segment | 0 | 2 |
| Model Threshold Test Value | 0.06 | 0.51 |

Reviewing this output, the following can be determined:

- The final action recommended by the application for both claims is to use standard processing.
- For both claims, the recommended action based on rules was also to use standard processing. Each claim had a total of three risks points assigned, though different rules fired in order to reach this total.
- For Claim 1, the rule segment named *Multiple Claims* fired *true*. Three risk points were assigned for this segment, as specified on the Define tab in the application.
- For Claim 2, three different segments fired *true* (*Police Intervention*, *Cost Over 3K*, *Claim Type*). These were the first, fourth, and fifth segments in the set, respectively. A single risk point was assigned for each of these segments, again as specified on the Define tab.
- The Rule Threshold value of two indicates the claim needed at least two risk points to be assigned this action. (Claims with fewer than two risk points are allocated to *Fast Track*.)
- The allocation based on models was *Fast Track* for Claim 1, and *Standard* for Claim 2. Claim 1 failed to cross the Model Threshold value of 0.3 for standard processing, thus it is allocated to Segment 0 and no threshold value is shown.

Prompting the user for scoring parameters

In cases where certain parameters may be provided at score time, the scoring configuration will prompt the user as needed. Such parameters can be defined in the XML template as follows:

```
<Variable name="MaxOffersNum" dataType="integer" optimizationInputItem="true" prompt="Max Offer">
  <ValueSource xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:type="ConstantValueSource">
    <Value>1</Value>
  </ValueSource>
</Variable>
```

In this case the scoring configuration will prompt the user to specify Max Offer.

Optionally, this variable can be defined as a translatable string, as follows:

```
<Variable name="MaxOffersNum" dataType="integer" optimizationInputItem="true" prompt="$Scim/Max Offer">
```

For this to work, the value \$Scim/Max Offer would need to be defined as a translatable key in IBM® SPSS® Collaboration and Deployment Services, and values provided for the relevant languages.

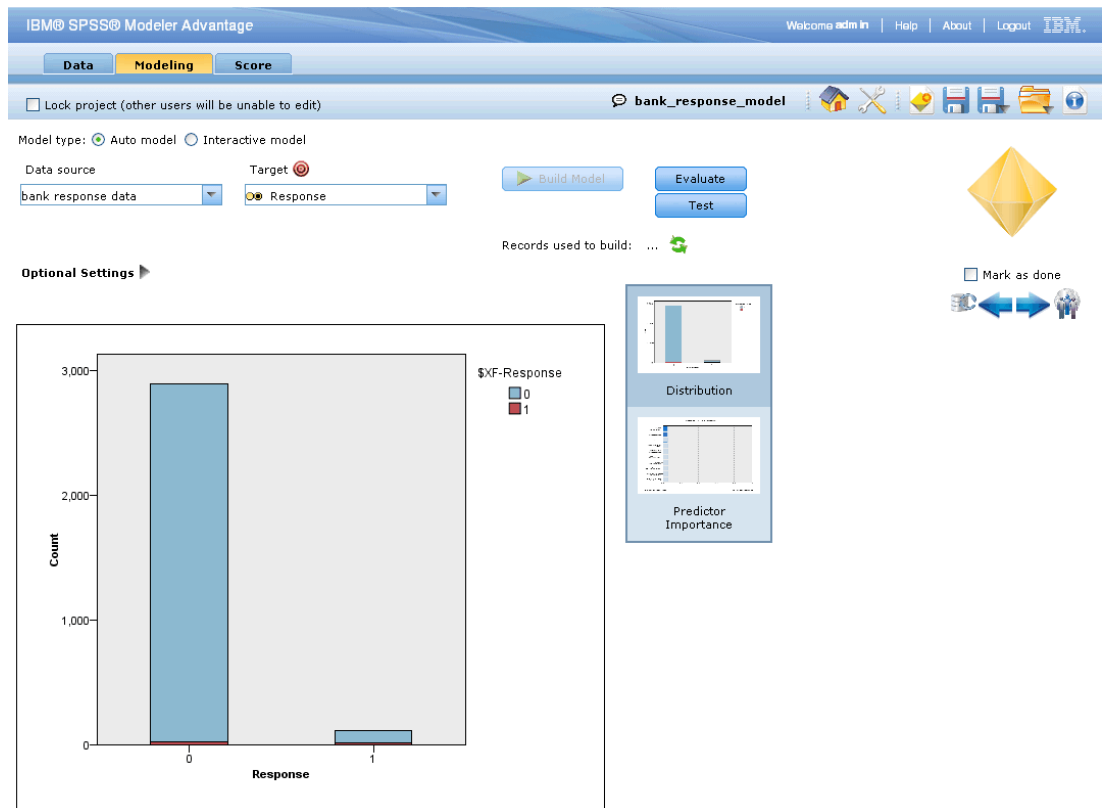
Application template examples

This section provides sample XML for four different application template examples.

IBM SPSS Modeler Advantage Template

IBM® SPSS® Modeler Advantage is an easy-to-use application that puts the power of predictive modeling in the hands of business users. Using predictive models, you can identify patterns based on what has happened in the past, and use them to predict what is likely to happen in the future. For more information, see the *IBM SPSS Modeler Advantage User's Guide*.

Figure 2-16
IBM SPSS Modeler Advantage



The template for IBM SPSS Modeler Advantage is shown below.

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<!--
```

```
Licensed Materials - Property of IBM
```

```
IBM SPSS Products: Decision Management
```

```
(C) Copyright IBM Corp. 2010, 2011
```

```
US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP  
Schedule Contract with IBM Corp.
```

```
->
```

```
<PredictiveApplication xmlns="http://com.spss.pasw.dms/workspace" templateName="ModelerAdvantage"  
templateVersion="1" appsVersion="6.1">
```

```
<InterfaceControl>
```

```
<InterfacePages>
```

```
<ApplicationHome stepIncluded="true" showGallery="true"/>
```

```
<DataStep stepIncluded="true"/>
```

```
<GlobalSelectionStep stepIncluded="false"/>
```

```
<DefineStep stepIncluded="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
xsi:type="typeModelingDefineStep"/>
```

```
<CombineOptimizeStep stepIncluded="false">
```

```

        <CombineOptimizeMethod/>
    </CombineOptimizeStep>
    <DeployScoreStep stepIncluded="true">
        <ImmediateBatchScoring enableScoringOptions="true"/>
    </DeployScoreStep>
    <ReportStep stepIncluded="false"/>
</InterfacePages>
<InterfaceFeature id="Collaboration"/>
<InterfaceFeature id="UploadDownload"/>
<InterfaceFeature id="MetadataDownload"/>
</InterfaceControl>
</PredictiveApplication>

```

A detailed description of the XML template that makes up a typical modeling application follows. Descriptions of all elements are available in the [XML templates appendix](#) on p. 3.

Refer back to the preceding XML example while reading the following information.

- ▶ The `templatename` element specifies the name of the application template. You don't need to include the file extension. This attribute is required.

```
templateName="ModelerAdvantage"
```

- ▶ The `templateVersion` and `appsVersion` elements are for internal use when applying patch fixes from SPSS Inc. You should never modify these settings.

```
templateVersion="1" appsVersion="6.1"
```

- ▶ The `ApplicationHome` element indicates whether the Home page and the model gallery section will be included in the application. These attributes are optional. The default is `true`.

```
ApplicationHome stepIncluded="true" showGallery="true"
```

- ▶ The following elements indicate which tabs will appear in the user interface. In this modeling application, only the Data, Modeling, and Score tabs will be included. The Selections, Combine, and Reports tabs will not. These attributes are all optional. The default is `true`. For a detailed description of the various tabs in the user interface, see the user's guides.

(C) Copyright IBM Corp. 2010, 2011

US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

->

```

<PredictiveApplication xmlns="http://com.spss.pasw.dms/workspace" templateName="ModelerAdvantage"
templateVersion="1" appsVersion="6.1">
  <InterfaceControl>
    <InterfacePages>
      <ApplicationHome stepIncluded="true" showGallery="true"/>
      <DataStep stepIncluded="true"/>

```

- ▶ As part of the `DefineStep` element, `typeModelingDefineStep` indicates that the Define tab will be of the modeling type. For other application types, you might use `typeRulesManagementDefineStep` or `typeDecisionHierarchyDefineStep`.

- ▶ As part of the `DeployScoreStep` element, the `ImmediateBatchScoring` element indicates that scoring options will be included in the interface. This attribute is optional.

`ImmediateBatchScoring enableScoringOptions="true"`

- ▶ The `InterfaceFeature` element identifies major features to include in the user interface. This flexibility is valuable if you want to block certain users from certain functionality. At least one value is required. Possible values are described in the following table.

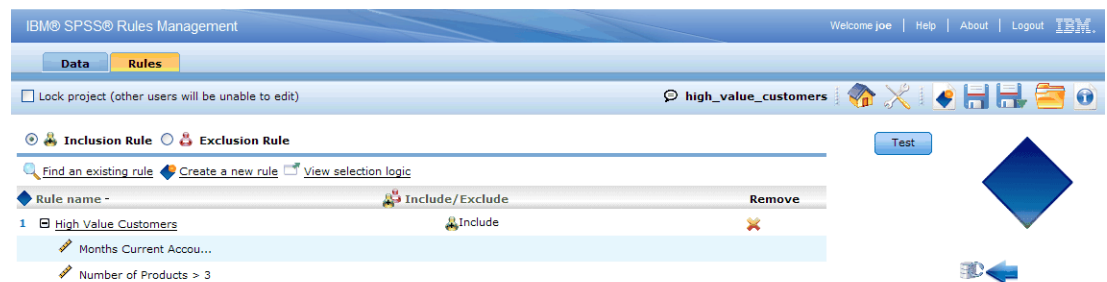
Note that inclusion of `UploadDownload` and `Collaboration` enables all other features.

| Possible values | Features enabled |
|---|--|
| <code><InterfaceFeature id="ModelExport"></code> | Ability to save models to the IBM® SPSS® Collaboration and Deployment Services Repository |
| <code><InterfaceFeature id="ModelBuild"></code> | Ability to build models in IBM® SPSS® Decision Management applications other than IBM SPSS Modeler Advantage |
| <code><InterfaceFeature id="RuleExport"></code> | Ability to save rules to the IBM SPSS Collaboration and Deployment Services Repository |
| <code><InterfaceFeature id="RuleReference"></code> | Ability to reference rules stored in the IBM SPSS Collaboration and Deployment Services Repository |
| <code><InterfaceFeature id="ModelReference"></code> | Ability to reference models stored in the IBM SPSS Collaboration and Deployment Services Repository |
| <code><InterfaceFeature id="UploadDownload"></code> | Ability to open files from or save files to the user's local file system |
| <code><InterfaceFeature id="Collaboration"></code> | The ability to reference or save objects to the IBM SPSS Collaboration and Deployment Services Repository |

IBM SPSS Rules Management template

IBM® SPSS® Rules Management provides a central tool for creating and editing shared rules, which can be used throughout applications to select and process records, and to automate decisions accordingly.

Figure 2-17
Rules management application



The template for SPSS Rules Management is shown below.

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
```

Licensed Materials - Property of IBM

IBM SPSS Products: Decision Management

(C) Copyright IBM Corp. 2010, 2011

US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP
Schedule Contract with IBM Corp.

->

```
<PredictiveApplication xmlns="http://com.spss.pasw.dms/workspace" templateName="RulesManagement"
templateVersion="1" appsVersion="6.1">
  <InterfaceControl>
    <InterfacePages>
      <ApplicationHome stepIncluded="true" showGallery="true"/>
      <DataStep stepIncluded="true"/>
      <GlobalSelectionStep stepIncluded="false"/>
      <DefineStep stepIncluded="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="typeRulesManagementDefineStep"/>
      <CombineOptimizeStep stepIncluded="false">
        <CombineOptimizeMethod/>
      </CombineOptimizeStep>
      <DeployScoreStep stepIncluded="false"/>
      <ReportStep stepIncluded="false"/>
    </InterfacePages>
    <InterfaceFeature id="Collaboration"/>
    <InterfaceFeature id="MetadataDownload"/>
  </InterfaceControl>
</PredictiveApplication>
```

- ▶ In this example, the application template XML file name is *RulesManagement.xml*:

```
templateName="RulesManagement"
```

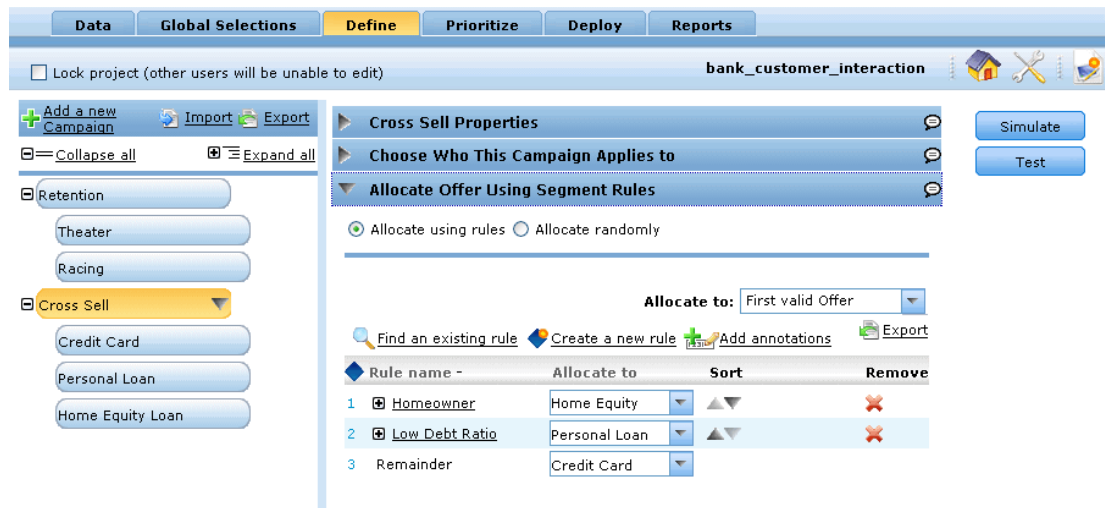
- ▶ This application has two tabs, Data and Rules. The only functionality included in this application is the `DefineStep` of the rules management type:

US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP
Schedule Contract with IBM Corp.

IBM SPSS Decision Management for Customer Interactions template

IBM® SPSS® Decision Management for Customer Interactions decides which promotions to offer customers when they contact your organization, and delivers recommendations to a call center, Web site, or store location in real time. By combining the logic of business rules with the insight gained through predictive modeling, the application identifies the most profitable decision for each customer. For more information, see the *IBM SPSS Decision Management for Customer Interactions* guide.

Figure 2-18
IBM SPSS Decision Management for Customer Interactions



The template for SPSS Decision Management for Customer Interaction is shown below.

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<!--
```

```
Licensed Materials - Property of IBM
```

```
IBM SPSS Products: Decision Management
```

```
(C) Copyright IBM Corp. 2010, 2011
```

```
US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP  
Schedule Contract with IBM Corp.
```

```
->
```

```
<PredictiveApplication xmlns="http://com.spss.pasw.dms/workspace" templateName="CustomerInteractionManagement" templateVersion="1.0">
  <InterfaceControl>
    <InterfacePages>
      <ApplicationHome stepIncluded="true" showGallery="true"/>
      <DataStep stepIncluded="true"/>
      <GlobalSelectionStep stepIncluded="true"/>
      <DefineStep stepIncluded="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="typeDecisionHierarchyDefinition">
        <PlanningSection enableInteractionPoints="true" enableStartEndDates="true"/>
        <SelectionSection enabled="true" enableModels="true"/>
        <AllocationRuleSection enabled="true"/>
        <AggregateRuleSection enabled="false"/>
        <PredictiveModelSection enabled="false"/>
      </DefineStep>
      <CombineOptimizeStep stepIncluded="true">
        <CombineOptimizeMethod enableNumReturnsByIP="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="typeCombineOptimizeMethod"/>
      </CombineOptimizeStep>
      <DeployScoreStep stepIncluded="true">
        <RealTimeScoring enableInteractiveQuestions="true"/>
      </DeployScoreStep>
      <ReportStep stepIncluded="true"/>
    </InterfacePages>
  </InterfaceControl>
</PredictiveApplication>
```

```

</InterfacePages>
<InterfaceFeature id="Collaboration"/>
<InterfaceFeature id="UploadDownload"/>
<InterfaceFeature id="MetadataDownload"/>
</InterfaceControl>
<EntityDimension name="Customer">
<Variable name="MaxOffersNum" dataType="integer" optimizationInputItem="true" prompt="Max Offer">
  <ValueSource xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="ConstantValueSource">
    <Value>1</Value>
  </ValueSource>
</Variable>
<Constraint type="max">
  <Boundary xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="VariableReferenceBoundary" value="MaxOffersNum">
    <Function Domain="double" Functor="variableReference">
      <Expression xmlns="http://com.spss.pasw.dms/rules" Domain="string">
        <Value>count</Value>
      </Expression>
    </Function>
  </Constraint>
</EntityDimension>
<Dimension name="Campaign">
  <Property>Name</Property>
  <Property>Category</Property>
  <Property>Organization</Property>
  <Property>Group</Property>
  <Property>Description</Property>
<Variable name="Prob.to Respond" dataType="double" simulateName="Offers Accepted" simulateAction="sum" optimizationInputItem="true" prompt="Prob.to Respond">
  <ValueSource xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="ConstantValueSource">
    <Value>0</Value>
  </ValueSource>
</Variable>
<Variable name="Min.Profit" dataType="double" optimizationInputItem="true" prompt="Min.Profit">
  <ValueSource xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="ConstantValueSource">
    <Value>0</Value>
  </ValueSource>
</Variable>
<Variable name="Revenue" dataType="double" optimizationInputItem="true" prompt="Revenue">
  <ValueSource xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="ConstantValueSource">
    <Value>0</Value>
  </ValueSource>
</Variable>
<Variable name="Cost" dataType="double" simulateAction="sum" simulateName="Total Cost" optimizationInputItem="true" prompt="Cost">
  <ValueSource xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="ConstantValueSource">
    <Value>0</Value>
  </ValueSource>
</Variable>
<Constraint type="min">
  <Boundary xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="VariableReferenceBoundary" value="Min.Profit">
    <Function Domain="double" Functor="variableReference">
      <Expression xmlns="http://com.spss.pasw.dms/rules" Domain="string">
        <Value>value</Value>
      </Expression>
    </Function>
  </Constraint>

```

```

    <Expression xmlns="http://com.spss.pasw.dms/rules" Domain="string">
      <Value>Objective</Value>
    </Expression>
    <Expression xmlns="http://com.spss.pasw.dms/rules" Domain="string">
      <Value>Expected Profit</Value>
    </Expression>
    <Expression xmlns="http://com.spss.pasw.dms/rules" Domain="string">
      <Value>Value</Value>
    </Expression>
  </Function>
</Constraint>
</Dimension>
<Dimension name="Offer" parentDimension="Campaign">
  <Property>Name</Property>
  <Property>Category</Property>
  <Property>Organization</Property>
  <Property>Group</Property>
  <Property>Description</Property>
</Dimension>
<Optimization algorithm="Heuristic">
  <ObjectiveFunction Domain="double" Functor="-" Name="Expected Profit">
    <Expression xmlns="http://com.spss.pasw.dms/rules" Domain="double" Functor="*">
      <Expression Domain="double" Functor="variableReference">
        <Expression>
          <Value>value</Value>
        </Expression>
        <Expression>
          <Value>Variable</Value>
        </Expression>
        <Expression>
          <Value>Prob.to Respond</Value>
        </Expression>
        <Expression>
          <Value>Value</Value>
        </Expression>
      </Expression>
      <Expression Domain="double" Functor="variableReference">
        <Expression>
          <Value>value</Value>
        </Expression>
        <Expression>
          <Value>Variable</Value>
        </Expression>
        <Expression>
          <Value>Revenue</Value>
        </Expression>
        <Expression>
          <Value>Value</Value>
        </Expression>
      </Expression>
    </Expression>
  </ObjectiveFunction>
  <Expression xmlns="http://com.spss.pasw.dms/rules" Domain="double" Functor="variableReference">

```



```

    <Expression>
      <Value>value</Value>
    </Expression>
    <Expression>
      <Value>Variable</Value>
    </Expression>
    <Expression>
      <Value>Cost</Value>
    </Expression>
    <Expression>
      <Value>Value</Value>
    </Expression>
  </Expression>
</ObjectiveFunction>
</Optimization>
<Deployment>
  <OutputAttribute referenceType="DimensionMember" name="Campaign" returnValue="Campaign.Allocation-Value">Campaign</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Offer" returnValue="Offer.Allocation-Value">Offer</OutputAttribute>
  <OutputAttribute referenceType="Objective" name="Expected Profit" returnValue="Expected Profit-Value">Output-PredictedProfit</OutputAttribute>
  <OutputAttribute referenceType="Variable" name="MaxOffersNum" returnValue="MaxOffersNum.Variable-Value">Output-MaxOffersNum</OutputAttribute>
  <OutputAttribute referenceType="Variable" name="Min.Profit" returnValue="Min.Profit.Variable-Value">Output-MinProfit</OutputAttribute>
  <OutputAttribute referenceType="Variable" name="Prob.to Respond" returnValue="Prob.to Respond.Variable-Value">Output-ProbToRespond</OutputAttribute>
  <OutputAttribute referenceType="Variable" name="Revenue" returnValue="Revenue.Variable-Value">Output-Revenue</OutputAttribute>
  <OutputAttribute referenceType="Variable" name="Cost" returnValue="Cost.Variable-Value">Output-Cost</OutputAttribute>
</Deployment>
</PredictiveApplication>

```

- In this example, the application template XML file name is *CustomerInteractionManagement.xml*:

```
templateName="CustomerInteractionManagement"
```

- This application has six tabs – Data, Global Selections, Define, Prioritize (CombineOptimize), Deploy, and Reports:

US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

→

```

<PredictiveApplication xmlns="http://com.spss.pasw.dms/workspace" templateName="CustomerInteractionManagement" templateVersion="1.0">
  <InterfaceControl>
    <InterfacePages>
      <ApplicationHome stepIncluded="true" showGallery="true"/>
      <DataStep stepIncluded="true"/>
      <GlobalSelectionStep stepIncluded="true"/>
      <DefineStep stepIncluded="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="typeDecisionHierarchyDefinition" >
        <PlanningSection enableInteractionPoints="true" enableStartEndDates="true"/>
        <SelectionSection enabled="true" enableModels="true"/>
        <AllocationRuleSection enabled="true"/>
        <AggregateRuleSection enabled="false"/>
        <PredictiveModelSection enabled="false"/>
      </DefineStep>
      <CombineOptimizeStep stepIncluded="true">
        <CombineOptimizeMethod enableNumReturnsByIP="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="typeCombineOptimizeMethod">

```

- ▶ This application's XML also defines a top-level entity dimension (`Customer`), and two main dimension members (`Campaign` and `Offer`). Note that variable names are defined for the dimensions. These are hard-coded in the XML application template rather than defined in the screen text properties files.

Applications can only have one level of children per dimension (on the Define tab, the user interface cannot display more than one level under each dimension).

```
<ReportStep stepIncluded="true"/>
```

```
.  
.
.
```

```
</Function>
```

```
.  
.
.
```

```
<Expression Domain="double" Functor="variableReference">
```

- ▶ The `Optimization` element defines the equation used to “value” each potential result by the optimization algorithm as it strives to find the solution with the minimum or maximum value. For this release, the only supported algorithm is `Heuristic`, which indicates that the “greedy” prioritization form of optimization will be used. You can also specify `None` to disable the use of the optimization.

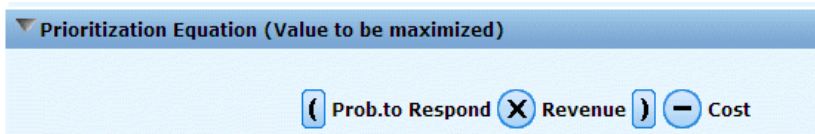
```
<Expression>
```

```
.  
.
.
```

The `Optimization` element contains the `ObjectiveFunction`. If you want to customize the objective function (the prioritization equation) used in an application, contact your SPSS representative if you have questions.

The equation used in the sample SPSS Decision Management for Customer Interaction is displayed on the Prioritize tab in the user interface:

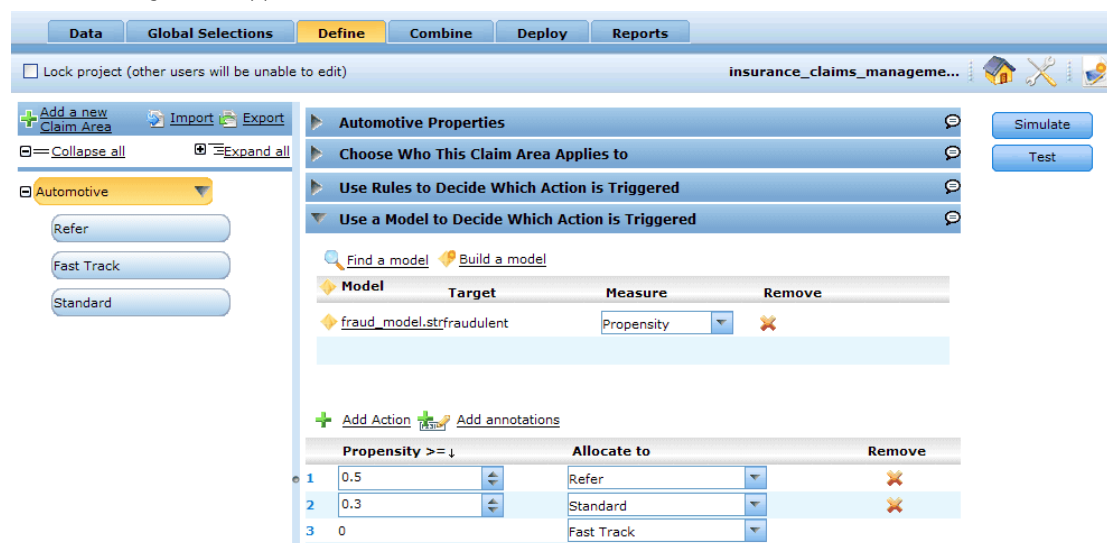
Figure 2-19
Prioritization equation



IBM SPSS Decision Management for Claims template

Using IBM® SPSS® Decision Management for Claims, organizations can harness the power of predictive analytics to process incoming claims in real time. For example, claims can be set on a “fast track” for immediate payment, processed in the normal manner, or referred to the special investigations unit. For more information, see the *IBM SPSS Decision Management for Claims* guide.

Figure 2-20
Claims management application



The template for SPSS Decision Management for Claims is shown below.

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<!--
```

```
Licensed Materials - Property of IBM
```

```
IBM SPSS Products: Decision Management
```

```
(C) Copyright IBM Corp. 2010, 2011
```

```
US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP  
Schedule Contract with IBM Corp.
```

```
->
```

```
<PredictiveApplication xmlns="http://com.spss.pasw.dms/workspace" templateName="ClaimsManagement"  
templateVersion="1" appsVersion="6.1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
```

```
<InterfaceControl>
```

```
<InterfacePages>
```

```
<ApplicationHome stepIncluded="true" showGallery="true"/>
```

```
<DataStep stepIncluded="true"/>
```

```
<GlobalSelectionStep stepIncluded="true"/>
```

```
<DefineStep stepIncluded="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
xsi:type="typeDecisionHierarchyDefineStep">
```

```
<SelectionSection enabled="true" enableModels="true"/>
```

```
<AggregateRuleSection enabled="true"/>
```

```

    <PredictiveModelSection enabled="true"/>
    <AllocationRuleSection enabled="false"/>
    <PlanningSection enableInteractionPoints="true" enableStartEndDates="true"/>
  </DefineStep>
  <CombineOptimizeStep stepIncluded="true" hasInteractionPointSection="true"
  lockInteractionPointSection="false" enableSimulation="true" enableTest="true">
    <CombineOptimizeMethod/>
  </CombineOptimizeStep>
  <DeployScoreStep stepIncluded="true">
    <RealTimeScoring enableInteractiveQuestions="true"/>
  </DeployScoreStep>
  <ReportStep stepIncluded="true"/>
</InterfacePages>
<InterfaceFeature id="Collaboration"/>
<InterfaceFeature id="UploadDownload"/>
<InterfaceFeature id="MetadataDownload"/>
</InterfaceControl>
<EntityDimension name="Claim"/>
<Dimension name="Claim Area">
  <Property>Name</Property>
  <Property>Category</Property>
  <Property>Organization</Property>
  <Property>Group</Property>
  <Property>Description</Property>
</Dimension>
<Dimension name="Action" parentDimension="Claim Area">
  <Property>Name</Property>
  <Property>Category</Property>
  <Property>Organization</Property>
  <Property>Group</Property>
  <Property>Description</Property>
</Dimension>
<Optimization algorithm="None">
  <ObjectiveFunction/>
</Optimization>
<Deployment>
  <OutputAttribute referenceType="DimensionMember" name="Claim Area"
  returnValue="Claim Area.Allocation-Value">Claim Area</OutputAttribute>
  <OutputAttribute referenceType="DimensionMember" name="Action"
  returnValue="Action.Allocation-Value">Action</OutputAttribute>
</Deployment>
</PredictiveApplication>

```

- In this example, the application template XML file name is *ClaimsManagement.xml*:

```
templateName="ClaimsManagement"
```

- This application has six tabs – Data, Global Selections, Define, Combine, Deploy, and Reports:

(C) Copyright IBM Corp. 2010, 2011

US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP
Schedule Contract with IBM Corp.

```

->
<PredictiveApplication xmlns="http://com.spss.pasw.dms/workspace" templateName="ClaimsManagement"
templateVersion="1" appsVersion="6.1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <InterfaceControl>
    <InterfacePages>
      <ApplicationHome stepIncluded="true" showGallery="true"/>
      <DataStep stepIncluded="true"/>
      <GlobalSelectionStep stepIncluded="true"/>
      <DefineStep stepIncluded="true" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="typeDecisionHierarchyDefineStep">
        <SelectionSection enabled="true" enableModels="true"/>
        <AggregateRuleSection enabled="true"/>
        <PredictiveModelSection enabled="true"/>
        <AllocationRuleSection enabled="false"/>
      </DefineStep>
    </InterfacePages>
  </InterfaceControl>
</PredictiveApplication>

```

- This application's XML also defines a top-level entity dimension (`Claim`) and two main dimension members (`Claim Area` and `Action`) and their dimension members. These dimensions will be displayed on the Define tab in the user interface.

Applications can only have one level of children per dimension (on the Define tab, the user interface cannot display more than one level under each dimension).

```

</DefineStep>
  <CombineOptimizeStep stepIncluded="true" hasInteractionPointSection="true"
lockInteractionPointSection="false" enableSimulation="true" enableTest="true">
    <CombineOptimizeMethod/>
  </CombineOptimizeStep>
  <DeployScoreStep stepIncluded="true">
    <RealTimeScoring enableInteractiveQuestions="true"/>
  </DeployScoreStep>
  <ReportStep stepIncluded="true"/>
</InterfacePages>
<InterfaceFeature id="Collaboration"/>
<InterfaceFeature id="UploadDownload"/>
<InterfaceFeature id="MetadataDownload"/>
</InterfaceControl>
<EntityDimension name="Claim"/>

```

Customizing the user interface

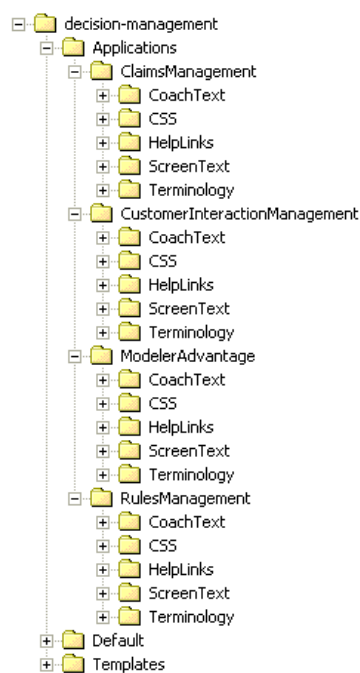
File locations

IBM® SPSS® Decision Management provides a framework for customizing the appearance of your applications. You can modify various files to customize the look and feel and the text displayed in the user interface. The process for modifying these files is described in this chapter. We recommend using a simple text editor such as Microsoft® Notepad to edit all *.css* and *.properties* files.

The default user interface files for SPSS Decision Management are installed in the IBM® SPSS® Collaboration and Deployment Services installation directory, for example *C:\Program Files\IBM\SPSS\Collaboration and Deployment Services\4.2\components\decision-management\Default*. To customize all applications, modify files in the *Default* directory. To customize one application and leave all others with the default settings, copy **only** the required directories and files from *Default* to a new application directory. For example, if you only want to customize CSS and coach text for a certain application, you only need to copy those folders – and you only need to copy the specific files and settings you want to customize. Settings in your application directory override those in *Default*.

For example, if you have four different applications—all with a unique look and feel—the directory structure might look like this:

Figure 3-1
Example directory structure



Important: Before you begin, we recommend making a backup copy of the entire *decision-management* directory.

General steps for customizing an application

After creating an application template as described in the previous chapter, follow these general steps to customize the look and feel of your application. The remaining sections in this chapter provide complete details for these general steps.

1. In the *Applications* directory, create a new folder for your application (for example, *YourApp*) as discussed in the previous chapter.
2. Copy all folders and files (or only the files you plan to customize) from an existing application and paste into your new application's directory. Choose an existing application that most closely resembles the application you want to create. For example, if you installed the prebuilt IBM® SPSS® Decision Management for Claims you can copy the contents of the *ClaimsManagement* directory into your new *YourApp* directory.
3. Open the *Default* directory and copy any other elements you want to customize, and paste them into your application's directory. For example, if you want to create custom terminology, copy the *Terminology* directory.

Your application folder only needs to contain the files you want to customize. All other files will be read from *Default*. Even within each file, you only need to include the portions you want to customize. For example, if customizing screen text, *ScreenText_en.properties* only needs to contain the text you are customizing. All other text will be read from *Default*. In other words, any item or file not explicitly defined or contained within your application directory will be handled by the *Default* directory.

4. Copy the *appGroup.xml* file and *description.xml* file from an existing application and paste it into your new application's folder (for example, into *YourApp*).

Edit the *appGroup.xml* file to reference the folders containing any files you plan to customize in your application's folder (see [Chapter 2](#) for details). Edit the *description.xml* file to specify the text used in your application's shortcut box on the *Applications launch page* (see [Chapter 2](#) for details).

5. Use the instructions in this chapter to customize your application's user interface.

Tip: When customizing files on the machine where IBM SPSS Collaboration and Deployment Services is installed, you can share the *decision-management* directory to edit the files from any other machine on your network. See your operating system documentation for details about sharing directories and files.

Note that you cannot customize the Login screen.

User interface text

You can customize all text displayed in your application to tailor the product for your company's needs. Such text includes:

Coach text: Coach text is brief, helpful, easily customizable text that appears throughout the user interface when you click the small coach text icon:



Coach text is separate from the full, browsable help system. The full help system is available by clicking the help icon on any screen or dialog:



The help system contains general information about the user interface and is not customizable, whereas the coach text can be personalized to be very specific to your application, industry, or company. Coach text is stored in *CoachText_en.properties* files, where *en* is the language.

Messages: Message text consists of all messages in the application, including errors, warnings, and information messages. Messages are stored in *Messages_en.properties* files, where *en* is the language.

Screen text: Screen text is text used on user interface elements such as tabs, buttons, dialog titles, and field labels. Screen text is stored in *ScreenText_en.properties* files, where *en* is the language. Note that the text used in shortcut boxes on the *Applications launch page* is handled in a special way with a *description.xml* file (see [Chapter 2](#) for details).

Terminology: Terminology refers to a custom list of terms used in your application. You can use terminology to replace certain terms such as *model* or *score* with terms more familiar to your users. Each term has a unique ID that can be referenced from other areas of the application such as coach text, message text, and screen text. Terminology definitions are stored in *Terminology_en.properties* files, where *en* is the language.

Language support

User interface text is stored in property files in the IBM® SPSS® Collaboration and Deployment Services installation directory (for example, *C:\Program Files\IBM\SPSS\Collaboration and Deployment Services\4.2\components\decision-management\Default\ScreenText*).

The property files shipped with IBM® SPSS® Decision Management are provided in multiple languages. Each file name includes the language code according to W3C definition standards (*_en*, *_de*, or *_ja*). If you need another language, you can create your own properties files with the proper language code and translate the content from the shipped files. Make sure you save

the files in ASCII format. The following table provides some example language codes. You can perform a simple Internet search to find other language codes.

Each user can easily change the language of his or her application without having to restart any servers. For example, German-speaking users, English-speaking users, and Japanese-speaking users can all be using the same application in their own language. From the Tools menu in your browser, go to Internet Options or Options, switch to the desired language, and then refresh the screen.

| Language | Language code | Example file name |
|----------|---------------|--------------------------------|
| Chinese | zh | <i>CoachText_zh.properties</i> |
| Dutch | nl | <i>CoachText_nl.properties</i> |
| English | en | <i>CoachText_en.properties</i> |
| French | fr | <i>CoachText_fr.properties</i> |
| German | de | <i>CoachText_de.properties</i> |
| Italian | it | <i>CoachText_it.properties</i> |
| Japanese | ja | <i>CoachText_ja.properties</i> |
| Spanish | es | <i>CoachText_es.properties</i> |

The following sections include the syntax of each properties file you can customize, including examples. As a precaution, save a copy of all original files before proceeding (we recommend saving a copy of the entire *decision-management* directory). This allows you to revert to the original files in the future, if necessary.

Note that each application directory includes a *description.xml* file that defines the text used in shortcut boxes on the *Applications launch page*. This file works differently than properties files, in that content for all languages is included within the file. For example, the English section for the IBM® SPSS® Decision Management for Claims is defined as follows:

```
<en>
  <TitleEntry>Claims Management</TitleEntry>
  <ShortDescription>Intelligent risk management in real time</ShortDescription>
  <LongDescription>Assess the overall risk level for incoming claims and recommend the specific action to take.</LongDescription>
</en>
```

English, German, and Japanese sections are included. To add your own language, simply create a new section (for example, `<fr>`) and customize the text to meet your needs.

If text in *description.xml* is missing or not configured correctly and cannot be read by the application, the application will then read it from *appGroup.xml*.

Coach text

Certain areas of the user interface provide coach text. Each area has a unique name identifying it in the coach text properties file. Entries in the coach text properties file are listed in the order they appear in the user interface. Follow the instructions in this section to customize the coach text in all applications or in one specific application. See [File locations on p. 40](#) for details about file locations.

Important: Do not modify any IDs in the coach text properties files. Only modify text after the equals sign (=). For example, in HOME_DATASTEP_TITLE=Data, HOME_DATASTEP_TITLE is the ID and should never be modified.

To customize coach text across all applications

1. Open the file *Default\CoachText\CoachText_en.properties*, where *en* is the desired language.
2. Make the desired changes, save, and close. Note that any customizations made to coach text in an application override the default coach text.

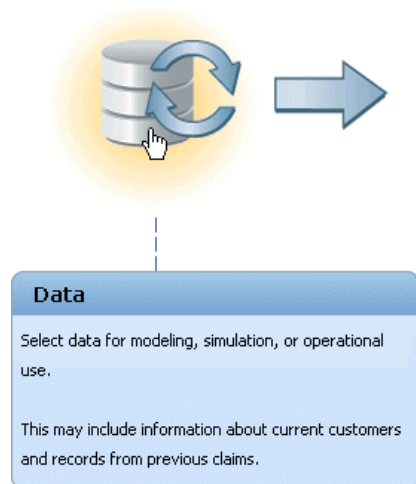
To customize coach text in one application

1. Open the file *Applications\YourApp\CoachText\CoachText_en.properties*, where *YourApp* is the name of your application's folder and *en* is the desired language. If this file does not yet exist, copy it from *Default/CoachText* and remove all sections from it except for those you plan to customize.
2. Make the desired changes, save, and close.

Examples

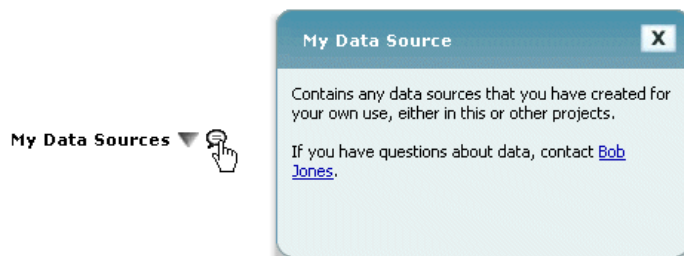
- To change the special “hover” style coach text used for the Data step icon on the Home page, modify the following lines in the coach text properties file. Modify the text after HOME_DATASTEP_TITLE= to change the title of the coach text window, or modify the text after HOME_DATASTEP_CONTENT to change the main text displayed in the coach text window.

```
HOME_DATASTEP_TITLE=Data
HOME_DATASTEP_CONTENT=Select data for modeling, simulation, or operational use.  
This may include information about current customers and results from previous claims.
```



- You can include simple HTML elements in coach text such as links, bold and italic text, etc. For example, to include an e-mail link so users can easily contact someone in your organization, include something like the following in the coach text properties file. The link in this example opens a new, blank e-mail message when the user clicks it from coach text on the Data tab.

```
DATA_SOURCE_MY_TITLE=My Data Source
DATA_SOURCE_MY_CONTENT=Contains any data sources that you have created for your
own use, either in this or other projects.<br/><br/>If you have questions about
data, contact <a href="mailto:bobjones@sdbank.com">Bob Jones</a>.
```



Message text

You can customize the text used in warning, error, and informational messages. Follow the instructions in this section to customize the message text in all applications or in one specific application. See [File locations on p. 40](#) for details about file locations.

Important: Do not modify any IDs in the message properties files. Only modify text after the equals sign (=). For example, in LOGIN_FAILED=Login unsuccessful, LOGIN_FAILED is the ID and should never be modified.

To customize messages across all applications

1. Open the file *Default\Message\Message_en.properties*, where *en* is the desired language.
2. Make the desired changes, save, and close. Note that any customizations made to messages in an application override the default messages.

To customize messages in one application

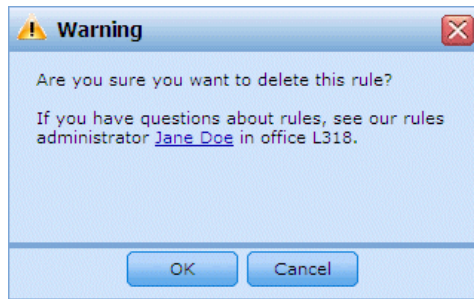
1. Open the file *Applications\YourApp\Message\Message_en.properties*, where *YourApp* is the name of your application's directory and *en* is the desired language. If this file does not yet exist, copy it from *Default/Message* and remove all sections from it except for those you plan to customize.
2. Make the desired changes, save, and close.

Example

To change the error message displayed when a user fails to log in to IBM® SPSS® Decision Management, modify the following line in the appropriate message properties file. Only modify the text after LOGIN_FAILED=.

For example, you may want to include the name of an administrator users should contact at your company for login-related issues.

```
DELETE_RULE=Are you sure you want to delete this rule?<br/><br/>If
you have questions about rules, see our rules administrator <a
href="mailto:janedoe@sdbank.com">Jane Doe</a> in office L318.
```



Screen text

Text such as dialog headings, field labels, tab labels, and button labels can be customized. Follow the instructions in this section to customize screen text in all applications or in one specific application. See [File locations on p. 40](#) for details about file locations.

Important: Do not modify any IDs in the screen text properties files. Only modify text after the equals sign (=). For example, in `TOOLTIP_NEW_MODEL=New model`, `TOOLTIP_NEW_MODEL` is the ID and should never be modified.

To customize screen text across all applications

1. Open the file `Default\ScreenText\ScreenText_en.properties`, where *en* is the desired language.
2. Make the desired changes, save, and close. Note that any customizations made to screen text in an application override the default screen text.

To customize screen text in one application

1. Open the file `Applications\YourApp\ScreenText\ScreenText_en.properties`, where *YourApp* is the name of your application's directory and *en* is the desired language. If this file does not yet exist, copy it from `Default/ScreenText` and remove all sections from it except for those you plan to customize.
2. Make the desired changes, save, and close.

Example

To change the name of the main section headings on the Data tab, modify the following values in the appropriate screen text properties file.

```
#####
# Screen text used on Data tab
#####
Project_Data_Model=Project Data Model
Data_source=Data source
```



Terminology

You can customize terminology used in your applications to fit your business needs. You can also add new terms. Each term has a unique ID that can be referenced in other areas of the application such as coach text windows, messages, and screen text. Follow the instructions in this section to create custom terms in all applications or one specific application. See [File locations on p. 40](#) for details about file locations.

To add custom terminology across all applications

1. Open the file *Default\Terminology\Terminology_en.properties*, where *en* is the desired language.
2. Modify or add one or more terminology definitions. Each term must have a unique ID.
3. Insert the appropriate terminology tag into the desired coach text, screen text, or messages properties files. Use the syntax `<#:DataStep>`, where *DataStep* is the ID from the terminology properties file.

To add custom terminology to one application

1. Open the file *Applications\YourApp\Terminology\Terminology_en.properties*, where *YourApp* is the name of your application's directory and *en* is the desired language. If this file does not yet exist, copy it from *Default\Terminology* and remove all sections from it except for those you plan to customize.
2. Modify or add one or more terminology definitions.
3. Insert the appropriate terminology tag into the desired coach text, screen text, or messages properties files located in your application's directory (for example, *Applications\YourApp*).

Example

The prebuilt applications included with the product use terminology variables for all tab names in the user interface. For example, the IBM® SPSS® Decision Management for Claims defines the following terminology variables in its *Terminology_en.properties* file:

```
#####
# Variables for names of tabs in UI
#####
ApplicationHome=Home
DataStep=Data
GlobalSelectionStep=Global Selections
DefineStep=Define
CombineOptimizeStep=Combine
DeployScoreStep=Deploy
ReportStep=Reports
```

And then the SPSS Decision Management for Claims uses those terminology variables in its *ScreenText_en.properties* file:

```
#####
# Name of each step/tab in the UI. These may differ per application type
#####
ApplicationHome=<#:ApplicationHome>
```

```
DataStep=<#:DataStep>
GlobalSelectionStep=<#:GlobalSelectionStep>
DefineStep=<#:DefineStep>
CombineOptimizeStep=<#:CombineOptimizeStep>
DeployScoreStep=<#:DeployScoreStep>
ReportStep=<#:ReportStep>
```

To change the name of the *Combine* tab to *Prioritize*, simply change `CombineOptimizeStep=Combine` to `CombineOptimizeStep=Prioritize` in the *Terminology_en.properties* file. The new tab name will then be used in every spot where the terminology variable is inserted (for example, it is also used in the coach text for the SPSS Decision Management for Claims, as shown below).

```
#####
# Following entries are for hover-style coach text on Home screen
#####

HOME_DATASTEP_TITLE=<#:DataStep>
HOME_DATASTEP_CONTENT=Select data for modeling, simulation, or operational
use.<br/><br/>This may include information about current customers and
records from previous claims.

HOME_GLOBALSELECTIONSTEP_TITLE=<#:GlobalSelectionStep>
HOME_GLOBALSELECTIONSTEP_CONTENT=Choose claims you want to include or exclude
from the application.<br/><br/>For example, all claims relating to floods or
windshield damage may be excluded due to special handling requirements.

HOME_DEFINESTEP_TITLE=<#:DefineStep>
HOME_DEFINESTEP_CONTENT=Define the types of claims and possible actions along
with the rules and models for determining the likelihood of fraud.

HOME_COMBINEOPTIMIZESTEP_TITLE=<#:CombineOptimizeStep>
HOME_COMBINEOPTIMIZESTEP_CONTENT=Specify how rules and models are combined to
determine the recommended action for each claim.

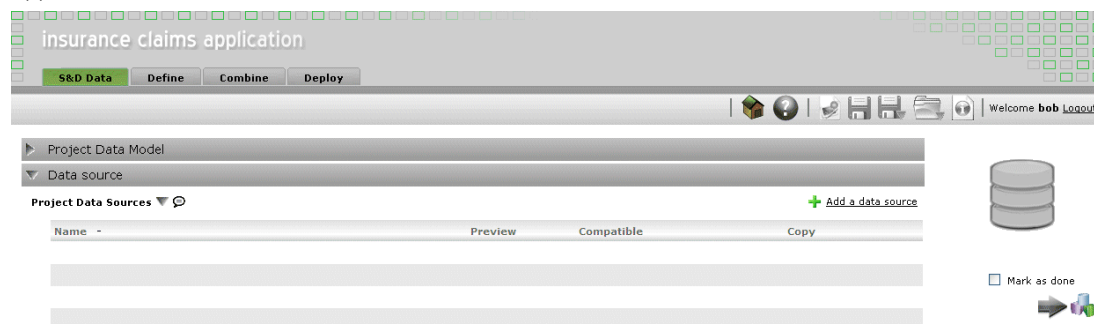
HOME_DEPLOYSCORESTEP_TITLE=<#:DeployScoreStep>
HOME_DEPLOYSCORESTEP_CONTENT=Validate your current configuration and mark it
ready to be deployed.
```

Look and feel

You can change the appearance of your applications by modifying graphics files and cascading style sheets (.css). Experience with graphics and style sheets is recommended for modifying elements such as:

- Colors
- Borders
- Background properties
- Size and position of elements
- Margins and padding
- Fonts and text properties

Figure 3-2
Application with custom look and feel

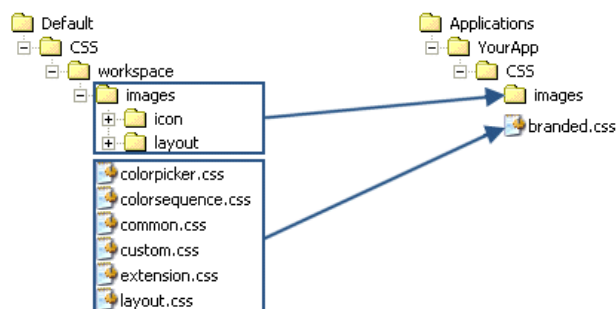


Note that styles cascade. The default styles and images are applied unless any are customized in your application, in which case they override the default. For example, if the only portion of your application you want to customize is the font, you can either change the values in the following section of the default CSS (*layout.css*) to change the font for all applications, or copy the section from *layout.css* to the custom CSS for your application (*branded.css*) to only change the font there. In the latter scenario, the *branded.css* file for your application would only need to contain the following section, and all other styles and settings will be applied from the default styles.

```
body,table td,select,pre,.gwt-Button {
    font-family: Verdana, Arial, Helvetica, sans-serif;
    font-size: 12px;
}
```

The following figure illustrates the process of customizing a single application, while leaving the default alone. This is the recommended method. To customize graphics, copy the graphics you want to customize from the default images folders to the images folder in your application directory, then modify them (or create new images files in your application directory of the correct file name, size, and folder location). To customize *.css* settings, open any or all of the default *.css* files and copy the sections you want to customize into your application's *branded.css* file.

Figure 3-3
Copying graphics and CSS settings from default



The same general process should be used for [customizing user interface text](#).

Customizing style sheets and graphics

Graphics and style sheets are stored in the IBM® SPSS® Collaboration and Deployment Services directory, for example *C:\Program Files\IBM\SPSS\Collaboration and Deployment Services\4.2\components\decision-management\Default\CSS*). Use the following steps to modify the style sheets and/or graphics for your application.

To customize CSS and graphics across all applications

1. In the *Default\CSS* folder, modify settings in one or more CSS files.
2. In the *Default\CSS\images* folder, edit any graphics files (*.gif*) in graphics software of your choice to make any desired changes, or replace the graphics with your own. Note that if you change the dimensions of a graphic, you also need to search the CSS for the graphic file name and update the defined pixel dimensions.

To customize CSS and graphics in one application

1. In the *CSS* folder of the application you want to customize (for example, *Applications\YourApp\CSS*), open the file *branded.css*.
2. Copy any sections you want to change from the default CSS files (*common.css*, *custom.css*, *extension.css*, *layout.css*) into *branded.css*. Note that you can only customize *colorpicker.css* across all applications (you cannot have unique settings per application). The file defines which colors are available for labels in the user interface.
3. Modify sections in *branded.css* as desired, save, and close.
4. Open your application's *appGroup.xml* file and set the `<CssFileSpec>` value to your application's *branded.css* stylesheet. Without this setting, your application would apply all default styles. For example:

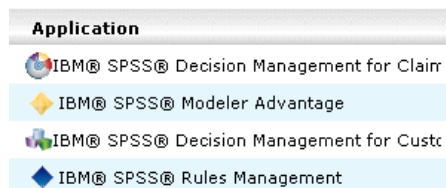
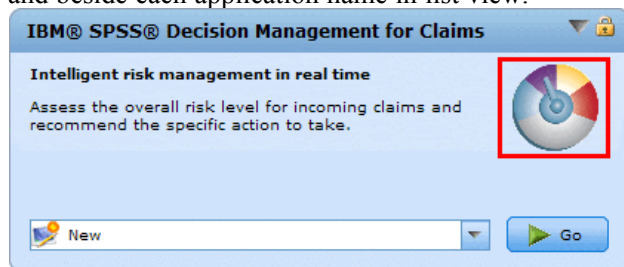
```
<CssFileSpec>/Applications/YourApp/CSS/branded.css</CssFileSpec>
```

Note: Changes aren't always reflected in the user interface immediately. You may need to wait a few minutes and refresh your web browser.

Examples

To change the graphics used on the applications launch page

On the *Applications launch page*, small graphics are used in the shortcut box for each application and beside each application name in list view:



The process for customizing these graphics is a bit different than for other graphics. You must modify settings in the default *custom.css* file (*Default\CSS\workspace\custom.css*). The shortcut graphics for each prebuilt application are defined in the CSS as follows:

```

cursor: hand;
  cursor: pointer;
}

.quickLaunch-page-layout {
  width: 98%;
  padding-top: 5px;
  padding-left: 5px;
  padding-right: 5px;
}

.launcher_customerinteractionmanagement_icon {
  width: 57px;
  height: 51px;
  background: url("images/icon/LAUNCHER_customer_interactions.gif")
    no-repeat scroll 0 0;
}

.launcher_claimsmanagement_icon {
  width: 58px;
  height: 58px;
  background: url("images/icon/LAUNCHER_claims_processing.gif") no-repeat
    scroll 0 0;
}

```

```
.launcher_rulesmanagement_icon {
    width: 43px;
    height: 44px;

    .launcher_YourApp_icon {
        width: 58px;
        height: 45px;
        background: url("images/icon/LAUNCHER_YourApp.gif") no-repeat
        scroll 0 0;
    }
}
```

And the small graphics for the list view are defined as follows:

```
width: 19px;
height: 23px;
background: url("images/icon/object_model_A.gif");
}

.model-dl-stream-icon {
    width: 18px;
    height: 18px;
    background: url("images/icon/object_model_DL.gif");
}

.pa-stream-icon {
    width: 21px;
    height: 19px;
    background: url("images/icon/object_project.gif");
}

.rule-stream-icon {
    width: 15px;
    height: 17px;
    background: url("images/icon/object_rule.gif");
    vertical-align: middle;
}

.ruleset-stream-icon {
    width: 20px;
    height: 16px;

    .launcher_list_YourApp_icon {
        width: 16px;
        height: 16px;
        background: transparent
        url("images/icon/LAUNCHER_list_YourApp.gif") no-repeat;
    }
}
```

- If you want to customize the graphic for an existing prebuilt application, simply modify the graphics defined in the css (for example, to customize the IBM® SPSS® Modeler Advantage graphics, edit *LAUNCHER_modeler_advantage.gif* and *LAUNCHER_list_modeler_advantage.gif*).

- ▶ If you want to create new graphics for a new application, add your graphics to the default icon folder and then add new CSS settings. For example, if your XML application template file name is *YourApp.xml*, you would add the appropriate CSS settings to *custom.css* as shown above. Be sure the `width` and `height` definitions are correct for your new graphics.

To change the colors available in the color picker

- ▶ To customize the colors available in the color picker, modify the file `Default\CSS\workspace\colorpicker.css`. The color picker is used for label colors on the Deploy tab and the matrix on the Combine tab of certain applications. You can change existing color values or add as many new colors as you like. Note that you can only customize these colors in the default CSS for all applications—you cannot customize them per application.

You can use the name of a color or the hex value (for example, red is #FF0000).

Figure 3-4
Color picker



```

/*
 * Licensed Materials - Property of IBM
 *
 * IBM SPSS Products: Decision Management
 *
 * © Copyright IBM Corp. 2010, 2011
 *
 * US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA
 * Schedule Contract with IBM Corp.
 */
.colorpicker0
{
  background-color: White;
}
.colorpicker1
{
  background-color: red;
}
.colorpicker2
{
  background-color: Pink;
}
.colorpicker3
{
.
.
.

```

Scoring Service configuration

Scoring includes the process of generating real-time values by supplying predictive models with input data. In general, to use a model for generating scores:

- ▶ Select a model from the IBM® SPSS® Collaboration and Deployment Services Repository to use for scoring.
- ▶ In IBM® SPSS® Collaboration and Deployment Services Deployment Manager, define a scoring configurations for the model.
- ▶ Supply the configured model with data and generate scores.

Scoring is now a component of IBM® SPSS® Collaboration and Deployment Services. This chapter provides brief information specific to IBM® SPSS® Decision Management regarding the IBM SPSS Collaboration and Deployment Services Scoring Service.

For complete information about scoring, see the *Scoring* chapter of the *IBM® SPSS® Collaboration and Deployment Services Deployment Manager User's Guide (UsersGuide.pdf)*. The guide is included on the IBM SPSS Collaboration and Deployment Services installation disc and installed with IBM SPSS Collaboration and Deployment Services.

IBM SPSS Decision Management and the Scoring Service

The general process for scoring IBM® SPSS® Decision Management applications is as follows:

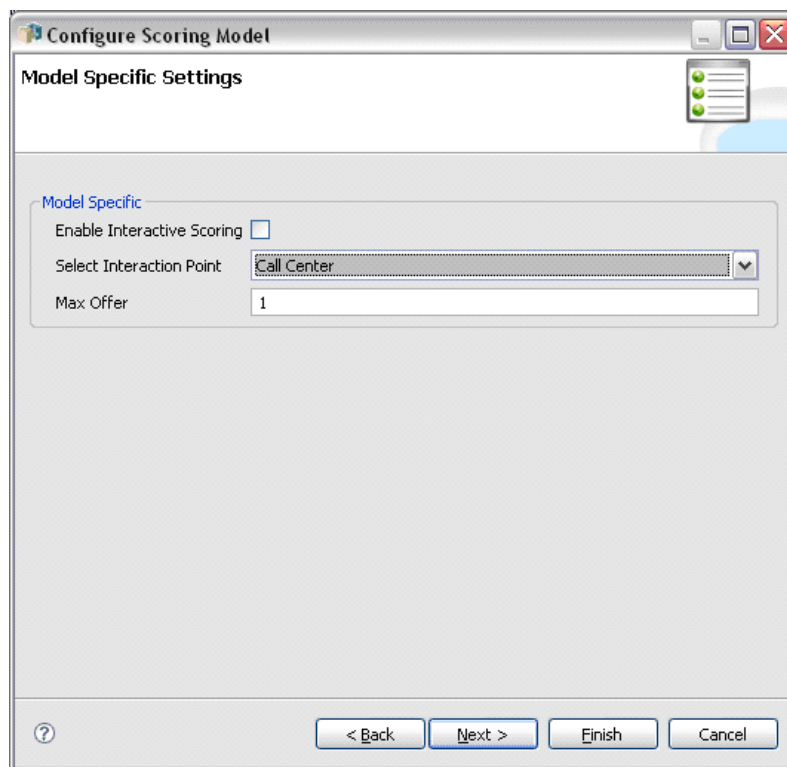
- ▶ A IBM® SPSS® Modeler stream (.str file) is automatically created in the repository when the end user saves a SPSS Decision Management application workspace.
- ▶ The SPSS Modeler stream can then be used with the Scoring Service. In IBM® SPSS® Collaboration and Deployment Services Deployment Manager, create a scoring configuration. When creating the scoring configuration, some SPSS Decision Management-specific dialogs must be completed to enable interactive scoring, select interaction points (if configured), and set global variables (such as *Max Offers*, for example).

Creating a Scoring Service Configuration

You need to use Deployment Manager to create a scoring configuration. For complete instructions, see the help in Deployment Manager. Keep the following SPSS Decision Management-specific points in mind when creating scoring configurations.

Model Specific Settings

Figure 4-1
Creating a Scoring Service configuration in IBM SPSS Collaboration and Deployment Services
Deployment Manager



Enable Interactive Scoring. If your application (stream) supports interactive scoring, you can select this option to choose whether interactive scoring is enabled for the scoring configuration. If enabled, and if the Scoring Service does not have all the inputs needed, a *MissingDataException* will be returned that identifies the missing data (fields), and the interactive question that can be used to prompt for the needed values. The caller can then prompt for the missing data and call the Scoring Service again (passing all data). Interactive scoring is configured on the Deploy tab in the SPSS Decision Management application (see below).

- While *MissingDataException* can identify multiple pieces of missing data, it does not necessarily identify all missing data. *MissingDataException* will communicate which data is missing at the current stage of processing.
- If Enable Interactive Scoring is not enabled, you get a *MissingDataException* without any interactive questions.

Select Interaction Point. If your application uses multiple interaction points, you can select which interaction point the configuration should use in the Model Specific Settings dialog box. Interaction points specify where an item such as a campaign or offer applies. Options might include a call center, web site, ATM, or in-store location. Administrators can predefine the interaction points available for selection by business users. The interaction points defined are

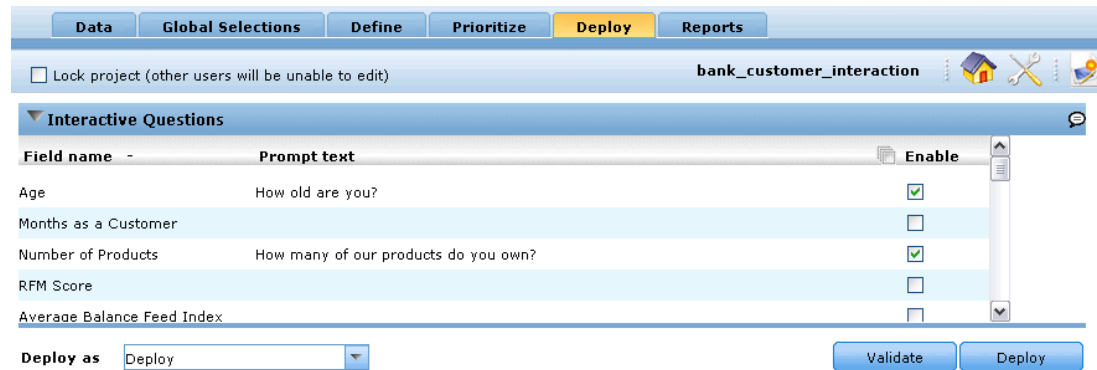
displayed to business users on the Define tab, in the properties section. You can create multiple scoring configurations in Deployment Manager—one for each interaction point.

Max Offer. Note that *Max Offer* is an example of a field that might be displayed in the Deployment Manager dialog. It's actually a variable defined for the entity dimension in your application's XML template file.

Configuring Model Specific Settings in IBM SPSS Decision Management

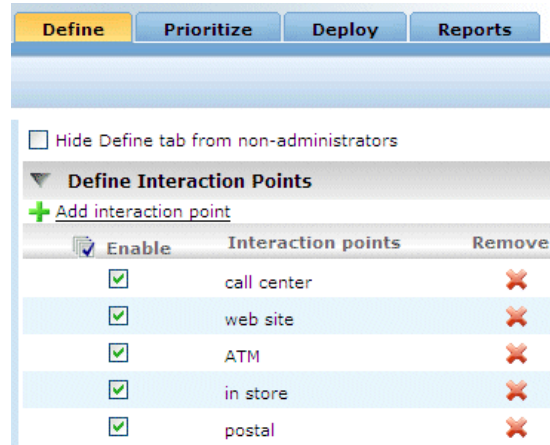
The model specific settings displayed in the scoring configuration are defined in SPSS Decision Management. Interactive scoring is performed on a per-field basis, and is configured on the Deploy tab.

Figure 4-2
Configuring interactive questions on the Deploy tab in the application



The available interaction points, if any, are configured for each application by an administrator.

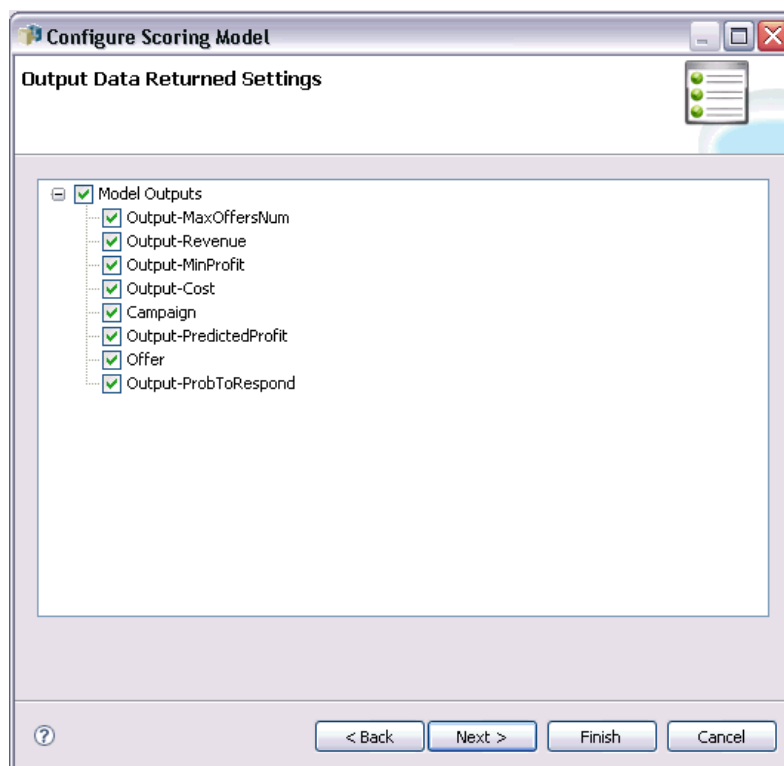
Figure 4-3
Defining interaction points in IBM SPSS Decision Management



Choosing Model Outputs

In the scoring configuration, you can choose which model outputs to include with the results. The available outputs are defined in the `Deployment` element in the XML template. [For more information, see the topic Configuring scoring output for deployment in Chapter 2 on p. 16.](#)

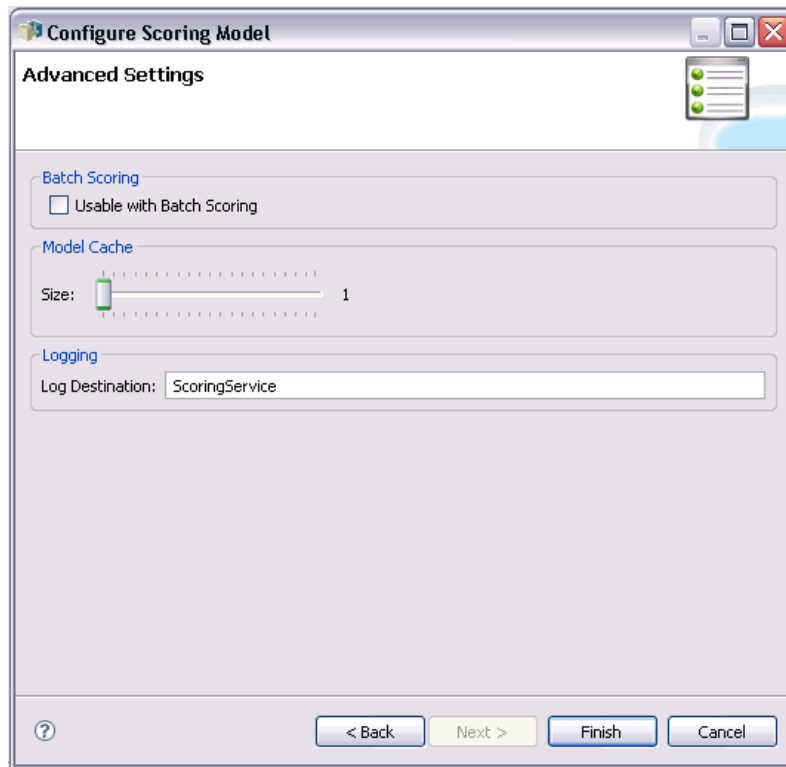
Figure 4-4
Choosing model outputs



Advanced Settings

Under Advanced Settings, you can specify options for batch scoring, caching, and logging.

Figure 4-5
Advanced scoring settings

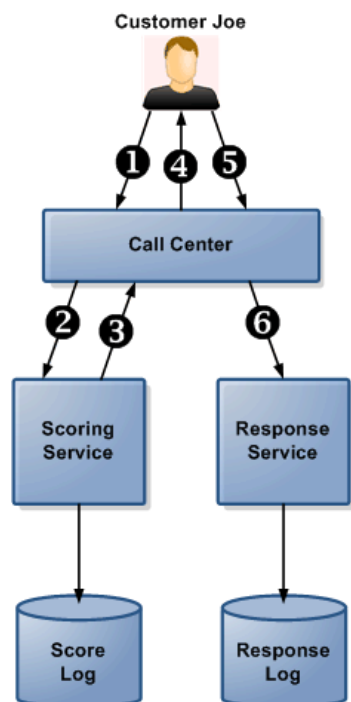


- **Usable with Batch Scoring.** If enabled, the user will have the option to select a text data file (in .csv format) when scoring the stream using IBM® SPSS® Collaboration and Deployment Services Deployment Portal or a similar tool.
- **Model Cache.** Specifies the number of images of a stream that are prepared and pre-loaded into the cache. This determines the number of concurrent scores that can be done without blocking any request, and may improve performance by avoiding the overhead of loading and preparing models.
- **Log Destination.** Specifies the name of the queue where scores are logged.

Response Service

The Response Service supplements the Scoring Service. It's a web service allowing client applications such as call center interfaces to send responses to the service to be logged. For example, a bank might have a call center interface that presents specific offers to the call center agent. The agent can then make the appropriate offer to the bank customer, and the customer's answer (response) is sent to the Response Service and logged. The following figure presents the flow of a complete example.

Figure 4-6
Example use of Scoring Service and Response Service



| | |
|----------|---|
| 1 | Customer Joe calls. |
| 2 | The call center sends Joe's customer ID to the Scoring Service. If logging is turned on in the scoring configuration (optional), this information is sent to the score log. Note that score logging is distinct from response logging. |
| 3 | The Scoring Service determines the best offer for customer Joe (<i>Gold Card</i> , for example) and sends the offer back to the call center. This information is also written to the score log (if enabled); Views and Queries can be written against the score log. |
| 4 | The call center operator presents the <i>Gold Card</i> offer to customer Joe. |
| 5 | Joe says yes to the offer. |
| 6 | The call center sends Joe's "yes" response to the Response Service and this response is logged. Queries can be written against the response log, or against both logs. |

For more information about the Response Service and hooking it up to your front-office application, contact your SPSS representative.

Using rules from ILOG Business Rule Management System

Rules created in a Business Rules Management System such as ILOG can be referenced and used in IBM® SPSS® Decision Management applications as follows:

- ▶ In SPSS Decision Management, the administrator downloads a *.ZIP* file containing the metadata for a particular project, including an XML schema that describes the project data model as well as a WSDL template.
- ▶ An expert user reads the XML schema into an external tool such as ILOG Rules Studio, uses it to create rules for use with the SPSS Decision Management project, and deploys each rule as a Web service.
- ▶ In IBM® SPSS® Collaboration and Deployment Services Deployment Manager, the administrator creates an external rule reference for each rule to be used in SPSS Decision Management. Each rule reference is saved as an object in IBM® SPSS® Collaboration and Deployment Services Repository.
- ▶ Referenced rules are accessible in the SPSS Decision Management project, where they can be browsed and used in the same manner as other models and rules. For more information, see the *User's Guide* for the SPSS Decision Management application.

Downloading project metadata

Rules created in a Business Rules Management System such as ILOG can be referenced and used in IBM® SPSS® Decision Management applications, provided they have been developed to support the same data model used in the current SPSS Decision Management project, and can be deployed as a Web service for use the application. To accomplish this, the SPSS Decision Management administrator can download a *.ZIP* file with metadata for the current project. The downloaded file is saved locally on the system used by the administrator to trigger the download.

Figure 5-1
Download metadata icon

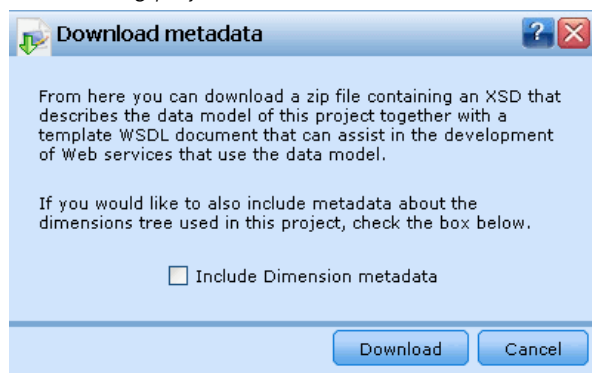


The following files are included in the *.ZIP* file:

- **XML schema definition (*.XSD)**. Contains definitions of the field types in the data model for the current SPSS Decision Management project. This file can be imported into an external development tool such as ILOG Rules Studio in order to develop rules for use with the current project.
- **Web service description language template (*.WSDL)**. Included to assist in development of Web services that use the data model. The *.WSDL* file is provided as a template that can be used to build Web services responsible for mediating messages between the SPSS Decision Management application and an external rule service. Details on the mediating Web service can be manually supplied by the integrator.

Include dimension metadata. If a dimension tree has been defined for the project on the Define tab, dimension tree metadata can optionally be included.

Figure 5-2
Downloading project metadata

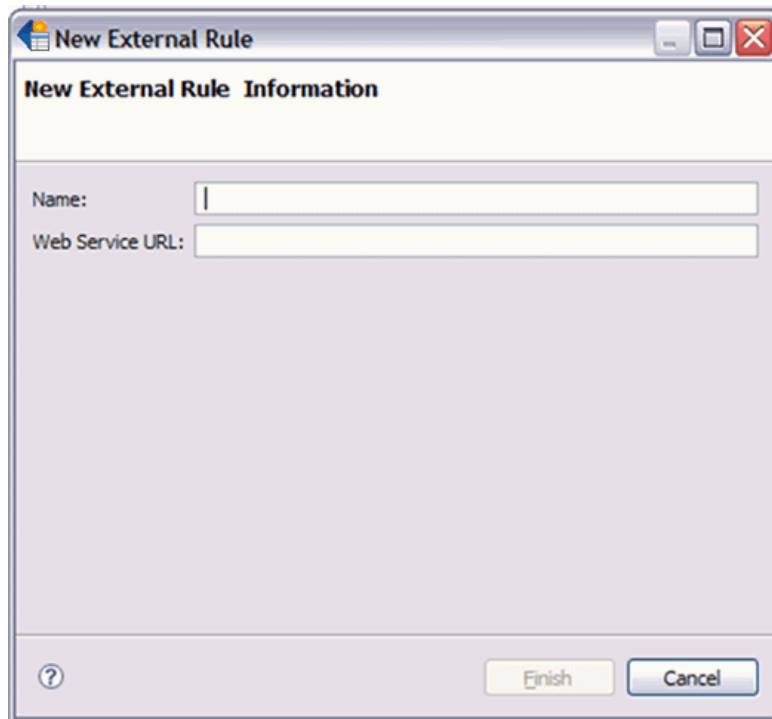


Creating external rule references

In IBM® SPSS® Collaboration and Deployment Services Deployment Manager, the New External Rule dialog box defines a reference to an external rule accessed through a Web service for use in IBM® SPSS® Decision Management applications. For example, this makes it possible to support ILOG rules in SPSS Decision Management.

- To create an external rule reference, in Deployment Manager, click on an item in the content repository and from the menus choose:
File > New > External Rule...

Figure 5-3
Creating a new external rule reference



The image shows a dialog box titled "New External Rule" with a subtitle "New External Rule Information". It contains two text input fields: "Name:" and "Web Service URL:". At the bottom, there are three buttons: a help button (question mark), an "Finish" button, and a "Cancel" button.

Name. Specify a name for the external rule reference.

Web Service URL. Enter the URL of the web service where the rule is deployed, for example *http://myRuleServer:8080/theRestOfTheURL*. The URL will be validated automatically to ensure it meets the appropriate naming conventions.

Using external rules in applications

Once defined in IBM® SPSS® Collaboration and Deployment Services Deployment Manager, external rules can be browsed and used in IBM® SPSS® Decision Management applications in much the same manner as other models and rules. For more information, see the *User's Guide* for the SPSS Decision Management application.

XML Schema

Element Reference

This section provides a reference for all the elements in the XML schema used to configure and customize applications.

Each topic lists the valid attributes for an element and its parent and child elements. These elements are listed in the table of contents as a child of this topic (Element Reference) rather than as a child of the parent topic.

Attribute Element

A reference to an attribute that will provide the value

Table A-1
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Attribute" type="typeAttribute" abstract="false">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"/></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"/></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-2
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[Expression Element](#), [Function Element](#), [Function Element](#), [ObjectiveFunction Element](#),
[Expression Element](#), [Expression Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Attribute Element](#)

child Element

Cognos object

Table A-3

Attributes for child

| Attribute | Use | Description | Valid Values |
|-----------|----------|-------------|----------------|
| fullName | optional | | <i>string</i> |
| isSupport | optional | | <i>boolean</i> |
| name | optional | | <i>string</i> |
| path | optional | | <i>string</i> |
| selected | optional | | <i>boolean</i> |
| typeName | optional | | <i>string</i> |

XML Representation

```
<xs:element name="child" type="typeCognosObject" abstract="false">
  <xs:sequence maxOccurs="unbounded" minOccurs="0">
    <xs:element ref="child"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string"></xs:attribute>
  <xs:attribute name="selected" type="xs:boolean"></xs:attribute>
  <xs:attribute name="fullName" type="xs:string"></xs:attribute>
  <xs:attribute name="typeName" type="xs:string"></xs:attribute>
  <xs:attribute name="path" type="xs:string"></xs:attribute>
  <xs:attribute name="isSupport" type="xs:boolean"></xs:attribute>
</xs:element>
```

Parent Elements

[selectedCognosObject Element](#), [selectedCognosObject Element](#)

Child Elements

[child Element](#)

DataSet Element

A set of input data defined for use by the application

Table A-4
Attributes for DataSet

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```
<xs:element name="DataSet">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
  </xs:sequence>
</xs:element>
```



```

<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
<xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="compatibility" type="enumCompatibility" use="optional">
  <xs:enumeration value="complete"></xs:enumeration>
  <xs:enumeration value="partial"></xs:enumeration>
  <xs:enumeration value="none"></xs:enumeration>
</xs:attribute>
<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-5
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|---|--------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | string |
| dataType | required | Storage type of the attribute | string |
| description | optional | Optional attribute description | string |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Table A-6
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements[DataSet Element](#)**Child Elements**[Category Element](#)**Category Element**

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements[Attribute Element](#)**Table Element**

The table used in this data set

Table A-7
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-8
Extended Types

| Type | Description |
|-------------------------------------|--|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |

| Type | Description |
|-------------------------------|---|
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[DataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-9

Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Expression Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Expression Element](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements

[Expression Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements[DataSet Element](#)**Child Elements**[AttributeMapping Element](#)**AttributeMapping Element**

The mapping of these attributes to the primary attributes

Table A-10
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements[Mapping Element](#)**Expression Element**

An expression

Table A-11
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|-----------|----------|--|---------------|
| Domain | optional | Resulting data type domain for this expression | <i>string</i> |
| Functor | optional | Optional functor involved in this expression | <i>string</i> |
| Name | optional | Alias name of this expression | <i>string</i> |

XML Representation

```

<xs:element name="Expression" type="typeExpression" abstract="false">
  <xs:choice>
    <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"/></xs:element>
    <xs:element ref="Attribute"/></xs:element>
    <xs:element ref="Value"/></xs:element>
  </xs:choice>
  <xs:attribute name="Name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="Domain" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="Functor" type="xs:string" use="optional"/></xs:attribute>
</xs:element>

```

Parent Elements

[Function Element](#), [Function Element](#), [ObjectiveFunction Element](#), [Expression Element](#), [Expression Element](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Value Element](#)

Member Element

Dimension members held in this association

Table A-12

Attributes for Member

| Attribute | Use | Description | Valid Values |
|------------|-----------------|---|----------------|
| name | required | Dimension member referenced | <i>string</i> |
| returnWith | optional | indicator of if this member has a 'return with' additional measure or not | <i>boolean</i> |
| reused | optional | indicator of if this member is used in more than one reference hierarchy or not | <i>boolean</i> |

XML Representation

```

<xs:element name="Member" type="typeReferencedMember">
  <xs:sequence>
    <xs:element name="Child" type="typeReferencedDimension" minOccurs="0" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element ref="Member" maxOccurs="unbounded"/></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="VariableValue" type="typeVariableValue" minOccurs="0" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Value" type="typeValueSource"/></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>

```



```

</xs:sequence>
<xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
<xs:attribute name="reused" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="returnWith" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[Child Element](#), [ReferencedDimensionHierarchy Element](#)

Child Elements

[Child Element](#), [VariableValue Element](#)

Child Element

Referenced set of child dimensions and members

Table A-13
Attributes for Child

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|----------------------|---------------|
| name | required | Dimension referenced | <i>string</i> |

XML Representation

```

<xs:element name="Child" type="typeReferencedDimension" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element ref="Member" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
</xs:element>

```

Parent Elements

[Member Element](#)

Child Elements

[Member Element](#)

VariableValue Element

Variable Values defined for this member (used in task submission only)

Table A-14
Attributes for VariableValue

| Attribute | Use | Description | Valid Values |
|------------------|-----------------|---|---------------|
| interactionPoint | optional | Optional Interaction Point for this variable value, Variable name plus Interaction Point name (may be empty) unique in a value series | <i>string</i> |
| name | required | Variable referenced by name | <i>string</i> |

XML Representation

```
<xs:element name="VariableValue" type="typeVariableValue" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Value" type="typeValueSource"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="interactionPoint" type="xs:string" use="optional" default=""></xs:attribute>
</xs:element>
```

Parent Elements

[Member Element](#)

Child Elements

[Value Element](#)

Value Element

The value for this variable reference

XML Representation

```
<xs:element name="Value" type="typeValueSource"></xs:element>
```

Table A-15
Extended Types

| Type | Description |
|--|---------------------------------------|
| ConstantValueSource | A constant value source |
| AttributeValueSource | An Entity attribute value source |
| LocalRuleValueSource | A local rule value source |
| ReferencedRuleModelValueSource | Referenced rule or model value source |

Parent Elements

[VariableValue Element](#)

PredictiveApplication Element

Definition of an IBM SPSS Decision Management predictive application

Table A-16

Attributes for PredictiveApplication

| Attribute | Use | Description | Valid Values |
|----------------------------|-----------------|---|---------------------|
| appsVersion | optional | Version of DM that last modified this Application Workspace. Format is expected to be (major).(minor). | <i>string</i> |
| cacheHandle | optional | Runtime tracking of the associated cache handle for this object | <i>string</i> |
| groupTemplate | optional | Deprecated as of DM 6.1. The Application Group definition file spec to use for controlling common presentation aspects of an object from this group | <i>string</i> |
| modifiedByOtherApplication | optional | Indicates whether this application has been modified by another application framework or not | <i>boolean</i> |
| name | optional | Deprecated as of DM 6.1. Application name to display in the application | <i>string</i> |
| objectOrigin | optional | Runtime information on the origin of this workspace Stream | <i>string</i> |
| previousVersion | optional | Previous version of the Application Template used to create this Application Workspace | <i>string</i> |
| priorityDimension | optional | Dimension considered to be the Priority Dimension | <i>string</i> |
| templateName | required | File name of the XML template that defines this Application Workspace, set by the application designer | <i>string</i> |
| templateVersion | required | Version of the Application Template used to create this Application Workspace | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|--------------------------|----------|---|----------------|
| testMode | optional | For internal use only. Indicates application should be executed in test mode. | <i>boolean</i> |
| testModeInteractionPoint | optional | For internal use only. Indicates the interaction point when running in test mode. | <i>string</i> |

XML Representation

```

<xs:element name="PredictiveApplication" abstract="false">
  <xs:sequence>
    <xs:element name="InterfaceControl" type="typeInterfaceControl">
      <xs:sequence>
        <xs:element name="InterfacePages">
          <xs:sequence>
            <xs:element name="ApplicationHome" type="typeApplicationHomeStep"
              minOccurs="0"></xs:element>
            <xs:element name="DataStep" type="typeDataStep" minOccurs="0"></xs:element>
            <xs:element name="GlobalSelectionStep" type="typeGlobalSelectionStep"
              minOccurs="0"></xs:element>
            <xs:element name="DefineStep" type="typeDefineStep" minOccurs="0"></xs:element>
            <xs:element name="CombineOptimizeStep" type="typeCombineOptimizeStep"
              minOccurs="0">
              <xs:sequence>
                <xs:element name="CombineOptimizeMethod"
                  type="typeCombineOptimizeType"></xs:element>
              </xs:sequence>
            </xs:element>
            <xs:element name="DeployScoreStep" type="typeDeployScoreStep" minOccurs="0">
              <xs:sequence>
                <xs:element name="ImmediateBatchScoring" type="typeImmediateBatchScoring"
                  minOccurs="0"></xs:element>
                <xs:element name="ScheduledBatchScoring" type="typeScheduledBatchScoring"
                  minOccurs="0"></xs:element>
                <xs:element name="RealTimeScoring" type="typeRealTimeDeploy"
                  minOccurs="0"></xs:element>
              </xs:sequence>
            </xs:element>
            <xs:element name="ReportStep" minOccurs="0"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="InterfaceFeature" type="typeInterfaceFeature" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
        <xs:element name="ReferencedDimensionHierarchy" type="typeReferencedDimension"
          minOccurs="0" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element ref="Member" maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="SpecialVariableReference" type="typeUserVariableReference"
          minOccurs="0" maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>

```

```

<xs:element name="Inputs" type="typeInputs" minOccurs="0">
  <xs:sequence>
    <xs:element name="PrimaryDataSet" type="dataset:typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
          <xs:sequence>
            <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
            <xs:element name="Definition" type="xs:string"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
          <xs:sequence>
            <xs:element name="AttributeMapping" type="typeAttributeMapping"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="OtherDataSet" type="dataset:typeDataSet" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
          <xs:sequence>
            <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
            <xs:element name="Definition" type="xs:string"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
          <xs:sequence>
            <xs:element name="AttributeMapping" type="typeAttributeMapping"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>

```

```

        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="DerivedAttribute" type="dataset:typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    </xs:sequence>
    <xs:sequence>
      <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
</xs:element>
<xs:element name="EntityDimension" type="typeEntityDimension" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attributes" type="typeAttributeReference" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    <xs:element name="InteractiveQuestions" type="typeInteractiveQuery" minOccurs="0"
maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="EntityAttribute" type="xs:string"></xs:element>
        <xs:element name="InteractionPoint" type="xs:string" minOccurs="0"></xs:element>
        <xs:element name="QueryText" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Variable" type="typeVariable" minOccurs="0" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="ValueSource" type="typeValueSource"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Constraint" type="typeConstraint" minOccurs="0" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Boundary" type="typeConstraintBoundary"></xs:element>
        <xs:element name="Function" type="Q1:typeExpression">
          <xs:choice>
            <xs:element ref="Expression" minOccurs="0"
maxOccurs="unbounded"></xs:element>
            <xs:element ref="Attribute"></xs:element>
            <xs:element ref="Value"></xs:element>
          </xs:choice>
        </xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Selection" type="typeLocalRule" minOccurs="0">
      <xs:sequence>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Allocation" type="typeDimensionAllocation" minOccurs="0"
maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Value" type="typeValueSource"></xs:element>

```

```

        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Dimension" type="typeDimension" minOccurs="0" maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Variable" type="typeVariable" minOccurs="0" maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="ValueSource" type="typeValueSource"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="Constraint" type="typeConstraint" minOccurs="0" maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Boundary" type="typeConstraintBoundary"></xs:element>
          <xs:element name="Function" type="Q1:typeExpression">
            <xs:choice>
              <xs:element ref="Expression" minOccurs="0"
                maxOccurs="unbounded"></xs:element>
              <xs:element ref="Attribute"></xs:element>
              <xs:element ref="Value"></xs:element>
            </xs:choice>
          </xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Member" type="typeDimensionMember" minOccurs="0"
    maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Selection" type="typeMemberSelection" minOccurs="0">
        <xs:sequence>
          <xs:element name="Definition" type="xs:string"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:sequence>
        <xs:element name="StartTimestamp" type="typeTimestampDetails"
          minOccurs="0"></xs:element>
        <xs:element name="EndTimestamp" type="typeTimestampDetails"
          minOccurs="0"></xs:element>
        <xs:element name="InteractionPoint" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
        <xs:element name="BaseSelection" type="typeLocalRule" minOccurs="0">
          <xs:sequence>
            <xs:element name="Definition" type="xs:string"></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Allocation" type="typeDimensionAllocation" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Value" type="typeValueSource"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="VariableValue" type="typeVariableValue" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Value" type="typeValueSource"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:element>

```

```

        <xs:element name="PropertyValue" type="typePropertyValue" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Property" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Optimization" type="typeOptimizationDefinition" minOccurs="0">
  <xs:sequence>
    <xs:element name="ObjectiveFunction" type="Q1:typeExpression">
      <xs:choice>
        <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"></xs:element>
        <xs:element ref="Attribute"></xs:element>
        <xs:element ref="Value"></xs:element>
      </xs:choice>
    </xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Deployment" type="typeDeployment" minOccurs="0">
  <xs:sequence>
    <xs:element name="DeployLabel" type="typeLabelDefinition" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
    <xs:element name="OutputAttribute" type="typeOutputAttribute" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
    <xs:element name="InteractionPoint" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="CurrentStateReport" type="typeCurrentStateReportItem"
  minOccurs="0"></xs:element>
<xs:element name="Report" type="typeReportItem" minOccurs="0"
  maxOccurs="unbounded"></xs:element>
<xs:element name="Tasks" type="typeTaskInformation" minOccurs="0">
  <xs:sequence>
    <xs:element name="Build" type="typeBuildTask" minOccurs="0">
      <xs:sequence>
        <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
          minOccurs="0">
          <xs:sequence>
            <xs:element name="UserId"></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:sequence>
    <xs:element name="SourceDataSet" type="dataset:typeDataSet">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>

```



```

        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    <xs:sequence>
      <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
    <xs:sequence>
      <xs:element name="AttributeMapping" type="typeAttributeMapping"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
</xs:element>
<xs:element name="ModelInputs" type="xs:string" maxOccurs="unbounded"></xs:element>
<xs:element name="Selections" type="typeLocalRule" minOccurs="0">
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="InteractiveBuild" type="typeInteractiveBuild" minOccurs="0">
  <xs:sequence>
    <xs:element name="DecisionList" type="typeLocalRule" minOccurs="0">
      <xs:sequence>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="SelectionUsed" type="xs:string" minOccurs="0"
  maxOccurs="unbounded"></xs:element>
<xs:element name="Parameter" type="typeParameter" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>
<xs:element name="DataScan" type="typeDataScanTask" minOccurs="0">
  <xs:sequence>
    <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
      minOccurs="0">
      <xs:sequence>
        <xs:element name="UserId"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:sequence>
<xs:sequence>
  <xs:element name="SourceDataSet" type="dataset:typeDataSet">
    <xs:sequence>
      <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
        <xs:sequence>

```

```

        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
      <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="DerivedAttribute" type="dataset:typeDataSetExpression"
  minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Evaluate" type="typeEvaluateTask" minOccurs="0">
  <xs:sequence>
    <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
      minOccurs="0">
      <xs:sequence>
        <xs:element name="UserId"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:sequence>
<xs:sequence>
  <xs:element name="SourceDataSet" type="dataset:typeDataSet">
    <xs:sequence>
      <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Category" type="xs:string" minOccurs="0"
            maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>

```

```

</xs:element name="Table" type="typeDataTable"></xs:element>
<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Selections" type="typeLocalRule" minOccurs="0">
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="SelectionUsed" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Score" type="typeScoreTask" minOccurs="0">
  <xs:sequence>
    <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
minOccurs="0">
      <xs:sequence>
        <xs:element name="UserId"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:sequence>
<xs:sequence>
  <xs:element name="SourceDataSet" type="dataset:typeDataSet">
    <xs:sequence>
      <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="Table" type="typeDataTable"></xs:element>
      <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:sequence>
    </xs:sequence>
  </xs:element>

```

```

        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
        <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
</xs:element>
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
    <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>
<xs:element name="RecordSelection" type="typeLocalRule" minOccurs="0">
    <xs:sequence>
        <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
</xs:element>
<xs:element name="InteractionPoint" type="xs:string" minOccurs="0"></xs:element>
<xs:element name="SelectedOutput" type="xs:string"
maxOccurs="unbounded"></xs:element>
<xs:element name="Mapping" type="dataset:typeDataSetMapping" minOccurs="0">
    <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
</xs:element>
<xs:element name="TargetDataTable" type="dataset:typeDataTable"></xs:element>
<xs:element name="TargetDataServerCredentials" type="typeTaskDatabaseCredentials"
minOccurs="0">
    <xs:sequence>
        <xs:element name="UserId"></xs:element>
    </xs:sequence>
</xs:element>
<xs:element name="Options" type="typeScoreOptions" minOccurs="0">
    <xs:choice>
        <xs:element name="TopNPercent" type="xs:double"></xs:element>
        <xs:element name="TopN" type="xs:long"></xs:element>
        <xs:element name="MinMaxPropensity"></xs:element>
    </xs:choice>
</xs:element>
<xs:element name="SelectionUsed" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
<xs:element name="Parameter" type="typeParameter" maxOccurs="unbounded">
    <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
</xs:element>
<xs:element name="CognosTable" type="dataset:CognosTable">
    <xs:sequence maxOccurs="1" minOccurs="0">
        <xs:element name="selectedCognosObject" type="typeCognosObject">
            <xs:sequence maxOccurs="unbounded" minOccurs="0">
                <xs:element ref="child"></xs:element>
            </xs:sequence>
        </xs:element>
    </xs:sequence>
</xs:element>
<xs:element name="cognosDataSource"></xs:element>

```

```

        <xs:element name="cognosSelectedItems"></xs:element>
    </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Simulate" type="typeSimulateTask" minOccurs="0" maxOccurs="unbounded">
    <xs:sequence>
        <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
            minOccurs="0">
            <xs:sequence>
                <xs:element name="UserId"></xs:element>
            </xs:sequence>
        </xs:element>
    </xs:sequence>
    <xs:sequence>
        <xs:element name="SourceDataSet" type="dataset:typeDataSet">
            <xs:sequence>
                <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
                    <xs:sequence>
                        <xs:element name="Category" type="xs:string" minOccurs="0"
                            maxOccurs="unbounded"></xs:element>
                    </xs:sequence>
                </xs:element>
                <xs:element name="Table" type="typeDataTable"></xs:element>
                <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
                    maxOccurs="unbounded">
                    <xs:sequence>
                        <xs:element name="Category" type="xs:string" minOccurs="0"
                            maxOccurs="unbounded"></xs:element>
                    </xs:sequence>
                    <xs:sequence>
                        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
                            maxOccurs="unbounded"></xs:element>
                        <xs:element name="Definition" type="xs:string"></xs:element>
                    </xs:sequence>
                </xs:element>
                <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
                    <xs:sequence>
                        <xs:element name="AttributeMapping" type="typeAttributeMapping"
                            maxOccurs="unbounded"></xs:element>
                    </xs:sequence>
                </xs:element>
            </xs:sequence>
        </xs:element>
        <xs:element name="VariableValue" type="typeVariableValue" minOccurs="0"
            maxOccurs="unbounded">
            <xs:sequence>
                <xs:element name="Value" type="typeValueSource"></xs:element>
            </xs:sequence>
        </xs:element>
        <xs:element name="DimensionDetails" type="typeTaskDimensionDetails" minOccurs="0"
            maxOccurs="unbounded">
            <xs:sequence>
                <xs:element name="MemberDetails" type="typeTaskMemberDetails"
                    maxOccurs="unbounded">
                    <xs:sequence>

```

```

        <xs:element name="VariableValue" type="typeVariableValue" minOccurs="0"
maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Value" type="typeValueSource"></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="CombiningRule" type="typeLocalRule" minOccurs="0">
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Test" type="typeTestTask" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
minOccurs="0">
      <xs:sequence>
        <xs:element name="UserId"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:sequence>
</xs:sequence>
<xs:choice>
  <xs:element name="CustomInput" type="typeCustomInput">
    <xs:sequence>
      <xs:element name="Field" type="typeCustomInputField"
maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Value" type="typeCustomInputFieldValue"
maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="DataSetInput" type="typeTestRecordSelection">
    <xs:sequence>
      <xs:element name="SourceDataSet" type="dataset:typeDataSet">
        <xs:sequence>
          <xs:element name="Attribute" type="typeAttribute"
maxOccurs="unbounded">
            <xs:sequence>
              <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
            </xs:sequence>
          </xs:element>
          <xs:element name="Table" type="typeDataTable"></xs:element>
          <xs:element name="Expression" type="typeDataSetExpression"
minOccurs="0" maxOccurs="unbounded">
            <xs:sequence>
              <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
            </xs:sequence>
          </xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>

```

```

        <xs:sequence>
          <xs:element name="DataSetAttribute" type="xs:string"
            minOccurs="0" maxOccurs="unbounded"/></xs:element>
          <xs:element name="Definition" type="xs:string"/></xs:element>
        </xs:sequence>
      </xs:element>
    <xs:element name="Mapping" type="typeDataSetMapping"
      minOccurs="0">
      <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
          maxOccurs="unbounded"/></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Selection" type="typeLocalRule" minOccurs="0">
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"/></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>
</xs:choice>
<xs:element name="DisplayField" type="xs:string" maxOccurs="unbounded"/></xs:element>
<xs:element name="InteractionPoint" type="xs:string" minOccurs="0"/></xs:element>
</xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>
</xs:sequence>
<xs:attribute name="appsVersion" type="xs:string" use="optional"/></xs:attribute>
<xs:attribute name="templateName" type="xs:string" use="required"/></xs:attribute>
<xs:attribute name="templateVersion" type="xs:string" use="required"/></xs:attribute>
<xs:attribute name="groupTemplate" type="xs:string" use="optional"/></xs:attribute>
<xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
<xs:attribute name="priorityDimension" type="xs:string" use="optional"/></xs:attribute>
<xs:attribute name="modifiedByOtherApplication" type="xs:boolean" use="optional"
  default="false"/></xs:attribute>
<xs:attribute name="objectOrigin" type="xs:string" use="optional"/></xs:attribute>
<xs:attribute name="cacheHandle" type="xs:string" use="optional"/></xs:attribute>
<xs:attribute name="previousVersion" type="xs:string" use="optional"/></xs:attribute>
<xs:attribute name="testMode" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="testModeInteractionPoint" type="xs:string" use="optional"/></xs:attribute>
</xs:element>

```

Child Elements

[CurrentStateReport Element](#), [Deployment Element](#), [Dimension Element](#), [EntityDimension Element](#), [Inputs Element](#), [InterfaceControl Element](#), [Optimization Element](#), [Report Element](#), [Tasks Element](#)

InterfaceControl Element

Control of the interface presented for this application type

XML Representation

```

<xs:element name="InterfaceControl" type="typeInterfaceControl">
  <xs:sequence>
    <xs:element name="InterfacePages">
      <xs:sequence>
        <xs:element name="ApplicationHome" type="typeApplicationHomeStep"
          minOccurs="0"></xs:element>
        <xs:element name="DataStep" type="typeDataStep" minOccurs="0"></xs:element>
        <xs:element name="GlobalSelectionStep" type="typeGlobalSelectionStep"
          minOccurs="0"></xs:element>
        <xs:element name="DefineStep" type="typeDefineStep" minOccurs="0"></xs:element>
        <xs:element name="CombineOptimizeStep" type="typeCombineOptimizeStep" minOccurs="0">
          <xs:sequence>
            <xs:element name="CombineOptimizeMethod"
              type="typeCombineOptimizeType"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="DeployScoreStep" type="typeDeployScoreStep" minOccurs="0">
          <xs:sequence>
            <xs:element name="ImmediateBatchScoring" type="typeImmediateBatchScoring"
              minOccurs="0"></xs:element>
            <xs:element name="ScheduledBatchScoring" type="typeScheduledBatchScoring"
              minOccurs="0"></xs:element>
            <xs:element name="RealTimeScoring" type="typeRealTimeDeploy"
              minOccurs="0"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="ReportStep" minOccurs="0"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="InterfaceFeature" type="typeInterfaceFeature" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
    <xs:element name="ReferencedDimensionHierarchy" type="typeReferencedDimension" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element ref="Member" maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="SpecialVariableReference" type="typeUserVariableReference" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>

```

Parent Elements

[PredictiveApplication Element](#)

Child Elements

[InterfaceFeature Element](#), [InterfacePages Element](#), [ReferencedDimensionHierarchy Element](#), [SpecialVariableReference Element](#)

InterfacePages Element

Pages to include in the main panel for this application

Table A-17
Attributes for *InterfacePages*

| Attribute | Use | Description | Valid Values |
|-------------|----------|--|---------------|
| defaultStep | optional | The name of the Step to display as the default in the user interface | <i>string</i> |

XML Representation

```
<xs:element name="InterfacePages">
  <xs:sequence>
    <xs:element name="ApplicationHome" type="typeApplicationHomeStep" minOccurs="0"></xs:element>
    <xs:element name="DataStep" type="typeDataStep" minOccurs="0"></xs:element>
    <xs:element name="GlobalSelectionStep" type="typeGlobalSelectionStep"
      minOccurs="0"></xs:element>
    <xs:element name="DefineStep" type="typeDefineStep" minOccurs="0"></xs:element>
    <xs:element name="CombineOptimizeStep" type="typeCombineOptimizeStep" minOccurs="0">
      <xs:sequence>
        <xs:element name="CombineOptimizeMethod" type="typeCombineOptimizeType"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="DeployScoreStep" type="typeDeployScoreStep" minOccurs="0">
      <xs:sequence>
        <xs:element name="ImmediateBatchScoring" type="typeImmediateBatchScoring"
          minOccurs="0"></xs:element>
        <xs:element name="ScheduledBatchScoring" type="typeScheduledBatchScoring"
          minOccurs="0"></xs:element>
        <xs:element name="RealTimeScoring" type="typeRealTimeDeploy" minOccurs="0"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="ReportStep" minOccurs="0"></xs:element>
  </xs:sequence>
  <xs:attribute name="defaultStep" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[InterfaceControl Element](#)

Child Elements

[ApplicationHome Element](#), [CombineOptimizeStep Element](#), [DataStep Element](#), [DefineStep Element](#), [DeployScoreStep Element](#), [GlobalSelectionStep Element](#), [ReportStep Element](#)

ApplicationHome Element

The Application Home configuration

Table A-18
Attributes for *ApplicationHome*

| Attribute | Use | Description | Valid Values |
|-------------|----------|--|----------------|
| showGallery | optional | Controls the presentation of the Gallery interaction section | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|---------------|----------|--|----------------|
| stepCompleted | optional | Indicates whether the user has marked this panel as completed or not | <i>boolean</i> |
| stepHidden | optional | The 'hidden' state for this panel | <i>boolean</i> |
| stepIncluded | optional | The logical 'included or not' flag for this panel | <i>boolean</i> |
| stepLocked | optional | The locked state for this panel | <i>boolean</i> |

XML Representation

```
<xs:element name="ApplicationHome" type="typeApplicationHomeStep" minOccurs="0">
  <xs:attribute name="stepIncluded" type="xs:boolean" default="true"></xs:attribute>
  <xs:attribute name="stepHidden" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="stepLocked" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="stepCompleted" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="showGallery" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>
```

Parent Elements

[InterfacePages Element](#)

Related Elements

[DataStep Element](#), [GlobalSelectionStep Element](#), [DefineStep Element](#), [CombineOptimizeStep Element](#), [DeployScoreStep Element](#)

DataStep Element

The Data Step configuration

Table A-19
Attributes for DataStep

| Attribute | Use | Description | Valid Values |
|------------------------|----------|---|----------------|
| enableAnalytical | optional | Enable the Analytical data set usage | <i>boolean</i> |
| enableOperationalBatch | optional | Enable the Operational Batch data set usage | <i>boolean</i> |
| enableOperationalRT | optional | Enable the Operational Real-Time data set usage | <i>boolean</i> |
| enableSimulationTest | optional | Enable the Simulation and Test data set usage | <i>boolean</i> |
| lockPrimaryDataSet | optional | Optional flag (default is false) controlling whether the Project Data Model selection is locked by the administrator or not | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|-------------------|----------|---|----------------|
| permitExpressions | optional | Flag to indicate whether derived attribute expressions are permitted to extend a data set | <i>boolean</i> |
| stepCompleted | optional | Indicates whether the user has marked this panel as completed or not | <i>boolean</i> |
| stepHidden | optional | The 'hidden' state for this panel | <i>boolean</i> |
| stepIncluded | optional | The logical 'included or not' flag for this panel | <i>boolean</i> |
| stepLocked | optional | The locked state for this panel | <i>boolean</i> |

XML Representation

```
<xs:element name="DataStep" type="typeDataStep" minOccurs="0">
  <xs:attribute name="stepIncluded" type="xs:boolean" default="true"></xs:attribute>
  <xs:attribute name="stepHidden" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="stepLocked" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="stepCompleted" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="enableAnalytical" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="enableOperationalBatch" type="xs:boolean" use="optional"
    default="true"></xs:attribute>
  <xs:attribute name="enableOperationalRT" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="enableSimulationTest" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="permitExpressions" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="lockPrimaryDataSet" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>
```

Parent Elements

[InterfacePages Element](#)

Related Elements

[ApplicationHome Element](#), [GlobalSelectionStep Element](#), [DefineStep Element](#),
[CombineOptimizeStep Element](#), [DeployScoreStep Element](#)

GlobalSelectionStep Element

The Global Includes and Excludes configuration

Table A-20
 Attributes for GlobalSelectionStep

| Attribute | Use | Description | Valid Values |
|--------------|----------|-----------------------|----------------|
| enableModels | optional | Models off/on control | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|---------------|----------|--|----------------|
| stepCompleted | optional | Indicates whether the user has marked this panel as completed or not | <i>boolean</i> |
| stepHidden | optional | The 'hidden' state for this panel | <i>boolean</i> |
| stepIncluded | optional | The logical 'included or not' flag for this panel | <i>boolean</i> |
| stepLocked | optional | The locked state for this panel | <i>boolean</i> |

XML Representation

```
<xs:element name="GlobalSelectionStep" type="typeGlobalSelectionStep" minOccurs="0">
  <xs:attribute name="stepIncluded" type="xs:boolean" default="true"/></xs:attribute>
  <xs:attribute name="stepHidden" type="xs:boolean" default="false"/></xs:attribute>
  <xs:attribute name="stepLocked" type="xs:boolean" default="false"/></xs:attribute>
  <xs:attribute name="stepCompleted" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="enableModels" type="xs:boolean" use="optional" default="true"/></xs:attribute>
</xs:element>
```

Parent Elements

[InterfacePages Element](#)

Related Elements

[ApplicationHome Element](#), [DataStep Element](#), [DefineStep Element](#), [CombineOptimizeStep Element](#), [DeployScoreStep Element](#)

DefineStep Element

The Define Step configuration

Table A-21
Attributes for DefineStep

| Attribute | Use | Description | Valid Values |
|------------------|----------|--|----------------|
| enableSimulation | optional | Controls presentation of the Define-style Simulation action | <i>boolean</i> |
| enableTest | optional | Controls presentation of the Test action | <i>boolean</i> |
| stepCompleted | optional | Indicates whether the user has marked this panel as completed or not | <i>boolean</i> |
| stepHidden | optional | The 'hidden' state for this panel | <i>boolean</i> |
| stepIncluded | optional | The logical 'included or not' flag for this panel | <i>boolean</i> |
| stepLocked | optional | The locked state for this panel | <i>boolean</i> |

XML Representation

```
<xs:element name="DefineStep" type="typeDefineStep" minOccurs="0">
  <xs:attribute name="stepIncluded" type="xs:boolean" default="true"></xs:attribute>
  <xs:attribute name="stepHidden" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="stepLocked" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="stepCompleted" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="enableSimulation" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="enableTest" type="xs:boolean" use="optional" default="true"></xs:attribute>
</xs:element>
```

Table A-22
Extended Types

| Type | Description |
|---|--|
| typeDecisionHierarchyDefineStep | The decision hierarchy definition step configuration. AggregationRuleSection and PredictiveModelSection may not both be enabled when using more than 2 dimensions. |
| typeModelingDefineStep | The Model definition step configuration |
| typeRulesManagementDefineStep | The Rules Management define step configuration |

Parent Elements

[InterfacePages Element](#)

Related Elements

[ApplicationHome Element](#), [DataStep Element](#), [GlobalSelectionStep Element](#),
[CombineOptimizeStep Element](#), [DeployScoreStep Element](#)

CombineOptimizeStep Element

The Combine/Optimize Step configuration

Table A-23
Attributes for CombineOptimizeStep

| Attribute | Use | Description | Valid Values |
|-----------------------------|----------|--|----------------|
| enableSimulation | optional | Controls presentation of the Define-style Simulation action | <i>boolean</i> |
| enableTest | optional | Controls presentation of the Test action | <i>boolean</i> |
| hasInteractionPointSection | optional | Configuration control of whether this application has an IP section or not | <i>boolean</i> |
| lockConstraintsSection | optional | Administrator control for lock of entire Constraints section | <i>boolean</i> |
| lockInteractionPointSection | optional | Administrator control for lock of entire IP section | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|---------------|----------|--|----------------|
| stepCompleted | optional | Indicates whether the user has marked this panel as completed or not | <i>boolean</i> |
| stepHidden | optional | The 'hidden' state for this panel | <i>boolean</i> |
| stepIncluded | optional | The logical 'included or not' flag for this panel | <i>boolean</i> |
| stepLocked | optional | The locked state for this panel | <i>boolean</i> |

XML Representation

```

<xs:element name="CombineOptimizeStep" type="typeCombineOptimizeStep" minOccurs="0">
  <xs:attribute name="stepIncluded" type="xs:boolean" default="true"></xs:attribute>
  <xs:attribute name="stepHidden" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="stepLocked" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="stepCompleted" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:sequence>
    <xs:element name="CombineOptimizeMethod" type="typeCombineOptimizeType"></xs:element>
  </xs:sequence>
  <xs:attribute name="enableSimulation" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="enableTest" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="hasInteractionPointSection" type="xs:boolean" use="optional"
  default="false"></xs:attribute>
  <xs:attribute name="lockInteractionPointSection" type="xs:boolean" use="optional"
  default="false"></xs:attribute>
  <xs:attribute name="lockConstraintsSection" type="xs:boolean" use="optional"
  default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[InterfacePages Element](#)

Child Elements

[CombineOptimizeMethod Element](#)

Related Elements

[ApplicationHome Element](#), [DataStep Element](#), [GlobalSelectionStep Element](#), [DefineStep Element](#), [DeployScoreStep Element](#)

CombineOptimizeMethod Element

Method to use for combining or optimizing results to reach a decision

XML Representation

```

<xs:element name="CombineOptimizeMethod" type="typeCombineOptimizeType"></xs:element>

```

Table A-24
Extended Types

| Type | Description |
|--|--|
| PrioritizationOptimization | The Prioritization form of optimization |
| MatrixCombine | Configuration control of the Matrix combination method. This method may not be used with more than 2 dimensions. |

Parent Elements

[CombineOptimizeStep](#) Element

DeployScoreStep Element

The Deploy/Score Step configuration

Table A-25
Attributes for *DeployScoreStep*

| Attribute | Use | Description | Valid Values |
|--------------------------------|----------|---|----------------|
| hasInteractiveQuestionSection | optional | Configuration of whether this application has an Interactive Questions section or not | <i>boolean</i> |
| lockInteractiveQuestionSection | optional | Administrator lock of the Interactive Questions section | <i>boolean</i> |
| stepCompleted | optional | Indicates whether the user has marked this panel as completed or not | <i>boolean</i> |
| stepHidden | optional | The 'hidden' state for this panel | <i>boolean</i> |
| stepIncluded | optional | The logical 'included or not' flag for this panel | <i>boolean</i> |
| stepLocked | optional | The locked state for this panel | <i>boolean</i> |

XML Representation

```
<xs:element name="DeployScoreStep" type="typeDeployScoreStep" minOccurs="0">
  <xs:attribute name="stepIncluded" type="xs:boolean" default="true"></xs:attribute>
  <xs:attribute name="stepHidden" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="stepLocked" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="stepCompleted" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:sequence>
    <xs:element name="ImmediateBatchScoring" type="typeImmediateBatchScoring"
      minOccurs="0"></xs:element>
    <xs:element name="ScheduledBatchScoring" type="typeScheduledBatchScoring"
      minOccurs="0"></xs:element>
    <xs:element name="RealTimeScoring" type="typeRealTimeDeploy" minOccurs="0"></xs:element>
  </xs:sequence>
  <xs:attribute name="hasInteractiveQuestionSection" type="xs:boolean" use="optional"
    default="true"></xs:attribute>
</xs:element>
```

```
<xs:attribute name="lockInteractiveQuestionSection" type="xs:boolean" use="optional"
  default="false"></xs:attribute>
</xs:element>
```

Parent Elements

[InterfacePages Element](#)

Child Elements

[ImmediateBatchScoring Element](#), [RealTimeScoring Element](#), [ScheduledBatchScoring Element](#)

Related Elements

[ApplicationHome Element](#), [DataStep Element](#), [GlobalSelectionStep Element](#), [DefineStep Element](#), [CombineOptimizeStep Element](#)

ImmediateBatchScoring Element

Configuration of the Immediate Batch scoring

Table A-26

Attributes for ImmediateBatchScoring

| Attribute | Use | Description | Valid Values |
|----------------------|----------|---|----------------|
| enableScoringOptions | optional | Controls whether the Scoring Options will be presented or not | <i>boolean</i> |

XML Representation

```
<xs:element name="ImmediateBatchScoring" type="typeImmediateBatchScoring" minOccurs="0">
  <xs:attribute name="enableScoringOptions" type="xs:boolean" use="optional"
    default="false"></xs:attribute>
</xs:element>
```

Parent Elements

[DeployScoreStep Element](#)

ScheduledBatchScoring Element

Not supported in the current release

Table A-27

Attributes for ScheduledBatchScoring

| Attribute | Use | Description | Valid Values |
|----------------------|----------|---|----------------|
| enableScoringOptions | optional | Controls whether the Scoring Options will be presented or not | <i>boolean</i> |

XML Representation

```
<xs:element name="ScheduledBatchScoring" type="typeScheduledBatchScoring" minOccurs="0">
  <xs:attribute name="enableScoringOptions" type="xs:boolean" use="optional"
    default="false"></xs:attribute>
</xs:element>
```

Parent Elements

[DeployScoreStep Element](#)

RealTimeScoring Element

Configuration of a Real Time Scoring deployment

Table A-28
Attributes for RealTimeScoring

| Attribute | Use | Description | Valid Values |
|----------------------------|----------|--|----------------|
| enableInteractiveQuestions | optional | Flag indicating whether the Interactive Questions interface will be presented on the Deploy panel or not | <i>boolean</i> |

XML Representation

```
<xs:element name="RealTimeScoring" type="typeRealTimeDeploy" minOccurs="0">
  <xs:attribute name="enableInteractiveQuestions" type="xs:boolean" use="optional"
    default="true"></xs:attribute>
</xs:element>
```

Parent Elements

[DeployScoreStep Element](#)

ReportStep Element

The Report Step configuration

Table A-29
Attributes for ReportStep

| Attribute | Use | Description | Valid Values |
|--------------------------|----------|--|----------------|
| hideCurrentResults | optional | Optional flag (default is false) to control whether the Current State report items are hidden from business users or not | <i>boolean</i> |
| lockCurrentResultsReport | optional | Optional flag (default is false) to control the administrator lock of the Current State report selection list | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|-------------------------|----------|--|----------------|
| lockCurrentResultsTitle | optional | Optional flag (default is false) to control the administrator lock of the Current State report section title | <i>boolean</i> |
| stepCompleted | optional | Indicates whether the user has marked this panel as completed or not | <i>boolean</i> |
| stepHidden | optional | The 'hidden' state for this panel | <i>boolean</i> |
| stepIncluded | optional | The logical 'included or not' flag for this panel | <i>boolean</i> |
| stepLocked | optional | The locked state for this panel | <i>boolean</i> |

XML Representation

```
<xs:element name="ReportStep" minOccurs="0">
  <xs:attribute name="stepIncluded" type="xs:boolean" default="true"/></xs:attribute>
  <xs:attribute name="stepHidden" type="xs:boolean" default="false"/></xs:attribute>
  <xs:attribute name="stepLocked" type="xs:boolean" default="false"/></xs:attribute>
  <xs:attribute name="stepCompleted" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="hideCurrentResults" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="lockCurrentResultsReport" type="xs:boolean" use="optional"
    default="false"/></xs:attribute>
  <xs:attribute name="lockCurrentResultsTitle" type="xs:boolean" use="optional"
    default="false"/></xs:attribute>
</xs:element>
```

Parent Elements

[InterfacePages Element](#)

InterfaceFeature Element

Controllable features to expose in the user interface presented for this application

Table A-30
Attributes for InterfaceFeature

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---|
| id | required | ID code for the major feature to expose | ModelReference ModelBuild ModelExport RuleExport RuleReference Collaboration UploadDownload MetadataDownload |

XML Representation

```
<xs:element name="InterfaceFeature" type="typeInterfaceFeature" minOccurs="0" maxOccurs="unbounded">
```

```

<xs:attribute name="id" type="enumFeatureType" use="required">
  <xs:enumeration value="ModelReference"></xs:enumeration>
  <xs:enumeration value="ModelBuild"></xs:enumeration>
  <xs:enumeration value="ModelExport"></xs:enumeration>
  <xs:enumeration value="RuleExport"></xs:enumeration>
  <xs:enumeration value="RuleReference"></xs:enumeration>
  <xs:enumeration value="Collaboration"></xs:enumeration>
  <xs:enumeration value="UploadDownload"></xs:enumeration>
  <xs:enumeration value="MetadataDownload"></xs:enumeration>
</xs:attribute>
</xs:element>

```

Parent Elements

[InterfaceControl Element](#)

ReferencedDimensionHierarchy Element

The Dimension hierarchy as defined in the user interface

Table A-31

Attributes for *ReferencedDimensionHierarchy*

| Attribute | Use | Description | Valid Values |
|-----------|----------|----------------------|--------------|
| name | required | Dimension referenced | string |

XML Representation

```

<xs:element name="ReferencedDimensionHierarchy" type="typeReferencedDimension" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element ref="Member" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
</xs:element>

```

Parent Elements

[InterfaceControl Element](#)

Child Elements

[Member Element](#)

SpecialVariableReference Element

A list of the variables to be managed in a special way by the user interface

Table A-32

Attributes for *SpecialVariableReference*

| Attribute | Use | Description | Valid Values |
|-------------|----------|--|-----------------------|
| autoManaged | optional | If set this variable is being managed automatically for the reason indicated | returnWith annotation |

| Attribute | Use | Description | Valid Values |
|-----------------|-----------------|--|----------------|
| displayOrder | optional | A 0 to N value indicating the display order of this variable in the user interface | <i>int</i> |
| isMoveable | optional | Indicates whether this variable can be moved to other Dimensions or not | <i>boolean</i> |
| specialUsageKey | optional | A special usage indicator such as Max Number of Offers, set of keys supported defined by release | <i>string</i> |
| variableName | required | The name of the variable referenced | <i>string</i> |

XML Representation

```
<xs:element name="SpecialVariableReference" type="typeUserVariableReference" minOccurs="0"
maxOccurs="unbounded">
  <xs:attribute name="variableName" type="xs:string" use="required"/>
  <xs:attribute name="specialUsageKey" type="xs:string" use="optional"/>
  <xs:attribute name="displayOrder" type="xs:int" use="optional"/>
  <xs:attribute name="isMoveable" type="xs:boolean" use="optional" default="false"/>
  <xs:attribute name="autoManaged" type="enumAutoManageVariable" use="optional">
    <xs:enumeration value="returnWith"/>
    <xs:enumeration value="annotation"/>
  </xs:attribute>
</xs:element>
```

Parent Elements

[InterfaceControl Element](#)

Inputs Element

Data sets by usage type, local expressions and models defined for this application

Table A-33

Attributes for Inputs

| Attribute | Use | Description | Valid Values |
|--------------------|----------|-----------------------------------|---------------|
| primaryDataSetName | optional | The name of the primary data set. | <i>string</i> |

XML Representation

```
<xs:element name="Inputs" type="typeInputs" minOccurs="0">
  <xs:sequence>
    <xs:element name="PrimaryDataSet" type="dataset.typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"/>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
```

```

    </xs:sequence>
  </xs:element>
  <xs:element name="Table" type="typeDataTable"></xs:element>
  <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    </xs:sequence>
    <xs:sequence>
      <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
    <xs:sequence>
      <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
</xs:element>
<xs:element name="OtherDataSet" type="dataset:typeDataSet" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
      <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="DerivedAttribute" type="dataset:typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>

```

```

        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    <xs:sequence>
      <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
<xs:attribute name="primaryDataSetName" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Parent Elements

[PredictiveApplication Element](#)

Child Elements

[DerivedAttribute Element](#), [OtherDataSet Element](#), [PrimaryDataSet Element](#)

PrimaryDataSet Element

(Deprecated) The data set to use for defining the application details and all rules

Table A-34

Attributes for PrimaryDataSet

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|--------------|----------|--|----------------|
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="PrimaryDataSet" type="dataset:typeDataSet" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
      <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="compatibility" type="enumCompatibility" use="optional">
    <xs:enumeration value="complete"></xs:enumeration>
    <xs:enumeration value="partial"></xs:enumeration>
    <xs:enumeration value="none"></xs:enumeration>
  </xs:attribute>

```

```

<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[Inputs Element](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-35
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-36
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[PrimaryDataSet Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```

<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>

```

Parent Elements

[Attribute Element](#)

Table Element

The table used in this data set

Table A-37
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-38
Extended Types

| Type | Description |
|-------------------------------------|---|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[PrimaryDataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-39
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```


XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements

[Expression Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      minOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements

[PrimaryDataSet Element](#)

Child Elements

[AttributeMapping Element](#)

AttributeMapping Element

The mapping of these attributes to the primary attributes

Table A-40
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements[Mapping Element](#)**OtherDataSet Element**

The 'other' data sets of interest

Table A-41

Attributes for OtherDataSet

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```
<xs:element name="OtherDataSet" type="dataset:typeDataSet" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
```

```

<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Table" type="typeDataTable"></xs:element>
<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
  maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
<xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="compatibility" type="enumCompatibility" use="optional">
  <xs:enumeration value="complete"></xs:enumeration>
  <xs:enumeration value="partial"></xs:enumeration>
  <xs:enumeration value="none"></xs:enumeration>
</xs:attribute>
<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[Inputs Element](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-42
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
```



```
<xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Table A-43
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[OtherDataSet Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Attribute Element](#)

Table Element

The table used in this data set

Table A-44
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"></xs:attribute>
```

</xs:element>

Table A-45
Extended Types

| Type | Description |
|-------------------------------------|---|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[OtherDataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-46
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |

[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"/></xs:element>
```

Parent Elements

[Expression Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      maxOccurs="unbounded"/></xs:element>
  </xs:sequence>
```

</xs:element>

Parent Elements

[OtherDataSet Element](#)

Child Elements

[AttributeMapping Element](#)

AttributeMapping Element

The mapping of these attributes to the primary attributes

Table A-47
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[Mapping Element](#)

DerivedAttribute Element

The derived attribute expressions

Table A-48
Attributes for DerivedAttribute

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|---|---------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="DerivedAttribute" type="dataset:typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>

```


Parent Elements[DerivedAttribute Element](#)**EntityDimension Element**

Dimension that defined the Entity of interest to this predictive application (such as Customer, Product, etc.)

Table A-49
Attributes for EntityDimension

| Attribute | Use | Description | Valid Values |
|-------------|----------|---|---|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| name | optional | Name of the element | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |

XML Representation

```
<xs:element name="EntityDimension" type="typeEntityDimension" minOccurs="0">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="Attributes" type="typeAttributeReference" minOccurs="0"
      maxOccurs="unbounded"/></xs:element>
    <xs:element name="InteractiveQuestions" type="typeInteractiveQuery" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="EntityAttribute" type="xs:string"/></xs:element>
        <xs:element name="InteractionPoint" type="xs:string" minOccurs="0"/></xs:element>
        <xs:element name="QueryText" type="xs:string"/></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Variable" type="typeVariable" minOccurs="0" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="ValueSource" type="typeValueSource"/></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Constraint" type="typeConstraint" minOccurs="0" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Boundary" type="typeConstraintBoundary"/></xs:element>
        <xs:element name="Function" type="Q1:typeExpression">
          <xs:choice>
            <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"/></xs:element>
          </xs:choice>
        </xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
```



```

        <xs:element ref="Attribute"></xs:element>
        <xs:element ref="Value"></xs:element>
    </xs:choice>
</xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Selection" type="typeLocalRule" minOccurs="0">
    <xs:sequence>
        <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
</xs:element>
<xs:element name="Allocation" type="typeDimensionAllocation" minOccurs="0"
maxOccurs="unbounded">
    <xs:sequence>
        <xs:element name="Value" type="typeValueSource"></xs:element>
    </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>

```

Parent Elements

[PredictiveApplication Element](#)

Child Elements

[Allocation Element](#), [Attributes Element](#), [Constraint Element](#), [InteractiveQuestions Element](#), [Selection Element](#), [Variable Element](#)

Related Elements

[Variable Element](#), [Constraint Element](#), [Selection Element](#), [Dimension Element](#), [Variable Element](#), [Constraint Element](#), [Member Element](#), [BaseSelection Element](#), [Optimization Element](#), [Deployment Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)

Attributes Element

Attributes that define the Entity, defined by the primary data set

XML Representation

```

<xs:element name="Attributes" type="typeAttributeReference" minOccurs="0"
maxOccurs="unbounded"></xs:element>

```

Parent Elements

[EntityDimension Element](#)

InteractiveQuestions Element

List of 'more input' interactive questions issued by interactive applications

Table A-50

Attributes for InteractiveQuestions

| Attribute | Use | Description | Valid Values |
|------------------|------------|--|---------------------|
| enabled | optional | Indication of enabled state for this query | <i>boolean</i> |

XML Representation

```
<xs:element name="InteractiveQuestions" type="typeInteractiveQuery" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="EntityAttribute" type="xs:string"/></xs:element>
    <xs:element name="InteractionPoint" type="xs:string" minOccurs="0"/></xs:element>
    <xs:element name="QueryText" type="xs:string"/></xs:element>
  </xs:sequence>
  <xs:attribute name="enabled" type="xs:boolean" use="optional" default="false"/></xs:attribute>
</xs:element>
```

Parent Elements

[EntityDimension Element](#)

Child Elements

[EntityAttribute Element](#), [InteractionPoint Element](#), [QueryText Element](#)

EntityAttribute Element

Query pertains to the referenced Entity attribute

XML Representation

```
<xs:element name="EntityAttribute" type="xs:string"/></xs:element>
```

Parent Elements

[InteractiveQuestions Element](#)

InteractionPoint Element

Optional Interaction Point name used when differentiating in the query based on interaction points

XML Representation

```
<xs:element name="InteractionPoint" type="xs:string" minOccurs="0"/></xs:element>
```

Parent Elements[InteractiveQuestions Element](#)**QueryText Element**

Explicit query text

XML Representation

```
<xs:element name="QueryText" type="xs:string"></xs:element>
```

Parent Elements[InteractiveQuestions Element](#)**Variable Element**

List of Variables defined for the Entity

Table A-51

Attributes for Variable

| Attribute | Use | Description | Valid Values |
|-----------------------|-----------------|--|---|
| dataType | required | Data type of this variable | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| name | optional | Name of the element | <i>string</i> |
| optimizationInputItem | optional | Indication of if this variable is to be controlled in Prioritize / Optimize step or not | <i>boolean</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| prompt | optional | When set this key value controls the text to display when prompting for variable value input | <i>string</i> |
| simulateAction | optional | If set this variable will be summarized in the indicated manner during a simulation | sum average |
| simulateName | optional | When set this key value controls the text to display when displaying the summarized value of this variable during a simulation | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|------------------------|----------|--|--|
| simulateNumericDisplay | optional | Optional control of the display of numeric values - Integer, Percentage or Double under user preference formatting | Double IntegerRounded IntegerTruncated Percentage |
| tableIndex | optional | Variable index in prioritization table | <i>int</i> |

XML Representation

```

<xs:element name="Variable" type="typeVariable" minOccurs="0" maxOccurs="unbounded">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="ValueSource" type="typeValueSource"/></xs:element>
  </xs:sequence>
  <xs:attribute name="dataType" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="tableIndex" type="xs:int" use="optional" default="0"/></xs:attribute>
  <xs:attribute name="prompt" type="xs:string" use="optional" default="VARIABLE_PROMPT"/></xs:attribute>
  <xs:attribute name="optimizationInputItem" type="xs:boolean" use="optional"
  default="false"/></xs:attribute>
  <xs:attribute name="simulateAction" type="enumVariableValueSummary" use="optional">
    <xs:enumeration value="sum"/></xs:enumeration>
    <xs:enumeration value="average"/></xs:enumeration>
  </xs:attribute>
  <xs:attribute name="simulateName" type="xs:string" use="optional"
  default="VARIABLE_PROMPT"/></xs:attribute>
  <xs:attribute name="simulateNumericDisplay" type="enumNumericDisplay">
    <xs:enumeration value="Double"/></xs:enumeration>
    <xs:enumeration value="IntegerRounded"/></xs:enumeration>
    <xs:enumeration value="IntegerTruncated"/></xs:enumeration>
    <xs:enumeration value="Percentage"/></xs:enumeration>
  </xs:attribute>
</xs:element>

```

Parent Elements

[EntityDimension Element](#)

Child Elements

[ValueSource Element](#)

Related Elements

EntityDimension Element, Constraint Element, Selection Element, Dimension Element, Variable Element, Constraint Element, Member Element, BaseSelection Element, Optimization Element, Deployment Element, Selections Element, DecisionList Element, Selections Element, RecordSelection Element, CombiningRule Element, Selection Element, Rule Element, BaseSelection Element

ValueSource Element

Source of default values for this Variable

XML Representation

```
<xs:element name="ValueSource" type="typeValueSource"></xs:element>
```

Table A-52
Extended Types

| Type | Description |
|--|---------------------------------------|
| ConstantValueSource | A constant value source |
| AttributeValueSource | An Entity attribute value source |
| LocalRuleValueSource | A local rule value source |
| ReferencedRuleModelValueSource | Referenced rule or model value source |

Parent Elements

[Variable Element](#)

Constraint Element

Constraints associated with this Dimension, to be applied in the execution and optimization of this application

Table A-53
Attributes for Constraint

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|---|---|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| name | optional | Name of the element | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| type | required | Constraint type | max min |

XML Representation

```
<xs:element name="Constraint" type="typeConstraint" minOccurs="0" maxOccurs="unbounded">
```

```

<xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
<xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
  <xs:enumeration value="none"/></xs:enumeration>
  <xs:enumeration value="modify"/></xs:enumeration>
  <xs:enumeration value="add"/></xs:enumeration>
  <xs:enumeration value="remove"/></xs:enumeration>
</xs:attribute>
<xs:sequence>
  <xs:element name="Boundary" type="typeConstraintBoundary"/></xs:element>
  <xs:element name="Function" type="Q1:typeExpression">
    <xs:choice>
      <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"/></xs:element>
      <xs:element ref="Attribute"/></xs:element>
      <xs:element ref="Value"/></xs:element>
    </xs:choice>
  </xs:element>
</xs:sequence>
<xs:attribute name="type" type="enumConstraintType" use="required">
  <xs:enumeration value="max"/></xs:enumeration>
  <xs:enumeration value="min"/></xs:enumeration>
</xs:attribute>
</xs:element>

```

Parent Elements[EntityDimension Element](#)**Child Elements**[Boundary Element](#), [Function Element](#)**Related Elements**

[EntityDimension Element](#), [Variable Element](#), [Selection Element](#), [Dimension Element](#), [Variable Element](#), [Constraint Element](#), [Member Element](#), [BaseSelection Element](#), [Optimization Element](#), [Deployment Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)

Boundary Element

Constraint boundary

Table A-54

Attributes for Boundary

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| value | required | The value or reference defining this boundary | <i>string</i> |

XML Representation

```

<xs:element name="Boundary" type="typeConstraintBoundary">
  <xs:attribute name="value" type="xs:string" use="required"/></xs:attribute>

```

</xs:element>

Table A-55
Extended Types

| Type | Description |
|---|--|
| ConstantBoundary | A constant Constraint boundary |
| VariableReferenceBoundary | A variable reference Constraint Boundary |

Parent Elements

[Constraint Element](#)

Function Element

Constraint function definition

Table A-56
Attributes for Function

| Attribute | Use | Description | Valid Values |
|-----------|----------|--|---------------|
| Domain | optional | Resulting data type domain for this expression | <i>string</i> |
| Functor | optional | Optional functor involved in this expression | <i>string</i> |
| Name | optional | Alias name of this expression | <i>string</i> |

XML Representation

```
<xs:element name="Function" type="Q1:typeExpression">
  <xs:choice>
    <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"/></xs:element>
    <xs:element ref="Attribute"/></xs:element>
    <xs:element ref="Value"/></xs:element>
  </xs:choice>
  <xs:attribute name="Name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="Domain" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="Functor" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Parent Elements

[Constraint Element](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Value Element](#)

Selection Element

Selection and Exclusion rules for Entity members

Table A-57
Attributes for Selection

| Attribute | Use | Description | Valid Values |
|------------------------------|-----------------|--|---|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| hasLocalExpressionReferences | optional | Set during an edit to indicate whether the rule has local expression references in it or not. When true, this rule cannot be exported. | <i>boolean</i> |
| mimeType | required | File MIME type of this rule | <i>string</i> |
| name | optional | Name of the element | <i>string</i> |
| outputDataType | optional | Output field data type | <i>string</i> |
| outputField | optional | Output field to use from the rule | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| usageDescription | optional | Optional additional descriptive text for this rule | <i>string</i> |

XML Representation

```
<xs:element name="Selection" type="typeLocalRule" minOccurs="0">
  <xs:attribute name="name" type="xs:string" use="optional"/>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/>
    <xs:enumeration value="modify"/>
    <xs:enumeration value="add"/>
    <xs:enumeration value="remove"/>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="mimeType" type="xs:string" use="required"/>
  <xs:attribute name="usageDescription" type="xs:string" use="optional"/>
  <xs:attribute name="hasLocalExpressionReferences" type="xs:boolean" use="optional"
    default="false"/>
  <xs:attribute name="outputField" type="xs:string" use="optional"/>
  <xs:attribute name="outputDataType" type="xs:string" use="optional"/>
</xs:element>
```

Table A-58
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeMemberSelection | The Dimension member selection properties and resulting selection rule |

Parent Elements

[EntityDimension Element](#)

Child Elements

[Definition Element](#)

Related Elements

[EntityDimension Element](#), [Variable Element](#), [Constraint Element](#), [Dimension Element](#), [Variable Element](#), [Constraint Element](#), [Member Element](#), [BaseSelection Element](#), [Optimization Element](#), [Deployment Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)

Definition Element

Definition of the local rule

XML Representation

```
<xs:element name="Definition" type="xs:string"/></xs:element>
```

Parent Elements

[Selection Element](#)

Allocation Element

Allocation rule for the Entity Dimension and next level Dimension(s)

Table A-59

Attributes for Allocation

| Attribute | Use | Description | Valid Values |
|--------------------|-----------------|---|---------------|
| dimensionReference | required | Child Dimension this Allocation pertains to | <i>string</i> |
| interactionPoint | optional | The optional Interaction Point indicator | <i>string</i> |

XML Representation

```
<xs:element name="Allocation" type="typeDimensionAllocation" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Value" type="typeValueSource"/></xs:element>
  </xs:sequence>
  <xs:attribute name="dimensionReference" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="interactionPoint" type="xs:string"/></xs:attribute>
</xs:element>
```

Parent Elements[EntityDimension Element](#)**Child Elements**[Value Element](#)**Value Element**

The allocated value for this dimension

XML Representation

```
<xs:element name="Value" type="typeValueSource"></xs:element>
```

Table A-60
Extended Types

| Type | Description |
|--|---------------------------------------|
| ConstantValueSource | A constant value source |
| AttributeValueSource | An Entity attribute value source |
| LocalRuleValueSource | A local rule value source |
| ReferencedRuleModelValueSource | Referenced rule or model value source |

Parent Elements[Allocation Element](#)**Dimension Element**

The business problem's dimensional solution hierarchy

Table A-61
Attributes for Dimension

| Attribute | Use | Description | Valid Values |
|-----------------|----------|---|---|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| name | optional | Name of the element | <i>string</i> |
| parentDimension | optional | Optional parent dimension for this dimension (hierarchy) | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |

XML Representation

```
<xs:element name="Dimension" type="typeDimension" minOccurs="0" maxOccurs="unbounded">
```

```

</xs:attribute name="name" type="xs:string" use="optional"></xs:attribute>
</xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
</xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
  <xs:enumeration value="none"></xs:enumeration>
  <xs:enumeration value="modify"></xs:enumeration>
  <xs:enumeration value="add"></xs:enumeration>
  <xs:enumeration value="remove"></xs:enumeration>
</xs:attribute>
</xs:sequence>
</xs:element name="Variable" type="typeVariable" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="ValueSource" type="typeValueSource"></xs:element>
  </xs:sequence>
</xs:element>
</xs:element name="Constraint" type="typeConstraint" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Boundary" type="typeConstraintBoundary"></xs:element>
    <xs:element name="Function" type="Q1:typeExpression">
      <xs:choice>
        <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"></xs:element>
        <xs:element ref="Attribute"></xs:element>
        <xs:element ref="Value"></xs:element>
      </xs:choice>
    </xs:element>
  </xs:sequence>
</xs:element>
</xs:element name="Member" type="typeDimensionMember" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Selection" type="typeMemberSelection" minOccurs="0">
      <xs:sequence>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:sequence>
      <xs:element name="StartTimestamp" type="typeTimestampDetails"
        minOccurs="0"></xs:element>
      <xs:element name="EndTimestamp" type="typeTimestampDetails"
        minOccurs="0"></xs:element>
      <xs:element name="InteractionPoint" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
      <xs:element name="BaseSelection" type="typeLocalRule" minOccurs="0">
        <xs:sequence>
          <xs:element name="Definition" type="xs:string"></xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Allocation" type="typeDimensionAllocation" minOccurs="0"
    maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Value" type="typeValueSource"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="VariableValue" type="typeVariableValue" minOccurs="0"
    maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Value" type="typeValueSource"></xs:element>
    </xs:sequence>
  </xs:element>

```

```

    </xs:element>
    <xs:element name="PropertyValue" type="typePropertyValue" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Property" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
</xs:sequence>
<xs:attribute name="parentDimension" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Parent Elements

[PredictiveApplication Element](#)

Child Elements

[Constraint Element](#), [Member Element](#), [Property Element](#), [Variable Element](#)

Related Elements

[EntityDimension Element](#), [Variable Element](#), [Constraint Element](#), [Selection Element](#), [Variable Element](#), [Constraint Element](#), [Member Element](#), [BaseSelection Element](#), [Optimization Element](#), [Deployment Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)

Variable Element

List of Variables defined for this Dimension

Table A-62
Attributes for Variable

| Attribute | Use | Description | Valid Values |
|-----------------------|-----------------|--|---|
| dataType | required | Data type of this variable | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| name | optional | Name of the element | <i>string</i> |
| optimizationInputItem | optional | Indication of if this variable is to be controlled in Prioritize / Optimize step or not | <i>boolean</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| prompt | optional | When set this key value controls the text to display when prompting for variable value input | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|------------------------|----------|--|--|
| simulateAction | optional | If set this variable will be summarized in the indicated manner during a simulation | sum average |
| simulateName | optional | When set this key value controls the text to display when displaying the summarized value of this variable during a simulation | <i>string</i> |
| simulateNumericDisplay | optional | Optional control of the display of numeric values - Integer, Percentage or Double under user preference formatting | Double IntegerRounded IntegerTruncated Percentage |
| tableIndex | optional | Variable index in prioritization table | <i>int</i> |

XML Representation

```

<xs:element name="Variable" type="typeVariable" minOccurs="0" maxOccurs="unbounded">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="ValueSource" type="typeValueSource"/></xs:element>
  </xs:sequence>
  <xs:attribute name="dataType" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="tableIndex" type="xs:int" use="optional" default="0"/></xs:attribute>
  <xs:attribute name="prompt" type="xs:string" use="optional" default="VARIABLE_PROMPT"/></xs:attribute>
  <xs:attribute name="optimizationInputItem" type="xs:boolean" use="optional"
  default="false"/></xs:attribute>
  <xs:attribute name="simulateAction" type="enumVariableValueSummary" use="optional">
    <xs:enumeration value="sum"/></xs:enumeration>
    <xs:enumeration value="average"/></xs:enumeration>
  </xs:attribute>
  <xs:attribute name="simulateName" type="xs:string" use="optional"
  default="VARIABLE_PROMPT"/></xs:attribute>
  <xs:attribute name="simulateNumericDisplay" type="enumNumericDisplay">
    <xs:enumeration value="Double"/></xs:enumeration>
    <xs:enumeration value="IntegerRounded"/></xs:enumeration>
    <xs:enumeration value="IntegerTruncated"/></xs:enumeration>
    <xs:enumeration value="Percentage"/></xs:enumeration>
  </xs:attribute>
</xs:element>

```

Parent Elements

Dimension Element

Child Elements

[ValueSource Element](#)

Related Elements

[EntityDimension Element](#), [Variable Element](#), [Constraint Element](#), [Selection Element](#), [Dimension Element](#), [Constraint Element](#), [Member Element](#), [BaseSelection Element](#), [Optimization Element](#), [Deployment Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)

ValueSource Element

Source of default values for this Variable

XML Representation

```
<xs:element name="ValueSource" type="typeValueSource"/></xs:element>
```

Table A-63
Extended Types

| Type | Description |
|--|---------------------------------------|
| ConstantValueSource | A constant value source |
| AttributeValueSource | An Entity attribute value source |
| LocalRuleValueSource | A local rule value source |
| ReferencedRuleModelValueSource | Referenced rule or model value source |

Parent Elements

[Variable Element](#)

Constraint Element

List of Constraints on this Dimension

Table A-64
Attributes for Constraint

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|---|---|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| name | optional | Name of the element | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| type | required | Constraint type | max min |

XML Representation

```

<xs:element name="Constraint" type="typeConstraint" minOccurs="0" maxOccurs="unbounded">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="Boundary" type="typeConstraintBoundary"/></xs:element>
    <xs:element name="Function" type="Q1:typeExpression">
      <xs:choice>
        <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"/></xs:element>
        <xs:element ref="Attribute"/></xs:element>
        <xs:element ref="Value"/></xs:element>
      </xs:choice>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="type" type="enumConstraintType" use="required">
    <xs:enumeration value="max"/></xs:enumeration>
    <xs:enumeration value="min"/></xs:enumeration>
  </xs:attribute>
</xs:element>

```

Parent Elements[Dimension Element](#)**Child Elements**[Boundary Element, Function Element](#)**Related Elements**

[EntityDimension Element](#), [Variable Element](#), [Constraint Element](#), [Selection Element](#), [Dimension Element](#), [Variable Element](#), [Member Element](#), [BaseSelection Element](#), [Optimization Element](#), [Deployment Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)

Boundary Element

Constraint boundary

Table A-65
Attributes for Boundary

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| value | required | The value or reference defining this boundary | <i>string</i> |

XML Representation

```
<xs:element name="Boundary" type="typeConstraintBoundary">
  <xs:attribute name="value" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Table A-66
Extended Types

| Type | Description |
|---|--|
| ConstantBoundary | A constant Constraint boundary |
| VariableReferenceBoundary | A variable reference Constraint Boundary |

Parent Elements

[Constraint Element](#)

Function Element

Constraint function definition

Table A-67
Attributes for Function

| Attribute | Use | Description | Valid Values |
|-----------|----------|--|---------------|
| Domain | optional | Resulting data type domain for this expression | <i>string</i> |
| Functor | optional | Optional functor involved in this expression | <i>string</i> |
| Name | optional | Alias name of this expression | <i>string</i> |

XML Representation

```
<xs:element name="Function" type="Q1:typeExpression">
  <xs:choice>
    <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"></xs:element>
    <xs:element ref="Attribute"></xs:element>
    <xs:element ref="Value"></xs:element>
  </xs:choice>
  <xs:attribute name="Name" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="Domain" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="Functor" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[Constraint Element](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Value Element](#)

Member Element

Dimension Member definition

Table A-68

Attributes for Member

| Attribute | Use | Description | Valid Values |
|-----------------------------------|----------|---|---|
| description | optional | Display text describing this dimension member | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| name | optional | Name of the element | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| priority | optional | The priority of this member to be considered by the optimization algorithm. The number 1 is the highest priority, followed by 2, etc. | <i>int</i> |
| sameMatrixForAllInteractionPoints | optional | Runtime UI control of the use the same matrix for all Interaction Points option | <i>boolean</i> |
| useMatrix | optional | Runtime UI control of the use matrix or not decision for Combine when only one input has been configured | <i>boolean</i> |

XML Representation

```

<xs:element name="Member" type="typeDimensionMember" minOccurs="0" maxOccurs="unbounded">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="Selection" type="typeMemberSelection" minOccurs="0">
      <xs:sequence>
        <xs:element name="Definition" type="xs:string"/></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="StartTimestamp" type="typeTimestampDetails" minOccurs="0"/></xs:element>
    <xs:element name="EndTimestamp" type="typeTimestampDetails" minOccurs="0"/></xs:element>
    <xs:element name="InteractionPoint" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"/></xs:element>
    <xs:element name="BaseSelection" type="typeLocalRule" minOccurs="0">

```

```

        <xs:sequence>
          <xs:element name="Definition" type="xs:string"/></xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Allocation" type="typeDimensionAllocation" minOccurs="0"
maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Value" type="typeValueSource"/></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="VariableValue" type="typeVariableValue" minOccurs="0" maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Value" type="typeValueSource"/></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="PropertyValue" type="typePropertyValue" minOccurs="0"
maxOccurs="unbounded"/></xs:element>
</xs:sequence>
<xs:attribute name="description" type="xs:string" use="optional"/></xs:attribute>
<xs:attribute name="priority" type="xs:int" use="optional" default="1"/></xs:attribute>
<xs:attribute name="sameMatrixForAllInteractionPoints" type="xs:boolean" use="optional"
default="true"/></xs:attribute>
<xs:attribute name="useMatrix" type="xs:boolean" use="optional" default="false"/></xs:attribute>
</xs:element>

```

Parent Elements[Dimension Element](#)**Child Elements**[Allocation Element](#), [PropertyValue Element](#), [Selection Element](#), [VariableValue Element](#)**Related Elements**[EntityDimension Element](#), [Variable Element](#), [Constraint Element](#), [Selection Element](#), [Dimension Element](#), [Variable Element](#), [Constraint Element](#), [BaseSelection Element](#), [Optimization Element](#), [Deployment Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)**Selection Element**

Selection and Exclusion rules for this Dimension Member

Table A-69
Attributes for Selection

| Attribute | Use | Description | Valid Values |
|-----------|----------|--|----------------|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|------------------------------|-----------------|--|---|
| hasLocalExpressionReferences | optional | Set during an edit to indicate whether the rule has local expression references in it or not. When true, this rule cannot be exported. | <i>boolean</i> |
| contentType | required | File MIME type of this rule | <i>string</i> |
| name | optional | Name of the element | <i>string</i> |
| outputDataType | optional | Output field data type | <i>string</i> |
| outputField | optional | Output field to use from the rule | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| usageDescription | optional | Optional additional descriptive text for this rule | <i>string</i> |

XML Representation

```

<xs:element name="Selection" type="typeMemberSelection" minOccurs="0">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"/></xs:element>
  </xs:sequence>
  <xs:attribute name="contentType" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="usageDescription" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="hasLocalExpressionReferences" type="xs:boolean" use="optional"
  default="false"/></xs:attribute>
  <xs:attribute name="outputField" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputDataType" type="xs:string" use="optional"/></xs:attribute>
  <xs:sequence>
    <xs:element name="StartTimestamp" type="typeTimestampDetails" minOccurs="0"/></xs:element>
    <xs:element name="EndTimestamp" type="typeTimestampDetails" minOccurs="0"/></xs:element>
    <xs:element name="InteractionPoint" type="xs:string" minOccurs="0"
    maxOccurs="unbounded"/></xs:element>
    <xs:element name="BaseSelection" type="typeLocalRule" minOccurs="0">
      <xs:sequence>
        <xs:element name="Definition" type="xs:string"/></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>

```

Parent Elements[Member Element](#)**Child Elements**[BaseSelection Element](#), [Definition Element](#), [EndTimestamp Element](#), [InteractionPoint Element](#), [StartTimestamp Element](#)**Definition Element**

Definition of the local rule

XML Representation

```
<xs:element name="Definition" type="xs:string"/></xs:element>
```

Parent Elements[Selection Element](#)**StartTimestamp Element**

The valid start timestamp for this Dimension Member, test will be incorporated into the final local rule if specified

Table A-70
Attributes for StartTimestamp

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|-------------------------------------|--------------|
| day | required | the day portion of the timestamp | <i>int</i> |
| hour | optional | the hour portion of the timestamp | <i>int</i> |
| minute | optional | the minute portion of the timestamp | <i>int</i> |
| month | required | the month portion of the timestamp | <i>int</i> |
| second | optional | the second portion of the timestamp | <i>int</i> |
| year | required | the year portion of the timestamp | <i>int</i> |

XML Representation

```
<xs:element name="StartTimestamp" type="typeTimestampDetails" minOccurs="0">
  <xs:attribute name="year" type="xs:int" use="required"/></xs:attribute>
  <xs:attribute name="month" type="xs:int" use="required"/></xs:attribute>
  <xs:attribute name="day" type="xs:int" use="required"/></xs:attribute>
  <xs:attribute name="hour" type="xs:int" use="optional" default="0"/></xs:attribute>
  <xs:attribute name="minute" type="xs:int" use="optional" default="0"/></xs:attribute>
  <xs:attribute name="second" type="xs:int" use="optional" default="0"/></xs:attribute>
</xs:element>
```

Parent Elements[Selection Element](#)**EndTimestamp Element**

The valid end timestamp for this Dimension Member, test will be incorporated into the final local rule if specified

Table A-71
Attributes for EndTimestamp

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|-------------------------------------|--------------|
| day | required | the day portion of the timestamp | <i>int</i> |
| hour | optional | the hour portion of the timestamp | <i>int</i> |
| minute | optional | the minute portion of the timestamp | <i>int</i> |
| month | required | the month portion of the timestamp | <i>int</i> |
| second | optional | the second portion of the timestamp | <i>int</i> |
| year | required | the year portion of the timestamp | <i>int</i> |

XML Representation

```
<xs:element name="EndTimestamp" type="typeTimestampDetails" minOccurs="0">
  <xs:attribute name="year" type="xs:int" use="required"/>
  <xs:attribute name="month" type="xs:int" use="required"/>
  <xs:attribute name="day" type="xs:int" use="required"/>
  <xs:attribute name="hour" type="xs:int" use="optional" default="0"/>
  <xs:attribute name="minute" type="xs:int" use="optional" default="0"/>
  <xs:attribute name="second" type="xs:int" use="optional" default="0"/>
</xs:element>
```

Parent Elements[Selection Element](#)**InteractionPoint Element**

List of selected Interaction Points for the Dimension Member, test will be incorporated into the final local rule if specified

XML Representation

```
<xs:element name="InteractionPoint" type="xs:string" minOccurs="0" maxOccurs="unbounded"/>
```

Parent Elements[Selection Element](#)

BaseSelection Element

The selection rule for the Dimension Member, will be folded into the final local rule if specified

Table A-72
Attributes for BaseSelection

| Attribute | Use | Description | Valid Values |
|------------------------------|-----------------|--|---|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| hasLocalExpressionReferences | optional | Set during an edit to indicate whether the rule has local expression references in it or not. When true, this rule cannot be exported. | <i>boolean</i> |
| mimeType | required | File MIME type of this rule | <i>string</i> |
| name | optional | Name of the element | <i>string</i> |
| outputDataType | optional | Output field data type | <i>string</i> |
| outputField | optional | Output field to use from the rule | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| usageDescription | optional | Optional additional descriptive text for this rule | <i>string</i> |

XML Representation

```
<xs:element name="BaseSelection" type="typeLocalRule" minOccurs="0">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"/></xs:element>
  </xs:sequence>
  <xs:attribute name="mimeType" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="usageDescription" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="hasLocalExpressionReferences" type="xs:boolean" use="optional"
  default="false"/></xs:attribute>
  <xs:attribute name="outputField" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputDataType" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-73
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeMemberSelection | The Dimension member selection properties and resulting selection rule |

Parent Elements

[Selection Element](#)

Child Elements

[Definition Element](#)

Related Elements

[EntityDimension Element](#), [Variable Element](#), [Constraint Element](#), [Selection Element](#), [Dimension Element](#), [Variable Element](#), [Constraint Element](#), [Member Element](#), [Optimization Element](#), [Deployment Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)

Definition Element

Definition of the local rule

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements

[BaseSelection Element](#)

Allocation Element

Allocation rules for this Dimension Member

Table A-74
Attributes for Allocation

| Attribute | Use | Description | Valid Values |
|--------------------|-----------------|---|---------------|
| dimensionReference | required | Child Dimension this Allocation pertains to | <i>string</i> |
| interactionPoint | optional | The optional Interaction Point indicator | <i>string</i> |

XML Representation

```
<xs:element name="Allocation" type="typeDimensionAllocation" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Value" type="typeValueSource"></xs:element>
  </xs:sequence>
</xs:element>
```

```

    </xs:sequence>
    <xs:attribute name="dimensionReference" type="xs:string" use="required"></xs:attribute>
    <xs:attribute name="interactionPoint" type="xs:string"></xs:attribute>
  </xs:element>

```

Parent Elements

[Member Element](#)

Child Elements

[Value Element](#)

Value Element

The allocated value for this dimension

XML Representation

```
<xs:element name="Value" type="typeValueSource"></xs:element>
```

Table A-75
Extended Types

| Type | Description |
|--|---------------------------------------|
| ConstantValueSource | A constant value source |
| AttributeValueSource | An Entity attribute value source |
| LocalRuleValueSource | A local rule value source |
| ReferencedRuleModelValueSource | Referenced rule or model value source |

Parent Elements

[Allocation Element](#)

VariableValue Element

Variable Values defined for this Dimension Member

Table A-76
Attributes for VariableValue

| Attribute | Use | Description | Valid Values |
|------------------|-----------------|---|---------------|
| interactionPoint | optional | Optional Interaction Point for this variable value, Variable name plus Interaction Point name (may be empty) unique in a value series | <i>string</i> |
| name | required | Variable referenced by name | <i>string</i> |

XML Representation

```
<xs:element name="VariableValue" type="typeVariableValue" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Value" type="typeValueSource"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="interactionPoint" type="xs:string" use="optional" default=""></xs:attribute>
</xs:element>
```

Parent Elements[Member Element](#)**Child Elements**[Value Element](#)**Value Element**

The value for this variable reference

XML Representation

```
<xs:element name="Value" type="typeValueSource"></xs:element>
```

Table A-77
Extended Types

| Type | Description |
|--|---------------------------------------|
| ConstantValueSource | A constant value source |
| AttributeValueSource | An Entity attribute value source |
| LocalRuleValueSource | A local rule value source |
| ReferencedRuleModelValueSource | Referenced rule or model value source |

Parent Elements[VariableValue Element](#)**PropertyValue Element**

Property values for this Dimension member (content of element)

Table A-78
Attributes for PropertyValue

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---------------|---------------|
| name | required | Property name | <i>string</i> |

XML Representation

```
<xs:element name="PropertyValue" type="typePropertyValue" minOccurs="0" maxOccurs="unbounded">
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
```

```
</xs:element>
```

Parent Elements

[Member Element](#)

Property Element

Properties defined for all members of this Dimension

XML Representation

```
<xs:element name="Property" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Dimension Element](#)

Optimization Element

Definition of the optimization to be applied on execution of this application

Table A-79

Attributes for Optimization

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|---|--|
| algorithm | required | Optimization algorithm from list of known algorithms | Heuristic IPBase IPMin IPMax None |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| name | optional | Name of the element | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |

XML Representation

```
<xs:element name="Optimization" type="typeOptimizationDefinition" minOccurs="0">
  <xs:attribute name="name" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"></xs:enumeration>
    <xs:enumeration value="modify"></xs:enumeration>
    <xs:enumeration value="add"></xs:enumeration>
    <xs:enumeration value="remove"></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="ObjectiveFunction" type="Q1:typeExpression">
```

```

    <xs:choice>
      <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"/></xs:element>
      <xs:element ref="Attribute"/></xs:element>
      <xs:element ref="Value"/></xs:element>
    </xs:choice>
  </xs:element>
</xs:sequence>
<xs:attribute name="algorithm" type="enumOptimizationAlgorithmType" use="required">
  <xs:enumeration value="Heuristic"/></xs:enumeration>
  <xs:enumeration value="IPBase"/></xs:enumeration>
  <xs:enumeration value="IPMin"/></xs:enumeration>
  <xs:enumeration value="IPMax"/></xs:enumeration>
  <xs:enumeration value="None"/></xs:enumeration>
</xs:attribute>
</xs:element>

```

Parent Elements

[PredictiveApplication Element](#)

Child Elements

[ObjectiveFunction Element](#)

Related Elements

[EntityDimension Element](#), [Variable Element](#), [Constraint Element](#), [Selection Element](#), [Dimension Element](#), [Variable Element](#), [Constraint Element](#), [Member Element](#), [BaseSelection Element](#), [Deployment Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)

ObjectiveFunction Element

Objective Function definition

Table A-80

Attributes for ObjectiveFunction

| Attribute | Use | Description | Valid Values |
|-----------|----------|--|---------------|
| Domain | optional | Resulting data type domain for this expression | <i>string</i> |
| Functor | optional | Optional functor involved in this expression | <i>string</i> |
| Name | optional | Alias name of this expression | <i>string</i> |

XML Representation

```

<xs:element name="ObjectiveFunction" type="Q1:typeExpression">
  <xs:choice>
    <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"/></xs:element>

```

```

    <xs:element ref="Attribute"></xs:element>
    <xs:element ref="Value"></xs:element>
  </xs:choice>
  <xs:attribute name="Name" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="Domain" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="Functor" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Parent Elements

[Optimization Element](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Value Element](#)

Deployment Element

Deployment details for this application

Table A-81

Attributes for Deployment

| Attribute | Use | Description | Valid Values |
|-------------------------|----------|--|---|
| defaultInteractionPoint | optional | Optional indicator of the Interaction Point that represents the terminal node to be set in the Stream deployment information as the scoring task | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| name | optional | Name of the element | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |

XML Representation

```

<xs:element name="Deployment" type="typeDeployment" minOccurs="0">
  <xs:attribute name="name" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"></xs:enumeration>
    <xs:enumeration value="modify"></xs:enumeration>
    <xs:enumeration value="add"></xs:enumeration>
    <xs:enumeration value="remove"></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="DeployLabel" type="typeLabelDefinition" minOccurs="0"
      maxOccurs="unbounded"></xs:element>

```

```

    <xs:element name="OutputAttribute" type="typeOutputAttribute" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
    <xs:element name="InteractionPoint" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="defaultInteractionPoint" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Parent Elements

[PredictiveApplication Element](#)

Child Elements

[DeployLabel Element](#), [InteractionPoint Element](#), [OutputAttribute Element](#)

Related Elements

[EntityDimension Element](#), [Variable Element](#), [Constraint Element](#), [Selection Element](#), [Dimension Element](#), [Variable Element](#), [Constraint Element](#), [Member Element](#), [BaseSelection Element](#), [Optimization Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)

DeployLabel Element

List of labels presented to the user during deployment

Table A-82
Attributes for *DeployLabel*

| Attribute | Use | Description | Valid Values |
|--------------|-----------------|--|---------------|
| displayColor | optional | Optional color to use when displaying this label | <i>string</i> |
| labelName | required | Name of this label | <i>string</i> |

XML Representation

```

<xs:element name="DeployLabel" type="typeLabelDefinition" minOccurs="0" maxOccurs="unbounded">
  <xs:attribute name="labelName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="displayColor" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Parent Elements

[Deployment Element](#)

OutputAttribute Element

Interactive output attributes

Table A-83
Attributes for *OutputAttribute*

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|---|
| name | required | Attribute Name | <i>string</i> |
| parent | optional | Specifies the output hierarchy for display purposes | <i>string</i> |
| referenceType | required | Reference type | Variable Objective DimensionMember |
| returnValue | required | Return Value | <i>string</i> |

XML Representation

```
<xs:element name="OutputAttribute" type="typeOutputAttribute" minOccurs="0" maxOccurs="unbounded">
  <xs:attribute name="referenceType" type="enumAttributeReferenced" use="required">
    <xs:enumeration value="Variable"></xs:enumeration>
    <xs:enumeration value="Objective"></xs:enumeration>
    <xs:enumeration value="DimensionMember"></xs:enumeration>
  </xs:attribute>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="returnValue" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="parent" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[Deployment Element](#)

InteractionPoint Element

List of defined Interaction Points for the application

Table A-84
Attributes for *InteractionPoint*

| Attribute | Use | Description | Valid Values |
|-----------|----------|--|----------------|
| isEnabled | optional | Control of the enabled/disabled indicator for this Interaction Point | <i>boolean</i> |

XML Representation

```
<xs:element name="InteractionPoint" minOccurs="0" maxOccurs="unbounded">
  <xs:attribute name="isEnabled" type="xs:boolean" use="optional" default="true"></xs:attribute>
</xs:element>
```

Parent Elements

[Deployment Element](#)

CurrentStateReport Element

The optional report to use for summarizing the current state of the application

Table A-85
Attributes for CurrentStateReport

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|---|---|
| author | optional | Author of the object version | <i>string</i> |
| brokenLink | optional | Indicates whether the object version can be found in the repository or not | <i>boolean</i> |
| dateCreated | optional | Date the version was created in the repository | <i>string</i> |
| description | optional | Description defined for the object version and user's language code | <i>string</i> |
| displayName | optional | The name to display to the user for this report | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| groupName | optional | Optional report group name | <i>string</i> |
| id | required | ID of the repository object | <i>string</i> |
| isLocked | optional | runtime communication of object lock state | <i>boolean</i> |
| keywords | optional | Keywords defined for the object version | <i>string</i> |
| label | required | Version label of the repository object | <i>string</i> |
| marker | optional | Version marker for the repository object | <i>string</i> |
| mimeType | optional | File MIME type of the repository object | <i>string</i> |
| modelID | optional | ID of the model in the build cache, used to track model refresh and those being created by auto-model process | <i>any</i> |
| name | optional | Name of the element | <i>string</i> |
| parameters | optional | Optional parameters to pass to the report when it runs | <i>string</i> |
| parentObjectId | optional | Tracking of the parent object ID | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |

| Attribute | Use | Description | Valid Values |
|------------------|----------|--|---------------|
| path | optional | Full path of the object in the repository | <i>string</i> |
| usageDescription | optional | Additional description text that can be assigned by the user interface, but not part of repository information | <i>string</i> |

XML Representation

```

<xs:element name="CurrentStateReport" type="typeCurrentStateReportItem" minOccurs="0">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:attribute name="id" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="mimeType" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="label" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="marker" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="path" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="dateCreated" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="brokenLink" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="author" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="keywords" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="usageDescription" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="modelID"/></xs:attribute>
  <xs:attribute name="parentObjectId" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="isLocked" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="parameters" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="groupName" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="displayName" type="xs:string" use="optional"/></xs:attribute>
</xs:element>

```

Parent Elements

PredictiveApplication Element

Report Element

Reports available in this application

Table A-86
Attributes for Report

| Attribute | Use | Description | Valid Values |
|-----------|----------|------------------------------|---------------|
| author | optional | Author of the object version | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|------------------|-----------------|--|---|
| brokenLink | optional | Indicates whether the object version can be found in the repository or not | <i>boolean</i> |
| dateCreated | optional | Date the version was created in the repository | <i>string</i> |
| description | optional | Description defined for the object version and user's language code | <i>string</i> |
| displayName | optional | The name to display to the user for this report | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| groupName | optional | Optional report group name | <i>string</i> |
| id | required | ID of the repository object | <i>string</i> |
| isLocked | optional | runtime communication of object lock state | <i>boolean</i> |
| keywords | optional | Keywords defined for the object version | <i>string</i> |
| label | required | Version label of the repository object | <i>string</i> |
| marker | optional | Version marker for the repository object | <i>string</i> |
| mimeType | optional | File MIME type of the repository object | <i>string</i> |
| modelID | optional | ID of the model in the build cache, used to track model refresh and those being created by auto-model process | <i>any</i> |
| name | optional | Name of the element | <i>string</i> |
| parameters | optional | Optional parameters to pass to the report when it runs | <i>string</i> |
| parentObjectId | optional | Tracking of the parent object ID | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| path | optional | Full path of the object in the repository | <i>string</i> |
| usageDescription | optional | Additional description text that can be assigned by the user interface, but not part of repository information | <i>string</i> |

XML Representation

```

<xs:element name="Report" type="typeReportItem" minOccurs="0" maxOccurs="unbounded">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:attribute name="id" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="mimeType" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="label" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="marker" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="path" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="dateCreated" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="brokenLink" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="author" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="keywords" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="usageDescription" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="modelID"/></xs:attribute>
  <xs:attribute name="parentObjectId" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="isLocked" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="parameters" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="groupName" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="displayName" type="xs:string" use="optional"/></xs:attribute>
</xs:element>

```

Table A-87
Extended Types

| Type | Description |
|--|---|
| typeCurrentStateReportItem | Specifies on the report used for displaying the current state of a deployed application |

Parent Elements

[PredictiveApplication Element](#)

Related Elements

[RuleModelReference Element](#)

Tasks Element

Information on long-running task requests

XML Representation

```

<xs:element name="Tasks" type="typeTaskInformation" minOccurs="0">
  <xs:sequence>
    <xs:element name="Build" type="typeBuildTask" minOccurs="0">
      <xs:sequence>

```

```

<xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
minOccurs="0">
  <xs:sequence>
    <xs:element name="UserId"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
<xs:sequence>
  <xs:element name="SourceDataSet" type="dataset:typeDataSet">
    <xs:sequence>
      <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="Table" type="typeDataTable"></xs:element>
      <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
        </xs:sequence>
        <xs:sequence>
          <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
          <xs:element name="Definition" type="xs:string"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
        <xs:sequence>
          <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="ModelInputs" type="xs:string" maxOccurs="unbounded"></xs:element>
  <xs:element name="Selections" type="typeLocalRule" minOccurs="0">
    <xs:sequence>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="InteractiveBuild" type="typeInteractiveBuild" minOccurs="0">
    <xs:sequence>
      <xs:element name="DecisionList" type="typeLocalRule" minOccurs="0">
        <xs:sequence>
          <xs:element name="Definition" type="xs:string"></xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="SelectionUsed" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  <xs:element name="Parameter" type="typeParameter" maxOccurs="unbounded">
    <xs:sequence>

```

```

        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="DataScan" type="typeDataScanTask" minOccurs="0">
  <xs:sequence>
    <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
      minOccurs="0">
      <xs:sequence>
        <xs:element name="UserId"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="SourceDataSet" type="dataset:typeDataSet">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
          <xs:sequence>
            <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
            <xs:element name="Definition" type="xs:string"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
          <xs:sequence>
            <xs:element name="AttributeMapping" type="typeAttributeMapping"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:element name="DerivedAttribute" type="dataset:typeDataSetExpression" minOccurs="0"
    maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Category" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
    <xs:sequence>
      <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>

```

```

    </xs:sequence>
  </xs:element>
  <xs:element name="Evaluate" type="typeEvaluateTask" minOccurs="0">
    <xs:sequence>
      <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
        minOccurs="0">
        <xs:sequence>
          <xs:element name="UserId"></xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
    <xs:sequence>
      <xs:element name="SourceDataSet" type="dataset:typeDataSet">
        <xs:sequence>
          <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
            <xs:sequence>
              <xs:element name="Category" type="xs:string" minOccurs="0"
                maxOccurs="unbounded"></xs:element>
            </xs:sequence>
          </xs:element>
          <xs:element name="Table" type="typeDataTable"></xs:element>
          <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
            maxOccurs="unbounded">
            <xs:sequence>
              <xs:element name="Category" type="xs:string" minOccurs="0"
                maxOccurs="unbounded"></xs:element>
            </xs:sequence>
            <xs:sequence>
              <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
                maxOccurs="unbounded"></xs:element>
              <xs:element name="Definition" type="xs:string"></xs:element>
            </xs:sequence>
          </xs:element>
          <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
            <xs:sequence>
              <xs:element name="AttributeMapping" type="typeAttributeMapping"
                maxOccurs="unbounded"></xs:element>
            </xs:sequence>
          </xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="Selections" type="typeLocalRule" minOccurs="0">
        <xs:sequence>
          <xs:element name="Definition" type="xs:string"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="SelectionUsed" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Score" type="typeScoreTask" minOccurs="0">
    <xs:sequence>
      <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
        minOccurs="0">
        <xs:sequence>
          <xs:element name="UserId"></xs:element>
        </xs:sequence>
    </xs:sequence>
  </xs:element>

```

```

    </xs:element>
  </xs:sequence>
<xs:sequence>
  <xs:element name="SourceDataSet" type="dataset:typeDataSet">
    <xs:sequence>
      <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Category" type="xs:string" minOccurs="0"
            maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="Table" type="typeDataTable"></xs:element>
      <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
        maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Category" type="xs:string" minOccurs="0"
            maxOccurs="unbounded"></xs:element>
        </xs:sequence>
        <xs:sequence>
          <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
            maxOccurs="unbounded"></xs:element>
          <xs:element name="Definition" type="xs:string"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
        <xs:sequence>
          <xs:element name="AttributeMapping" type="typeAttributeMapping"
            maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="RecordSelection" type="typeLocalRule" minOccurs="0">
    <xs:sequence>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="InteractionPoint" type="xs:string" minOccurs="0"></xs:element>
  <xs:element name="SelectedOutput" type="xs:string" maxOccurs="unbounded"></xs:element>
  <xs:element name="Mapping" type="dataset:typeDataSetMapping" minOccurs="0">
    <xs:sequence>
      <xs:element name="AttributeMapping" type="typeAttributeMapping"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="TargetDataTable" type="dataset:typeDataTable"></xs:element>
  <xs:element name="TargetDataServerCredentials" type="typeTaskDatabaseCredentials"
    minOccurs="0">
    <xs:sequence>
      <xs:element name="UserId"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Options" type="typeScoreOptions" minOccurs="0">
    <xs:choice>
      <xs:element name="TopNPercent" type="xs:double"></xs:element>
      <xs:element name="TopN" type="xs:long"></xs:element>
      <xs:element name="MinMaxPropensity"></xs:element>
    </xs:choice>
  </xs:element>

```

```

    </xs:choice>
  </xs:element>
  <xs:element name="SelectionUsed" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  <xs:element name="Parameter" type="typeParameter" maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="CognosTable" type="dataset:CognosTable">
    <xs:sequence maxOccurs="1" minOccurs="0">
      <xs:element name="selectedCognosObject" type="typeCognosObject">
        <xs:sequence maxOccurs="unbounded" minOccurs="0">
          <xs:element ref="child"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="cognosDataSource"></xs:element>
      <xs:element name="cognosSelectedItems"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Simulate" type="typeSimulateTask" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
minOccurs="0">
      <xs:sequence>
        <xs:element name="UserId"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="SourceDataSet" type="dataset:typeDataSet">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
          </xs:sequence>
          <xs:sequence>
            <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
            <xs:element name="Definition" type="xs:string"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
          <xs:sequence>

```

```

        <xs:element name="AttributeMapping" type="typeAttributeMapping"
            maxOccurs="unbounded"></xs:element>
    </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>
<xs:element name="VariableValue" type="typeVariableValue" minOccurs="0"
    maxOccurs="unbounded">
    <xs:sequence>
        <xs:element name="Value" type="typeValueSource"></xs:element>
    </xs:sequence>
</xs:element>
<xs:element name="DimensionDetails" type="typeTaskDimensionDetails" minOccurs="0"
    maxOccurs="unbounded">
    <xs:sequence>
        <xs:element name="MemberDetails" type="typeTaskMemberDetails"
            maxOccurs="unbounded">
            <xs:sequence>
                <xs:element name="VariableValue" type="typeVariableValue" minOccurs="0"
                    maxOccurs="unbounded">
                    <xs:sequence>
                        <xs:element name="Value" type="typeValueSource"></xs:element>
                    </xs:sequence>
                </xs:element>
            </xs:sequence>
        </xs:element>
    </xs:sequence>
</xs:element>
<xs:element name="CombiningRule" type="typeLocalRule" minOccurs="0">
    <xs:sequence>
        <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Test" type="typeTestTask" minOccurs="0" maxOccurs="unbounded">
    <xs:sequence>
        <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
            minOccurs="0">
            <xs:sequence>
                <xs:element name="UserId"></xs:element>
            </xs:sequence>
        </xs:element>
    </xs:sequence>
</xs:sequence>
<xs:choice>
    <xs:element name="CustomInput" type="typeCustomInput">
        <xs:sequence>
            <xs:element name="Field" type="typeCustomInputField" maxOccurs="unbounded">
                <xs:sequence>
                    <xs:element name="Value" type="typeCustomInputFieldValue"
                        maxOccurs="unbounded"></xs:element>
                </xs:sequence>
            </xs:element>
        </xs:sequence>
    </xs:element>
    <xs:element name="DataSetInput" type="typeTestRecordSelection">

```



```

<xs:sequence>
  <xs:element name="SourceDataSet" type="dataset:typeDataSet">
    <xs:sequence>
      <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Category" type="xs:string" minOccurs="0"
            maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="Table" type="typeDataTable"></xs:element>
      <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
        maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Category" type="xs:string" minOccurs="0"
            maxOccurs="unbounded"></xs:element>
        </xs:sequence>
        <xs:sequence>
          <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
            maxOccurs="unbounded"></xs:element>
          <xs:element name="Definition" type="xs:string"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
        <xs:sequence>
          <xs:element name="AttributeMapping" type="typeAttributeMapping"
            maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Selection" type="typeLocalRule" minOccurs="0">
    <xs:sequence>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:choice>
    <xs:element name="DisplayField" type="xs:string" maxOccurs="unbounded"></xs:element>
    <xs:element name="InteractionPoint" type="xs:string" minOccurs="0"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>

```

Parent Elements[PredictiveApplication Element](#)**Child Elements**[Build Element](#), [DataScan Element](#), [Evaluate Element](#), [Score Element](#), [Simulate Element](#), [Test Element](#)

Build Element

Settings used in last Build task submittal

Table A-88

Attributes for Build

| Attribute | Use | Description | Valid Values |
|-----------------------|-----------------|---|--|
| allowAutoDataPrep | optional | Defines whether auto data preparation should be a supported option. | <i>boolean</i> |
| allowAutoPartition | optional | Defines whether auto partitioning should be a supported option. | <i>boolean</i> |
| autoDataPrep | optional | Add auto data preparation to build task | <i>boolean</i> |
| autoDataPrepObjective | optional | Guidance for the auto data prep objective | Balance Speed Accuracy Custom |
| autoPartition | optional | Add auto partition to build task | <i>boolean</i> |
| isAutoBuild | optional | Indication of if this is an auto-build or not | <i>boolean</i> |
| maxBuildTime | optional | Optional restriction on the auto-model build time | <i>int</i> |
| responseSought | optional | The target response value for the task | <i>string</i> |
| sourceDataSetName | optional | The name of the source data set. | <i>string</i> |
| target | required | The model build target field | <i>string</i> |

XML Representation

```

<xs:element name="Build" type="typeBuildTask" minOccurs="0">
  <xs:sequence>
    <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
      minOccurs="0">
      <xs:sequence>
        <xs:element name="UserId"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="SourceDataSet" type="dataset:typeDataSet">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>

```

```

<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>
<xs:element name="ModelInputs" type="xs:string" maxOccurs="unbounded"></xs:element>
<xs:element name="Selections" type="typeLocalRule" minOccurs="0">
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="InteractiveBuild" type="typeInteractiveBuild" minOccurs="0">
  <xs:sequence>
    <xs:element name="DecisionList" type="typeLocalRule" minOccurs="0">
      <xs:sequence>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="SelectionUsed" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
<xs:element name="Parameter" type="typeParameter" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
<xs:attribute name="sourceDataSetName" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="target" type="xs:string" use="required"></xs:attribute>
<xs:attribute name="responseSought" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="autoDataPrep" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="autoPartition" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="allowAutoDataPrep" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="allowAutoPartition" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="isAutoBuild" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="autoDataPrepObjective" type="enumAdpObjective" use="optional" default="Balance">
  <xs:enumeration value="Balance"></xs:enumeration>
  <xs:enumeration value="Speed"></xs:enumeration>
  <xs:enumeration value="Accuracy"></xs:enumeration>
  <xs:enumeration value="Custom"></xs:enumeration>

```

```

    </xs:attribute>
    <xs:attribute name="maxBuildTime" type="xs:int" use="optional" default="0"></xs:attribute>
  </xs:element>

```

Parent Elements

[Tasks Element](#)

Child Elements

[InteractiveBuild Element](#), [ModelInputs Element](#), [Parameter Element](#), [Selections Element](#), [SelectionUsed Element](#), [SourceDataServerCredentials Element](#), [SourceDataSet Element](#)

Related Elements

[DataScan Element](#), [Evaluate Element](#), [Score Element](#), [Simulate Element](#), [Test Element](#)

SourceDataServerCredentials Element

Optional data source server connection to be used in the task. NOTE: runtime-only information, these values are never to be passed in clear text or stored in an unencrypted manner in the workspace.

XML Representation

```

<xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials" minOccurs="0">
  <xs:sequence>
    <xs:element name="UserId"></xs:element>
  </xs:sequence>
</xs:element>

```

Parent Elements

[Build Element](#)

Child Elements

[UserId Element](#)

UserId Element

Specific User ID and Password information

Table A-89
Attributes for UserId

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| id | required | Optional User ID when required (encode? encrypt?) | <i>string</i> |
| password | required | Optional User Password when required (encode? encrypt?) | <i>string</i> |

XML Representation

```
<xs:element name="UserId">
  <xs:attribute name="id" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="password" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements

[SourceDataServerCredentials Element](#)

SourceDataSet Element

(Deprecated) The data set used as input to the model build task

Table A-90
Attributes for SourceDataSet

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|------------|----------|--|----------------|
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="SourceDataSet" type="dataset:typeDataSet">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:sequence>
      <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
    </xs:element>
    <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
      <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="compatibility" type="enumCompatibility" use="optional">
    <xs:enumeration value="complete"></xs:enumeration>
    <xs:enumeration value="partial"></xs:enumeration>
    <xs:enumeration value="none"></xs:enumeration>
  </xs:attribute>
  <xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements[Build Element](#)**Child Elements**[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)**Attribute Element**

The attributes of the given data set at the point of last refresh

Table A-91
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
```

```

    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-92
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[SourceDataSet Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```

<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>

```

Parent Elements

[Attribute Element](#)

Table Element

The table used in this data set

Table A-93
Attributes for Table

| Attribute | Use | Description | Valid Values |
|-----------|----------|--|---------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-94
Extended Types

| Type | Description |
|-------------------------------------|---|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[SourceDataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-95
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
</xs:element>
```

Parent Elements

[SourceDataSet Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      minOccurs="unbounded"/></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements

[SourceDataSet Element](#)

Child Elements

[AttributeMapping Element](#)

AttributeMapping Element

The mapping of these attributes to the primary attributes

Table A-96
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" minOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements

[Mapping Element](#)

ModelInputs Element

Selected model inputs

XML Representation

```
<xs:element name="ModelInputs" type="xs:string" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Build Element](#)

Selections Element

Optional input data selection rule

Table A-97

Attributes for Selections

| Attribute | Use | Description | Valid Values |
|------------------------------|-----------------|--|---|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| hasLocalExpressionReferences | optional | Set during an edit to indicate whether the rule has local expression references in it or not. When true, this rule cannot be exported. | <i>boolean</i> |
| mimeType | required | File MIME type of this rule | <i>string</i> |
| name | optional | Name of the element | <i>string</i> |
| outputDataType | optional | Output field data type | <i>string</i> |
| outputField | optional | Output field to use from the rule | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| usageDescription | optional | Optional additional descriptive text for this rule | <i>string</i> |

XML Representation

```
<xs:element name="Selections" type="typeLocalRule" minOccurs="0">
  <xs:attribute name="name" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"></xs:enumeration>
    <xs:enumeration value="modify"></xs:enumeration>
    <xs:enumeration value="add"></xs:enumeration>
    <xs:enumeration value="remove"></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
  <xs:attribute name="mimeType" type="xs:string" use="required"></xs:attribute>
```

```

<xs:attribute name="usageDescription" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="hasLocalExpressionReferences" type="xs:boolean" use="optional"
default="false"></xs:attribute>
<xs:attribute name="outputField" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="outputDataType" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-98
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeMemberSelection | The Dimension member selection properties and resulting selection rule |

Parent Elements

[Build Element](#)

Child Elements

[Definition Element](#)

Related Elements

[EntityDimension Element](#), [Variable Element](#), [Constraint Element](#), [Selection Element](#), [Dimension Element](#), [Variable Element](#), [Constraint Element](#), [Member Element](#), [BaseSelection Element](#), [Optimization Element](#), [Deployment Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)

Definition Element

Definition of the local rule

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements

[Selections Element](#)

InteractiveBuild Element

Optional Interactive Build details

Table A-99
Attributes for InteractiveBuild

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|----------------|
| attributeReuse | required | Flag controlling reuse of attributes in segmentation rules | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|------------------------------|-----------------|---|----------------|
| confidenceInterval | required | Confidence interval for new segmentation conditions | <i>double</i> |
| findMaxSegments | required | Control of the maximum number of segments found | <i>int</i> |
| findSegmentsResponse | required | Control of the segment response test | <i>boolean</i> |
| findSegmentsWith | required | The segment find-type information | <i>string</i> |
| maxAttributesUsed | required | Limit to maximum number of attributes to be used in a segmentation rule | <i>int</i> |
| minimumSizeAbsolute | required | Minimum segment size as an absolute value | <i>double</i> |
| minimumSizePercentOfPrevious | required | Minimum segment size in percentage of previous partition | <i>double</i> |

XML Representation

```
<xs:element name="InteractiveBuild" type="typeInteractiveBuild" minOccurs="0">
  <xs:sequence>
    <xs:element name="DecisionList" type="typeLocalRule" minOccurs="0">
      <xs:sequence>
        <xs:element name="Definition" type="xs:string"/></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="findSegmentsWith" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="findMaxSegments" type="xs:int" use="required"/></xs:attribute>
  <xs:attribute name="findSegmentsResponse" type="xs:boolean" use="required"/></xs:attribute>
  <xs:attribute name="minimumSizePercentOfPrevious" type="xs:double" use="required"/></xs:attribute>
  <xs:attribute name="minimumSizeAbsolute" type="xs:double" use="required"/></xs:attribute>
  <xs:attribute name="maxAttributesUsed" type="xs:int" use="required"/></xs:attribute>
  <xs:attribute name="attributeReuse" type="xs:boolean" use="required"/></xs:attribute>
  <xs:attribute name="confidenceInterval" type="xs:double" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements

[Build Element](#)

Child Elements

[DecisionList Element](#)

DecisionList Element

The Decision List constructed interactively

Table A-100
Attributes for DecisionList

| Attribute | Use | Description | Valid Values |
|------------------------------|-----------------|--|---|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| hasLocalExpressionReferences | optional | Set during an edit to indicate whether the rule has local expression references in it or not. When true, this rule cannot be exported. | <i>boolean</i> |
| mimeType | required | File MIME type of this rule | <i>string</i> |
| name | optional | Name of the element | <i>string</i> |
| outputDataType | optional | Output field data type | <i>string</i> |
| outputField | optional | Output field to use from the rule | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| usageDescription | optional | Optional additional descriptive text for this rule | <i>string</i> |

XML Representation

```
<xs:element name="DecisionList" type="typeLocalRule" minOccurs="0">
  <xs:attribute name="name" type="xs:string" use="optional"/>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/>
    <xs:enumeration value="modify"/>
    <xs:enumeration value="add"/>
    <xs:enumeration value="remove"/>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="mimeType" type="xs:string" use="required"/>
  <xs:attribute name="usageDescription" type="xs:string" use="optional"/>
  <xs:attribute name="hasLocalExpressionReferences" type="xs:boolean" use="optional"
    default="false"/>
  <xs:attribute name="outputField" type="xs:string" use="optional"/>
  <xs:attribute name="outputDataType" type="xs:string" use="optional"/>
</xs:element>
```

Table A-101
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeMemberSelection | The Dimension member selection properties and resulting selection rule |

Parent Elements[InteractiveBuild Element](#)**Child Elements**[Definition Element](#)**Related Elements**

[EntityDimension Element](#), [Variable Element](#), [Constraint Element](#), [Selection Element](#), [Dimension Element](#), [Variable Element](#), [Constraint Element](#), [Member Element](#), [BaseSelection Element](#), [Optimization Element](#), [Deployment Element](#), [Selections Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)

Definition Element

Definition of the local rule

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements[DecisionList Element](#)**SelectionUsed Element**

The ‘outer’ selections added to this task

XML Representation

```
<xs:element name="SelectionUsed" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Build Element](#)**Parameter Element**

The parameters exposed in the stream (imported projects only)

Table A-102
Attributes for Parameter

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--------------------------------|---------------|
| dataType | required | The type of the parameter | <i>string</i> |
| description | optional | Optional parameter description | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|--------------|-----------------|--|---------------|
| maximumValue | optional | A maximum value restriction for this parameter | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this parameter | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| value | optional | The current value for the parameter | <i>string</i> |

XML Representation

```
<xs:element name="Parameter" type="typeParameter" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="value" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[Build Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Parameter Element](#)

DataScan Element

Settings used in last Data Scan task submittal

Table A-103
Attributes for DataScan

| Attribute | Use | Description | Valid Values |
|-------------------|----------|----------------------------------|---------------|
| sourceDataSetName | optional | The name of the source data set. | <i>string</i> |

XML Representation

```

<xs:element name="DataScan" type="typeDataScanTask" minOccurs="0">
  <xs:sequence>
    <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
      minOccurs="0">
      <xs:sequence>
        <xs:element name="UserId"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="SourceDataSet" type="dataset:typeDataSet">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
          <xs:sequence>
            <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
            <xs:element name="Definition" type="xs:string"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
          <xs:sequence>
            <xs:element name="AttributeMapping" type="typeAttributeMapping"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="DerivedAttribute" type="dataset:typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>

```

```

        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="sourceDataSetName" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Parent Elements[Tasks Element](#)**Child Elements**[DerivedAttribute Element](#), [SourceDataServerCredentials Element](#), [SourceDataSet Element](#)**Related Elements**[Build Element](#), [Evaluate Element](#), [Score Element](#), [Simulate Element](#), [Test Element](#)**SourceDataServerCredentials Element**

Optional data source server connection to be used in the task. NOTE: runtime-only information, these values are never to be passed in clear text or stored in an unencrypted manner in the workspace.

XML Representation

```

<xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials" minOccurs="0">
  <xs:sequence>
    <xs:element name="UserId"></xs:element>
  </xs:sequence>
</xs:element>

```

Parent Elements[DataScan Element](#)**Child Elements**[UserId Element](#)**UserId Element**

Specific User ID and Password information

Table A-104
Attributes for *UserId*

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| id | required | Optional User ID when required (encode? encrypt?) | <i>string</i> |
| password | required | Optional User Password when required (encode? encrypt?) | <i>string</i> |

XML Representation

```
<xs:element name="UserId">
  <xs:attribute name="id" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="password" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements

[SourceDataServerCredentials Element](#)

SourceDataSet Element

The data set used as input to the data scan task

Table A-105
Attributes for *SourceDataSet*

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|----------------|----------|--|----------------|
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="SourceDataSet" type="dataset:typeDataSet">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
      <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="compatibility" type="enumCompatibility" use="optional">

```

```

    <xs:enumeration value="complete"></xs:enumeration>
    <xs:enumeration value="partial"></xs:enumeration>
    <xs:enumeration value="none"></xs:enumeration>
  </xs:attribute>
  <xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[DataScan Element](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-106
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Table A-107
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[SourceDataSet Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```


Parent Elements[Attribute Element](#)**Table Element**

The table used in this data set

Table A-108

Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-109

Extended Types

| Type | Description |
|-------------------------------------|---|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table defintion |
| SASFileTable | A SAS save file-based table defintion |
| SpssFileTable | An SPSS save file-based table defintion |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements[SourceDataSet Element](#)**Expression Element**

Optional passing of expressions defined by an application into a task

Table A-110
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

```

<xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
<xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
<xs:sequence>
  <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
    maxOccurs="unbounded"></xs:element>
  <xs:element name="Definition" type="xs:string"></xs:element>
</xs:sequence>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
</xs:element>

```

Parent Elements

[SourceDataSet Element](#)

Child Elements

[Category Element](#), [DataSetAttribute Element](#), [Definition Element](#)

Related Elements

[Expression Element](#), [Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#),
[Expression Element](#), [DerivedAttribute Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Expression Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Expression Element](#)**Definition Element**

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements[Expression Element](#)**Mapping Element**

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      minOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements[SourceDataSet Element](#)**Child Elements**[AttributeMapping Element](#)**AttributeMapping Element**

The mapping of these attributes to the primary attributes

Table A-111
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[Mapping Element](#)

DerivedAttribute Element

The derived attribute expressions

Table A-112
Attributes for *DerivedAttribute*

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[DerivedAttribute Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[DerivedAttribute Element](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"/></xs:element>
```

Parent Elements

[DerivedAttribute Element](#)

Evaluate Element

Settings used in last Evaluate task submittal

Table A-113
Attributes for Evaluate

| Attribute | Use | Description | Valid Values |
|-------------------|----------|--|----------------|
| autoDataPrep | optional | Add auto data preparation to build task | <i>boolean</i> |
| chartDistribution | optional | Indicates the need to produce a Distribution chart | <i>boolean</i> |
| chartGains | optional | Indicates the need to produce a Gains chart | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|-------------------|----------|--|----------------|
| chartLift | optional | Indicates the need to produce a Lift chart | <i>boolean</i> |
| chartProfit | optional | Indicates the need to produce a Profit chart | <i>boolean</i> |
| chartResponse | optional | Indicates the need to produce a Response chart | <i>boolean</i> |
| chartROI | optional | Indicates the need to produce a ROI chart | <i>boolean</i> |
| chartSimulation | optional | Indicates the need to execute a simulation and expose the Interactive Simulation tab | <i>boolean</i> |
| cost | optional | Cost input to be used in charting | <i>double</i> |
| population | optional | Population control input to be used in charting | <i>double</i> |
| reserveRecords | optional | Optional indication of if a number of records are to be reserved automatically for evaluation and test | <i>boolean</i> |
| responseSought | optional | Optional target for evaluation, not used in Range targets | <i>string</i> |
| revenue | optional | Revenue input to be used in charting | <i>double</i> |
| sourceDataSetName | optional | The name of the source data set. | <i>string</i> |

XML Representation

```

<xs:element name="Evaluate" type="typeEvaluateTask" minOccurs="0">
  <xs:sequence>
    <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
      minOccurs="0">
      <xs:sequence>
        <xs:element name="UserId"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="SourceDataSet" type="dataset:typeDataSet">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>

```



```

        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    <xs:sequence>
      <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
    <xs:sequence>
      <xs:element name="AttributeMapping" type="typeAttributeMapping"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Selections" type="typeLocalRule" minOccurs="0">
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="SelectionUsed" type="xs:string" minOccurs="0"
  maxOccurs="unbounded"></xs:element>
</xs:sequence>
<xs:attribute name="sourceDataSetName" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="chartDistribution" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="chartGains" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="chartLift" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="chartResponse" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="chartProfit" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="chartROI" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="chartSimulation" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="cost" type="xs:double" use="optional"></xs:attribute>
<xs:attribute name="revenue" type="xs:double" use="optional"></xs:attribute>
<xs:attribute name="responseSought" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="population" type="xs:double" use="optional"></xs:attribute>
<xs:attribute name="reserveRecords" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="autoDataPrep" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[Tasks Element](#)

Child Elements

[Selections Element](#), [SelectionUsed Element](#), [SourceDataServerCredentials Element](#), [SourceDataSet Element](#)

Related Elements

[Build Element](#), [DataScan Element](#), [Score Element](#), [Simulate Element](#), [Test Element](#)

SourceDataServerCredentials Element

Optional data source server connection to be used in the task. NOTE: runtime-only information, these values are never to be passed in clear text or stored in an unencrypted manner in the workspace.

XML Representation

```
<xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials" minOccurs="0">
  <xs:sequence>
    <xs:element name="UserId"></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements

[Evaluate Element](#)

Child Elements

[UserId Element](#)

UserId Element

Specific User ID and Password information

Table A-114
Attributes for UserId

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| id | required | Optional User ID when required (encode? encrypt?) | <i>string</i> |
| password | required | Optional User Password when required (encode? encrypt?) | <i>string</i> |

XML Representation

```
<xs:element name="UserId">
  <xs:attribute name="id" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="password" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[SourceDataServerCredentials Element](#)

SourceDataSet Element

(Deprecated) The data set used as input to the model build task

Table A-115
Attributes for SourceDataSet

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="SourceDataSet" type="dataset:typeDataSet">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
  </xs:sequence>
</xs:element>

```

```

<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
<xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="compatibility" type="enumCompatibility" use="optional">
  <xs:enumeration value="complete"></xs:enumeration>
  <xs:enumeration value="partial"></xs:enumeration>
  <xs:enumeration value="none"></xs:enumeration>
</xs:attribute>
<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[Evaluate Element](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-116
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|-----------|----------|---|---------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-117
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements[SourceDataSet Element](#)**Child Elements**[Category Element](#)**Category Element**

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements[Attribute Element](#)**Table Element**

The table used in this data set

Table A-118
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-119
Extended Types

| Type | Description |
|-------------------------------------|--|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |

| Type | Description |
|-------------------------------|---|
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[SourceDataSet](#) Element

Expression Element

Optional passing of expressions defined by an application into a task

Table A-120

Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"/></xs:element>
```

Parent Elements

[Expression Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">  
  <xs:sequence>  
    <xs:element name="AttributeMapping" type="typeAttributeMapping"  
      maxOccurs="unbounded"/></xs:element>  
  </xs:sequence>  
</xs:element>
```

Parent Elements[SourceDataSet Element](#)**Child Elements**[AttributeMapping Element](#)**AttributeMapping Element**

The mapping of these attributes to the primary attributes

Table A-121
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements[Mapping Element](#)**Selections Element**

Optional input data selection rule

Table A-122
Attributes for Selections

| Attribute | Use | Description | Valid Values |
|------------------------------|-----------------|--|----------------|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| hasLocalExpressionReferences | optional | Set during an edit to indicate whether the rule has local expression references in it or not. When true, this rule cannot be exported. | <i>boolean</i> |
| contentType | required | File MIME type of this rule | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|------------------|----------|---|---|
| name | optional | Name of the element | <i>string</i> |
| outputDataType | optional | Output field data type | <i>string</i> |
| outputField | optional | Output field to use from the rule | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| usageDescription | optional | Optional additional descriptive text for this rule | <i>string</i> |

XML Representation

```

<xs:element name="Selections" type="typeLocalRule" minOccurs="0">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"/></xs:element>
  </xs:sequence>
  <xs:attribute name="mimeType" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="usageDescription" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="hasLocalExpressionReferences" type="xs:boolean" use="optional"
    default="false"/></xs:attribute>
  <xs:attribute name="outputField" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputDataType" type="xs:string" use="optional"/></xs:attribute>
</xs:element>

```

Table A-123
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeMemberSelection | The Dimension member selection properties and resulting selection rule |

Parent Elements

[Evaluate Element](#)

Child Elements

[Definition Element](#)

Related Elements

EntityDimension Element, Variable Element, Constraint Element, Selection Element, Dimension Element, Variable Element, Constraint Element, Member Element, BaseSelection Element, Optimization Element, Deployment Element, Selections Element, DecisionList Element, RecordSelection Element, CombiningRule Element, Selection Element, Rule Element, BaseSelection Element

Definition Element

Definition of the local rule

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements

[Selections Element](#)

SelectionUsed Element

The ‘outer’ selections added to this task

XML Representation

```
<xs:element name="SelectionUsed" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Evaluate Element](#)

Score Element

Settings used in last Score task submittal

Table A-124

Attributes for Score

| Attribute | Use | Description | Valid Values |
|-------------------|----------|--|--|
| destinationLock | optional | Control of lock option during update for some target types | <i>boolean</i> |
| sourceDataSetName | optional | The name of the source data set. | <i>string</i> |
| targetAction | optional | How the target data is to be written | Append Create Overwrite |

XML Representation

```
<xs:element name="Score" type="typeScoreTask" minOccurs="0">
```

```

<xs:sequence>
  <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
    minOccurs="0">
    <xs:sequence>
      <xs:element name="UserId"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
<xs:sequence>
  <xs:element name="SourceDataSet" type="dataset:typeDataSet">
    <xs:sequence>
      <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Category" type="xs:string" minOccurs="0"
            maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="Table" type="typeDataTable"></xs:element>
      <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
        maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Category" type="xs:string" minOccurs="0"
            maxOccurs="unbounded"></xs:element>
        </xs:sequence>
        <xs:sequence>
          <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
            maxOccurs="unbounded"></xs:element>
          <xs:element name="Definition" type="xs:string"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
        <xs:sequence>
          <xs:element name="AttributeMapping" type="typeAttributeMapping"
            maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="RecordSelection" type="typeLocalRule" minOccurs="0">
    <xs:sequence>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="InteractionPoint" type="xs:string" minOccurs="0"></xs:element>
  <xs:element name="SelectedOutput" type="xs:string" maxOccurs="unbounded"></xs:element>
  <xs:element name="Mapping" type="dataset:typeDataSetMapping" minOccurs="0">
    <xs:sequence>
      <xs:element name="AttributeMapping" type="typeAttributeMapping"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="TargetDataTable" type="dataset:typeDataTable"></xs:element>
  <xs:element name="TargetDataServerCredentials" type="typeTaskDatabaseCredentials"
    minOccurs="0">
    <xs:sequence>
      <xs:element name="UserId"></xs:element>
    </xs:sequence>
  </xs:element>

```

```

</xs:element>
<xs:element name="Options" type="typeScoreOptions" minOccurs="0">
  <xs:choice>
    <xs:element name="TopNPercent" type="xs:double"></xs:element>
    <xs:element name="TopN" type="xs:long"></xs:element>
    <xs:element name="MinMaxPropensity"></xs:element>
  </xs:choice>
</xs:element>
<xs:element name="SelectionUsed" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
<xs:element name="Parameter" type="typeParameter" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="CognosTable" type="dataset:CognosTable">
  <xs:sequence maxOccurs="1" minOccurs="0">
    <xs:element name="selectedCognosObject" type="typeCognosObject">
      <xs:sequence maxOccurs="unbounded" minOccurs="0">
        <xs:element ref="child"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="cognosDataSource"></xs:element>
    <xs:element name="cognosSelectedItems"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
<xs:attribute name="sourceDataSetName" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="targetAction" use="optional">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:enumeration value="Append"></xs:enumeration>
      <xs:enumeration value="Create"></xs:enumeration>
      <xs:enumeration value="Overwrite"></xs:enumeration>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
<xs:attribute name="destinationLock" type="xs:boolean" use="optional"></xs:attribute>
</xs:element>

```

Parent Elements[Tasks Element](#)**Child Elements**

[CognosTable Element](#), [InteractionPoint Element](#), [Mapping Element](#), [Options Element](#), [Parameter Element](#), [RecordSelection Element](#), [SelectedOutput Element](#), [SelectionUsed Element](#), [SourceDataServerCredentials Element](#), [SourceDataSet Element](#), [TargetDataServerCredentials Element](#), [TargetDataTable Element](#)

Related Elements

[Build Element](#), [DataScan Element](#), [Evaluate Element](#), [Simulate Element](#), [Test Element](#)

SourceDataServerCredentials Element

Optional data source server connection to be used in the task. NOTE: runtime-only information, these values are never to be passed in clear text or stored in an unencrypted manner in the workspace.

XML Representation

```
<xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials" minOccurs="0">
  <xs:sequence>
    <xs:element name="UserId"></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements

[Score Element](#)

Child Elements

[UserId Element](#)

UserId Element

Specific User ID and Password information

Table A-125
Attributes for UserId

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| id | required | Optional User ID when required (encode? encrypt?) | <i>string</i> |
| password | required | Optional User Password when required (encode? encrypt?) | <i>string</i> |

XML Representation

```
<xs:element name="UserId">
  <xs:attribute name="id" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="password" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[SourceDataServerCredentials Element](#)

SourceDataSet Element

(Deprecated) The data set to use as input to this score task

Table A-126
Attributes for SourceDataSet

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```
<xs:element name="SourceDataSet" type="dataset:typeDataSet">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
  </xs:sequence>
</xs:element>
```



```

<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
<xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="compatibility" type="enumCompatibility" use="optional">
  <xs:enumeration value="complete"></xs:enumeration>
  <xs:enumeration value="partial"></xs:enumeration>
  <xs:enumeration value="none"></xs:enumeration>
</xs:attribute>
<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[Score Element](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-127
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|-----------|----------|---|---------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-128
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements[SourceDataSet Element](#)**Child Elements**[Category Element](#)**Category Element**

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements[Attribute Element](#)**Table Element**

The table used in this data set

Table A-129

Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-130

Extended Types

| Type | Description |
|-------------------------------------|--|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |

| Type | Description |
|-------------------------------|---|
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[SourceDataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-131

Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"/></xs:element>
```

Parent Elements

[Expression Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">  
  <xs:sequence>  
    <xs:element name="AttributeMapping" type="typeAttributeMapping"  
      maxOccurs="unbounded"/></xs:element>  
  </xs:sequence>  
</xs:element>
```

Parent Elements[SourceDataSet Element](#)**Child Elements**[AttributeMapping Element](#)**AttributeMapping Element**

The mapping of these attributes to the primary attributes

Table A-132

Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements[Mapping Element](#)**RecordSelection Element**

Optional input record selection rule

Table A-133

Attributes for RecordSelection

| Attribute | Use | Description | Valid Values |
|------------------------------|-----------------|--|----------------|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| hasLocalExpressionReferences | optional | Set during an edit to indicate whether the rule has local expression references in it or not. When true, this rule cannot be exported. | <i>boolean</i> |
| mimeType | required | File MIME type of this rule | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|------------------|----------|---|---|
| name | optional | Name of the element | <i>string</i> |
| outputDataType | optional | Output field data type | <i>string</i> |
| outputField | optional | Output field to use from the rule | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| usageDescription | optional | Optional additional descriptive text for this rule | <i>string</i> |

XML Representation

```

<xs:element name="RecordSelection" type="typeLocalRule" minOccurs="0">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"/></xs:element>
  </xs:sequence>
  <xs:attribute name="mimeType" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="usageDescription" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="hasLocalExpressionReferences" type="xs:boolean" use="optional"
    default="false"/></xs:attribute>
  <xs:attribute name="outputField" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputDataType" type="xs:string" use="optional"/></xs:attribute>
</xs:element>

```

Table A-134
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeMemberSelection | The Dimension member selection properties and resulting selection rule |

Parent Elements

[Score Element](#)

Child Elements

[Definition Element](#)

Related Elements

[EntityDimension Element](#), [Variable Element](#), [Constraint Element](#), [Selection Element](#), [Dimension Element](#), [Variable Element](#), [Constraint Element](#), [Member Element](#), [BaseSelection Element](#), [Optimization Element](#), [Deployment Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [CombiningRule Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)

Definition Element

Definition of the local rule

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements

[RecordSelection Element](#)

InteractionPoint Element

Optional Interaction Point execution control for Scoring task

XML Representation

```
<xs:element name="InteractionPoint" type="xs:string" minOccurs="0"></xs:element>
```

Parent Elements

[Score Element](#)

SelectedOutput Element

Selected output data model fields to be inserted into the target

XML Representation

```
<xs:element name="SelectedOutput" type="xs:string" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Score Element](#)

Mapping Element

Optional mapping of selected outputs to the target table

XML Representation

```
<xs:element name="Mapping" type="dataset:typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      minOccurs="unbounded"/></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements

[Score Element](#)

Child Elements

[AttributeMapping Element](#)

AttributeMapping Element

The mapping of these attributes to the primary attributes

Table A-135
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" minOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements

[Mapping Element](#)

TargetDataTable Element

Target table, real class will be DatabaseTable, FlatFileTable, etc.

Table A-136
Attributes for *TargetDataTable*

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="TargetDataTable" type="dataset:typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Table A-137
Extended Types

| Type | Description |
|-------------------------------------|---|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[Score Element](#)

TargetDataServerCredentials Element

Optional data source server connection to be used in the task. NOTE: runtime-only information, these values are never to be passed in clear text or stored in an unencrypted manner in the workspace.

XML Representation

```
<xs:element name="TargetDataServerCredentials" type="typeTaskDatabaseCredentials" minOccurs="0">
  <xs:sequence>
    <xs:element name="UserId"></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements[Score Element](#)**Child Elements**[UserId Element](#)**UserId Element**

Specific User ID and Password information

Table A-138
Attributes for *UserId*

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| id | required | Optional User ID when required (encode? encrypt?) | <i>string</i> |
| password | required | Optional User Password when required (encode? encrypt?) | <i>string</i> |

XML Representation

```
<xs:element name="UserId">
  <xs:attribute name="id" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="password" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements[TargetDataServerCredentials Element](#)**Options Element**

Optional score output control

XML Representation

```
<xs:element name="Options" type="typeScoreOptions" minOccurs="0">
  <xs:choice>
    <xs:element name="TopNPercent" type="xs:double"/></xs:element>
    <xs:element name="TopN" type="xs:long"/></xs:element>
    <xs:element name="MinMaxPropensity"/></xs:element>
  </xs:choice>
</xs:element>
```

Parent Elements[Score Element](#)

Child Elements

[MinMaxPropensity Element](#), [TopN Element](#), [TopNPercent Element](#)

TopNPercent Element

Output only top N percent of scores

XML Representation

```
<xs:element name="TopNPercent" type="xs:double"></xs:element>
```

Parent Elements

[Options Element](#)

TopN Element

Output only top N scores

XML Representation

```
<xs:element name="TopN" type="xs:long"></xs:element>
```

Parent Elements

[Options Element](#)

MinMaxPropensity Element

Output only records falling in min/max propensity range

Table A-139

Attributes for MinMaxPropensity

| Attribute | Use | Description | Valid Values |
|-----------|----------|-----------------------------|---------------|
| max | optional | Maximum value in this range | <i>double</i> |
| min | optional | Minimum value in this range | <i>double</i> |

XML Representation

```
<xs:element name="MinMaxPropensity">
  <xs:attribute name="max" type="xs:double"></xs:attribute>
  <xs:attribute name="min" type="xs:double"></xs:attribute>
</xs:element>
```

Parent Elements

[Options Element](#)

SelectionUsed Element

The ‘outer’ selections added to this task

XML Representation

```
<xs:element name="SelectionUsed" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Score Element](#)

Parameter Element

The parameters exposed in the stream (imported projects only)

Table A-140
Attributes for Parameter

| Attribute | Use | Description | Valid Values |
|--------------|-----------------|--|---------------|
| dataType | required | The type of the parameter | <i>string</i> |
| description | optional | Optional parameter description | <i>string</i> |
| maximumValue | optional | A maximum value restriction for this parameter | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this parameter | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| value | optional | The current value for the parameter | <i>string</i> |

XML Representation

```
<xs:element name="Parameter" type="typeParameter" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="value" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Parent Elements

[Score Element](#)

Child Elements[Category Element](#)**Category Element**

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements[Parameter Element](#)**CognosTable Element**

An Cognos-based table definition

Table A-141

Attributes for CognosTable

| Attribute | Use | Description | Valid Values |
|--------------------------|-----------------|--|----------------|
| anonymous | optional | | <i>boolean</i> |
| isExport | optional | | <i>boolean</i> |
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| nameSpace | optional | | <i>string</i> |
| outputPackageName | optional | Output package name. | <i>string</i> |
| password | optional | | <i>string</i> |
| selectedCognosDataSource | optional | | <i>string</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |
| uri | optional | | <i>string</i> |
| user | optional | | <i>string</i> |

XML Representation

```
<xs:element name="CognosTable" type="dataset:CognosTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
  <xs:sequence maxOccurs="1" minOccurs="0">
    <xs:element name="selectedCognosObject" type="typeCognosObject">
      <xs:sequence maxOccurs="unbounded" minOccurs="0">
        <xs:element ref="child"/></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
```

```

    </xs:sequence>
  </xs:element>
  <xs:element name="cognosDataSource"></xs:element>
  <xs:element name="cognosSelectedItems"></xs:element>
</xs:sequence>
<xs:attribute name="uri" type="xs:string"></xs:attribute>
<xs:attribute name="anonymous" type="xs:boolean"></xs:attribute>
<xs:attribute name="nameSpace" type="xs:string"></xs:attribute>
<xs:attribute name="user" type="xs:string"></xs:attribute>
<xs:attribute name="password" type="xs:string"></xs:attribute>
<xs:attribute name="outputPackageName" type="xs:string"></xs:attribute>
<xs:attribute name="selectedCognosDataSource" type="xs:string"></xs:attribute>
<xs:attribute name="isExport" type="xs:boolean" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

Score Element

Child Elements

[cognosDataSource Element](#), [cognosSelectedItems Element](#), [selectedCognosObject Element](#)

selectedCognosObject Element

For import and export, that indicates the Cognos package.

Table A-142
Attributes for *selectedCognosObject*

| Attribute | Use | Description | Valid Values |
|-----------|----------|-------------|----------------|
| fullName | optional | | <i>string</i> |
| isSupport | optional | | <i>boolean</i> |
| name | optional | | <i>string</i> |
| path | optional | | <i>string</i> |
| selected | optional | | <i>boolean</i> |
| typeName | optional | | <i>string</i> |

XML Representation

```

<xs:element name="selectedCognosObject" type="typeCognosObject">
  <xs:sequence maxOccurs="unbounded" minOccurs="0">
    <xs:element ref="child"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string"></xs:attribute>
  <xs:attribute name="selected" type="xs:boolean"></xs:attribute>
  <xs:attribute name="fullName" type="xs:string"></xs:attribute>
  <xs:attribute name="typeName" type="xs:string"></xs:attribute>
  <xs:attribute name="path" type="xs:string"></xs:attribute>
  <xs:attribute name="isSupport" type="xs:boolean"></xs:attribute>
</xs:element>

```


Parent Elements[CognosTable Element](#)**Child Elements**[child Element](#)**cognosDataSource Element****XML Representation**

```
<xs:element name="cognosDataSource"></xs:element>
```

Parent Elements[CognosTable Element](#)**cognosSelectedItems Element****XML Representation**

```
<xs:element name="cognosSelectedItems"></xs:element>
```

Parent Elements[CognosTable Element](#)**Simulate Element**

Settings used in last Simulate task submittal

Table A-143

Attributes for Simulate

| Attribute | Use | Description | Valid Values |
|--------------------------|----------|---|--|
| simulationDate | optional | The simulation date | <i>long</i> |
| sourceDataSetName | optional | The name of the source data set. | <i>string</i> |
| specificDimensionMember | optional | Selected root Dimension member | <i>string</i> |
| specificInteractionPoint | optional | Selected Interaction Point | <i>string</i> |
| taskOrigin | optional | Runtime information on where in the UI the task was requested | Define Combine Prioritize |

XML Representation

```
<xs:element name="Simulate" type="typeSimulateTask" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
```

```

<xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
minOccurs="0">
  <xs:sequence>
    <xs:element name="UserId"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
<xs:sequence>
  <xs:element name="SourceDataSet" type="dataset:typeDataSet">
    <xs:sequence>
      <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="Table" type="typeDataTable"></xs:element>
      <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
        </xs:sequence>
        <xs:sequence>
          <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
          <xs:element name="Definition" type="xs:string"></xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
        <xs:sequence>
          <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="VariableValue" type="typeVariableValue" minOccurs="0" maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Value" type="typeValueSource"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="DimensionDetails" type="typeTaskDimensionDetails" minOccurs="0"
maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="MemberDetails" type="typeTaskMemberDetails" maxOccurs="unbounded">
        <xs:sequence>
          <xs:element name="VariableValue" type="typeVariableValue" minOccurs="0"
maxOccurs="unbounded">
            <xs:sequence>
              <xs:element name="Value" type="typeValueSource"></xs:element>
            </xs:sequence>
          </xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
</xs:element>

```

```

    <xs:element name="CombiningRule" type="typeLocalRule" minOccurs="0">
      <xs:sequence>
        <xs:element name="Definition" type="xs:string"/></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="sourceDataSetName" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="simulationDate" type="xs:long" use="optional" default="0"/></xs:attribute>
  <xs:attribute name="specificDimensionMember" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="specificInteractionPoint" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="taskOrigin" type="enumSimulationTaskOrigin">
    <xs:enumeration value="Define"/></xs:enumeration>
    <xs:enumeration value="Combine"/></xs:enumeration>
    <xs:enumeration value="Prioritize"/></xs:enumeration>
  </xs:attribute>
</xs:element>

```

Parent Elements[Tasks Element](#)**Child Elements**[CombiningRule Element](#), [DimensionDetails Element](#), [SourceDataServerCredentials Element](#), [SourceDataSet Element](#), [VariableValue Element](#)**Related Elements**[Build Element](#), [DataScan Element](#), [Evaluate Element](#), [Score Element](#), [Test Element](#)**SourceDataServerCredentials Element**

Optional data source server connection to be used in the task. NOTE: runtime-only information, these values are never to be passed in clear text or stored in an unencrypted manner in the workspace.

XML Representation

```

<xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials" minOccurs="0">
  <xs:sequence>
    <xs:element name="UserId"/></xs:element>
  </xs:sequence>
</xs:element>

```

Parent Elements[Simulate Element](#)**Child Elements**[UserId Element](#)

UserId Element

Specific User ID and Password information

Table A-144
Attributes for UserId

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| id | required | Optional User ID when required (encode? encrypt?) | <i>string</i> |
| password | required | Optional User Password when required (encode? encrypt?) | <i>string</i> |

XML Representation

```
<xs:element name="UserId">
  <xs:attribute name="id" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="password" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements

[SourceDataServerCredentials Element](#)

SourceDataSet Element

(Deprecated) The data set to use as input to this score task

Table A-145
Attributes for SourceDataSet

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|----------------|----------|--|----------------|
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="SourceDataSet" type="dataset:typeDataSet">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
      <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="compatibility" type="enumCompatibility" use="optional">

```

```

    <xs:enumeration value="complete"></xs:enumeration>
    <xs:enumeration value="partial"></xs:enumeration>
    <xs:enumeration value="none"></xs:enumeration>
  </xs:attribute>
  <xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[Simulate Element](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-146
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-----------|----------|---|---------------|
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-147
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[SourceDataSet Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```

<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>

```

Parent Elements[Attribute Element](#)**Table Element**

The table used in this data set

Table A-148
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-149
Extended Types

| Type | Description |
|-------------------------------------|---|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements[SourceDataSet Element](#)**Expression Element**

Optional passing of expressions defined by an application into a task

Table A-150
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

```

<xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
<xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
<xs:sequence>
  <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
    maxOccurs="unbounded"></xs:element>
  <xs:element name="Definition" type="xs:string"></xs:element>
</xs:sequence>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
</xs:element>

```

Parent Elements

[SourceDataSet Element](#)

Child Elements

[Category Element](#), [DataSetAttribute Element](#), [Definition Element](#)

Related Elements

[Expression Element](#), [Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#),
[Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Expression Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Expression Element](#)**Definition Element**

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements[Expression Element](#)**Mapping Element**

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      minOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements[SourceDataSet Element](#)**Child Elements**[AttributeMapping Element](#)**AttributeMapping Element**

The mapping of these attributes to the primary attributes

Table A-151
Attributes for *AttributeMapping*

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[Mapping Element](#)

VariableValue Element

Global variable values defined for this task

Table A-152

Attributes for VariableValue

| Attribute | Use | Description | Valid Values |
|------------------|-----------------|---|---------------|
| interactionPoint | optional | Optional Interaction Point for this variable value, Variable name plus Interaction Point name (may be empty) unique in a value series | <i>string</i> |
| name | required | Variable referenced by name | <i>string</i> |

XML Representation

```
<xs:element name="VariableValue" type="typeVariableValue" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Value" type="typeValueSource"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="interactionPoint" type="xs:string" use="optional" default=""></xs:attribute>
</xs:element>
```

Parent Elements

[Simulate Element](#)

Child Elements

[Value Element](#)

Value Element

The value for this variable reference

XML Representation

```
<xs:element name="Value" type="typeValueSource"></xs:element>
```

Table A-153
Extended Types

| Type | Description |
|--|---------------------------------------|
| ConstantValueSource | A constant value source |
| AttributeValueSource | An Entity attribute value source |
| LocalRuleValueSource | A local rule value source |
| ReferencedRuleModelValueSource | Referenced rule or model value source |

Parent Elements

[VariableValue Element](#)

DimensionDetails Element

Dimension specific variable values defined for this task

Table A-154
Attributes for DimensionDetails

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|----------------|---------------|
| name | required | Dimension name | <i>string</i> |

XML Representation

```
<xs:element name="DimensionDetails" type="typeTaskDimensionDetails" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="MemberDetails" type="typeTaskMemberDetails" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="VariableValue" type="typeVariableValue" minOccurs="0"
maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Value" type="typeValueSource"/></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements

[Simulate Element](#)

Child Elements

[MemberDetails Element](#)

MemberDetails Element

The Dimension Member details submitted with a task

Table A-155
Attributes for MemberDetails

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|-----------------------|---------------|
| name | required | Dimension Member name | <i>string</i> |

XML Representation

```
<xs:element name="MemberDetails" type="typeTaskMemberDetails" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="VariableValue" type="typeVariableValue" minOccurs="0" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Value" type="typeValueSource"/></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements

[DimensionDetails Element](#)

Child Elements

[VariableValue Element](#)

VariableValue Element

Variable Values defined for this task

Table A-156
Attributes for VariableValue

| Attribute | Use | Description | Valid Values |
|------------------|-----------------|---|---------------|
| interactionPoint | optional | Optional Interaction Point for this variable value, Variable name plus Interaction Point name (may be empty) unique in a value series | <i>string</i> |
| name | required | Variable referenced by name | <i>string</i> |

XML Representation

```
<xs:element name="VariableValue" type="typeVariableValue" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Value" type="typeValueSource"/></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="interactionPoint" type="xs:string" use="optional" default=""></xs:attribute>
</xs:element>
```

Parent Elements[MemberDetails Element](#)**Child Elements**[Value Element](#)**Value Element**

The value for this variable reference

XML Representation

```
<xs:element name="Value" type="typeValueSource"></xs:element>
```

Table A-157
Extended Types

| Type | Description |
|--|---------------------------------------|
| ConstantValueSource | A constant value source |
| AttributeValueSource | An Entity attribute value source |
| LocalRuleValueSource | A local rule value source |
| ReferencedRuleModelValueSource | Referenced rule or model value source |

Parent Elements[VariableValue Element](#)**CombiningRule Element**

Rule used in a Combine What If simulation

Table A-158
Attributes for CombiningRule

| Attribute | Use | Description | Valid Values |
|------------------------------|-----------------|--|----------------|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| hasLocalExpressionReferences | optional | Set during an edit to indicate whether the rule has local expression references in it or not. When true, this rule cannot be exported. | <i>boolean</i> |
| contentType | required | File MIME type of this rule | <i>string</i> |
| name | optional | Name of the element | <i>string</i> |
| outputDataType | optional | Output field data type | <i>string</i> |
| outputField | optional | Output field to use from the rule | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|------------------|----------|---|---|
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| usageDescription | optional | Optional additional descriptive text for this rule | <i>string</i> |

XML Representation

```

<xs:element name="CombiningRule" type="typeLocalRule" minOccurs="0">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"/></xs:element>
  </xs:sequence>
  <xs:attribute name="mimeType" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="usageDescription" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="hasLocalExpressionReferences" type="xs:boolean" use="optional"
    default="false"/></xs:attribute>
  <xs:attribute name="outputField" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputDataType" type="xs:string" use="optional"/></xs:attribute>
</xs:element>

```

Table A-159
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeMemberSelection | The Dimension member selection properties and resulting selection rule |

Parent Elements

[Simulate Element](#)

Child Elements

[Definition Element](#)

Related Elements

[EntityDimension Element](#), [Variable Element](#), [Constraint Element](#), [Selection Element](#), [Dimension Element](#), [Variable Element](#), [Constraint Element](#), [Member Element](#), [BaseSelection Element](#), [Optimization Element](#), [Deployment Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)

Definition Element

Definition of the local rule

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements

[CombiningRule Element](#)

Test Element

Setting used in last Test task submittal

Table A-160

Attributes for Test

| Attribute | Use | Description | Valid Values |
|---------------|----------|---|----------------|
| taskOrigin | optional | Runtime information on where in the UI the task was requested | <i>string</i> |
| testDate | optional | The testn date, default is 'today' | <i>string</i> |
| useCustomData | optional | Indicator if the custom data or record limit from source data set is to be used | <i>boolean</i> |

XML Representation

```
<xs:element name="Test" type="typeTestTask" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials"
      minOccurs="0">
      <xs:sequence>
        <xs:element name="UserId"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:choice>
      <xs:element name="CustomInput" type="typeCustomInput">
        <xs:sequence>
          <xs:element name="Field" type="typeCustomInputField" maxOccurs="unbounded">
            <xs:sequence>
              <xs:element name="Value" type="typeCustomInputFieldValue"
                maxOccurs="unbounded"></xs:element>
            </xs:sequence>
          </xs:element>
        </xs:sequence>
      </xs:element>
      <xs:element name="DataSetInput" type="typeTestRecordSelection">
        <xs:sequence>
```

```

<xs:element name="SourceDataSet" type="dataset:typeDataSet">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
      <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:element name="Selection" type="typeLocalRule" minOccurs="0">
    <xs:sequence>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
</xs:choice>
<xs:element name="DisplayField" type="xs:string" maxOccurs="unbounded"></xs:element>
<xs:element name="InteractionPoint" type="xs:string" minOccurs="0"></xs:element>
</xs:sequence>
<xs:attribute name="testDate" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="useCustomData" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="taskOrigin" type="xs:string"></xs:attribute>
</xs:element>

```

Parent Elements[Tasks Element](#)**Child Elements**

[CustomInput Element](#), [DataSetInput Element](#), [DisplayField Element](#), [InteractionPoint Element](#), [SourceDataSetServerCredentials Element](#)

Related Elements

[Build Element](#), [DataScan Element](#), [Evaluate Element](#), [Score Element](#), [Simulate Element](#)

SourceDataServerCredentials Element

Optional data source server connection to be used in the task. NOTE: runtime-only information, these values are never to be passed in clear text or stored in an unencrypted manner in the workspace.

XML Representation

```
<xs:element name="SourceDataServerCredentials" type="typeTaskDatabaseCredentials" minOccurs="0">
  <xs:sequence>
    <xs:element name="UserId"></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements

[Test Element](#)

Child Elements

[UserId Element](#)

UserId Element

Specific User ID and Password information

Table A-161

Attributes for UserId

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| id | required | Optional User ID when required (encode? encrypt?) | <i>string</i> |
| password | required | Optional User Password when required (encode? encrypt?) | <i>string</i> |

XML Representation

```
<xs:element name="UserId">
  <xs:attribute name="id" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="password" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[SourceDataServerCredentials Element](#)

CustomInput Element

User specified test input records

XML Representation

```
<xs:element name="CustomInput" type="typeCustomInput">
  <xs:sequence>
    <xs:element name="Field" type="typeCustomInputField" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Value" type="typeCustomInputFieldValue"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements

[Test Element](#)

Child Elements

[Field Element](#)

Field Element

The series of input fields with all column values

Table A-162
Attributes for Field

| Attribute | Use | Description | Valid Values |
|-----------|----------|----------------|--------------|
| name | required | The field name | string |

XML Representation

```
<xs:element name="Field" type="typeCustomInputField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Value" type="typeCustomInputFieldValue" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[CustomInput Element](#)

Child Elements

[Value Element](#)

Value Element

Column-wise list of field values

Table A-163
Attributes for Value

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|--------------------------|----------------|
| isNull | optional | Indicator of null values | <i>boolean</i> |
| value | required | Input value | <i>string</i> |

XML Representation

```
<xs:element name="Value" type="typeCustomInputFieldValue" maxOccurs="unbounded">
  <xs:attribute name="value" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="isNull" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>
```

Parent Elements

[Field Element](#)

DataSetInput Element

Row limited Data Set used for test input

Table A-164
Attributes for DataSetInput

| Attribute | Use | Description | Valid Values |
|-------------------|-----------------|---|-------------------------------------|
| basedOn | required | The first hit, random selection or selection rule record limit to be used | FirstHit RandomSelection |
| recordLimit | required | Numeric limit to the test run | <i>int</i> |
| sourceDataSetName | optional | The name of the source data set. | <i>string</i> |

XML Representation

```
<xs:element name="DataSetInput" type="typeTestRecordSelection">
  <xs:sequence>
    <xs:element name="SourceDataSet" type="dataset:typeDataSet">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
```

```

        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    <xs:sequence>
      <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
    <xs:sequence>
      <xs:element name="AttributeMapping" type="typeAttributeMapping"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Selection" type="typeLocalRule" minOccurs="0">
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
<xs:attribute name="sourceDataSetName" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="recordLimit" type="xs:int" use="required"></xs:attribute>
<xs:attribute name="basedOn" type="enumTestBasedOn" use="required">
  <xs:enumeration value="FirstHit"></xs:enumeration>
  <xs:enumeration value="RandomSelection"></xs:enumeration>
</xs:attribute>
</xs:element>

```

Parent Elements

[Test Element](#)

Child Elements

[Selection Element](#), [SourceDataSet Element](#)

SourceDataSet Element

(Deprecated) The data set used as input to the test task, optional when custom data sent

Table A-165
Attributes for SourceDataSet

| Attribute | Use | Description | Valid Values |
|---------------|----------|---|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|----------------|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="SourceDataSet" type="dataset:typeDataSet">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>

```

```

</xs:element>
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      minOccurs="unbounded"/></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
<xs:attribute name="name" type="xs:string" use="required"/></xs:attribute>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
<xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="compatibility" type="enumCompatibility" use="optional">
  <xs:enumeration value="complete"/></xs:enumeration>
  <xs:enumeration value="partial"/></xs:enumeration>
  <xs:enumeration value="none"/></xs:enumeration>
</xs:attribute>
<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
</xs:element>

```

Parent Elements

[DataSetInput Element](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-166
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|--------------|-----------------|---|---------------|
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-167
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[SourceDataSet Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Attribute Element](#)

Table Element

The table used in this data set

Table A-168
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Table A-169
Extended Types

| Type | Description |
|-------------------------------------|---|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[SourceDataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-170
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
```

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>  
</xs:sequence>  
<xs:attribute name="name" type="xs:string" use="required"/></xs:attribute>  
<xs:attribute name="dataType" type="xs:string" use="required"/></xs:attribute>  
<xs:attribute name="miningType" type="xs:string"/></xs:attribute>  
<xs:attribute name="description" type="xs:string" use="optional"/></xs:attribute>  
<xs:attribute name="maximumValue" type="xs:string" use="optional"/></xs:attribute>  
<xs:attribute name="minimumValue" type="xs:string" use="optional"/></xs:attribute>  
<xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"/></xs:attribute>  
<xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"/></xs:attribute>  
<xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"/></xs:attribute>  
<xs:attribute name="Usage" type="xs:string" use="optional" default="value"/></xs:attribute>  
<xs:attribute name="Category" type="xs:string" use="optional"/></xs:attribute>  
<xs:sequence>  
  <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>  
  <xs:element name="Definition" type="xs:string"/></xs:element>  
</xs:sequence>  
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>  
</xs:element>
```

Parent Elements

[SourceDataSet Element](#)

Child Elements

[Category Element](#), [DataSetAttribute Element](#), [Definition Element](#)

Related Elements

[Expression Element](#), [Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#), [Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"/></xs:element>
```

Parent Elements

[Expression Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">  
  <xs:sequence>  
    <xs:element name="AttributeMapping" type="typeAttributeMapping"  
      maxOccurs="unbounded"/></xs:element>  
  </xs:sequence>  
</xs:element>
```

Parent Elements

[SourceDataSet Element](#)

Child Elements

[AttributeMapping Element](#)

AttributeMapping Element

The mapping of these attributes to the primary attributes

Table A-171
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[Mapping Element](#)

Selection Element

Optional selection rule for this test

Table A-172
Attributes for Selection

| Attribute | Use | Description | Valid Values |
|------------------------------|-----------------|--|---|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| hasLocalExpressionReferences | optional | Set during an edit to indicate whether the rule has local expression references in it or not. When true, this rule cannot be exported. | <i>boolean</i> |
| contentType | required | File MIME type of this rule | <i>string</i> |
| name | optional | Name of the element | <i>string</i> |
| outputDataType | optional | Output field data type | <i>string</i> |
| outputField | optional | Output field to use from the rule | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| usageDescription | optional | Optional additional descriptive text for this rule | <i>string</i> |

XML Representation

```

<xs:element name="Selection" type="typeLocalRule" minOccurs="0">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"/></xs:element>
  </xs:sequence>
  <xs:attribute name="mimeType" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="usageDescription" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="hasLocalExpressionReferences" type="xs:boolean" use="optional"
  default="false"/></xs:attribute>
  <xs:attribute name="outputField" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputDataType" type="xs:string" use="optional"/></xs:attribute>
</xs:element>

```

Table A-173
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeMemberSelection | The Dimension member selection properties and resulting selection rule |

Parent Elements

[DataSetInput Element](#)

Child Elements

[Definition Element](#)

Related Elements

[EntityDimension Element](#), [Variable Element](#), [Constraint Element](#), [Selection Element](#), [Dimension Element](#), [Variable Element](#), [Constraint Element](#), [Member Element](#), [BaseSelection Element](#), [Optimization Element](#), [Deployment Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Rule Element](#), [BaseSelection Element](#)

Definition Element

Definition of the local rule

XML Representation

```

<xs:element name="Definition" type="xs:string"/></xs:element>

```

Parent Elements[Selection Element](#)**DisplayField Element**

The fields to be displayed as the 'key' to the test record, when primary key is known it should be the default

XML Representation

```
<xs:element name="DisplayField" type="xs:string" maxOccurs="unbounded"/></xs:element>
```

Parent Elements[Test Element](#)**InteractionPoint Element**

Selected Interaction Point for this test

XML Representation

```
<xs:element name="InteractionPoint" type="xs:string" minOccurs="0"/></xs:element>
```

Parent Elements[Test Element](#)**Rule Element**

The root element for all rule types

XML Representation

```
<xs:element name="Rule" abstract="false">
  <xs:sequence>
    <xs:element name="Rule" type="typeRule">
      <xs:sequence>
        <xs:element name="ApplicationView" minOccurs="0"/></xs:element>
        <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
          <xs:sequence>
            <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
              <xs:sequence>
                <xs:element name="Category" type="xs:string" minOccurs="0"
                  maxOccurs="unbounded"/></xs:element>
              </xs:sequence>
            </xs:element>
            <xs:element name="Table" type="typeDataTable"/></xs:element>
            <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
              maxOccurs="unbounded">
              <xs:sequence>
```



```

        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    <xs:sequence>
      <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
    <xs:sequence>
      <xs:element name="AttributeMapping" type="typeAttributeMapping"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
</xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>

```

Child Elements

Rule Element

Rule Element

Specific rule instance

Table A-174

Attributes for Rule

| Attribute | Use | Description | Valid Values |
|-------------|----------|-----------------------------------|---------------|
| description | optional | Optional description of this rule | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-----------------|----------|--|--|
| outputQualifier | optional | The qualifier to be used in the execution plan for naming the measures | <i>string</i> |
| usageType | optional | The User Perspective of the usage of this rule, communication between the application designer and the business user who will apply the rule | Segment SegmentSet Selection ExcludeSet IncludeSet Allocation Aggregation Matrix Expression Arbitration Threshold |

XML Representation

```

<xs:element name="Rule" type="typeRule">
  <xs:sequence>
    <xs:element name="ApplicationView" minOccurs="0"/></xs:element>
    <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"/></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
          <xs:sequence>
            <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
            <xs:element name="Definition" type="xs:string"/></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
          <xs:sequence>
            <xs:element name="AttributeMapping" type="typeAttributeMapping"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"/></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Output" type="typeField" maxOccurs="unbounded">

```

```

    <xs:sequence>
      <xs:element name="Category" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
</xs:sequence>
<xs:attribute name="outputQualifier" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="usageType" type="enumUsageType" use="optional">
  <xs:enumeration value="Segment"></xs:enumeration>
  <xs:enumeration value="SegmentSet"></xs:enumeration>
  <xs:enumeration value="Selection"></xs:enumeration>
  <xs:enumeration value="ExcludeSet"></xs:enumeration>
  <xs:enumeration value="IncludeSet"></xs:enumeration>
  <xs:enumeration value="Allocation"></xs:enumeration>
  <xs:enumeration value="Aggregation"></xs:enumeration>
  <xs:enumeration value="Matrix"></xs:enumeration>
  <xs:enumeration value="Expression"></xs:enumeration>
  <xs:enumeration value="Arbitration"></xs:enumeration>
  <xs:enumeration value="Threshold"></xs:enumeration>
</xs:attribute>
<xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-175
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeDecisionRule | A Decision Rule |
| typeMatrixRule | The Decision Matrix Rule |
| typeRandomRule | the Random Rule |
| typeExpressionRule | A simple expression |
| typeThresholdRule | An allocation rule defined by a series of threshold tests against a rule or model output |
| typeArbitrationRule | An allocation rule defined to be a 'primary' rule and a 'secondary' rule pair |

Parent Elements

[Rule Element](#)

Child Elements

[AnalyticEngine Element](#), [ApplicationView Element](#), [DataSet Element](#), [Input Element](#), [Output Element](#)

ApplicationView Element

Reference to Application View and table the rule is designed to work with, object ID content of this element

Table A-176
Attributes for ApplicationView

| Attribute | Use | Description | Valid Values |
|-----------------|-----------------|--|---------------|
| label | required | Version label referenced | <i>string</i> |
| mimeType | optional | File MIME type of the repository object | <i>string</i> |
| name | optional | Optional Application View name for display | <i>string</i> |
| outputQualifier | optional | Optional output qualifier to be used during execution | <i>string</i> |
| table | optional | optional? Table name referenced from this Application View | <i>string</i> |
| usage | optional | Additional display information for the user interface | <i>string</i> |

XML Representation

```
<xs:element name="ApplicationView" minOccurs="0">
  <xs:attribute name="label" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="name" type="xs:string"/></xs:attribute>
  <xs:attribute name="usage" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputQualifier" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="mimeType" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="table" type="xs:string"/></xs:attribute>
</xs:element>
```

Parent Elements

[Rule Element](#)

Related Elements

[ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ObjectReference Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#)

DataSet Element

Optional information on data set used to define this rule

Table A-177
Attributes for DataSet

| Attribute | Use | Description | Valid Values |
|---------------|----------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|----------------|
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>

```

```

    <xs:sequence>
      <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
    <xs:sequence>
      <xs:element name="AttributeMapping" type="typeAttributeMapping"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
<xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="compatibility" type="enumCompatibility" use="optional">
  <xs:enumeration value="complete"></xs:enumeration>
  <xs:enumeration value="partial"></xs:enumeration>
  <xs:enumeration value="none"></xs:enumeration>
</xs:attribute>
<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements[Rule Element](#)**Child Elements**[Attribute Element, Expression Element, Mapping Element, Table Element](#)**Attribute Element**

The attributes of the given data set at the point of last refresh

Table A-178
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-179
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[DataSet Element](#)

Child Elements[Category Element](#)**Category Element**

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements[Attribute Element](#)**Table Element**

The table used in this data set

Table A-180
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-181
Extended Types

| Type | Description |
|-------------------------------------|--|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |

| Type | Description |
|-----------------------------|---|
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[DataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-182
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"/></xs:element>
```

Parent Elements

[Expression Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">  
  <xs:sequence>  
    <xs:element name="AttributeMapping" type="typeAttributeMapping"  
      maxOccurs="unbounded"/></xs:element>  
  </xs:sequence>  
</xs:element>
```

Parent Elements

[DataSet Element](#)

Child Elements

[AttributeMapping Element](#)

AttributeMapping Element

The mapping of these attributes to the primary attributes

Table A-183
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

Mapping Element

Input Element

The required inputs for this rule

Table A-184
Attributes for Input

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
```

```
</xs:element>
```

Parent Elements

[Rule Element](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Input Element](#)

Output Element

The outputs produced by an execution of this rule

Table A-185

Attributes for Output

| Attribute | Use | Description | Valid Values |
|------------------|-----------------|--|---------------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
```

```
</xs:element>
```

Parent Elements

[Rule Element](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Output Element](#)

AnalyticEngine Element

Runtime executable representation of the rule

XML Representation

```
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
```

Parent Elements

[Rule Element](#)

Value Element

A constant value

Table A-186
Attributes for Value

| Attribute | Use | Description | Valid Values |
|-----------|----------|---|----------------|
| IsNil | optional | Flag indicating if the value is NULL or not | <i>boolean</i> |
| type | optional | Specific data type of this literal value | <i>any</i> |

XML Representation

```
<xs:element name="Value" type="typeValue" abstract="false">
  <xs:attribute name="IsNil" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="type" use="optional">
```

```

    <xs:simpleType>
      <xs:restriction base="xs:string"></xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:element>

```

Parent Elements

[Expression Element](#), [Function Element](#), [Function Element](#), [ObjectiveFunction Element](#), [Expression Element](#), [Expression Element](#)

Extended Types

Extended types extend elements in an XML document by adding attributes and child elements. To use an extended type in an XML document, you specify the extended type with the `xsi:type` attribute for the element. Then you can use the attributes and elements defined by the extended type.

AttributeValueSource Type

An Entity attribute value source

XML Representation

```

<xs:complexType name="AttributeValueSource">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttributeReference"></xs:element>
  </xs:sequence>
</xs:complexType>

```

Extends

[Value Element](#), [ValueSource Element](#), [Value Element](#), [ValueSource Element](#), [Value Element](#), [Value Element](#), [Value Element](#), [Value Element](#)

Child Elements

[Attribute Element](#)

Related Types

[ConstantValueSource Type](#), [LocalRuleValueSource Type](#), [ReferencedRuleModelValueSource Type](#)

Attribute Element

Entity attribute that determines this allocation

XML Representation

```
<xs:element name="Attribute" type="typeAttributeReference"></xs:element>
```

Parent Elements

[AttributeValueSource Type](#)

CognosTable Type

An Cognos-based table definition

Table A-187

Attributes for CognosTable

| Attribute | Use | Description | Valid Values |
|--------------------------|-----------------|--|----------------|
| anonymous | optional | | <i>boolean</i> |
| isExport | optional | | <i>boolean</i> |
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| nameSpace | optional | | <i>string</i> |
| outputPackageName | optional | Output package name. | <i>string</i> |
| password | optional | | <i>string</i> |
| selectedCognosDataSource | optional | | <i>string</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |
| uri | optional | | <i>string</i> |
| user | optional | | <i>string</i> |

XML Representation

```
<xs:complexType name="CognosTable">
  <xs:sequence maxOccurs="1" minOccurs="0">
    <xs:element name="selectedCognosObject" type="typeCognosObject">
      <xs:sequence maxOccurs="unbounded" minOccurs="0">
        <xs:element ref="child"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="cognosDataSource"></xs:element>
    <xs:element name="cognosSelectedItems"></xs:element>
  </xs:sequence>
</xs:complexType>
```


cognosDataSource Element**XML Representation**

```
<xs:element name="cognosDataSource"></xs:element>
```

Parent Elements

[CognosTable Type](#)

cognosSelectedItems Element**XML Representation**

```
<xs:element name="cognosSelectedItems"></xs:element>
```

Parent Elements

[CognosTable Type](#)

ConstantBoundary Type

A constant Constraint boundary

Table A-189

Attributes for ConstantBoundary

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| value | required | The value or reference defining this boundary | <i>string</i> |

XML Representation

```
<xs:complexType name="ConstantBoundary"></xs:complexType>
```

Extends

[Boundary Element](#), [Boundary Element](#)

Related Types

[VariableReferenceBoundary Type](#)

ConstantValueSource Type

A constant value source

XML Representation

```
<xs:complexType name="ConstantValueSource">
  <xs:sequence>
    <xs:element name="Value" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

```
</xs:sequence>
</xs:complexType>
```

Extends

Value Element, ValueSource Element, Value Element, ValueSource Element, Value Element, Value Element, Value Element, Value Element

Child Elements

Value Element

Related Types

AttributeValueSource Type, LocalRuleValueSource Type, ReferencedRuleModelValueSource Type

Value Element

Constant value, multiple values get multiple elements and are not delimited

XML Representation

```
<xs:element name="Value" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

ConstantValueSource Type

DatabaseTable Type

A database-based table definition

Table A-190
Attributes for DatabaseTable

| Attribute | Use | Description | Valid Values |
|-----------------|-----------------|--|--|
| dataSourceName | required | Name of the defined data source (ODBC DSN) | <i>string</i> |
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| quoteReferences | optional | Controls use of quotes on table and column names | auto always never |

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---|
| tableName | required | Name of the selected table at the source | <i>string</i> |
| trimSpace | optional | Controls leading and trailing space trimming operations | none leading trailing both |

XML Representation

```
<xs:complexType name="DatabaseTable"></xs:complexType>
```

Extends

Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, TargetDataTable Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element

Related Types

CognosTable Type, DimensionsFileTable Type, ExcelFileTable Type, FlatFileTable Type, PevTable Type, SASFileTable Type, SpssFileTable Type

DimensionsFileTable Type

A SAS save file-based table definition

Table A-191
Attributes for DimensionsFileTable

| Attribute | Use | Description | Valid Values |
|-----------------------|-----------------|--|----------------|
| caseDataFilename | optional | Name of the case data file to be produced or updated | <i>string</i> |
| enableSystemVariables | optional | When true, enables the System Variables output in the data collection | <i>boolean</i> |
| fileLocation | optional | Path information for this file | <i>string</i> |
| fileType | required | File type detected or set by user | <i>string</i> |
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|-----------------------|-----------------|--|----------------|
| mergeExistingMetaData | optional | When true, indicates that the metadata generated should be merged with the indicated metadata file, otherwise it will replace it | <i>boolean</i> |
| metaDataFilename | optional | Name of the metadata file to be produced or updated | <i>string</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:complexType name="DimensionsFileTable"></xs:complexType>
```

Extends

Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, TargetDataTable Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element

Related Types

CognosTable Type, DatabaseTable Type, ExcelFileTable Type, FlatFileTable Type, PevTable Type, SASFileTable Type, SpssFileTable Type

ExcelFileTable Type

An Excel file-based table definition

Table A-192
Attributes for *ExcelFileTable*

| Attribute | Use | Description | Valid Values |
|------------------------|-----------------|--|--------------------------------------|
| fileLocation | optional | Path information for this file | <i>string</i> |
| fileType | required | File type detected or set by user | Excel2003 Excel2007 |
| firstRowHasColumnNames | optional | Indicates whether the first row in the worksheet has column names or not | <i>boolean</i> |
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|-------------------------------|-----------------|--|----------------|
| rangeStartsOnFirstNonBlankRow | optional | Indicates how start of range is to be detected | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:complexType name="ExcelFileTable">  
  <xs:sequence>  
    <xs:choice>  
      <xs:element name="NamedRange" type="xs:string"/></xs:element>  
      <xs:element name="WorksheetIndex" type="xs:string"/></xs:element>  
      <xs:element name="WorksheetName" type="xs:string"/></xs:element>  
    </xs:choice>  
    <xs:element name="ExplicitRangeOfCells" type="typeCellRange" minOccurs="0"/></xs:element>  
    <xs:element name="OnBlankRows" type="enumOnBlankRows" default="Stop" minOccurs="0">  
      <xs:enumeration value="Return"/></xs:enumeration>  
      <xs:enumeration value="Stop"/></xs:enumeration>  
      <xs:enumeration value="Skip"/></xs:enumeration>  
    </xs:element>  
  </xs:sequence>  
</xs:complexType>
```

Extends

[Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [TargetDataTable Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#)

Child Elements

[ExplicitRangeOfCells Element](#), [NamedRange Element](#), [OnBlankRows Element](#), [WorksheetIndex Element](#), [WorksheetName Element](#)

Related Types

[CognosTable Type](#), [DatabaseTable Type](#), [DimensionsFileTable Type](#), [FlatFileTable Type](#), [PevTable Type](#), [SASFileTable Type](#), [SpssFileTable Type](#)

NamedRange Element

Optional Data Range to use for supplying data

XML Representation

```
<xs:element name="NamedRange" type="xs:string"/></xs:element>
```

Parent Elements

[ExcelFileTable Type](#)

WorksheetIndex Element

Worksheet index to use as data table

XML Representation

```
<xs:element name="WorksheetIndex" type="xs:string"/></xs:element>
```

Parent Elements

[ExcelFileTable Type](#)

WorksheetName Element

Worksheet name to use as data table

XML Representation

```
<xs:element name="WorksheetName" type="xs:string"/></xs:element>
```

Parent Elements

[ExcelFileTable Type](#)

ExplicitRangeOfCells Element

Explicit range of cells that defines this table of data, ignored for named range and optional for worksheets

Table A-193

Attributes for *ExplicitRangeOfCells*

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|---|---------------|
| end | required | Ending cell, bottom right corner of range | <i>string</i> |
| lowerRightCell | required | The cell in the bottom right of the range | <i>string</i> |
| start | required | Starting cell, top left corner of range | <i>string</i> |
| upperLeftCell | required | The cell in the top left of the range | <i>string</i> |

XML Representation

```
<xs:element name="ExplicitRangeOfCells" type="typeCellRange" minOccurs="0">
  <xs:attribute name="start" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="end" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="upperLeftCell" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="lowerRightCell" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements[ExcelFileTable Type](#)**OnBlankRows Element**

When processing by first non-blank row, this is the 'On Blank Rows' indicator

XML Representation

```
<xs:element name="OnBlankRows" type="enumOnBlankRows" default="Stop" minOccurs="0">
  <xs:enumeration value="Return"></xs:enumeration>
  <xs:enumeration value="Stop"></xs:enumeration>
  <xs:enumeration value="Skip"></xs:enumeration>
</xs:element>
```

Parent Elements[ExcelFileTable Type](#)**FlatFileTable Type**

A flat file-based table definition

Table A-194
Attributes for FlatFileTable

| Attribute | Use | Description | Valid Values |
|------------------------|-----------------|---|---|
| decimalSymbol | optional | Optional, explicit definition of the decimal symbol used in the file | period comma default |
| doubleQuoteHandling | optional | Specification of how double quote characters should be handled. Default is Discard. | discard pair include |
| encoding | optional | Ability to force a given encoding when reading the file | clientDefault UTF-8 |
| fileLocation | optional | Path information for this file | <i>string</i> |
| fileType | required | File type detected or set by user | <i>string</i> |
| firstRowHasColumnNames | optional | Indicates whether the first row in the file has column names or not | <i>boolean</i> |
| linesToScanForType | optional | The lines (rows) of the input files to be scanned to determine the storage data type of each column. Default is 50. | <i>int</i> |
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|---------------------|-----------------|---|---|
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| outputQuoteChar | optional | The quote character to use on output | <i>string</i> |
| singleQuoteHandling | optional | Specification of how single quote characters should be handled. Default is Discard. | discard pair include |
| skipSpaces | optional | The type of space skip to perform. Default is None. | none leading trailing both |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```

<xs:complexType name="FlatFileTable">
  <xs:sequence>
    <xs:element name="Delimiters" type="typeFieldDelimiters"/></xs:element>
    <xs:element name="EolCommentChars" type="xs:string" minOccurs="0"/></xs:element>
    <xs:element name="NumberOfInputFields" type="xs:int" minOccurs="0"/></xs:element>
    <xs:element name="SkipHeaderChars" type="xs:int" minOccurs="0"/></xs:element>
    <xs:element name="InvalidCharReplace" type="xs:string" minOccurs="0"/></xs:element>
  </xs:sequence>
</xs:complexType>

```

Extends

[Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#)

Child Elements

[Delimiters Element](#), [EolCommentChars Element](#), [InvalidCharReplace Element](#), [NumberOfInputFields Element](#), [SkipHeaderChars Element](#)

Related Types

[CognosTable Type](#), [DatabaseTable Type](#), [DimensionsFileTable Type](#), [ExcelFileTable Type](#), [PevTable Type](#), [SASFileTable Type](#), [SpssFileTable Type](#)

Delimiters Element

Field delimiters

Table A-195
Attributes for Delimiters

| Attribute | Use | Description | Valid Values |
|--------------------------|----------|---|----------------|
| AllowMultipleBlankDelims | optional | Consider multiple spaces to be a single delimiter | <i>boolean</i> |
| Comma | optional | Comma delimited | <i>boolean</i> |
| Newline | optional | Newline character delimited | <i>boolean</i> |
| NonPrintingChars | optional | Any non-printing character considered the delimiter | <i>boolean</i> |
| Other | optional | User-specified delimiter | <i>string</i> |
| Space | optional | Space delimited | <i>boolean</i> |
| Tab | optional | Tab delimited | <i>boolean</i> |

XML Representation

```
<xs:element name="Delimiters" type="typeFieldDelimiters">
  <xs:attribute name="Space" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="AllowMultipleBlankDelims" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="Newline" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="NonPrintingChars" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="Comma" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="Tab" type="xs:boolean" default="false"></xs:attribute>
  <xs:attribute name="Other" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[FlatFileTable Type](#)

EolCommentChars Element

End Of Line comment characters

XML Representation

```
<xs:element name="EolCommentChars" type="xs:string" minOccurs="0"></xs:element>
```

Parent Elements

[FlatFileTable Type](#)

NumberOfInputFields Element

Number of input fields. When not checked, this element is not included. Otherwise, number > 0 is expected.

XML Representation

```
<xs:element name="NumberOfInputFields" type="xs:int" minOccurs="0"></xs:element>
```

Parent Elements[FlatFileTable Type](#)**SkipHeaderChars Element**

When specified, this element indicates the number of characters to skip for the 'header'

XML Representation

```
<xs:element name="SkipHeaderChars" type="xs:int" minOccurs="0"/></xs:element>
```

Parent Elements[FlatFileTable Type](#)**InvalidCharReplace Element**

Characters to use for replacing any invalid characters encountered. Default is Discard when not specified.

XML Representation

```
<xs:element name="InvalidCharReplace" type="xs:string" minOccurs="0"/></xs:element>
```

Parent Elements[FlatFileTable Type](#)**LocalRuleValueSource Type**

A local rule value source

XML Representation

```
<xs:complexType name="LocalRuleValueSource">
  <xs:sequence>
    <xs:element name="Rule" type="typeLocalRule">
      <xs:sequence>
        <xs:element name="Definition" type="xs:string"/></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

Extends

[Value Element](#), [ValueSource Element](#), [Value Element](#), [ValueSource Element](#), [Value Element](#), [Value Element](#), [Value Element](#), [Value Element](#)

Child Elements[Rule Element](#)**Related Types**[AttributeValueSource Type](#), [ConstantValueSource Type](#), [ReferencedRuleModelValueSource Type](#)**Rule Element**

Local rule that determines this allocation

Table A-196
Attributes for Rule

| Attribute | Use | Description | Valid Values |
|------------------------------|-----------------|--|---|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| hasLocalExpressionReferences | optional | Set during an edit to indicate whether the rule has local expression references in it or not. When true, this rule cannot be exported. | <i>boolean</i> |
| mimeType | required | File MIME type of this rule | <i>string</i> |
| name | optional | Name of the element | <i>string</i> |
| outputDataType | optional | Output field data type | <i>string</i> |
| outputField | optional | Output field to use from the rule | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| usageDescription | optional | Optional additional descriptive text for this rule | <i>string</i> |

XML Representation

```

<xs:element name="Rule" type="typeLocalRule">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"/></xs:element>
  </xs:sequence>
  <xs:attribute name="mimeType" type="xs:string" use="required"/></xs:attribute>

```

```

<xs:attribute name="usageDescription" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="hasLocalExpressionReferences" type="xs:boolean" use="optional"
default="false"></xs:attribute>
<xs:attribute name="outputField" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="outputDataType" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-197
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeMemberSelection | The Dimension member selection properties and resulting selection rule |

Parent Elements

[LocalRuleValueSource](#) Type

Child Elements

[Definition Element](#)

Related Elements

[EntityDimension Element](#), [Variable Element](#), [Constraint Element](#), [Selection Element](#), [Dimension Element](#), [Variable Element](#), [Constraint Element](#), [Member Element](#), [BaseSelection Element](#), [Optimization Element](#), [Deployment Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Selection Element](#), [BaseSelection Element](#)

Definition Element

Definition of the local rule

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements

[Rule Element](#)

MatrixCombine Type

Configuration control of the Matrix combination method. This method may not be used with more than 2 dimensions.

XML Representation

```
<xs:complexType name="MatrixCombine"></xs:complexType>
```

Extends

[CombineOptimizeMethod Element](#)

Related Types

[PrioritizationOptimization Type](#)

PevTable Type

An Enterprise View-based table definition

Table A-198
Attributes for PevTable

| Attribute | Use | Description | Valid Values |
|----------------------|-----------------|--|---|
| applicationViewID | required | The Application View associated with this data provider | <i>string</i> |
| applicationViewLabel | required | The Application View version label associated with this data provider | <i>string</i> |
| applicationViewName | optional | Display name for the selected Application View, not used in references | <i>string</i> |
| environmentSupported | required | Environment indicator of Analytic or Operational for this data provider | operational analytical real time reporting |
| isRealTime | required | Indicates whether this is a Real-Time Data Provider Definition or not | <i>boolean</i> |
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:complexType name="PevTable">
  <xs:sequence>
    <xs:element name="DpdReference" type="typeDpdReference"/></xs:element>
  </xs:sequence>
</xs:complexType>
```

Extends

Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, TargetDataTable Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element, Table Element

Child Elements

DpdReference Element

Related Types

CognosTable Type, DatabaseTable Type, DimensionsFileTable Type, ExcelFileTable Type, FlatFileTable Type, SASFileTable Type, SpssFileTable Type

DpdReference Element

Enterprise View Data Provider Definition used to access data from this table, implicitly of the same label as the Application View associated with the table

Table A-199
Attributes for DpdReference

| Attribute | Use | Description | Valid Values |
|-----------|----------|--|---------------|
| name | required | Display name of this Data Provider Definition | <i>string</i> |
| objectID | required | Object ID reference to this Data Provider Definition | <i>string</i> |

XML Representation

```
<xs:element name="DpdReference" type="typeDpdReference">
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="objectID" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

PevTable Type

PrioritizationOptimization Type

The Prioritization form of optimization

Table A-200
Attributes for PrioritizationOptimization

| Attribute | Use | Description | Valid Values |
|----------------------|----------|--|----------------|
| enableNumReturnsByIP | optional | Flag controlling the ability to specify the number of return values by Interaction Point | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|------------------------|----------|--|----------------|
| lockConfigurationByIP | optional | Optional Admin lock of the ability to change the Configuration by IP control | <i>boolean</i> |
| lockNumReturns | optional | Optional Admin lock of the 'number of returns' input | <i>boolean</i> |
| sameConfiguraitonForIP | optional | Indication of if the same Prioritization configuration is to be applied for all Interaction Points (true default) or not (false) | <i>boolean</i> |

XML Representation

```
<xs:complexType name="PrioritizationOptimization"></xs:complexType>
```

Extends

[CombineOptimizeMethod Element](#)

Related Types

[MatrixCombine Type](#)

ReferencedRuleModelValueSource Type

Referenced rule or model value source

XML Representation

```
<xs:complexType name="ReferencedRuleModelValueSource">
  <xs:sequence>
    <xs:element name="RuleModelReference" type="typeRuleScenarioReference"></xs:element>
  </xs:sequence>
</xs:complexType>
```

Extends

[Value Element](#), [ValueSource Element](#), [Value Element](#), [ValueSource Element](#), [Value Element](#), [Value Element](#), [Value Element](#), [Value Element](#)

Child Elements

[RuleModelReference Element](#)

Related Types

[AttributeValueSource Type](#), [ConstantValueSource Type](#), [LocalRuleValueSource Type](#)

RuleModelReference Element

Repository Rule or Model object value source referenced

Table A-201

Attributes for RuleModelReference

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|---|----------------|
| author | optional | Author of the object version | <i>string</i> |
| brokenLink | optional | Indicates whether the object version can be found in the repository or not | <i>boolean</i> |
| dateCreated | optional | Date the version was created in the repository | <i>string</i> |
| description | optional | Description defined for the object version and user's language code | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| hidden | optional | keep? Indicates whether this rule or model should be hidden in the user interface | <i>boolean</i> |
| id | required | ID of the repository object | <i>string</i> |
| isLocked | optional | runtime communication of object lock state | <i>boolean</i> |
| keywords | optional | Keywords defined for the object version | <i>string</i> |
| label | required | Version label of the repository object | <i>string</i> |
| marker | optional | Version marker for the repository object | <i>string</i> |
| mimeType | optional | File MIME type of the repository object | <i>string</i> |
| modelID | optional | ID of the model in the build cache, used to track model refresh and those being created by auto-model process | <i>any</i> |
| name | optional | Name of the element | <i>string</i> |
| negated | optional | Flag indicating negation of output field value | <i>boolean</i> |
| outputDataType | optional | Output field data type | <i>string</i> |
| outputField | optional | Output field to use from referenced object | <i>string</i> |
| outputRole | optional | The role of the output field referenced | <i>string</i> |
| parentObjectId | optional | Tracking of the parent object ID | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|------------------|-----------------|--|---|
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| path | optional | Full path of the object in the repository | <i>string</i> |
| type | required | Type of this reference | Value Model Selection |
| usageDescription | optional | Additional description text that can be assigned by the user interface, but not part of repository information | <i>string</i> |

XML Representation

```

<xs:element name="RuleModelReference" type="typeRuleScenarioReference">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:attribute name="id" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="mimeType" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="label" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="marker" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="path" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="dateCreated" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="brokenLink" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="author" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="keywords" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="usageDescription" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="modelID"/></xs:attribute>
  <xs:attribute name="parentObjectId" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="isLocked" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="type" type="enumRuleType" use="required">
    <xs:enumeration value="Value"/></xs:enumeration>
    <xs:enumeration value="Model"/></xs:enumeration>
    <xs:enumeration value="Selection"/></xs:enumeration>
  </xs:attribute>
  <xs:attribute name="negated" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="outputField" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputDataType" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputRole" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="hidden" type="xs:boolean" use="optional" default="false"/></xs:attribute>
</xs:element>

```

Parent Elements

[ReferencedRuleModelValueSource Type](#)

SpssFileTable Type

An SPSS save file-based table definition

Table A-203
Attributes for SpssFileTable

| Attribute | Use | Description | Valid Values |
|-----------------------------|-----------------|--|---------------------|
| fileLocation | optional | Path information for this file | <i>string</i> |
| fileType | required | File type detected or set by user | <i>string</i> |
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |
| valuesReadDataAndLabels | optional | When true, data and labels are read for Values, otherwise labels are read as data for Values | <i>boolean</i> |
| variablesReadNamesAndLabels | optional | When true, indicates that both names and labels should be read for Variables, otherwise labels are read as names for Variables | <i>boolean</i> |

XML Representation

```
<xs:complexType name="SpssFileTable"></xs:complexType>
```

Extends

[Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [TargetDataTable Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#), [Table Element](#)

Related Types

[CognosTable Type](#), [DatabaseTable Type](#), [DimensionsFileTable Type](#), [ExcelFileTable Type](#), [FlatFileTable Type](#), [PevTable Type](#), [SASFileTable Type](#)

typeArbitrationRule Type

An allocation rule defined to be a ‘primary’ rule and a ‘secondary’ rule pair

Table A-204
Attributes for typeArbitrationRule

| Attribute | Use | Description | Valid Values |
|-----------------|----------|--|--|
| description | optional | Optional description of this rule | <i>string</i> |
| outputQualifier | optional | The qualifier to be used in the execution plan for naming the measures | <i>string</i> |
| usageType | optional | The User Perspective of the usage of this rule, communication between the application designer and the business user who will apply the rule | Segment SegmentSet Selection ExcludeSet IncludeSet Allocation Aggregation Matrix Expression Arbitration Threshold |

XML Representation

```

<xs:complexType name="typeArbitrationRule" mixed="false">
  <xs:sequence>
    <xs:element name="ApplicationView" minOccurs="0"/>
    <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"/>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/>
          </xs:sequence>
          <xs:sequence>
            <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/>
            <xs:element name="Definition" type="xs:string"/>
          </xs:sequence>
        </xs:element>
        <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
          <xs:sequence>
            <xs:element name="AttributeMapping" type="typeAttributeMapping"
              maxOccurs="unbounded"/>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
      <xs:sequence>

```

```

        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Output" type="typeField" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
  </xs:sequence>
</xs:sequence>
<xs:element name="Primary" type="typeRule">
  <xs:sequence>
    <xs:element name="ApplicationView" minOccurs="0"></xs:element>
    <xs:element name="DataSet" type="dataset.typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
          <xs:sequence>
            <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
            <xs:element name="Definition" type="xs:string"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
          <xs:sequence>
            <xs:element name="AttributeMapping" type="typeAttributeMapping"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>

```

```

        <xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"/></xs:element>
    </xs:sequence>
</xs:element>
<xs:element name="Secondary" type="typeRule">
    <xs:sequence>
        <xs:element name="ApplicationView" minOccurs="0"/></xs:element>
        <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
            <xs:sequence>
                <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
                    <xs:sequence>
                        <xs:element name="Category" type="xs:string" minOccurs="0"
                            maxOccurs="unbounded"/></xs:element>
                    </xs:sequence>
                </xs:element>
                <xs:element name="Table" type="typeDataTable"/></xs:element>
                <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
                    maxOccurs="unbounded">
                    <xs:sequence>
                        <xs:element name="Category" type="xs:string" minOccurs="0"
                            maxOccurs="unbounded"/></xs:element>
                    </xs:sequence>
                    <xs:sequence>
                        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
                            maxOccurs="unbounded"/></xs:element>
                        <xs:element name="Definition" type="xs:string"/></xs:element>
                    </xs:sequence>
                </xs:element>
                <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
                    <xs:sequence>
                        <xs:element name="AttributeMapping" type="typeAttributeMapping"
                            maxOccurs="unbounded"/></xs:element>
                    </xs:sequence>
                </xs:element>
            </xs:sequence>
        </xs:element>
        <xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
            <xs:sequence>
                <xs:element name="Category" type="xs:string" minOccurs="0"
                    maxOccurs="unbounded"/></xs:element>
            </xs:sequence>
        </xs:element>
        <xs:element name="Output" type="typeField" maxOccurs="unbounded">
            <xs:sequence>
                <xs:element name="Category" type="xs:string" minOccurs="0"
                    maxOccurs="unbounded"/></xs:element>
            </xs:sequence>
        </xs:element>
        <xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"/></xs:element>
    </xs:sequence>
</xs:element>
</xs:sequence>
</xs:complexType>

```

Extends

[Rule Element](#), [Primary Element](#), [Secondary Element](#), [ColumnRule Element](#), [RowRule Element](#), [RuleObject Element](#)

Child Elements

[AnalyticEngine Element](#), [ApplicationView Element](#), [DataSet Element](#), [Input Element](#), [Output Element](#), [Primary Element](#), [Secondary Element](#)

Related Types

[typeDecisionRule Type](#), [typeExpressionRule Type](#), [typeMatrixRule Type](#), [typeRandomRule Type](#), [typeThresholdRule Type](#)

ApplicationView Element

Reference to Application View and table the rule is designed to work with, object ID content of this element

Table A-205
Attributes for ApplicationView

| Attribute | Use | Description | Valid Values |
|-----------------|-----------------|--|---------------|
| label | required | Version label referenced | <i>string</i> |
| contentType | optional | File MIME type of the repository object | <i>string</i> |
| name | optional | Optional Application View name for display | <i>string</i> |
| outputQualifier | optional | Optional output qualifier to be used during execution | <i>string</i> |
| table | optional | optional? Table name referenced from this Application View | <i>string</i> |
| usage | optional | Additional display information for the user interface | <i>string</i> |

XML Representation

```
<xs:element name="ApplicationView" minOccurs="0">
  <xs:attribute name="label" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="name" type="xs:string"/></xs:attribute>
  <xs:attribute name="usage" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputQualifier" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="contentType" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="table" type="xs:string"/></xs:attribute>
</xs:element>
```

Parent Elements

[typeArbitrationRule Type](#)

Related Elements

ApplicationView Element, ApplicationView Element, ApplicationView Element, ApplicationView Element, ObjectReference Element, ApplicationView Element, ApplicationView Element, ApplicationView Element, ApplicationView Element, ApplicationView Element, ApplicationView Element

DataSet Element

Optional information on data set used to define this rule

Table A-206
Attributes for DataSet

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
      <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="compatibility" type="enumCompatibility" use="optional">
    <xs:enumeration value="complete"></xs:enumeration>
    <xs:enumeration value="partial"></xs:enumeration>
    <xs:enumeration value="none"></xs:enumeration>
  </xs:attribute>
  <xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[typeArbitrationRule](#) Type

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-207
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
```

```

<xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
<xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-208
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[DataSet Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Attribute Element](#)

Table Element

The table used in this data set

Table A-209
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
```

```

<xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
<xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>

```

Table A-210
Extended Types

| Type | Description |
|-------------------------------------|---|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[DataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-211
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|--------------|-----------------|---|---------------|
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
</xs:element>
```

Parent Elements

[DataSet Element](#)

Child Elements

[Category Element](#), [DataSetAttribute Element](#), [Definition Element](#)

Related Elements

[Expression Element](#), [Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#), [Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"/></xs:element>
```

Parent Elements

[Expression Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      minOccurs="unbounded"/></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements[DataSet Element](#)**Child Elements**[AttributeMapping Element](#)**AttributeMapping Element**

The mapping of these attributes to the primary attributes

Table A-212
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements[Mapping Element](#)**Input Element**

The required inputs for this rule

Table A-213
Attributes for Input

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|------------------------------------|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[typeArbitrationRule Type](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Input Element](#)

Output Element

The outputs produced by an execution of this rule

Table A-214
Attributes for Output

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[typeArbitrationRule Type](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Output Element](#)

AnalyticEngine Element

Runtime executable representation of the rule

XML Representation

```
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"/></xs:element>
```

Parent Elements

[typeArbitrationRule](#) Type

Primary Element

UI will assign only a Decision List as the primary rule

Table A-215
Attributes for Primary

| Attribute | Use | Description | Valid Values |
|-----------------|----------|--|--|
| description | optional | Optional description of this rule | <i>string</i> |
| outputQualifier | optional | The qualifier to be used in the execution plan for naming the measures | <i>string</i> |
| usageType | optional | The User Perspective of the usage of this rule, communication between the application designer and the business user who will apply the rule | Segment SegmentSet Selection ExcludeSet IncludeSet Allocation Aggregation Matrix Expression Arbitration Threshold |

XML Representation

```
<xs:element name="Primary" type="typeRule">
  <xs:sequence>
    <xs:element name="ApplicationView" minOccurs="0"/></xs:element>
    <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"/></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"/></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
```

```

        <xs:element name="Definition" type="xs:string"/></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
      <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
          maxOccurs="unbounded"/></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"/></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"/></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"/></xs:element>
</xs:sequence>
<xs:attribute name="outputQualifier" type="xs:string" use="optional"/></xs:attribute>
<xs:attribute name="usageType" type="enumUsageType" use="optional">
  <xs:enumeration value="Segment"/></xs:enumeration>
  <xs:enumeration value="SegmentSet"/></xs:enumeration>
  <xs:enumeration value="Selection"/></xs:enumeration>
  <xs:enumeration value="ExcludeSet"/></xs:enumeration>
  <xs:enumeration value="IncludeSet"/></xs:enumeration>
  <xs:enumeration value="Allocation"/></xs:enumeration>
  <xs:enumeration value="Aggregation"/></xs:enumeration>
  <xs:enumeration value="Matrix"/></xs:enumeration>
  <xs:enumeration value="Expression"/></xs:enumeration>
  <xs:enumeration value="Arbitration"/></xs:enumeration>
  <xs:enumeration value="Threshold"/></xs:enumeration>
</xs:attribute>
<xs:attribute name="description" type="xs:string" use="optional"/></xs:attribute>
</xs:element>

```

Table A-216
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeDecisionRule | A Decision Rule |
| typeMatrixRule | The Decision Matrix Rule |
| typeRandomRule | the Random Rule |
| typeExpressionRule | A simple expression |
| typeThresholdRule | An allocation rule defined by a series of threshold tests against a rule or model output |
| typeArbitrationRule | An allocation rule defined to be a 'primary' rule and a 'secondary' rule pair |

DataSet Element

Optional information on data set used to define this rule

Table A-218
Attributes for DataSet

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```
<xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
```

```

    </xs:sequence>
  </xs:element>
  <xs:element name="Table" type="typeDataTable"></xs:element>
  <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    </xs:sequence>
    <xs:sequence>
      <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
    <xs:sequence>
      <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
<xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="compatibility" type="enumCompatibility" use="optional">
  <xs:enumeration value="complete"></xs:enumeration>
  <xs:enumeration value="partial"></xs:enumeration>
  <xs:enumeration value="none"></xs:enumeration>
</xs:attribute>
<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements[Primary Element](#)**Child Elements**[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)**Attribute Element**

The attributes of the given data set at the point of last refresh

Table A-219
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
```



```
<xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Table A-220
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[DataSet Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Attribute Element](#)

Table Element

The table used in this data set

Table A-221
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"></xs:attribute>
```

</xs:element>

Table A-222
Extended Types

| Type | Description |
|-------------------------------------|---|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[DataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-223
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |

[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"/></xs:element>
```

Parent Elements

[Expression Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      maxOccurs="unbounded"/></xs:element>
  </xs:sequence>
```

</xs:element>

Parent Elements

[DataSet Element](#)

Child Elements

[AttributeMapping Element](#)

AttributeMapping Element

The mapping of these attributes to the primary attributes

Table A-224
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[Mapping Element](#)

Input Element

The required inputs for this rule

Table A-225
Attributes for Input

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-------------|----------|--|---------------|
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[Primary Element](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Input Element](#)

Output Element

The outputs produced by an execution of this rule

Table A-226
Attributes for Output

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-------------|----------|--|---------------|
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[Primary Element](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Output Element](#)

AnalyticEngine Element

Runtime executable representation of the rule

XML Representation

```
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
```

Parent Elements

[Primary Element](#)

Secondary Element

The rule to be executed if the Primary rule above does not return a value.

Table A-227
Attributes for Secondary

| Attribute | Use | Description | Valid Values |
|-----------------|----------|--|--|
| description | optional | Optional description of this rule | <i>string</i> |
| outputQualifier | optional | The qualifier to be used in the execution plan for naming the measures | <i>string</i> |
| usageType | optional | The User Perspective of the usage of this rule, communication between the application designer and the business user who will apply the rule | Segment SegmentSet Selection ExcludeSet IncludeSet Allocation Aggregation Matrix Expression Arbitration Threshold |

XML Representation

```
<xs:element name="Secondary" type="typeRule">
  <xs:sequence>
    <xs:element name="ApplicationView" minOccurs="0"/></xs:element>
    <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"/></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
          <xs:sequence>
            <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
            <xs:element name="Definition" type="xs:string"/></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
          <xs:sequence>
            <xs:element name="AttributeMapping" type="typeAttributeMapping"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
```



```

    </xs:sequence>
  </xs:element>
  <xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Category" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Output" type="typeField" maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Category" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
</xs:sequence>
<xs:attribute name="outputQualifier" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="usageType" type="enumUsageType" use="optional">
  <xs:enumeration value="Segment"></xs:enumeration>
  <xs:enumeration value="SegmentSet"></xs:enumeration>
  <xs:enumeration value="Selection"></xs:enumeration>
  <xs:enumeration value="ExcludeSet"></xs:enumeration>
  <xs:enumeration value="IncludeSet"></xs:enumeration>
  <xs:enumeration value="Allocation"></xs:enumeration>
  <xs:enumeration value="Aggregation"></xs:enumeration>
  <xs:enumeration value="Matrix"></xs:enumeration>
  <xs:enumeration value="Expression"></xs:enumeration>
  <xs:enumeration value="Arbitration"></xs:enumeration>
  <xs:enumeration value="Threshold"></xs:enumeration>
</xs:attribute>
<xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-228
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeDecisionRule | A Decision Rule |
| typeMatrixRule | The Decision Matrix Rule |
| typeRandomRule | the Random Rule |
| typeExpressionRule | A simple expression |
| typeThresholdRule | An allocation rule defined by a series of threshold tests against a rule or model output |
| typeArbitrationRule | An allocation rule defined to be a 'primary' rule and a 'secondary' rule pair |

Parent Elements

[typeArbitrationRule](#) Type

Child Elements

[AnalyticEngine](#) Element, [ApplicationView](#) Element, [DataSet](#) Element, [Input](#) Element, [Output](#) Element

ApplicationView Element

Reference to Application View and table the rule is designed to work with, object ID content of this element

Table A-229
Attributes for ApplicationView

| Attribute | Use | Description | Valid Values |
|-----------------|-----------------|--|---------------|
| label | required | Version label referenced | <i>string</i> |
| mimeType | optional | File MIME type of the repository object | <i>string</i> |
| name | optional | Optional Application View name for display | <i>string</i> |
| outputQualifier | optional | Optional output qualifier to be used during execution | <i>string</i> |
| table | optional | optional? Table name referenced from this Application View | <i>string</i> |
| usage | optional | Additional display information for the user interface | <i>string</i> |

XML Representation

```
<xs:element name="ApplicationView" minOccurs="0">
  <xs:attribute name="label" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="name" type="xs:string"/></xs:attribute>
  <xs:attribute name="usage" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputQualifier" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="mimeType" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="table" type="xs:string"/></xs:attribute>
</xs:element>
```

Parent Elements

[Secondary Element](#)

Related Elements

[ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ObjectReference Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#)

DataSet Element

Optional information on data set used to define this rule

Table A-230
Attributes for DataSet

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
  </xs:sequence>
</xs:element>

```

```

<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
<xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="compatibility" type="enumCompatibility" use="optional">
  <xs:enumeration value="complete"></xs:enumeration>
  <xs:enumeration value="partial"></xs:enumeration>
  <xs:enumeration value="none"></xs:enumeration>
</xs:attribute>
<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

Secondary Element

Child Elements

Attribute Element, Expression Element, Mapping Element, Table Element

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-231
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|-----------|----------|---|---------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-232
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements[DataSet Element](#)**Child Elements**[Category Element](#)**Category Element**

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements[Attribute Element](#)**Table Element**

The table used in this data set

Table A-233
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-234
Extended Types

| Type | Description |
|-------------------------------------|--|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |

| Type | Description |
|-------------------------------|---|
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[DataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-235

Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"/></xs:element>
```

Parent Elements

[Expression Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">  
  <xs:sequence>  
    <xs:element name="AttributeMapping" type="typeAttributeMapping"  
      maxOccurs="unbounded"/></xs:element>  
  </xs:sequence>  
</xs:element>
```

Parent Elements[DataSet Element](#)**Child Elements**[AttributeMapping Element](#)**AttributeMapping Element**

The mapping of these attributes to the primary attributes

Table A-236

Attributes for *AttributeMapping*

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements[Mapping Element](#)**Input Element**

The required inputs for this rule

Table A-237

Attributes for *Input*

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements[Secondary Element](#)**Child Elements**[Category Element](#)**Category Element**

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Input Element](#)**Output Element**

The outputs produced by an execution of this rule

Table A-238
Attributes for Output

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements[Secondary Element](#)**Child Elements**[Category Element](#)**Category Element**

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Output Element](#)**AnalyticEngine Element**

Runtime executable representation of the rule

XML Representation

```
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
```

Parent Elements[Secondary Element](#)**typeCurrentStateReportItem Type**

Specifies on the report used for displaying the current state of a deployed application

Table A-239
Attributes for type *CurrentStateReportItem*

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|---|---|
| author | optional | Author of the object version | <i>string</i> |
| brokenLink | optional | Indicates whether the object version can be found in the repository or not | <i>boolean</i> |
| dateCreated | optional | Date the version was created in the repository | <i>string</i> |
| description | optional | Description defined for the object version and user's language code | <i>string</i> |
| displayName | optional | The name to display to the user for this report | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| groupName | optional | Optional report group name | <i>string</i> |
| id | required | ID of the repository object | <i>string</i> |
| isLocked | optional | runtime communication of object lock state | <i>boolean</i> |
| keywords | optional | Keywords defined for the object version | <i>string</i> |
| label | required | Version label of the repository object | <i>string</i> |
| marker | optional | Version marker for the repository object | <i>string</i> |
| mimeType | optional | File MIME type of the repository object | <i>string</i> |
| modelID | optional | ID of the model in the build cache, used to track model refresh and those being created by auto-model process | <i>any</i> |
| name | optional | Name of the element | <i>string</i> |
| parameters | optional | Optional parameters to pass to the report when it runs | <i>string</i> |
| parentObjectId | optional | Tracking of the parent object ID | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |

| Attribute | Use | Description | Valid Values |
|------------------|----------|--|---------------|
| path | optional | Full path of the object in the repository | <i>string</i> |
| usageDescription | optional | Additional description text that can be assigned by the user interface, but not part of repository information | <i>string</i> |

XML Representation

```
<xs:complexType name="typeCurrentStateReportItem"></xs:complexType>
```

Extends

[Report Element](#)

typeDataSetExpression Type

A derived attribute expression definition stored locally

Table A-240
Attributes for typeDataSetExpression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:complexType name="typeDataSetExpression">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"/></xs:element>
    <xs:element name="Definition" type="xs:string"/></xs:element>
  </xs:sequence>
</xs:complexType>
```

Extends

[Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#), [Attribute Element](#)

Child Elements

[Category Element](#), [DataSetAttribute Element](#), [Definition Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[typeDataSetExpression Type](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[typeDataSetExpression Type](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements

[typeDataSetExpression Type](#)

typeDecisionHierarchyDefineStep Type

The decision hierarchy definition step configuration. AggregationRuleSection and PredictiveModelSection may not both be enabled when using more than 2 dimensions.

Table A-241

Attributes for typeDecisionHierarchyDefineStep

| Attribute | Use | Description | Valid Values |
|------------------|----------|--|----------------|
| enableSimulation | optional | Controls presentation of the Define-style Simulation action | <i>boolean</i> |
| enableTest | optional | Controls presentation of the Test action | <i>boolean</i> |
| stepCompleted | optional | Indicates whether the user has marked this panel as completed or not | <i>boolean</i> |
| stepHidden | optional | The 'hidden' state for this panel | <i>boolean</i> |
| stepIncluded | optional | The logical 'included or not' flag for this panel | <i>boolean</i> |
| stepLocked | optional | The locked state for this panel | <i>boolean</i> |

XML Representation

```
<xs:complexType name="typeDecisionHierarchyDefineStep">
```



```

<xs:sequence>
  <xs:element name="SelectionSection" type="typeSelectionsSection"></xs:element>
  <xs:element name="AggregateRuleSection"></xs:element>
  <xs:element name="PredictiveModelSection" type="typePredictiveModelSection"></xs:element>
  <xs:element name="AllocationRuleSection" type="typeAllocationRuleSection"></xs:element>
  <xs:element name="PlanningSection" type="typePlanningSection"></xs:element>
</xs:sequence>
</xs:complexType>

```

Extends

[DefineStep Element](#)

Child Elements

[AggregateRuleSection Element](#), [AllocationRuleSection Element](#), [PlanningSection Element](#), [PredictiveModelSection Element](#), [SelectionSection Element](#)

Related Types

[typeModelingDefineStep Type](#), [typeRulesManagementDefineStep Type](#)

SelectionSection Element

Configuration of the Selections section

Table A-242
Attributes for SelectionSection

| Attribute | Use | Description | Valid Values |
|--------------|-----------------|---|----------------|
| enabled | required | Logical switch controlling whether this section is enabled or not | <i>boolean</i> |
| enableModels | optional | Models off/on control | <i>boolean</i> |

XML Representation

```

<xs:element name="SelectionSection" type="typeSelectionsSection">
  <xs:attribute name="enabled" type="xs:boolean" use="required"></xs:attribute>
  <xs:attribute name="enableModels" type="xs:boolean" use="optional" default="true"></xs:attribute>
</xs:element>

```

Parent Elements

[typeDecisionHierarchyDefineStep Type](#)

AggregateRuleSection Element

Configuration of the Aggregate Rule section

Table A-243
Attributes for AggregateRuleSection

| Attribute | Use | Description | Valid Values |
|-------------------------------|-----------------|---|----------------|
| enableCategoriesAndThresholds | optional | Controls the appearance of the threshold or value range segmentation with category assignment | <i>boolean</i> |
| enabled | required | Logical switch controlling whether this section is enabled or not | <i>boolean</i> |
| enableModels | optional | Models off/on control | <i>boolean</i> |

XML Representation

```
<xs:element name="AggregateRuleSection">
  <xs:attribute name="enabled" type="xs:boolean" use="required"/></xs:attribute>
  <xs:attribute name="enableModels" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="enableCategoriesAndThresholds" type="xs:boolean" use="optional"
    default="true"/></xs:attribute>
</xs:element>
```

Parent Elements

[typeDecisionHierarchyDefineStep Type](#)

PredictiveModelSection Element

Configuration of the Predictive Model section

Table A-244
Attributes for PredictiveModelSection

| Attribute | Use | Description | Valid Values |
|-------------------------------|-----------------|---|----------------|
| enableCategoriesAndThresholds | optional | Controls the appearance of the threshold or value range segmentation with category assignment | <i>boolean</i> |
| enabled | required | Logical switch controlling whether this section is enabled or not | <i>boolean</i> |

XML Representation

```
<xs:element name="PredictiveModelSection" type="typePredictiveModelSection">
  <xs:attribute name="enabled" type="xs:boolean" use="required"/></xs:attribute>
  <xs:attribute name="enableCategoriesAndThresholds" type="xs:boolean" use="optional"
    default="true"/></xs:attribute>
</xs:element>
```

Parent Elements

[typeDecisionHierarchyDefineStep Type](#)

AllocationRuleSection Element

Configuration of the Allocation Rule section

Table A-245

Attributes for AllocationRuleSection

| Attribute | Use | Description | Valid Values |
|-----------------------------|-----------------|--|----------------|
| enabled | required | Logical switch controlling whether this section is enabled or not | <i>boolean</i> |
| enableFirstRuleHitExecution | optional | Permit user option of halting rule execution on first 'true' encountered | <i>boolean</i> |
| enableListExecution | optional | Permit user option of running the entire rule set, potentially resulting in multiple 'true' events | <i>boolean</i> |
| enableModels | optional | Models off/on control | <i>boolean</i> |
| enableRandomExecution | optional | Permit user option of telling the execution code to only choose from the available responses | <i>boolean</i> |

XML Representation

```
<xs:element name="AllocationRuleSection" type="typeAllocationRuleSection">
  <xs:attribute name="enabled" type="xs:boolean" use="required"/></xs:attribute>
  <xs:attribute name="enableModels" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="enableFirstRuleHitExecution" type="xs:boolean" use="optional"
    default="true"/></xs:attribute>
  <xs:attribute name="enableListExecution" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="enableRandomExecution" type="xs:boolean" use="optional"
    default="true"/></xs:attribute>
</xs:element>
```

Parent Elements

[typeDecisionHierarchyDefineStep](#) Type

PlanningSection Element

Configuration of the Planning section

Table A-246
Attributes for *PlanningSection*

| Attribute | Use | Description | Valid Values |
|-------------------------|-----------------|---|----------------|
| enableInteractionPoints | required | Logical switch controlling whether Interaction Points are presented to the user or not | <i>boolean</i> |
| enableStartEndDates | required | Logical switch controlling whether Start and End date limits are presented to the user or not | <i>boolean</i> |

XML Representation

```
<xs:element name="PlanningSection" type="typePlanningSection">
  <xs:attribute name="enableInteractionPoints" type="xs:boolean" use="required"/></xs:attribute>
  <xs:attribute name="enableStartEndDates" type="xs:boolean" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements

[typeDecisionHierarchyDefineStep](#) Type

typeDecisionRule Type

A Decision Rule

Table A-247
Attributes for *typeDecisionRule*

| Attribute | Use | Description | Valid Values |
|--------------------------|-----------------|--|--|
| aggregation | required | The rule subtype (more than aggregation) controlling execution of this rule | AllMatches FirstMatch Segment Selection Sum |
| aggregationRemainderType | optional | The type of remainder processing to be performed on a 'Sum' aggregation; when omitted there will be no remainder applied | ApplyWhenZero ApplyAlways |
| description | optional | Optional description of this rule | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-----------------|----------|--|--|
| outputQualifier | optional | The qualifier to be used in the execution plan for naming the measures | <i>string</i> |
| usageType | optional | The User Perspective of the usage of this rule, communication between the application designer and the business user who will apply the rule | Segment SegmentSet Selection ExcludeSet IncludeSet Allocation Aggregation Matrix Expression Arbitration Threshold |

XML Representation

```

<xs:complexType name="typeDecisionRule" abstract="false" mixed="false">
  <xs:sequence>
    <xs:element name="ApplicationView" minOccurs="0"/></xs:element>
    <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"/></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
          <xs:sequence>
            <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
            <xs:element name="Definition" type="xs:string"/></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
          <xs:sequence>
            <xs:element name="AttributeMapping" type="typeAttributeMapping"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"/></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Output" type="typeField" maxOccurs="unbounded">

```

```

    <xs:sequence>
      <xs:element name="Category" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
</xs:sequence>
<xs:sequence>
  <xs:element name="Segment" type="typeDecisionSegment" minOccurs="0" maxOccurs="unbounded">
    <xs:sequence>
      <xs:choice>
        <xs:element name="Expression" type="typeExpression">
          <xs:choice>
            <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"></xs:element>
            <xs:element ref="Attribute"></xs:element>
            <xs:element ref="Value"></xs:element>
          </xs:choice>
        </xs:element>
        <xs:element name="ObjectReference"></xs:element>
      </xs:choice>
      <xs:element name="ValueOutput" type="typeValueOutput" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Remainder" type="typeRemainder" minOccurs="0">
    <xs:sequence>
      <xs:element name="ValueOutput" type="typeValueOutput" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
</xs:complexType>

```

Extends

[Rule Element](#), [Primary Element](#), [Secondary Element](#), [ColumnRule Element](#), [RowRule Element](#), [RuleObject Element](#)

Child Elements

[AnalyticEngine Element](#), [ApplicationView Element](#), [DataSet Element](#), [Input Element](#), [Output Element](#), [Remainder Element](#), [Segment Element](#)

Related Types

[typeArbitrationRule Type](#), [typeExpressionRule Type](#), [typeMatrixRule Type](#), [typeRandomRule Type](#), [typeThresholdRule Type](#)

ApplicationView Element

Reference to Application View and table the rule is designed to work with, object ID content of this element

Table A-248
Attributes for *ApplicationView*

| Attribute | Use | Description | Valid Values |
|-----------------|-----------------|--|---------------|
| label | required | Version label referenced | <i>string</i> |
| mimeType | optional | File MIME type of the repository object | <i>string</i> |
| name | optional | Optional Application View name for display | <i>string</i> |
| outputQualifier | optional | Optional output qualifier to be used during execution | <i>string</i> |
| table | optional | optional? Table name referenced from this Application View | <i>string</i> |
| usage | optional | Additional display information for the user interface | <i>string</i> |

XML Representation

```
<xs:element name="ApplicationView" minOccurs="0">
  <xs:attribute name="label" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="name" type="xs:string"></xs:attribute>
  <xs:attribute name="usage" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="outputQualifier" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="mimeType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="table" type="xs:string"></xs:attribute>
</xs:element>
```

Parent Elements

[typeDecisionRule Type](#)

Related Elements

[ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ObjectReference Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#)

DataSet Element

Optional information on data set used to define this rule

Table A-249
Attributes for *DataSet*

| Attribute | Use | Description | Valid Values |
|---------------|----------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|----------------|
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>

```



```

    <xs:sequence>
      <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
    <xs:sequence>
      <xs:element name="AttributeMapping" type="typeAttributeMapping"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
<xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="compatibility" type="enumCompatibility" use="optional">
  <xs:enumeration value="complete"></xs:enumeration>
  <xs:enumeration value="partial"></xs:enumeration>
  <xs:enumeration value="none"></xs:enumeration>
</xs:attribute>
<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[typeDecisionRule Type](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-250
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-251
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[DataSet Element](#)

Child Elements[Category Element](#)**Category Element**

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/>
```

Parent Elements[Attribute Element](#)**Table Element**

The table used in this data set

Table A-252
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/>
  <xs:attribute name="loginId" type="xs:string" use="optional"/>
</xs:element>
```

Table A-253
Extended Types

| Type | Description |
|-------------------------------------|--|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |

| Type | Description |
|-----------------------------|---|
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[DataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-254

Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
</xs:element>

```

Parent Elements[DataSet Element](#)**Child Elements**[Category Element](#), [DataSetAttribute Element](#), [Definition Element](#)**Related Elements**

[Expression Element](#), [Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#),
[Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```

<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>

```

Parent Elements[Expression Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"/></xs:element>
```

Parent Elements

[Expression Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">  
  <xs:sequence>  
    <xs:element name="AttributeMapping" type="typeAttributeMapping"  
      maxOccurs="unbounded"/></xs:element>  
  </xs:sequence>  
</xs:element>
```

Parent Elements

[DataSet Element](#)

Child Elements

[AttributeMapping Element](#)

AttributeMapping Element

The mapping of these attributes to the primary attributes

Table A-255
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

Mapping Element

Input Element

The required inputs for this rule

Table A-256
Attributes for Input

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
```

```
</xs:element>
```

Parent Elements

[typeDecisionRule Type](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Input Element](#)

Output Element

The outputs produced by an execution of this rule

Table A-257

Attributes for Output

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
```


</xs:element>

Parent Elements

[typeDecisionRule Type](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Output Element](#)

AnalyticEngine Element

Runtime executable representation of the rule

XML Representation

```
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
```

Parent Elements

[typeDecisionRule Type](#)

Segment Element

The Segment expressions for this Decision List rule

Table A-258
Attributes for Segment

| Attribute | Use | Description | Valid Values |
|-------------|----------|---|----------------|
| description | optional | Optional segment description | <i>string</i> |
| isExcluded | optional | Optional indicator of whether this segment should default to an Exclude when used in selection or not | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|------------------------|----------|---|----------------|
| localLock | optional | Optional indicator of if an Admin has locked this segment in the rule, only has meaning to UI supporting this feature | <i>boolean</i> |
| segmentName | optional | Alias name for this segment | <i>string</i> |
| sharedObjectReferences | optional | Optional attribute (default false) indicates of if this segment references objects in the repository or not | <i>boolean</i> |

XML Representation

```

<xs:element name="Segment" type="typeDecisionSegment" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:choice>
      <xs:element name="Expression" type="typeExpression">
        <xs:choice>
          <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"></xs:element>
          <xs:element ref="Attribute"></xs:element>
          <xs:element ref="Value"></xs:element>
        </xs:choice>
      </xs:element>
      <xs:element name="ObjectReference"></xs:element>
    </xs:choice>
    <xs:element name="ValueOutput" type="typeValueOutput" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="segmentName" type="xs:string"></xs:attribute>
  <xs:attribute name="isExcluded" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="localLock" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="sharedObjectReferences" type="xs:boolean" use="optional"
    default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[typeDecisionRule Type](#)

Child Elements

[Expression Element](#), [ObjectReference Element](#), [ValueOutput Element](#)

Expression Element

Segment expression

Table A-259
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|-----------|----------|--|---------------|
| Domain | optional | Resulting data type domain for this expression | <i>string</i> |
| Functor | optional | Optional functor involved in this expression | <i>string</i> |
| Name | optional | Alias name of this expression | <i>string</i> |

XML Representation

```
<xs:element name="Expression" type="typeExpression">
  <xs:choice>
    <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"/></xs:element>
    <xs:element ref="Attribute"/></xs:element>
    <xs:element ref="Value"/></xs:element>
  </xs:choice>
  <xs:attribute name="Name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="Domain" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="Functor" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Parent Elements

[Segment Element](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Value Element](#)

ObjectReference Element

A reference to a repository object and column used, object ID content of this element

Table A-260
Attributes for ObjectReference

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|---|---------------|
| column | required | The output column of the referenced repository object | <i>string</i> |
| label | required | Version label referenced | <i>string</i> |
| contentType | optional | File MIME type of the repository object | <i>string</i> |
| name | optional | Optional Application View name for display | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-----------------|----------|---|---------------|
| outputQualifier | optional | Optional output qualifier to be used during execution | <i>string</i> |
| usage | optional | Additional display information for the user interface | <i>string</i> |

XML Representation

```
<xs:element name="ObjectReference">
  <xs:attribute name="label" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="name" type="xs:string"></xs:attribute>
  <xs:attribute name="usage" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="outputQualifier" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="mimeType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="column" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[Segment Element](#)

Related Elements

[ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#)

ValueOutput Element

Allocated output values produced by ‘match’ of the expression above, optional for rule types that have their overall output implied as in the Segment and Selection rules. Value is content of this element. Any output of the rule not specified is implied to have a null value.

Table A-261
Attributes for ValueOutput

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|------------------------------|---------------|
| field | required | The field name of the output | <i>string</i> |

XML Representation

```
<xs:element name="ValueOutput" type="typeValueOutput" minOccurs="0" maxOccurs="unbounded">
  <xs:attribute name="field" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[Segment Element](#)

Remainder Element

The optional definition of a remainder

Table A-262
Attributes for Remainder

| Attribute | Use | Description | Valid Values |
|-------------|----------|-----------------------------|---------------|
| segmentName | optional | Alias name for this segment | <i>string</i> |

XML Representation

```
<xs:element name="Remainder" type="typeRemainder" minOccurs="0">
  <xs:sequence>
    <xs:element name="ValueOutput" type="typeValueOutput" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="segmentName" type="xs:string"></xs:attribute>
</xs:element>
```

Parent Elements

[typeDecisionRule Type](#)

Child Elements

[ValueOutput Element](#)

ValueOutput Element

Output values associated with the remainder situation for a rule. Value is content of this element, and any output of the rule not specified is implied to have a null value.

Table A-263
Attributes for ValueOutput

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|------------------------------|---------------|
| field | required | The field name of the output | <i>string</i> |

XML Representation

```
<xs:element name="ValueOutput" type="typeValueOutput" minOccurs="0" maxOccurs="unbounded">
  <xs:attribute name="field" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[Remainder Element](#)

typeExpressionRule Type

A simple expression

Table A-264
Attributes for typeExpressionRule

| Attribute | Use | Description | Valid Values |
|-----------------|----------|--|--|
| description | optional | Optional description of this rule | string |
| outputQualifier | optional | The qualifier to be used in the execution plan for naming the measures | string |
| usageType | optional | The User Perspective of the usage of this rule, communication between the application designer and the business user who will apply the rule | Segment SegmentSet Selection ExcludeSet IncludeSet Allocation Aggregation Matrix Expression Arbitration Threshold |

XML Representation

```

<xs:complexType name="typeExpressionRule" abstract="false" mixed="false">
  <xs:sequence>
    <xs:element name="ApplicationView" minOccurs="0"/>
    <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"/>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/>
          </xs:sequence>
          <xs:sequence>
            <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/>
            <xs:element name="Definition" type="xs:string"/>
          </xs:sequence>
        </xs:element>
        <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
          <xs:sequence>
            <xs:element name="AttributeMapping" type="typeAttributeMapping"
              maxOccurs="unbounded"/>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
      <xs:sequence>

```

```

        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Output" type="typeField" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
  </xs:sequence>
</xs:sequence>
<xs:element name="Expression" type="typeExpression">
  <xs:choice>
    <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"></xs:element>
    <xs:element ref="Attribute"></xs:element>
    <xs:element ref="Value"></xs:element>
  </xs:choice>
</xs:element>
</xs:sequence>
</xs:complexType>

```

Extends

[Rule Element](#), [Primary Element](#), [Secondary Element](#), [ColumnRule Element](#), [RowRule Element](#), [RuleObject Element](#)

Child Elements

[AnalyticEngine Element](#), [ApplicationView Element](#), [DataSet Element](#), [Expression Element](#), [Input Element](#), [Output Element](#)

Related Types

[typeArbitrationRule Type](#), [typeDecisionRule Type](#), [typeMatrixRule Type](#), [typeRandomRule Type](#), [typeThresholdRule Type](#)

ApplicationView Element

Reference to Application View and table the rule is designed to work with, object ID content of this element

Table A-265
Attributes for ApplicationView

| Attribute | Use | Description | Valid Values |
|-----------------|-----------------|---|---------------|
| label | required | Version label referenced | <i>string</i> |
| contentType | optional | File MIME type of the repository object | <i>string</i> |
| name | optional | Optional Application View name for display | <i>string</i> |
| outputQualifier | optional | Optional output qualifier to be used during execution | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-----------|----------|--|---------------|
| table | optional | optional? Table name referenced from this Application View | <i>string</i> |
| usage | optional | Additional display information for the user interface | <i>string</i> |

XML Representation

```
<xs:element name="ApplicationView" minOccurs="0">
  <xs:attribute name="label" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="name" type="xs:string"/></xs:attribute>
  <xs:attribute name="usage" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputQualifier" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="mimeType" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="table" type="xs:string"/></xs:attribute>
</xs:element>
```

Parent Elements

[typeExpressionRule](#) Type

Related Elements

[ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ObjectReference Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#)

DataSet Element

Optional information on data set used to define this rule

Table A-266
Attributes for DataSet

| Attribute | Use | Description | Valid Values |
|---------------|----------|---|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|----------------|
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:sequence>
      <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
    <xs:sequence>
      <xs:element name="AttributeMapping" type="typeAttributeMapping"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>

```

```

<xs:attribute name="name" type="xs:string" use="required"/></xs:attribute>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
<xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="compatibility" type="enumCompatibility" use="optional">
  <xs:enumeration value="complete"/></xs:enumeration>
  <xs:enumeration value="partial"/></xs:enumeration>
  <xs:enumeration value="none"/></xs:enumeration>
</xs:attribute>
<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
</xs:element>

```

Parent Elements

[typeExpressionRule Type](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-267
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-268
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[DataSet Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```

<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>

```

Parent Elements[Attribute Element](#)**Table Element**

The table used in this data set

Table A-269
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-270
Extended Types

| Type | Description |
|-------------------------------------|---|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements[DataSet Element](#)**Expression Element**

Optional passing of expressions defined by an application into a task

Table A-271
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

```

<xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
<xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
<xs:sequence>
  <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
    maxOccurs="unbounded"></xs:element>
  <xs:element name="Definition" type="xs:string"></xs:element>
</xs:sequence>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
</xs:element>

```

Parent Elements[DataSet Element](#)**Child Elements**[Category Element](#), [DataSetAttribute Element](#), [Definition Element](#)**Related Elements**

[Expression Element](#), [Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#),
[Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Expression Element](#)**DataSetAttribute Element**

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Expression Element](#)**Definition Element**

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements[Expression Element](#)**Mapping Element**

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      minOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements[DataSet Element](#)**Child Elements**[AttributeMapping Element](#)**AttributeMapping Element**

The mapping of these attributes to the primary attributes

Table A-272
Attributes for *AttributeMapping*

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[Mapping Element](#)

Input Element

The required inputs for this rule

Table A-273
Attributes for Input

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[typeExpressionRule Type](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Input Element](#)

Output Element

The outputs produced by an execution of this rule

Table A-274
Attributes for Output

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[typeExpressionRule Type](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Output Element](#)

AnalyticEngine Element

Runtime executable representation of the rule

XML Representation

```
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"/></xs:element>
```

Parent Elements

[typeExpressionRule Type](#)

Expression Element

An expression

Table A-275
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|-----------|----------|--|---------------|
| Domain | optional | Resulting data type domain for this expression | <i>string</i> |
| Functor | optional | Optional functor involved in this expression | <i>string</i> |
| Name | optional | Alias name of this expression | <i>string</i> |

XML Representation

```
<xs:element name="Expression" type="typeExpression">
  <xs:choice>
    <xs:element ref="Expression" minOccurs="0" maxOccurs="unbounded"/></xs:element>
    <xs:element ref="Attribute"/></xs:element>
    <xs:element ref="Value"/></xs:element>
  </xs:choice>
  <xs:attribute name="Name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="Domain" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="Functor" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Parent Elements

typeExpressionRule Type

Child Elements

Attribute Element, Expression Element, Value Element

typeMatrixRule Type

The Decision Matrix Rule

Table A-276

Attributes for typeMatrixRule

| Attribute | Use | Description | Valid Values |
|-----------------|----------|--|---|
| description | optional | Optional description of this rule | string |
| outputQualifier | optional | The qualifier to be used in the execution plan for naming the measures | string |
| usageType | optional | The User Perspective of the usage of this rule, communication between the application designer and the business user who will apply the rule | Segment SegmentSet Selection ExcludeSet IncludeSet Allocation Aggregation Matrix Expression Arbitration Threshold |

XML Representation

```

<xs:complexType name="typeMatrixRule" abstract="false" mixed="false">
  <xs:sequence>
    <xs:element name="ApplicationView" minOccurs="0"/></xs:element>
    <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"/></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"/></xs:element>
        <xs:element name="Definition" type="xs:string"/></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:complexType>

```

```

        </xs:sequence>
      </xs:element>
      <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
        <xs:sequence>
          <xs:element name="AttributeMapping" type="typeAttributeMapping"
            minOccurs="0" maxOccurs="unbounded"></xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Category" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Output" type="typeField" maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Category" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
</xs:sequence>
<xs:sequence>
  <xs:element name="ColumnRule" type="typeRule" minOccurs="0">
    <xs:sequence>
      <xs:element name="ApplicationView" minOccurs="0"></xs:element>
      <xs:element name="DataSet" type="dataset.typeDataSet" minOccurs="0">
        <xs:sequence>
          <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
            <xs:sequence>
              <xs:element name="Category" type="xs:string" minOccurs="0"
                maxOccurs="unbounded"></xs:element>
            </xs:sequence>
          </xs:element>
          <xs:element name="Table" type="typeDataTable"></xs:element>
          <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
            maxOccurs="unbounded">
            <xs:sequence>
              <xs:element name="Category" type="xs:string" minOccurs="0"
                maxOccurs="unbounded"></xs:element>
            </xs:sequence>
            <xs:sequence>
              <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
                maxOccurs="unbounded"></xs:element>
              <xs:element name="Definition" type="xs:string"></xs:element>
            </xs:sequence>
          </xs:element>
          <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
            <xs:sequence>
              <xs:element name="AttributeMapping" type="typeAttributeMapping"
                maxOccurs="unbounded"></xs:element>
            </xs:sequence>
          </xs:element>
        </xs:sequence>
      </xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
</xs:element>

```

```

<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
</xs:sequence>
</xs:element>
<xs:element name="RowRule" type="typeRule" minOccurs="0">
  <xs:sequence>
    <xs:element name="ApplicationView" minOccurs="0"></xs:element>
    <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
          <xs:sequence>
            <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
            <xs:element name="Definition" type="xs:string"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
          <xs:sequence>
            <xs:element name="AttributeMapping" type="typeAttributeMapping"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>

```

```

        </xs:sequence>
      </xs:element>
      <xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Row" type="typeMatrixRow" maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="Cell" maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="AllocationDisplay" type="typeAllocationDisplay" minOccurs="0"
    maxOccurs="unbounded"></xs:element>
</xs:sequence>
</xs:complexType>

```

Extends

[Rule Element](#), [Primary Element](#), [Secondary Element](#), [ColumnRule Element](#), [RowRule Element](#), [RuleObject Element](#)

Child Elements

[AllocationDisplay Element](#), [AnalyticEngine Element](#), [ApplicationView Element](#), [ColumnRule Element](#), [DataSet Element](#), [Input Element](#), [Output Element](#), [Row Element](#), [RowRule Element](#)

Related Types

[typeArbitrationRule Type](#), [typeDecisionRule Type](#), [typeExpressionRule Type](#), [typeRandomRule Type](#), [typeThresholdRule Type](#)

ApplicationView Element

Reference to Application View and table the rule is designed to work with, object ID content of this element

Table A-277
Attributes for ApplicationView

| Attribute | Use | Description | Valid Values |
|-----------------|-----------------|--|---------------|
| label | required | Version label referenced | <i>string</i> |
| mimeType | optional | File MIME type of the repository object | <i>string</i> |
| name | optional | Optional Application View name for display | <i>string</i> |
| outputQualifier | optional | Optional output qualifier to be used during execution | <i>string</i> |
| table | optional | optional? Table name referenced from this Application View | <i>string</i> |
| usage | optional | Additional display information for the user interface | <i>string</i> |

XML Representation

```

<xs:element name="ApplicationView" minOccurs="0">
  <xs:attribute name="label" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="name" type="xs:string"/></xs:attribute>
  <xs:attribute name="usage" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputQualifier" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="mimeType" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="table" type="xs:string"/></xs:attribute>
</xs:element>

```

Parent Elements

[typeMatrixRule Type](#)

Related Elements

[ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ObjectReference Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#)

DataSet Element

Optional information on data set used to define this rule

Table A-278
Attributes for DataSet

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|----------------|----------|--|----------------|
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
      <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="compatibility" type="enumCompatibility" use="optional">

```



```

    <xs:enumeration value="complete"></xs:enumeration>
    <xs:enumeration value="partial"></xs:enumeration>
    <xs:enumeration value="none"></xs:enumeration>
  </xs:attribute>
  <xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[typeMatrixRule Type](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-279

Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Table A-280
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[DataSet Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Attribute Element](#)**Table Element**

The table used in this data set

Table A-281

Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-282

Extended Types

| Type | Description |
|-------------------------------------|---|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements[DataSet Element](#)**Expression Element**

Optional passing of expressions defined by an application into a task

Table A-283
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

```

<xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
<xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
<xs:sequence>
  <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
    maxOccurs="unbounded"></xs:element>
  <xs:element name="Definition" type="xs:string"></xs:element>
</xs:sequence>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
</xs:element>

```

Parent Elements[DataSet Element](#)**Child Elements**[Category Element](#), [DataSetAttribute Element](#), [Definition Element](#)**Related Elements**

[Expression Element](#), [Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#),
[Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Expression Element](#)**DataSetAttribute Element**

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Expression Element](#)**Definition Element**

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements[Expression Element](#)**Mapping Element**

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      minOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements[DataSet Element](#)**Child Elements**[AttributeMapping Element](#)**AttributeMapping Element**

The mapping of these attributes to the primary attributes

Table A-284
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[Mapping Element](#)

Input Element

The required inputs for this rule

Table A-285
Attributes for Input

| Attribute | Use | Description | Valid Values |
|-------------|----------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[typeMatrixRule Type](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Input Element](#)

Output Element

The outputs produced by an execution of this rule

Table A-286
Attributes for Output

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[typeMatrixRule Type](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Output Element](#)

AnalyticEngine Element

Runtime executable representation of the rule

XML Representation

```
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
```

Parent Elements

[typeMatrixRule Type](#)

ColumnRule Element

Rule for column values in the matrix, when not specified row rule is required

Table A-287
Attributes for ColumnRule

| Attribute | Use | Description | Valid Values |
|-----------------|----------|--|--|
| description | optional | Optional description of this rule | <i>string</i> |
| outputQualifier | optional | The qualifier to be used in the execution plan for naming the measures | <i>string</i> |
| usageType | optional | The User Perspective of the usage of this rule, communication between the application designer and the business user who will apply the rule | Segment SegmentSet Selection ExcludeSet IncludeSet Allocation Aggregation Matrix Expression Arbitration Threshold |

XML Representation

```
<xs:element name="ColumnRule" type="typeRule" minOccurs="0">
  <xs:sequence>
    <xs:element name="ApplicationView" minOccurs="0"></xs:element>
  </xs:sequence>
</xs:element>
```

```

<xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
      <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
</xs:sequence>
<xs:attribute name="outputQualifier" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="usageType" type="enumUsageType" use="optional">
  <xs:enumeration value="Segment"></xs:enumeration>
  <xs:enumeration value="SegmentSet"></xs:enumeration>
  <xs:enumeration value="Selection"></xs:enumeration>
  <xs:enumeration value="ExcludeSet"></xs:enumeration>
  <xs:enumeration value="IncludeSet"></xs:enumeration>
  <xs:enumeration value="Allocation"></xs:enumeration>
  <xs:enumeration value="Aggregation"></xs:enumeration>
  <xs:enumeration value="Matrix"></xs:enumeration>
  <xs:enumeration value="Expression"></xs:enumeration>
  <xs:enumeration value="Arbitration"></xs:enumeration>
  <xs:enumeration value="Threshold"></xs:enumeration>
</xs:attribute>

```

```
<xs:attribute name="description" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-288
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeDecisionRule | A Decision Rule |
| typeMatrixRule | The Decision Matrix Rule |
| typeRandomRule | the Random Rule |
| typeExpressionRule | A simple expression |
| typeThresholdRule | An allocation rule defined by a series of threshold tests against a rule or model output |
| typeArbitrationRule | An allocation rule defined to be a 'primary' rule and a 'secondary' rule pair |

Parent Elements

[typeMatrixRule](#) Type

Child Elements

[AnalyticEngine](#) Element, [ApplicationView](#) Element, [DataSet](#) Element, [Input](#) Element, [Output](#) Element

ApplicationView Element

Reference to Application View and table the rule is designed to work with, object ID content of this element

Table A-289
Attributes for ApplicationView

| Attribute | Use | Description | Valid Values |
|-----------------|-----------------|--|---------------|
| label | required | Version label referenced | <i>string</i> |
| mimeType | optional | File MIME type of the repository object | <i>string</i> |
| name | optional | Optional Application View name for display | <i>string</i> |
| outputQualifier | optional | Optional output qualifier to be used during execution | <i>string</i> |
| table | optional | optional? Table name referenced from this Application View | <i>string</i> |
| usage | optional | Additional display information for the user interface | <i>string</i> |

XML Representation

```
<xs:element name="ApplicationView" minOccurs="0">
  <xs:attribute name="label" type="xs:string" use="required"/></xs:attribute>
```

```

<xs:attribute name="name" type="xs:string"></xs:attribute>
<xs:attribute name="usage" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="outputQualifier" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="mimeType" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="table" type="xs:string"></xs:attribute>
</xs:element>

```

Parent Elements

[ColumnRule Element](#)

Related Elements

[ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ObjectReference Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#)

DataSet Element

Optional information on data set used to define this rule

Table A-290
Attributes for DataSet

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|--------------|----------|--|----------------|
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
      <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="compatibility" type="enumCompatibility" use="optional">
    <xs:enumeration value="complete"></xs:enumeration>
    <xs:enumeration value="partial"></xs:enumeration>
    <xs:enumeration value="none"></xs:enumeration>
  </xs:attribute>

```

```

<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[ColumnRule Element](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-291
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-292
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[DataSet Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```

<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>

```

Parent Elements

[Attribute Element](#)

Table Element

The table used in this data set

Table A-293
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-294
Extended Types

| Type | Description |
|-------------------------------------|---|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[DataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-295
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

```
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
</xs:element>
```

Parent Elements

[DataSet Element](#)

Child Elements

[Category Element](#), [DataSetAttribute Element](#), [Definition Element](#)

Related Elements

[Expression Element](#), [Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#),
[Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Expression Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Expression Element](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements

[Expression Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      minOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements

[DataSet Element](#)

Child Elements

[AttributeMapping Element](#)

AttributeMapping Element

The mapping of these attributes to the primary attributes

Table A-296
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements[Mapping Element](#)**Input Element**

The required inputs for this rule

Table A-297
Attributes for Input

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements[ColumnRule Element](#)**Child Elements**[Category Element](#)**Category Element**

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Input Element](#)**Output Element**

The outputs produced by an execution of this rule

Table A-298
Attributes for Output

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements[ColumnRule Element](#)**Child Elements**[Category Element](#)**Category Element**

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Output Element](#)**AnalyticEngine Element**

Runtime executable representation of the rule

XML Representation

```
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"/></xs:element>
```

Parent Elements[ColumnRule Element](#)**RowRule Element**

Rule for row values in the matrix, when not specified column rule is required

Table A-299

Attributes for RowRule

| Attribute | Use | Description | Valid Values |
|-----------------|----------|--|--|
| description | optional | Optional description of this rule | <i>string</i> |
| outputQualifier | optional | The qualifier to be used in the execution plan for naming the measures | <i>string</i> |
| usageType | optional | The User Perspective of the usage of this rule, communication between the application designer and the business user who will apply the rule | Segment SegmentSet Selection ExcludeSet IncludeSet Allocation Aggregation Matrix Expression Arbitration Threshold |

XML Representation

```
<xs:element name="RowRule" type="typeRule" minOccurs="0">
  <xs:sequence>
    <xs:element name="ApplicationView" minOccurs="0"/></xs:element>
    <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"/></xs:element>
  </xs:sequence>
</xs:element>
```

```

<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
</xs:sequence>
<xs:attribute name="outputQualifier" type="xs:string" use="optional"></xs:attribute>
<xs:attribute name="usageType" type="enumUsageType" use="optional">
  <xs:enumeration value="Segment"></xs:enumeration>
  <xs:enumeration value="SegmentSet"></xs:enumeration>
  <xs:enumeration value="Selection"></xs:enumeration>
  <xs:enumeration value="ExcludeSet"></xs:enumeration>
  <xs:enumeration value="IncludeSet"></xs:enumeration>
  <xs:enumeration value="Allocation"></xs:enumeration>
  <xs:enumeration value="Aggregation"></xs:enumeration>
  <xs:enumeration value="Matrix"></xs:enumeration>
  <xs:enumeration value="Expression"></xs:enumeration>
  <xs:enumeration value="Arbitration"></xs:enumeration>
  <xs:enumeration value="Threshold"></xs:enumeration>
</xs:attribute>
<xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-300
Extended Types

| Type | Description |
|----------------------------------|--------------------------|
| typeDecisionRule | A Decision Rule |
| typeMatrixRule | The Decision Matrix Rule |

| Type | Description |
|-------------------------------------|--|
| typeRandomRule | the Random Rule |
| typeExpressionRule | A simple expression |
| typeThresholdRule | An allocation rule defined by a series of threshold tests against a rule or model output |
| typeArbitrationRule | An allocation rule defined to be a 'primary' rule and a 'secondary' rule pair |

Parent Elements

[typeMatrixRule](#) Type

Child Elements

[AnalyticEngine](#) Element, [ApplicationView](#) Element, [DataSet](#) Element, [Input](#) Element, [Output](#) Element

ApplicationView Element

Reference to Application View and table the rule is designed to work with, object ID content of this element

Table A-301

Attributes for ApplicationView

| Attribute | Use | Description | Valid Values |
|-----------------|-----------------|--|---------------|
| label | required | Version label referenced | <i>string</i> |
| mimeType | optional | File MIME type of the repository object | <i>string</i> |
| name | optional | Optional Application View name for display | <i>string</i> |
| outputQualifier | optional | Optional output qualifier to be used during execution | <i>string</i> |
| table | optional | optional? Table name referenced from this Application View | <i>string</i> |
| usage | optional | Additional display information for the user interface | <i>string</i> |

XML Representation

```
<xs:element name="ApplicationView" minOccurs="0">
  <xs:attribute name="label" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="name" type="xs:string"/></xs:attribute>
  <xs:attribute name="usage" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputQualifier" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="mimeType" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="table" type="xs:string"/></xs:attribute>
</xs:element>
```


Parent Elements

[RowRule Element](#)

Related Elements

[ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ObjectReference Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#)

DataSet Element

Optional information on data set used to define this rule

Table A-302
Attributes for DataSet

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|------------|----------|--|----------------|
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
      <xs:sequence>
        <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
        <xs:element name="Definition" type="xs:string"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
      <xs:sequence>
        <xs:element name="AttributeMapping" type="typeAttributeMapping"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="compatibility" type="enumCompatibility" use="optional">
    <xs:enumeration value="complete"></xs:enumeration>
    <xs:enumeration value="partial"></xs:enumeration>
    <xs:enumeration value="none"></xs:enumeration>
  </xs:attribute>
  <xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
  <xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

RowRule Element

Child Elements

Attribute Element, Expression Element, Mapping Element, Table Element

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-303
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
```

```

    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-304
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[DataSet Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```

<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>

```

Parent Elements

[Attribute Element](#)

Table Element

The table used in this data set

Table A-305
Attributes for Table

| Attribute | Use | Description | Valid Values |
|-----------|----------|--|---------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-306
Extended Types

| Type | Description |
|-------------------------------------|---|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[DataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-307
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
</xs:element>
```

Parent Elements

[DataSet Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      minOccurs="unbounded"/></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements

[DataSet Element](#)

Child Elements

[AttributeMapping Element](#)

AttributeMapping Element

The mapping of these attributes to the primary attributes

Table A-308

Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" minOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements

[Mapping Element](#)

Input Element

The required inputs for this rule

Table A-309
Attributes for Input

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[RowRule Element](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Input Element](#)

Output Element

The outputs produced by an execution of this rule

Table A-310
Attributes for Output

| Attribute | Use | Description | Valid Values |
|-------------|----------|--|--------------|
| dataType | required | Data type of this referenced field | string |
| fieldName | required | Project data model attribute referenced as input | string |
| maxValue | optional | The maximum value for range measures | string |
| measureType | optional | The measure type used in modeling for this field | string |
| minValue | optional | The minimum value for range measures | string |

XML Representation

```
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[RowRule Element](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Output Element](#)

AnalyticEngine Element

Runtime executable representation of the rule

XML Representation

```
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"/></xs:element>
```

Parent Elements

[RowRule Element](#)

Row Element

Series of intersection values for the columns in a row of the matrix, if a one-rule input either row or column names will be blank

Table A-311
Attributes for Row

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|--|---------------|
| rowName | required | The title to be displayed for this row, the row rule return value to be tested (blank when only a column rule) | <i>string</i> |

XML Representation

```
<xs:element name="Row" type="typeMatrixRow" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Cell" maxOccurs="unbounded"/></xs:element>
  </xs:sequence>
  <xs:attribute name="rowName" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements

[typeMatrixRule Type](#)

Child Elements

[Cell Element](#)

Cell Element

Cells in this matrix row

Table A-312
Attributes for Cell

| Attribute | Use | Description | Valid Values |
|------------|-----------------|--|---------------|
| columnName | required | The name to be displayed for this column, the column rule return value to be tested (blank when only a row rule) | <i>string</i> |

XML Representation

```
<xs:element name="Cell" maxOccurs="unbounded">
  <xs:attribute name="columnName" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements

[Row Element](#)

AllocationDisplay Element

Display aspects for the allocated values of this matrix rule

Table A-313

Attributes for AllocationDisplay

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|--|---------------|
| color | optional | color to be used in the display of this name | <i>string</i> |
| name | required | name of the allocated object | <i>string</i> |

XML Representation

```
<xs:element name="AllocationDisplay" type="typeAllocationDisplay" minOccurs="0" maxOccurs="unbounded">
  <xs:attribute name="name" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="color" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Parent Elements

[typeMatrixRule Type](#)

typeMemberSelection Type

The Dimension member selection properties and resulting selection rule

Table A-314

Attributes for typeMemberSelection

| Attribute | Use | Description | Valid Values |
|------------------------------|-----------------|--|----------------|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| hasLocalExpressionReferences | optional | Set during an edit to indicate whether the rule has local expression references in it or not. When true, this rule cannot be exported. | <i>boolean</i> |
| mimeType | required | File MIME type of this rule | <i>string</i> |
| name | optional | Name of the element | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|------------------|----------|---|---|
| outputDataType | optional | Output field data type | <i>string</i> |
| outputField | optional | Output field to use from the rule | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| usageDescription | optional | Optional additional descriptive text for this rule | <i>string</i> |

XML Representation

```

<xs:complexType name="typeMemberSelection">
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"/></xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="StartTimestamp" type="typeTimestampDetails" minOccurs="0"/></xs:element>
    <xs:element name="EndTimestamp" type="typeTimestampDetails" minOccurs="0"/></xs:element>
    <xs:element name="InteractionPoint" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"/></xs:element>
    <xs:element name="BaseSelection" type="typeLocalRule" minOccurs="0">
      <xs:sequence>
        <xs:element name="Definition" type="xs:string"/></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:complexType>

```

Extends

[Selection Element](#), [BaseSelection Element](#), [Selections Element](#), [DecisionList Element](#), [Selections Element](#), [RecordSelection Element](#), [CombiningRule Element](#), [Selection Element](#), [Rule Element](#), [BaseSelection Element](#)

Child Elements

[BaseSelection Element](#), [Definition Element](#), [EndTimestamp Element](#), [InteractionPoint Element](#), [StartTimestamp Element](#)

Definition Element

Definition of the local rule

XML Representation

```

<xs:element name="Definition" type="xs:string"/></xs:element>

```

Parent Elements

[typeMemberSelection Type](#)

StartTimestamp Element

The valid start timestamp for this Dimension Member, test will be incorporated into the final local rule if specified

Table A-315
Attributes for StartTimestamp

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|-------------------------------------|--------------|
| day | required | the day portion of the timestamp | <i>int</i> |
| hour | optional | the hour portion of the timestamp | <i>int</i> |
| minute | optional | the minute portion of the timestamp | <i>int</i> |
| month | required | the month portion of the timestamp | <i>int</i> |
| second | optional | the second portion of the timestamp | <i>int</i> |
| year | required | the year portion of the timestamp | <i>int</i> |

XML Representation

```
<xs:element name="StartTimestamp" type="typeTimestampDetails" minOccurs="0">
  <xs:attribute name="year" type="xs:int" use="required"/></xs:attribute>
  <xs:attribute name="month" type="xs:int" use="required"/></xs:attribute>
  <xs:attribute name="day" type="xs:int" use="required"/></xs:attribute>
  <xs:attribute name="hour" type="xs:int" use="optional" default="0"/></xs:attribute>
  <xs:attribute name="minute" type="xs:int" use="optional" default="0"/></xs:attribute>
  <xs:attribute name="second" type="xs:int" use="optional" default="0"/></xs:attribute>
</xs:element>
```

Parent Elements

[typeMemberSelection Type](#)

EndTimestamp Element

The valid end timestamp for this Dimension Member, test will be incorporated into the final local rule if specified

Table A-316
Attributes for EndTimestamp

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|-------------------------------------|--------------|
| day | required | the day portion of the timestamp | <i>int</i> |
| hour | optional | the hour portion of the timestamp | <i>int</i> |
| minute | optional | the minute portion of the timestamp | <i>int</i> |
| month | required | the month portion of the timestamp | <i>int</i> |

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|-------------------------------------|--------------|
| second | optional | the second portion of the timestamp | <i>int</i> |
| year | required | the year portion of the timestamp | <i>int</i> |

XML Representation

```
<xs:element name="EndTimestamp" type="typeTimestampDetails" minOccurs="0">
  <xs:attribute name="year" type="xs:int" use="required"></xs:attribute>
  <xs:attribute name="month" type="xs:int" use="required"></xs:attribute>
  <xs:attribute name="day" type="xs:int" use="required"></xs:attribute>
  <xs:attribute name="hour" type="xs:int" use="optional" default="0"></xs:attribute>
  <xs:attribute name="minute" type="xs:int" use="optional" default="0"></xs:attribute>
  <xs:attribute name="second" type="xs:int" use="optional" default="0"></xs:attribute>
</xs:element>
```

Parent Elements

[typeMemberSelection Type](#)

InteractionPoint Element

List of selected Interaction Points for the Dimension Member, test will be incorporated into the final local rule if specified

XML Representation

```
<xs:element name="InteractionPoint" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[typeMemberSelection Type](#)

BaseSelection Element

The selection rule for the Dimension Member, will be folded into the final local rule if specified

Table A-317

Attributes for BaseSelection

| Attribute | Use | Description | Valid Values |
|------------------------------|----------|--|----------------|
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| hasLocalExpressionReferences | optional | Set during an edit to indicate whether the rule has local expression references in it or not. When true, this rule cannot be exported. | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|------------------|-----------------|---|---|
| mimeType | required | File MIME type of this rule | <i>string</i> |
| name | optional | Name of the element | <i>string</i> |
| outputDataType | optional | Output field data type | <i>string</i> |
| outputField | optional | Output field to use from the rule | <i>string</i> |
| patchAction | optional | This field is used to control the apply process for version patch templates | none modify add remove |
| usageDescription | optional | Optional additional descriptive text for this rule | <i>string</i> |

XML Representation

```

<xs:element name="BaseSelection" type="typeLocalRule" minOccurs="0">
  <xs:attribute name="name" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
  <xs:attribute name="patchAction" type="enumPatchAction" use="optional" default="none">
    <xs:enumeration value="none"/></xs:enumeration>
    <xs:enumeration value="modify"/></xs:enumeration>
    <xs:enumeration value="add"/></xs:enumeration>
    <xs:enumeration value="remove"/></xs:enumeration>
  </xs:attribute>
  <xs:sequence>
    <xs:element name="Definition" type="xs:string"/></xs:element>
  </xs:sequence>
  <xs:attribute name="mimeType" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="usageDescription" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="hasLocalExpressionReferences" type="xs:boolean" use="optional"
  default="false"/></xs:attribute>
  <xs:attribute name="outputField" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputDataType" type="xs:string" use="optional"/></xs:attribute>
</xs:element>

```

Table A-318
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeMemberSelection | The Dimension member selection properties and resulting selection rule |

Parent Elements

[typeMemberSelection](#) Type

Child Elements

[Definition](#) Element

Related Elements

EntityDimension Element, Variable Element, Constraint Element, Selection Element, Dimension Element, Variable Element, Constraint Element, Member Element, BaseSelection Element, Optimization Element, Deployment Element, Selections Element, DecisionList Element, Selections Element, RecordSelection Element, CombiningRule Element, Selection Element, Rule Element

Definition Element

Definition of the local rule

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements

BaseSelection Element

typeModelingDefineStep Type

The Model definition step configuration

Table A-319

Attributes for typeModelingDefineStep

| Attribute | Use | Description | Valid Values |
|---------------------------|----------|--|----------------|
| enableAutoModeling | optional | Flag controlling the appearance of the Auto-Modeling subpanel | <i>boolean</i> |
| enableInteractiveModeling | optional | Flag controlling the appearance of the Interactive Modeling subpanel | <i>boolean</i> |
| enableSimulation | optional | Controls presentation of the Define-style Simulation action | <i>boolean</i> |
| enableTest | optional | Controls presentation of the Test action | <i>boolean</i> |
| stepCompleted | optional | Indicates whether the user has marked this panel as completed or not | <i>boolean</i> |
| stepHidden | optional | The 'hidden' state for this panel | <i>boolean</i> |
| stepIncluded | optional | The logical 'included or not' flag for this panel | <i>boolean</i> |
| stepLocked | optional | The locked state for this panel | <i>boolean</i> |

XML Representation

```
<xs:complexType name="typeModelingDefineStep"></xs:complexType>
```

Extends

[DefineStep Element](#)

Related Types

[typeDecisionHierarchyDefineStep Type](#), [typeRulesManagementDefineStep Type](#)

typeRandomRule Type

the Random Rule

Table A-320

Attributes for typeRandomRule

| Attribute | Use | Description | Valid Values |
|-----------------|----------|--|--|
| description | optional | Optional description of this rule | <i>string</i> |
| outputQualifier | optional | The qualifier to be used in the execution plan for naming the measures | <i>string</i> |
| usageType | optional | The User Perspective of the usage of this rule, communication between the application designer and the business user who will apply the rule | Segment SegmentSet Selection ExcludeSet IncludeSet Allocation Aggregation Matrix Expression Arbitration Threshold |

XML Representation

```
<xs:complexType name="typeRandomRule" abstract="false" mixed="false">
  <xs:sequence>
    <xs:element name="ApplicationView" minOccurs="0"></xs:element>
    <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

```

</xs:sequence>
<xs:sequence>
  <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
    maxOccurs="unbounded"></xs:element>
  <xs:element name="Definition" type="xs:string"></xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
</xs:sequence>
<xs:sequence>
  <xs:element name="Choice" type="typeChoice" maxOccurs="unbounded">
    <xs:sequence>
      <xs:element name="OutputValue" type="typeValueOutput"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>
</xs:complexType>

```

Extends

[Rule Element](#), [Primary Element](#), [Secondary Element](#), [ColumnRule Element](#), [RowRule Element](#), [RuleObject Element](#)

Child Elements

[AnalyticEngine Element](#), [ApplicationView Element](#), [Choice Element](#), [DataSet Element](#), [Input Element](#), [Output Element](#)

Related Types

[typeArbitrationRule Type](#), [typeDecisionRule Type](#), [typeExpressionRule Type](#), [typeMatrixRule Type](#), [typeThresholdRule Type](#)

ApplicationView Element

Reference to Application View and table the rule is designed to work with, object ID content of this element

Table A-321
Attributes for ApplicationView

| Attribute | Use | Description | Valid Values |
|-----------------|-----------------|--|---------------|
| label | required | Version label referenced | <i>string</i> |
| mimeType | optional | File MIME type of the repository object | <i>string</i> |
| name | optional | Optional Application View name for display | <i>string</i> |
| outputQualifier | optional | Optional output qualifier to be used during execution | <i>string</i> |
| table | optional | optional? Table name referenced from this Application View | <i>string</i> |
| usage | optional | Additional display information for the user interface | <i>string</i> |

XML Representation

```
<xs:element name="ApplicationView" minOccurs="0">
  <xs:attribute name="label" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="name" type="xs:string"/></xs:attribute>
  <xs:attribute name="usage" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputQualifier" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="mimeType" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="table" type="xs:string"/></xs:attribute>
</xs:element>
```

Parent Elements

[typeRandomRule](#) Type

Related Elements

[ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ObjectReference Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#)

DataSet Element

Optional information on data set used to define this rule

Table A-322
Attributes for DataSet

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```
<xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
  </xs:sequence>
</xs:element>
```

```

<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
<xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="compatibility" type="enumCompatibility" use="optional">
  <xs:enumeration value="complete"></xs:enumeration>
  <xs:enumeration value="partial"></xs:enumeration>
  <xs:enumeration value="none"></xs:enumeration>
</xs:attribute>
<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[typeRandomRule Type](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-323
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|-----------|----------|---|---------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-324
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements[DataSet Element](#)**Child Elements**[Category Element](#)**Category Element**

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements[Attribute Element](#)**Table Element**

The table used in this data set

Table A-325
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-326
Extended Types

| Type | Description |
|-------------------------------------|--|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |

| Type | Description |
|-------------------------------|---|
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[DataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-327

Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"/></xs:element>
```

Parent Elements

[Expression Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">  
  <xs:sequence>  
    <xs:element name="AttributeMapping" type="typeAttributeMapping"  
      maxOccurs="unbounded"/></xs:element>  
  </xs:sequence>  
</xs:element>
```

Parent Elements[DataSet Element](#)**Child Elements**[AttributeMapping Element](#)**AttributeMapping Element**

The mapping of these attributes to the primary attributes

Table A-328
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements[Mapping Element](#)**Input Element**

The required inputs for this rule

Table A-329
Attributes for Input

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```

<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Parent Elements

[typeRandomRule Type](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```

<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>

```

Parent Elements

[Input Element](#)

Output Element

The outputs produced by an execution of this rule

Table A-330
Attributes for Output

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```

<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Parent Elements

[typeRandomRule](#) [Type](#)

Child Elements

[Category](#) [Element](#)

Category Element

The categorical values this field may return

XML Representation

```

<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>

```

Parent Elements

[Output](#) [Element](#)

AnalyticEngine Element

Runtime executable representation of the rule

XML Representation

```

<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>

```

Parent Elements

[typeRandomRule](#) [Type](#)

Choice Element

Choice holds the Offer to be extended in the element and a 'relativeAbundance' indicator influencing how the random value is selected as an attribute

Table A-331
Attributes for Choice

| Attribute | Use | Description | Valid Values |
|-------------------|----------|---|---------------|
| relativeAbundance | optional | The N of M (total) influence on the random allocation | <i>double</i> |

XML Representation

```
<xs:element name="Choice" type="typeChoice" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="OutputValue" type="typeValueOutput" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="relativeAbundance" type="xs:double"></xs:attribute>
</xs:element>
```

Parent Elements

[typeRandomRule Type](#)

Child Elements

[OutputValue Element](#)

OutputValue Element

Output values produced by execution of the expression above

Table A-332
Attributes for OutputValue

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|------------------------------|---------------|
| field | required | The field name of the output | <i>string</i> |

XML Representation

```
<xs:element name="OutputValue" type="typeValueOutput" maxOccurs="unbounded">
  <xs:attribute name="field" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[Choice Element](#)

typeRulesManagementDefineStep Type

The Rules Management define step configuration

Table A-333
Attributes for *typeRulesManagementDefineStep*

| Attribute | Use | Description | Valid Values |
|------------------|----------|--|----------------|
| enableSimulation | optional | Controls presentation of the Define-style Simulation action | <i>boolean</i> |
| enableTest | optional | Controls presentation of the Test action | <i>boolean</i> |
| stepCompleted | optional | Indicates whether the user has marked this panel as completed or not | <i>boolean</i> |
| stepHidden | optional | The 'hidden' state for this panel | <i>boolean</i> |
| stepIncluded | optional | The logical 'included or not' flag for this panel | <i>boolean</i> |
| stepLocked | optional | The locked state for this panel | <i>boolean</i> |

XML Representation

```
<xs:complexType name="typeRulesManagementDefineStep"></xs:complexType>
```

Extends

[DefineStep Element](#)

Related Types

[typeDecisionHierarchyDefineStep Type](#), [typeModelingDefineStep Type](#)

typeThresholdRule Type

An allocation rule defined by a series of threshold tests against a rule or model output

Table A-334
Attributes for *typeThresholdRule*

| Attribute | Use | Description | Valid Values |
|------------------|----------|---|----------------|
| description | optional | Optional description of this rule | <i>string</i> |
| numericThreshold | optional | Indicates how the threshold test is to be performed. Value of 'true' will cause a greater-than-or-equals numeric comparison in the test order specified; a 'false' will be an equals string comparison. | <i>boolean</i> |
| outputQualifier | optional | The qualifier to be used in the execution plan for naming the measures | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|---------------|----------|--|--|
| thresholdType | optional | The data type of all threshold values in this rule. | <i>string</i> |
| usageType | optional | The User Perspective of the usage of this rule, communication between the application designer and the business user who will apply the rule | Segment SegmentSet Selection ExcludeSet IncludeSet Allocation Aggregation Matrix Expression Arbitration Threshold |

XML Representation

```

<xs:complexType name="typeThresholdRule" mixed="false">
  <xs:sequence>
    <xs:element name="ApplicationView" minOccurs="0"/></xs:element>
    <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"/></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
          <xs:sequence>
            <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
            <xs:element name="Definition" type="xs:string"/></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
          <xs:sequence>
            <xs:element name="AttributeMapping" type="typeAttributeMapping"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"/></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Output" type="typeField" maxOccurs="unbounded">

```

```

    <xs:sequence>
      <xs:element name="Category" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
</xs:sequence>
<xs:sequence>
  <xs:element name="ReferencedValue" type="typeObjectOutput">
    <xs:choice>
      <xs:element name="RuleObject" type="typeRule">
        <xs:sequence>
          <xs:element name="ApplicationView" minOccurs="0"></xs:element>
          <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
            <xs:sequence>
              <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
                <xs:sequence>
                  <xs:element name="Category" type="xs:string" minOccurs="0"
                    maxOccurs="unbounded"></xs:element>
                </xs:sequence>
              </xs:element>
              <xs:element name="Table" type="typeDataTable"></xs:element>
              <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
                maxOccurs="unbounded">
                <xs:sequence>
                  <xs:element name="Category" type="xs:string" minOccurs="0"
                    maxOccurs="unbounded"></xs:element>
                </xs:sequence>
                <xs:sequence>
                  <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
                    maxOccurs="unbounded"></xs:element>
                  <xs:element name="Definition" type="xs:string"></xs:element>
                </xs:sequence>
              </xs:element>
              <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
                <xs:sequence>
                  <xs:element name="AttributeMapping" type="typeAttributeMapping"
                    maxOccurs="unbounded"></xs:element>
                </xs:sequence>
              </xs:element>
            </xs:sequence>
          </xs:element>
          <xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
            <xs:sequence>
              <xs:element name="Category" type="xs:string" minOccurs="0"
                maxOccurs="unbounded"></xs:element>
            </xs:sequence>
          </xs:element>
          <xs:element name="Output" type="typeField" maxOccurs="unbounded">
            <xs:sequence>
              <xs:element name="Category" type="xs:string" minOccurs="0"
                maxOccurs="unbounded"></xs:element>
            </xs:sequence>
          </xs:element>
          <xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
        </xs:sequence>
      </xs:element>
    </xs:choice>
  </xs:element>
</xs:sequence>
</xs:element>

```

```

        <xs:element name="ObjectReference" type="typeRepositoryObject"/></xs:element>
    </xs:choice>
</xs:element>
<xs:element name="Threshold" type="typeThresholdAllocation" minOccurs="0"
maxOccurs="unbounded">
    <xs:sequence>
        <xs:element name="ValueOutput" type="typeValueOutput"
maxOccurs="unbounded"/></xs:element>
    </xs:sequence>
</xs:element>
<xs:element name="Remainder" type="typeRemainder" minOccurs="0">
    <xs:sequence>
        <xs:element name="ValueOutput" type="typeValueOutput" minOccurs="0"
maxOccurs="unbounded"/></xs:element>
    </xs:sequence>
</xs:element>
</xs:sequence>
</xs:complexType>

```

Extends

[Rule Element](#), [Primary Element](#), [Secondary Element](#), [ColumnRule Element](#), [RowRule Element](#), [RuleObject Element](#)

Child Elements

[AnalyticEngine Element](#), [ApplicationView Element](#), [DataSet Element](#), [Input Element](#), [Output Element](#), [ReferencedValue Element](#), [Remainder Element](#), [Threshold Element](#)

Related Types

[typeArbitrationRule Type](#), [typeDecisionRule Type](#), [typeExpressionRule Type](#), [typeMatrixRule Type](#), [typeRandomRule Type](#)

ApplicationView Element

Reference to Application View and table the rule is designed to work with, object ID content of this element

Table A-335
Attributes for ApplicationView

| Attribute | Use | Description | Valid Values |
|-----------------|-----------------|---|---------------|
| label | required | Version label referenced | <i>string</i> |
| contentType | optional | File MIME type of the repository object | <i>string</i> |
| name | optional | Optional Application View name for display | <i>string</i> |
| outputQualifier | optional | Optional output qualifier to be used during execution | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-----------|----------|--|---------------|
| table | optional | optional? Table name referenced from this Application View | <i>string</i> |
| usage | optional | Additional display information for the user interface | <i>string</i> |

XML Representation

```
<xs:element name="ApplicationView" minOccurs="0">
  <xs:attribute name="label" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="name" type="xs:string"/></xs:attribute>
  <xs:attribute name="usage" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputQualifier" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="mimeType" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="table" type="xs:string"/></xs:attribute>
</xs:element>
```

Parent Elements

[typeThresholdRule Type](#)

Related Elements

[ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ObjectReference Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#)

DataSet Element

Optional information on data set used to define this rule

Table A-336
Attributes for DataSet

| Attribute | Use | Description | Valid Values |
|---------------|----------|---|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|----------------|
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```

<xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
    <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
      maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:sequence>
      <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
        maxOccurs="unbounded"></xs:element>
      <xs:element name="Definition" type="xs:string"></xs:element>
    </xs:sequence>
  </xs:element>
  <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
    <xs:sequence>
      <xs:element name="AttributeMapping" type="typeAttributeMapping"
        maxOccurs="unbounded"></xs:element>
    </xs:sequence>
  </xs:element>
</xs:sequence>

```

```

<xs:attribute name="name" type="xs:string" use="required"/></xs:attribute>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"/></xs:attribute>
<xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="compatibility" type="enumCompatibility" use="optional">
  <xs:enumeration value="complete"/></xs:enumeration>
  <xs:enumeration value="partial"/></xs:enumeration>
  <xs:enumeration value="none"/></xs:enumeration>
</xs:attribute>
<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"/></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
</xs:element>

```

Parent Elements

[typeThresholdRule Type](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-337
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-338
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements

[DataSet Element](#)

Child Elements

[Category Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```

<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>

```

Parent Elements[Attribute Element](#)**Table Element**

The table used in this data set

Table A-339
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-340
Extended Types

| Type | Description |
|-------------------------------------|---|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements[DataSet Element](#)**Expression Element**

Optional passing of expressions defined by an application into a task

Table A-341
Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```
<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

```

<xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
<xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
<xs:sequence>
  <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
    maxOccurs="unbounded"></xs:element>
  <xs:element name="Definition" type="xs:string"></xs:element>
</xs:sequence>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
</xs:element>

```

Parent Elements[DataSet Element](#)**Child Elements**[Category Element](#), [DataSetAttribute Element](#), [Definition Element](#)**Related Elements**

[Expression Element](#), [Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#),
[Expression Element](#), [Expression Element](#), [DerivedAttribute Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#),
[Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#), [Expression Element](#)

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Expression Element](#)**DataSetAttribute Element**

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Expression Element](#)**Definition Element**

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"></xs:element>
```

Parent Elements[Expression Element](#)**Mapping Element**

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
      minOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
```

Parent Elements[DataSet Element](#)**Child Elements**[AttributeMapping Element](#)**AttributeMapping Element**

The mapping of these attributes to the primary attributes

Table A-342
Attributes for *AttributeMapping*

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements

[Mapping Element](#)

Input Element

The required inputs for this rule

Table A-343
Attributes for Input

| Attribute | Use | Description | Valid Values |
|-------------|----------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[typeThresholdRule Type](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements

[Input Element](#)

Output Element

The outputs produced by an execution of this rule

Table A-344
Attributes for Output

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements

[typeThresholdRule Type](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Output Element](#)

AnalyticEngine Element

Runtime executable representation of the rule

XML Representation

```
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"/></xs:element>
```

Parent Elements

[typeThresholdRule Type](#)

ReferencedValue Element

The value to be tested in the defined thresholds

Table A-345

Attributes for ReferencedValue

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| output | required | The output value of the referenced object | <i>string</i> |
| role | optional | Optional role indicator for this output | <i>string</i> |

XML Representation

```
<xs:element name="ReferencedValue" type="typeObjectOutput">
  <xs:choice>
    <xs:element name="RuleObject" type="typeRule">
      <xs:sequence>
        <xs:element name="ApplicationView" minOccurs="0"/></xs:element>
        <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
          <xs:sequence>
            <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
              <xs:sequence>
                <xs:element name="Category" type="xs:string" minOccurs="0"
                  maxOccurs="unbounded"/></xs:element>
              </xs:sequence>
            </xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"/></xs:element>
      </xs:sequence>
    </xs:element>
  </xs:choice>
</xs:element>
```

```

<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
</xs:element>
<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
</xs:sequence>
</xs:element>
<xs:element name="ObjectReference" type="typeRepositoryObject"></xs:element>
</xs:choice>
<xs:attribute name="output" type="xs:string" use="required"></xs:attribute>
<xs:attribute name="role" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Parent Elements[typeThresholdRule Type](#)**Child Elements**[ObjectReference Element, RuleObject Element](#)**RuleObject Element**

An embedded rule object

Table A-346
Attributes for RuleObject

| Attribute | Use | Description | Valid Values |
|-----------------|----------|--|--|
| description | optional | Optional description of this rule | <i>string</i> |
| outputQualifier | optional | The qualifier to be used in the execution plan for naming the measures | <i>string</i> |
| usageType | optional | The User Perspective of the usage of this rule, communication between the application designer and the business user who will apply the rule | Segment SegmentSet Selection ExcludeSet IncludeSet Allocation Aggregation Matrix Expression Arbitration Threshold |

XML Representation

```

<xs:element name="RuleObject" type="typeRule">
  <xs:sequence>
    <xs:element name="ApplicationView" minOccurs="0"/></xs:element>
    <xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
      <xs:sequence>
        <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Table" type="typeDataTable"/></xs:element>
        <xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
          maxOccurs="unbounded">
          <xs:sequence>
            <xs:element name="Category" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
          <xs:sequence>
            <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
              maxOccurs="unbounded"/></xs:element>
            <xs:element name="Definition" type="xs:string"/></xs:element>
          </xs:sequence>
        </xs:element>
        <xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
          <xs:sequence>
            <xs:element name="AttributeMapping" type="typeAttributeMapping"
              maxOccurs="unbounded"/></xs:element>
          </xs:sequence>
        </xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
      <xs:sequence>

```



```

        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Output" type="typeField" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
  </xs:sequence>
  <xs:attribute name="outputQualifier" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="usageType" type="enumUsageType" use="optional">
    <xs:enumeration value="Segment"></xs:enumeration>
    <xs:enumeration value="SegmentSet"></xs:enumeration>
    <xs:enumeration value="Selection"></xs:enumeration>
    <xs:enumeration value="ExcludeSet"></xs:enumeration>
    <xs:enumeration value="IncludeSet"></xs:enumeration>
    <xs:enumeration value="Allocation"></xs:enumeration>
    <xs:enumeration value="Aggregation"></xs:enumeration>
    <xs:enumeration value="Matrix"></xs:enumeration>
    <xs:enumeration value="Expression"></xs:enumeration>
    <xs:enumeration value="Arbitration"></xs:enumeration>
    <xs:enumeration value="Threshold"></xs:enumeration>
  </xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-347
Extended Types

| Type | Description |
|-------------------------------------|--|
| typeDecisionRule | A Decision Rule |
| typeMatrixRule | The Decision Matrix Rule |
| typeRandomRule | the Random Rule |
| typeExpressionRule | A simple expression |
| typeThresholdRule | An allocation rule defined by a series of threshold tests against a rule or model output |
| typeArbitrationRule | An allocation rule defined to be a ‘primary’ rule and a ‘secondary’ rule pair |

Parent Elements

[ReferencedValue Element](#)

Child Elements

[AnalyticEngine Element](#), [ApplicationView Element](#), [DataSet Element](#), [Input Element](#), [Output Element](#)

ApplicationView Element

Reference to Application View and table the rule is designed to work with, object ID content of this element

Table A-348
Attributes for ApplicationView

| Attribute | Use | Description | Valid Values |
|-----------------|-----------------|--|---------------|
| label | required | Version label referenced | <i>string</i> |
| mimeType | optional | File MIME type of the repository object | <i>string</i> |
| name | optional | Optional Application View name for display | <i>string</i> |
| outputQualifier | optional | Optional output qualifier to be used during execution | <i>string</i> |
| table | optional | optional? Table name referenced from this Application View | <i>string</i> |
| usage | optional | Additional display information for the user interface | <i>string</i> |

XML Representation

```
<xs:element name="ApplicationView" minOccurs="0">
  <xs:attribute name="label" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="name" type="xs:string"/></xs:attribute>
  <xs:attribute name="usage" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputQualifier" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="mimeType" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="table" type="xs:string"/></xs:attribute>
</xs:element>
```

Parent Elements

[RuleObject Element](#)

Related Elements

[ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ObjectReference Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#), [ApplicationView Element](#)

DataSet Element

Optional information on data set used to define this rule

Table A-349
Attributes for DataSet

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|--|--|
| compatibility | optional | The compatibility level of this data set | complete partial none |
| deployUsage | optional | Indicates whether this data set will be used to Deploy the application or not | <i>boolean</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isCompatible | optional | Runtime flag used to track compatibility of this data set with another 'primary' data set | <i>boolean</i> |
| modelUsage | optional | Indicates whether this data set will be selectable when doing a model build or refresh in the application or not | <i>boolean</i> |
| name | required | Alias name for this data set | <i>string</i> |
| rescanRequired | optional | Runtime flag used to track if the data scan refresh is required on this data set or not | <i>boolean</i> |
| scanComplete | optional | Runtime flag used to track if the data scan has been performed on this data set or not | <i>boolean</i> |
| scoreUsage | optional | Indicates whether this data set will be selectable when Scoring in the application or not | <i>boolean</i> |
| testUsage | optional | Indicates whether this data set will be selectable when doing a Test or Simulate in the application or not | <i>boolean</i> |

XML Representation

```
<xs:element name="DataSet" type="dataset:typeDataSet" minOccurs="0">
  <xs:sequence>
    <xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
      <xs:sequence>
        <xs:element name="Category" type="xs:string" minOccurs="0"
          maxOccurs="unbounded"></xs:element>
      </xs:sequence>
    </xs:element>
    <xs:element name="Table" type="typeDataTable"></xs:element>
  </xs:sequence>
</xs:element>
```

```

<xs:element name="Expression" type="typeDataSetExpression" minOccurs="0"
maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:sequence>
    <xs:element name="DataSetAttribute" type="xs:string" minOccurs="0"
maxOccurs="unbounded"></xs:element>
    <xs:element name="Definition" type="xs:string"></xs:element>
  </xs:sequence>
</xs:element>
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">
  <xs:sequence>
    <xs:element name="AttributeMapping" type="typeAttributeMapping"
maxOccurs="unbounded"></xs:element>
  </xs:sequence>
</xs:element>
</xs:sequence>
<xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
<xs:attribute name="editable" type="xs:boolean" use="optional" default="true"></xs:attribute>
<xs:attribute name="deployUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scoreUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="modelUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="testUsage" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="compatibility" type="enumCompatibility" use="optional">
  <xs:enumeration value="complete"></xs:enumeration>
  <xs:enumeration value="partial"></xs:enumeration>
  <xs:enumeration value="none"></xs:enumeration>
</xs:attribute>
<xs:attribute name="isCompatible" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="scanComplete" type="xs:boolean" use="optional" default="false"></xs:attribute>
<xs:attribute name="rescanRequired" type="xs:boolean" use="optional" default="false"></xs:attribute>
</xs:element>

```

Parent Elements

[RuleObject Element](#)

Child Elements

[Attribute Element](#), [Expression Element](#), [Mapping Element](#), [Table Element](#)

Attribute Element

The attributes of the given data set at the point of last refresh

Table A-350
Attributes for Attribute

| Attribute | Use | Description | Valid Values |
|-----------|----------|---|---------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |
| name | required | Name of the attribute | <i>string</i> |
| Usage | optional | Indicates the usage in a constraint. If count, the usage is the number of output records. If sum, the usage is the sum of the value of the output records. If value, the default, the usage is the value of the current record. | <i>string</i> |

XML Representation

```

<xs:element name="Attribute" type="typeAttribute" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="name" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="miningType" type="xs:string"></xs:attribute>
  <xs:attribute name="description" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maximumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minimumValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="isSelected" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isOperational" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="isAnalytic" type="xs:boolean" use="optional" default="true"></xs:attribute>
  <xs:attribute name="Usage" type="xs:string" use="optional" default="value"></xs:attribute>
  <xs:attribute name="Category" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Table A-351
Extended Types

| Type | Description |
|---------------------------------------|--|
| typeDataSetExpression | A derived attribute expression definition stored locally |

Parent Elements[DataSet Element](#)**Child Elements**[Category Element](#)**Category Element**

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements[Attribute Element](#)**Table Element**

The table used in this data set

Table A-352
Attributes for Table

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|--|----------------|
| loginId | optional | Optional ID to be used if a login is required, passwords will not be saved | <i>string</i> |
| loginRequired | optional | Indicates whether credentials are required for table access or not | <i>boolean</i> |
| tableName | required | Name of the selected table at the source | <i>string</i> |

XML Representation

```
<xs:element name="Table" type="typeDataTable">
  <xs:attribute name="tableName" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="loginRequired" type="xs:boolean" use="optional" default="false"/></xs:attribute>
  <xs:attribute name="loginId" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Table A-353
Extended Types

| Type | Description |
|-------------------------------------|--|
| ExcelFileTable | An Excel file-based table definition |
| FlatFileTable | A flat file-based table definition |
| DimensionsFileTable | A SAS save file-based table definition |
| SASFileTable | A SAS save file-based table definition |

| Type | Description |
|-------------------------------|---|
| SpssFileTable | An SPSS save file-based table definition |
| DatabaseTable | A database-based table definition |
| PevTable | An Enterprise View-based table definition |
| CognosTable | An Cognos-based table definition |

Parent Elements

[DataSet Element](#)

Expression Element

Optional passing of expressions defined by an application into a task

Table A-354

Attributes for Expression

| Attribute | Use | Description | Valid Values |
|---------------|-----------------|---|----------------|
| Category | optional | Indicates that only records with the given category are considered. Only valid when usage attribute is count. | <i>string</i> |
| dataType | required | Storage type of the attribute | <i>string</i> |
| description | optional | Optional attribute description | <i>string</i> |
| editable | optional | Flag controlling editability in non-administrator interfaces | <i>boolean</i> |
| isAnalytic | optional | Indicates if this attribute is analytic or not | <i>boolean</i> |
| isOperational | optional | Indicates if this attribute is operational or not | <i>boolean</i> |
| isSelected | optional | Indicates selection state for this attribute | <i>boolean</i> |
| maximumValue | optional | A maximum value restriction for this attribute | <i>string</i> |
| minimumValue | optional | A minimum value restriction for this attribute | <i>string</i> |
| miningType | optional | The data mining type of this attribute | <i>string</i> |

Category Element

Categorical values defined for this attribute

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

DataSetAttribute Element

The attributes from this data set referenced by this expression

XML Representation

```
<xs:element name="DataSetAttribute" type="xs:string" minOccurs="0" maxOccurs="unbounded"/></xs:element>
```

Parent Elements

[Expression Element](#)

Definition Element

Definition of the local derived attribute expression

XML Representation

```
<xs:element name="Definition" type="xs:string"/></xs:element>
```

Parent Elements

[Expression Element](#)

Mapping Element

The mapping required to make this data set compatible with the application

XML Representation

```
<xs:element name="Mapping" type="typeDataSetMapping" minOccurs="0">  
  <xs:sequence>  
    <xs:element name="AttributeMapping" type="typeAttributeMapping"  
      maxOccurs="unbounded"/></xs:element>  
  </xs:sequence>  
</xs:element>
```

Parent Elements[DataSet Element](#)**Child Elements**[AttributeMapping Element](#)**AttributeMapping Element**

The mapping of these attributes to the primary attributes

Table A-355
Attributes for AttributeMapping

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| fromName | required | Source attribute on the 'left' side of this mapping (from the primary data set) | <i>string</i> |
| toName | required | Attribute from this table mapped on the 'to' (right) side of this mapping | <i>string</i> |

XML Representation

```
<xs:element name="AttributeMapping" type="typeAttributeMapping" maxOccurs="unbounded">
  <xs:attribute name="fromName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="toName" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements[Mapping Element](#)**Input Element**

The required inputs for this rule

Table A-356
Attributes for Input

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```

<xs:element name="Input" type="typeField" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>

```

Parent Elements

[RuleObject Element](#)

Child Elements

[Category Element](#)

Category Element

The categorical values this field may return

XML Representation

```

<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>

```

Parent Elements

[Input Element](#)

Output Element

The outputs produced by an execution of this rule

Table A-357
Attributes for Output

| Attribute | Use | Description | Valid Values |
|-------------|-----------------|--|---------------|
| dataType | required | Data type of this referenced field | <i>string</i> |
| fieldName | required | Project data model attribute referenced as input | <i>string</i> |
| maxValue | optional | The maximum value for range measures | <i>string</i> |
| measureType | optional | The measure type used in modeling for this field | <i>string</i> |
| minValue | optional | The minimum value for range measures | <i>string</i> |

XML Representation

```
<xs:element name="Output" type="typeField" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="fieldName" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="dataType" type="xs:string" use="required"></xs:attribute>
  <xs:attribute name="measureType" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="maxValue" type="xs:string" use="optional"></xs:attribute>
  <xs:attribute name="minValue" type="xs:string" use="optional"></xs:attribute>
</xs:element>
```

Parent Elements[RuleObject Element](#)**Child Elements**[Category Element](#)**Category Element**

The categorical values this field may return

XML Representation

```
<xs:element name="Category" type="xs:string" minOccurs="0" maxOccurs="unbounded"></xs:element>
```

Parent Elements[Output Element](#)**AnalyticEngine Element**

Runtime executable representation of the rule

XML Representation

```
<xs:element name="AnalyticEngine" type="xs:string" minOccurs="0"></xs:element>
```

Parent Elements[RuleObject Element](#)**ObjectReference Element**

A reference to a rule or model object

Table A-358
Attributes for *ObjectReference*

| Attribute | Use | Description | Valid Values |
|-----------------|-----------------|---|---------------|
| label | required | Version label referenced | <i>string</i> |
| contentType | optional | File MIME type of the repository object | <i>string</i> |
| name | optional | Optional Application View name for display | <i>string</i> |
| outputQualifier | optional | Optional output qualifier to be used during execution | <i>string</i> |
| usage | optional | Additional display information for the user interface | <i>string</i> |

XML Representation

```
<xs:element name="ObjectReference" type="typeRepositoryObject">
  <xs:attribute name="label" type="xs:string" use="required"/></xs:attribute>
  <xs:attribute name="name" type="xs:string"/></xs:attribute>
  <xs:attribute name="usage" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="outputQualifier" type="xs:string" use="optional"/></xs:attribute>
  <xs:attribute name="contentType" type="xs:string" use="optional"/></xs:attribute>
</xs:element>
```

Parent Elements

[ReferencedValue Element](#)

Threshold Element

An ordered set of threshold tests and associated allocations

Table A-359
Attributes for *Threshold*

| Attribute | Use | Description | Valid Values |
|----------------|-----------------|-------------------------|---------------|
| thresholdValue | required | Threshold value to test | <i>string</i> |

XML Representation

```
<xs:element name="Threshold" type="typeThresholdAllocation" minOccurs="0" maxOccurs="unbounded">
  <xs:sequence>
    <xs:element name="ValueOutput" type="typeValueOutput" maxOccurs="unbounded"/></xs:element>
  </xs:sequence>
  <xs:attribute name="thresholdValue" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements

[typeThresholdRule Type](#)

Child Elements[ValueOutput Element](#)**ValueOutput Element**

Allocated output values produced by ‘match’ of the expression above, optional for rule types that have their overall output implied as in the Segment and Selection rules. Value is content of this element. Any output of the rule not specified is implied to have a null value.

Table A-360
Attributes for ValueOutput

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|------------------------------|---------------|
| field | required | The field name of the output | <i>string</i> |

XML Representation

```
<xs:element name="ValueOutput" type="typeValueOutput" maxOccurs="unbounded">
  <xs:attribute name="field" type="xs:string" use="required"></xs:attribute>
</xs:element>
```

Parent Elements[Threshold Element](#)**Remainder Element**

The optional definition of a remainder

Table A-361
Attributes for Remainder

| Attribute | Use | Description | Valid Values |
|-------------|----------|-----------------------------|---------------|
| segmentName | optional | Alias name for this segment | <i>string</i> |

XML Representation

```
<xs:element name="Remainder" type="typeRemainder" minOccurs="0">
  <xs:sequence>
    <xs:element name="ValueOutput" type="typeValueOutput" minOccurs="0"
      maxOccurs="unbounded"></xs:element>
  </xs:sequence>
  <xs:attribute name="segmentName" type="xs:string"></xs:attribute>
</xs:element>
```

Parent Elements[typeThresholdRule Type](#)

Child Elements[ValueOutput Element](#)**ValueOutput Element**

Output values associated with the remainder situation for a rule. Value is content of this element, and any output of the rule not specified is implied to have a null value.

Table A-362

Attributes for ValueOutput

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|------------------------------|---------------|
| field | required | The field name of the output | <i>string</i> |

XML Representation

```
<xs:element name="ValueOutput" type="typeValueOutput" minOccurs="0" maxOccurs="unbounded">
  <xs:attribute name="field" type="xs:string" use="required"/></xs:attribute>
</xs:element>
```

Parent Elements[Remainder Element](#)**VariableReferenceBoundary Type**

A variable reference Constraint Boundary

Table A-363

Attributes for VariableReferenceBoundary

| Attribute | Use | Description | Valid Values |
|-----------|-----------------|---|---------------|
| value | required | The value or reference defining this boundary | <i>string</i> |

XML Representation

```
<xs:complexType name="VariableReferenceBoundary"/></xs:complexType>
```

Extends[Boundary Element](#), [Boundary Element](#)**Related Types**[ConstantBoundary Type](#)

Notices

This information was developed for products and services offered worldwide.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing, IBM Corporation, North Castle Drive, Armonk, NY 10504-1785, U.S.A.

For license inquiries regarding double-byte character set (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing, Legal and Intellectual Property Law, IBM Japan Ltd., 1623-14, Shimotsuruma, Yamato-shi, Kanagawa 242-8502 Japan.

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Software Group, Attention: Licensing, 233 S. Wacker Dr., Chicago, IL 60606, USA.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

Trademarks

IBM, the IBM logo, [ibm.com](http://www.ibm.com), and SPSS are trademarks of IBM Corporation, registered in many jurisdictions worldwide. A current list of IBM trademarks is available on the Web at <http://www.ibm.com/legal/copytrade.shtml>.

Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Java and all Java-based trademarks and logos are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

SAS is a registered trademark of SAS Institute Inc. in the United States, other countries, or both.

Other product and service names might be trademarks of IBM or other companies.

- AdditionalResponseInfo element, 3
- AggregateRuleSection element, 339
- Allocation element, 131, 145
- AllocationDisplay element, 414
- AllocationRuleSection element, 341
- AnalyticEngine element, 272, 308, 321, 334, 355, 372, 387, 400, 412, 432, 448, 462
- appGroup.xml, 5
- application
 - claims management example, 37
 - coach text, 43
 - custom CSS and graphics, 50
 - custom terminology, 47
 - customer interaction management example, 31
 - customizing look and feel, 48
 - customizing user interface text, 42
 - designing and configuring, 1
 - file locations, 40
 - language support, 42
 - message text, 45
 - modeling example, 27
 - rules-only example, 30
 - screen text, 46
 - template, 4
 - XML examples, 27
 - XML schema elements, 3
- application administrator, 1
- application designer, 1
- ApplicationHome element, 91
- ApplicationView element, 261, 298, 311, 324, 344, 361, 376, 389, 402, 422, 437, 452
- Attribute element, 63, 67, 106, 113, 169, 185, 198, 211, 232, 250, 264, 273, 301, 313, 326, 347, 364, 379, 392, 405, 424, 440, 454
- AttributeMapping element, 73, 111, 119, 174, 190, 204, 217, 220, 237, 255, 269, 306, 319, 332, 352, 369, 384, 397, 410, 430, 445, 460
- Attributes element, 123
- AttributeValueSource type, 273
- available documentation, 2

- BaseSelection element, 144, 417
- Boundary element, 128, 137
- Build element, 164
- building an application, 1
- business user, 1

- Category element, 64, 69, 72, 107, 110, 115, 118, 121, 170, 173, 180, 186, 189, 193, 200, 203, 213, 216, 225, 233, 236, 252, 254, 266, 268, 271–272, 302, 305, 307–308, 315, 318, 320–321, 328, 331, 333–334, 337, 349, 351, 354–355, 365, 368, 371–372, 380, 383, 386–387, 393, 396, 398–399, 406, 409, 411–412, 426, 429, 431–432, 441, 444, 447–448, 456, 459, 461–462
- Cell element, 413
- child element, 65
- Child element, 75
- Choice element, 432
- claims management application, 37
- coach text, 42–43
- cognosDataSource element, 227, 276
- cognosSelectedItems element, 227, 276
- CognosTable element, 225
- CognosTable type, 274
- ColumnRule element, 387
- CombineOptimizeMethod element, 96
- CombineOptimizeStep element, 95
- CombiningRule element, 241
- configuring an application, 1
- configuring the application template, 4
- ConstantBoundary type, 276
- ConstantValueSource type, 276
- Constraint element, 127, 136
- CSS, 48, 50
- CurrentStateReport element, 3, 153
- customer interaction management application, 31
- CustomInput element, 246
- customized
 - coach text, 43
 - CSS and graphics, 50
 - message text, 45
 - screen text, 46
 - terminology, 47
- customizing
 - coach text, 43
 - CSS, 48, 50
 - graphics, 48, 50
 - look and feel, 48
 - message text, 45
 - screen text, 46
 - terminology, 47
 - user interface text, 42

- DatabaseTable type, 277
- DataScan element, 180
- DataSet element, 65, 262, 299, 312, 324, 345, 362, 377, 390, 403, 422, 438, 452
- DataSetAttribute element, 72, 110, 118, 121, 173, 189, 193, 203, 216, 236, 255, 269, 305, 318, 331, 338, 352, 368, 383, 396, 409, 429, 444, 459
- DataSetInput element, 247
- DataStep element, 92
- DecisionList element, 177
- DefineStep element, 94
- Definition element, 72, 110, 118, 121, 131, 142, 145, 173, 176, 179, 190, 193, 203, 206, 216, 219, 237, 243, 255, 257, 269, 287, 305, 318, 331, 338, 352, 369, 384, 396, 409, 415, 419, 429, 445, 459
- Delimiters element, 283
- DeployLabel element, 151

- deployment
 - scoring output, 16–18, 22–24
- Deployment element, 3, 150
- DeployScoreStep element, 97
- DerivedAttribute element, 119, 191
- description.xml, 6
- designing an application, 1
- Dimension element, 3, 132
- DimensionDetails element, 239
- DimensionsFileTable type, 278
- directory structure, 40
- DisplayField element, 258
- DpdReference element, 289

- element reference, 63
- end user, 1
- EndTimestamp element, 143, 416
- EntityAttribute element, 124
- EntityDimension element, 3, 122
- EolCommentChars element, 284
- Evaluate element, 193
- ExcelFileTable type, 279
- ExplicitRangeOfCells element, 281
- Expression element, 70, 73, 108, 116, 171, 187, 201, 214, 234, 253, 267, 303, 316, 329, 350, 356, 366, 372, 381, 394, 407, 427, 442, 457
- external rule references
 - IBM SPSS Decision Management , 61
- external rules
 - downloading project metadata, 60
 - using in applications, 60

- Field element, 246
- file locations, 40
- FlatFileTable type, 282
- Function element, 129, 138

- German language, 42
- getting help
 - available documentation, 2
- GIF files, 50
- GlobalSelectionStep element, 93
- graphics, 48, 50

- IBM SPSS Decision Management
 - external rule references, 61
- IBM SPSS Decision Management for Claims , 37
- IBM SPSS Decision Management for Customer Interactions , 31
- ILOG rule references
 - IBM SPSS Decision Management , 61
- ILOG rules
 - downloading project metadata, 60
 - using in applications, 60
- ImmediateBatchScoring element, 98

- Input element, 270, 306, 319, 332, 353, 370, 385, 398, 410, 430, 446, 460
- Inputs element, 3, 102
- InteractionPoint element, 124, 143, 152, 219, 258, 417
- InteractiveBuild element, 176
- InteractiveQuestions element, 124
- InterfaceControl element, 3, 89
- InterfaceFeature element, 100
- InterfacePages element, 90
- InvalidCharReplace element, 285

- Japanese language, 42

- language support, 42
 - scoring parameters, 27
- legal notices, 466
- LocalRuleValueSource type, 285
- look and feel, 48

- Mapping element, 72, 111, 118, 174, 190, 203, 216, 219, 237, 255, 269, 305, 318, 331, 352, 369, 384, 397, 410, 429, 445, 459
- MatrixCombine type, 287
- Member element, 74, 139
- MemberDetails element, 239
- message text, 42, 45
- MinMaxPropensity element, 223
- modeling application example, 27
- ModelInputs element, 174

- NamedRange element, 280
- NumberOfInputFields element, 284

- ObjectiveFunction element, 149
- ObjectReference element, 357, 462
- OnBlankRows element, 282
- Optimization element, 3, 148
- Options element, 222
- OtherDataSet element, 112
- Output element, 271, 307, 320, 333, 354, 371, 386, 399, 411, 431, 447, 461
- OutputAttribute element, 16, 151
 - model output, 17–18, 23–24
 - prioritization outputs, 22
 - rule output, 17–18, 23–24
- OutputValue element, 433

- Parameter element, 179, 224
- PevTable type, 288
- PlanningSection element, 341
- PredictiveApplication element, 3, 77
- PredictiveModelSection element, 340
- Primary element, 309
- PrimaryDataSet element, 104

-
- PrioritizationOptimization type, 289
 - Property element, 148
 - PropertyValue element, 147

 - QueryText element, 125

 - RealTimeScoring element, 99
 - RecordSelection element, 217
 - ReferencedRuleModelValueSource type, 290
 - ReferencedValue element, 448
 - ReferencedDimensionHierarchy element, 101
 - Remainder element, 359, 464
 - Report element, 3, 154
 - ReportStep element, 99
 - Row element, 413
 - RowRule element, 400
 - Rule element, 258–259, 286
 - rule references
 - IBM SPSS Decision Management , 61
 - RuleModelReference element, 291
 - RuleObject element, 449
 - rules
 - external, 60
 - ILOG, 60
 - reusing, 60
 - shared, 60
 - rules-only application example, 30

 - SASFileTable type, 293
 - ScheduledBatchScoring element, 98
 - schema, 4
 - schema elements, 3
 - Score element, 206
 - scoring, 54
 - localizing parameters, 27
 - prompting for parameters, 27
 - scoring output
 - configuring for deployment, 16–18, 22–24
 - screen text, 42, 46
 - Secondary element, 322
 - Segment element, 355
 - selectedCognosObject element, 226, 275
 - SelectedOutput element, 219
 - Selection element, 129, 140, 256
 - Selections element, 175, 204
 - SelectionSection element, 339
 - SelectionUsed element, 179, 206, 224
 - Simulate element, 227
 - SkipHeaderChars element, 285
 - SourceDataServerCredentials element, 166, 182, 196, 209, 229, 245
 - SourceDataSet element, 167, 183, 196, 209, 230, 248
 - SpecialVariableReference element, 101
 - SpssFileTable type, 294
 - StartTimestamp element, 142, 416
 - style sheets, 48

 - Table element, 69, 107, 115, 170, 187, 200, 213, 234, 252, 266, 302, 315, 328, 349, 366, 381, 393, 406, 426, 442, 456
 - TargetDataServerCredentials element, 221
 - TargetDataTable element, 220
 - Tasks element, 3, 156
 - template, 4
 - terminology, 42, 47
 - Test element, 243
 - Threshold element, 463
 - TopN element, 223
 - TopNPercent element, 223
 - trademarks, 467
 - typeArbitrationRule type, 294
 - typeCurrentStateReportItem type, 334
 - typeDataSetExpression type, 336
 - typeDecisionHierarchyDefineStep type, 338
 - typeDecisionRule type, 342
 - typeExpressionRule type, 359
 - typeMatrixRule type, 373
 - typeMemberSelection type, 414
 - typeModelingDefineStep type, 419
 - typeRandomRule type, 420
 - typeRulesManagementDefineStep type, 433
 - typeThresholdRule type, 434

 - user interface text, 42
 - UserId element, 166, 182, 196, 209, 222, 230, 245

 - Value element, 76, 132, 146–147, 238, 241, 247, 272, 277
 - ValueOutput element, 358–359, 464–465
 - ValueSource element, 127, 136
 - Variable element, 125, 134
 - VariableReferenceBoundary type, 465
 - VariableValue element, 75, 146, 238, 240

 - WorksheetIndex element, 281
 - WorksheetName element, 281

 - XML application template, 4
 - examples, 27, 30–31, 37
 - XML schema elements, 3
 - XML schema elements, 3
 - XML template, 4
 - XSD schema, 4