



IBM Software Group

WebSphere® Process Server V6.1

New function in WebSphere Process Server V6.1



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This presentation details the new functions and enhancements for WebSphere Process Server version 6.1.

Goals

- Introduce WebSphere Process Server enhancements with V6.1
- At the end of the presentation you should be able to:
 - ▶ Identify the new features available in the V6.1 release of WebSphere Process Server
- Prerequisites to understanding this presentation
 - ▶ Knowledge of V6.0.2 WebSphere business process integration environment

The focus of this presentation is on the new features and enhancements to WebSphere Process Server version 6.1. This presentation starts with an overview of the differences between version 6.0.2 and version 6.1, therefore an understanding of version 6.0.2 is required. Each slide lists and discusses the V 6.0.2 product, the new features and enhancements in V 6.1 and the benefits resulting from the changes. Then details about each of these new features and enhancements are discussed.

Agenda

- WebSphere Process Server features update
 - ▶ Relationships enhancements
 - ▶ Business object map enhancements
 - ▶ Business rules enhancements
 - ▶ Event sequencing enhancements
- Summary

The new features for the WebSphere Process Server are grouped into functional themes. Each of these functional groups contains several new and enhanced features. There is a detailed description of each feature at an overview level, then additional details are described as well.

Relationships enhancements

Existing 6.0.2	<ul style="list-style-type: none"> Users can only query relationship data base on a particular instance ID.
New 6.1	<ul style="list-style-type: none"> Three new relationship service APIs (based on relationship name, relationship and role name, relationship and a list of role names)
Benefits	<ul style="list-style-type: none"> Provides the ability to query relationship runtime tables for a collection of instance data and retrieve all of the relationship data for a particular relationship or relationship/role.



The first enhancement is the relationships enhancements in version 6.1. In previous releases of WebSphere Process Server, you can only query relationship data based on a particular instanceID. This is sufficient data correlation during event processing, but does not work well for other purposes, such as generating reports, or when you need to retrieve relationship instance data for a particular relationship.

This update introduces three new APIs for relationship runtime data retrieval based on Relationship name, Relationship and Role names, and Relationship and a list of Role names.

Relationships service APIs

- Used to create and manipulate relationship instance data.
- Take DataObject as a parameter.
 - ▶ Can be an SDO DataObject or a BusinessGraph
- All the relationship APIs are public
- For more details, consult the WebSphere Process Server information center

The relationship service APIs are used to create and manipulate the relationship instance data. They take DataObject as a parameter. This DataObject can be an SDO DataObject or a BusinessGraph. The relationship APIs are able to deal with both of these. All the relationship APIs are public. For more information about using these APIs, consult the WebSphere Process Server Information Center.

Relationships enhancements

Existing 6.0.2	<ul style="list-style-type: none"> ▪ maintainIdentityRelationship() API had several known problems and limitations
New 6.1	<ul style="list-style-type: none"> ▪ maintainIdentityRelationship() API is deprecated ▪ Introduction of new correlate() APIs <ul style="list-style-type: none"> correlate() correlateFromComposite() correlateToComposite()
Benefits	<ul style="list-style-type: none"> ▪ New correlate() APIs fix these known problems and add enhanced function to the relationship service



The next Relationships enhancement is the introduction of a new API.

In previous releases there were some known problems and limitations with the way the maintainIdentityRelationship() API behaved, especially in the area of error handling. It was decided to deprecate this API and introduce the new correlate() APIs in its place. It is important to note that this change does not affect existing deployed applications. New applications will need to use the new APIs.

Correlate() APIs

- Existing deployed applications still work with these changes
- `maintainIdentityRelationship` in existing deployed modules can be used in conjunction with the new APIs
- New exceptions added to indicate a not valid state
- For more details, consult the WebSphere Process Server V6.1 Information Center

This presentation does not cover details of APIs; however a few key points to note about the new `correlate()` APIs are shown here. Most important is that any existing deployed applications that use the `maintainIdentityRelationship()` API still works in WebSphere Process Server version 6.1. The `maintainIdentityRelationship()` APIs can coexist with the new `correlate()` APIs; however new applications should use the `correlate()` APIs. There are also some new exceptions that have been added with `correlate` to indicate not valid states that previously were not flagged as errors and sometimes resulted in not valid actions or inconsistent behavior. For more details about the `correlate()` APIs, consult the WebSphere Process Server version 6.1 Information Center.

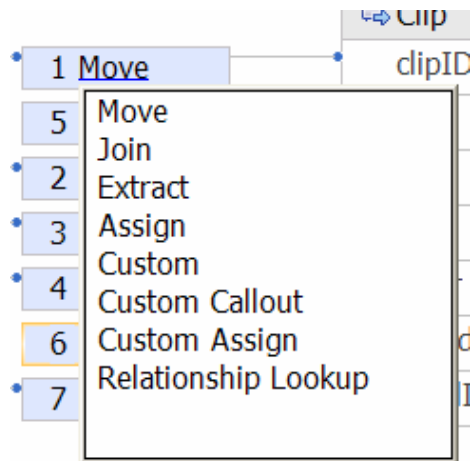
Business object map enhancements

Existing 6.0.2	<ul style="list-style-type: none"> No transformations for relationship lookup; have to use custom transform (Java snippet)
New 6.1	<ul style="list-style-type: none"> Support for relationship lookup transformation in the business object mapper Relationship lookup transformation can be specified between business object properties
Benefits	<ul style="list-style-type: none"> No custom transform necessary.



The next area with new function in version 6.1 is Business Object Maps. This update enables a new transformation in the Business Object Mapper for correlating Business Object properties using the new Relationship lookup transformation. In previous releases of WebSphere Process Server, the Business Object Mapper allowed Relationship transformations, but they were only supported through using a custom transform and then coding a Java snippet to actually do the lookup. Version 6.1 provides a new RelationshipService API and support for the Relationship Lookup transformation in the Business Object Mapper. This relationship lookup can be used during transformation of ASBOs to GBOs (or, directly from ASBOs to other ASBOs).

Business object map enhancements details



- New relationship lookup transformation available in business object mapper
- Use for static data lookup such as telephone area codes, state codes, country codes

In WebSphere Process Server V6.0.2 the Business Object Mapper allows Relationship transformations, but they support dynamic identity Relationships only -- in other words, using the `maintainIdentityRelationship()` API. Correlating "static" data such as telephone area codes or state codes was done by writing Java code to invoke a set of `RelationshipService` APIs through the custom transformation in the Business Object Mapper. This enhancement provides a new Relationship Lookup transformation in the Business Object Mapper.

Business rules enhancements

Existing 6.0.2	<ul style="list-style-type: none"> ▪ Custom business rule management clients not possible; only business rule manager supported
New 6.1	<ul style="list-style-type: none"> ▪ Public API added for business rules management ▪ Users can build custom management clients with many of the same capabilities as the business rule manager
Benefits	<ul style="list-style-type: none"> ▪ When used with other APIs, complete management clients can be built ▪ Allows for management of business processes, human tasks, and business rules through a single application

The business rules support for WebSphere Process Server V6.1 has been enhanced with a new public API for business rules management. The public business rule management APIs can be used for building custom management clients which have many of the same capabilities as the Business Rule Manager. These APIs can be used along with other APIs to build complete management clients where business processes, human tasks, and business rules can all be managed through a single application.

New business rules management APIs

- APIs can be used to
 - ▶ query business rule groups by name, namespace, custom properties
 - ▶ Modify business rule group operation selection table
 - ▶ Add and delete rules inside a ruleset
 - ▶ Add or delete conditions and actions in decision tables
- APIs must be used in an application installed on WebSphere Process Server
- Use with other APIs to build complete management clients
 - ▶ manage business processes, human tasks, and business rules through a single application.

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New function

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Through the business rule management APIs, business rule groups can be queried based on the name, namespace, or custom properties. Modifications can then be made to the business rule group operation selection table to change which rules are active, or changes can be made to templated values within rulesets and decision tables. Inside a ruleset, rules can be added or deleted. In decision tables, conditions and actions can be added or deleted.

The business rule managements APIs must be used in an application installed on WebSphere Process Server. The APIs do not provide a remote interface; however, they can be wrapped in a façade which is then exposed over a specific protocol for remote execution. As stated on the previous slide, these APIs can be used along with other APIs to build complete management clients where business processes, human tasks, and business rules can all be managed through a single application.

Business rules enhancements

Existing 6.0.2	<ul style="list-style-type: none">▪ No properties for business rule groups
New 6.1	<ul style="list-style-type: none">▪ Addition of properties for business rule groups
Benefits	<ul style="list-style-type: none">▪ Better management of business rule groups



New in version 6.1 are business rule group properties. Business rule group properties are intended to be used for management of business rule groups.

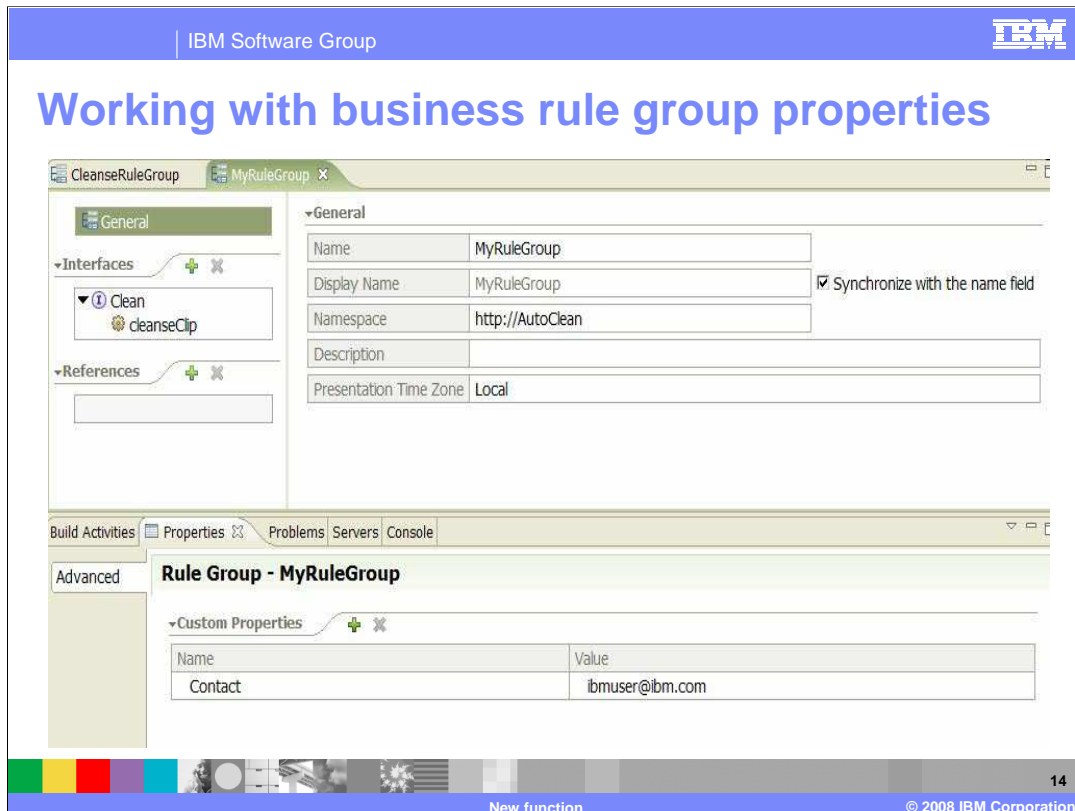
Business rule groups properties

- Two types of properties – system properties and user-defined properties
- Used for management of business rule groups
- Defined in WebSphere Integration Developer, modifiable in business rules manager
- Can be queried through business rules manager and the public business rules management API
- Can hold customer-specific information
- Number of user properties that you can define is unlimited

There are two types of Business Rule Groups properties; system properties, which are IBM-use only and read-only, and user-defined or 'custom' properties which are read-write. Custom properties names and values are case-sensitive.

Business Rule Groups properties are defined in WebSphere Integration Developer but are modifiable in the Business Rules Manager.

You can use custom properties on business rule groups for searches in order to retrieve subsets of business rule groups that you want to view and modify. You add new custom properties, delete or modify existing properties through the editing pages of business rule groups. The number of custom properties on a business rule group is unlimited.



This screen capture shows how you can add and delete custom properties for your business rule groups in WebSphere Integration Developer V 6.1. The business rule group editor is shown in edit mode. A new business rule group called “MyRuleGroup” has been added. At the bottom, in the properties tab, the system properties (which are read-only) and the custom properties are shown. A new custom property called “Contact” has been added and the value is an e-mail address. It is important to note that the business rules group properties names and values are case sensitive.

More about business rule group properties

- Cannot add properties to business rule groups created in previous (6.0) releases.
- Business rule group properties are added and deleted within WebSphere Integration Developer V6.1
- Business rule group properties are modified through the business rules manager (or public business rules management API)



It is important to note that the business rule group properties are only available to business rule groups that are created with WebSphere Integration Developer V6.1. When viewing a business rule group that was created before version 6.1, only artifact information is shown in the 'Properties' tab in WebSphere Integration Developer . The new custom properties cannot be added to business rule groups that were created using WebSphere Integration Developer V6.0.

Another point to remember is that the business rule groups properties are added and deleted in WebSphere Integration Developer , but they can be modified through the business rules manager.

Business rules enhancements

Existing 6.0.2	<ul style="list-style-type: none"> Cloudscape® is the default database type for a stand-alone profile. The selector and business rule group components do not use the common database when Cloudscape is selected.
New 6.1	<ul style="list-style-type: none"> Business rules and selectors are set to use the CommonDB for all supported database types on all platforms, including cloudscape. A separate Cloudscape database is not used for the artifacts.
Benefits	<ul style="list-style-type: none"> Business rules and selectors use a common repository to store the different artifacts across all platforms and database types.

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New function

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In version 6.0.2, when Cloudscape was selected as the CommonDB database type, a separate Cloudscape database was used to hold the Business Rules artifacts rather than the CommonDB database. This differentiation has been removed in version 6.1, and all business rules and selectors artifacts are now kept in the CommonDB for all supported database types on all platforms. A separate Cloudscape (or Derby, in V6.1) database for these artifacts is no longer used.

There are migration considerations for version 6.1 for those who used the Cloudscape database in versions 6.0.1 or 6.0.2. The migration is supported; see the Migration presentation for version 6.1 for details.

Business rules manager enhancements

Existing 6.0.2	<ul style="list-style-type: none">Business rule groups do not have custom properties, description field or display names
New 6.1	<ul style="list-style-type: none">User-defined properties, description field and display names for business rule groups are supported in the business rules manager
Benefits	<ul style="list-style-type: none">User-defined properties, display names and description fields are accessible through the business rules manager



The User-defined properties, Display Names and Description field are all added for Business Rule Groups in the Business Rules Manager

Display names and description fields for rule groups

- Description field is used to support the documentation capabilities of Modeler V6.1
- Display names for rule groups supports Modeler V6.1
 - ▶ Display names can be any string value with special characters
- Display names for rule groups not required to be unique inside business rule artifacts of same type
- Display names used everywhere name values appear

The description field for Rule Groups is new in version 6.1, and supports the documentation capabilities that are new in Modeler version 6.1. Display names for Rule Groups are also introduced in release 6.1 to support Modeler adapting the free-form names of business rule artifacts. The display names replace the current name values of Rule Groups and are used everywhere the name values are currently shown, including the left navigator pane, and when the artifacts are displayed in detail. The display names for Rule Groups are not required to be unique inside the business rule artifacts of the same type (meaning business rule groups). Names of the business rule artifacts are still required to be unique in any use cases.

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Business rules manager support for business rule group properties

Welcome admin | Logout | Search | Help IBM

Edit Mode: MyRuleGroup - Business Rule Group

Save Cancel Messages:

General Information

Display Name	<input type="text" value="MyRuleGroup"/>	<input checked="" type="checkbox"/> Synchronize with the name
Last Published	Feb 7, 2008 17:06 (Local Time)	Status *Original
Description	<input type="text"/>	

Properties

Click the Add button to add properties for the rulelogic.

Name	Value	Action
<input type="text" value="Contact"/>	<input type="text" value="ibmuser@ibm.com"/>	<input type="button" value="Delete"/>

Business Rules Resources	Description	Action
<input type="checkbox"/> <input type="checkbox"/> cleanseClip		<input type="button" value="Edit"/>

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New function © 2008 IBM Corporation

This screen capture shows the business rules manager page for rule groups for a version 6.1 rule group, including the custom properties. Note the property named Contact with the value that was created in a previous screen capture from WebSphere Integration Developer. From this panel in the business rules manager, you can edit the display name by clearing the “Synchronize with the name” box. You can also add a new property, edit the existing property, or delete the existing property. If the business rule group displayed has no properties defined, the properties section is not displayed.

Note that the description field is not editable, but the display name is editable if you uncheck the “Synchronize with the name” check box. When “Synchronize with the name” is checked, the Display name is equivalent to the name of the rule group.

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Business rules manager with pre-6.1 rule group

Welcome | Logout | Search | Help

CleanseRuleGroup - Business Rule Group

Back

General Information

Last Published	Sep 26, 2007 15:12 (Local Time)	Status	Original
Description			

Business Rules Resources	Description	Action
CleanseClip		Edit

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This slide shows the business rule group page with a pre-6.1 version business rule artifact. Notice that there is no Edit button and no Properties section, but there is support for the description field.

Display names for rulesets and rules

- Description field already exists for WebSphere Integration Developer 6.0.2
 - ▶ Editable in the edit mode of ruleset in BRM
- New in V6.1 is description field for rules and template parameters, and display names for rulesets and rules
- Display names for rulesets and rules not required to be unique inside business rule artifacts of same type

The description field for Ruleset already exists in version 6.0.2 and is editable in the edit mode of ruleset. New for version 6.1 is the description of rules and of template parameters. The description field supports the documentation capabilities that are new in Modeler for version 6.1. Display names of Rulesets and Rules are introduced in release 6.1 to support Modeler adapting the free-form names of business rule artifacts. The display names replace the current name values of Rulesets and Rules. The display names for Rulesets and Rules are not required to be unique inside the business rule artifacts of the same type (meaning business rule groups, rulesets, decision tables, or rules). Names of the business rule artifacts are still required to be unique in any use cases. Note that display names are used everywhere the name values are shown, including when artifacts are displayed in detail.

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Description and display name fields for rulesets

Welcome | [Logout](#) | [Search](#) | [Help](#)

> CleanseRuleGroup > cleanseClip

Edit Mode: cleanseClip - Rule Set

Messages:

General Information

Display Name	<input type="text" value="cleanseClip"/>	<input type="checkbox"/> Synchronize with the name
Last Published	Sep 28, 2007 10:48 (Local Time)	Status *Original
Description	<input type="text"/>	

Rules

Name	Display Name	Rule	Description	Action
<input type="text" value="Rule2"/>	<input type="text" value="Rule2"/>	If the incoming clip size is: <input type="text" value="small"/> set the clip size to standard value: <input type="text" value="small"/>	<input type="text" value="Rule2Description"/>	<input type="button" value="Delete"/> <input type="checkbox"/> Synchronize Name
<input type="text" value="Rule3"/>	<input type="text" value="Rule3"/>	If the incoming clip size is: <input type="text" value="regular"/> set the clip size to standard value: <input type="text"/>	<input type="text" value="Rule3Description"/>	<input type="button" value="Delete"/> <input type="checkbox"/> Synchronize Name
<input type="text" value="Rule4"/>	<input type="text" value="Rule4"/>	If the incoming clip size is: <input type="text" value="medium"/> set the clip size to standard value: <input type="text"/>	<input type="text"/>	<input type="button" value="Delete"/> <input type="checkbox"/> Synchronize Name

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This slide shows the business rule set support for description and display name fields. The description field for rulesets already exists and is editable in the Edit more for Ruleset. The description field for individual rules is new and you can edit it as well in this same screen. The display names for Rules and Rulesets are editable in edit mode. The Synchronize Name check box on the right is cleared when using display names; when that check box is selected, the display name is disabled and is set back to the name.

Business rules manager enhancements

Existing 6.0.2	<ul style="list-style-type: none">▪ No search capability for business rule groups
New 6.1	<ul style="list-style-type: none">▪ Add search capability for business rule groups
Benefits	<ul style="list-style-type: none">▪ Search for rule groups by name / display name, target namespace, custom properties

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New function

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The search capability for Business Rule Groups is added in version 6.1. This Search function can be used to quickly locate or narrow a specified set of business rule groups that you want to work with. There is a new search page for business rule groups.

Search page for business rule groups

- Four query operators
 - ▶ Is equal to, is like, is not equal to, is not like
- Can use wildcard characters for is like and is not like (% for multiple characters, _ for one character)
 - ▶ Must follow SQL syntax
- Can select user-defined properties for the search context
 - ▶ Can combine with “And”, “Or”, and “Not”

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New function

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In each search data field, you can select one of four query operators; is equal to, is like, is not equal to, is not like.

Is like and is not like can contain wildcard characters, such as percent to specify a wildcard for any number of characters and underscore to specify a single wildcard character. The wildcards must follow SQL syntax.

You can also select from the user-defined properties to add to the search context, and you can combine these properties by logical operators “And”, “Or”, and “Not”. When you add, delete, or modify properties on the Search page, it applies only to the Search context. It does not affect the properties of any rule object inside the Business Rules Manager.

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Search page in business rules manager

Welcome admin | [Logout](#) | [Search](#) | [Help](#)

Search for Business Rule Groups

Messages:

Search Data
 To search for business rule group(s), enter its name, namespace, and/or properties. The entered value(s) can contain wildcard characters: the percent character(%) to specify a wildcard for any number of characters and the underscore character (_) to specify a single character wildcard.

Name is equal to

Target Namespace is equal to

Click the Add button to add properties for search.

Logical Operator	Name	Query Operator	Value	Action
	<input type="text" value="Contact"/>	is equal to <input type="button" value="v"/>	<input type="text" value="ibmuser@ibm.com"/>	<input type="button" value="Delete"/>

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New function © 2008 IBM Corporation

The new search page for business rule groups is shown. This search page allows you to create a search query based on name, target namespace, and custom properties.

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Search results

Welcome | Logout | Search | Help

[Publish and Revert](#)
[Business Rule Gro](#)
[CleanseRuleGroup](#)
[MyRuleGroup](#)

Search for Business Rule Groups

Back Search Messages:

Search Data
To search for a business rule group, enter its name and namespace.

Name: is like
 Target Namespace: is equal to

Click the Add button to add properties for search.

Search Results

Rule Groups	Status	Description
MyRuleGroup	Same as Local	This is my rule group description.

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New function © 2008 IBM Corporation

This is the search page with the results shown. In the Search Results section, the results of your search are listed. You can click on the rule group to open the Business Rule Group page for that rule group.

One thing to notice is the “status” field in the search results; there are four kinds of status returned from the runtime. Let’s review them on the next slide.

Search results status types for rule groups

- “Same as Local” – a copy of result rule group already exists in BRM and is identical to the result rule group.
 - ▶ no action needed
- “Modified from Runtime” – a copy of result rule group already exists in BRM but another user session modified the master copy.
 - ▶ BRM automatically updates the local copy to get new modifications from the runtime
- “Modified in Local” – a copy of result rule group exists in BRM and has been modified by this user
 - ▶ BRM uses the local copy for any actions you take
- “New to Local” – no copy of the result BRG exists in BRM
 - ▶ BRM creates a local copy of the result rule group and displays it on the Navigation panel as well

There are four types of status that can be returned with the search results for rule groups:

- “Same as local” means a copy of the resulting rule group already exists in the business rule manager and is the same as the resulting rule group.
- “Modified from Runtime” means a copy of the resulting rule group already exists in Business Rule Manager but another user session has modified the master copy
- “Modified in Local” means a copy of the resulting rule group already exists in Business Rule manager and you have modified it
- “New to Local” means there is currently no copy of the resulting rule group in the Business Rule Manager.

Business rules manager enhancements

Existing 6.0.2	<ul style="list-style-type: none">Business Rules Manager installed only through Administrative Console or JACL file
New 6.1	<ul style="list-style-type: none">Additional installation method through Administrative Task (<code>\$AdminTask_configBusinessRulesManager</code>)
Benefits	<ul style="list-style-type: none">Additional installation method

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New function

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In previous versions, the Business Rules Manager can be installed through a JACL file or through the administrative console. Starting with version 6.1, Business Rules Manager can also be installed through a new administrative task, `configBusinessRulesManager`.

Install business rules manager - \$AdminTask

- `$AdminTask configBusinessRulesManager`
`{-serverName <server_name> -nodeName`
`<node_name> -contextRoot <context_root>}`

Or

- `$AdminTask configBusinessRulesManager`
`{-clusterName <cluster_name> -contextRoot`
`<context_root>}`
- Be sure to do an \$AdminConfig save to save the configuration
- `$AdminTask help configBusinessRulesManager` to learn more about the parameters

These are the commands you use to install Business Rules Manager using the Administrative Task. Remember that you can also install through the Administrative Console, or using a JACL file.

Event sequencing enhancements

Existing 6.0.2	<ul style="list-style-type: none"> ▪ Limitations for BPEL and BSM processes recommended no event sequencing for non-initiating tasks, but no validation in WebSphere Integration Developer for event sequencing
New 6.1	<ul style="list-style-type: none"> ▪ Addition of validation within WebSphere Integration Developer to flag as errors <ul style="list-style-type: none"> ▶ any attempt to use event sequencing with non-initiating tasks in BPEL or BSM processes ▶ any attempt to use event sequencing with a component that has more than one initiating receive ▪ Performance enhancements
Benefits	Better usability and performance

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New function

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In version 6.0.2, there was no validation within WebSphere Integration Developer for Event Sequencing limitations against BPEL and BSM processes. In version 6.1, the limitations still exist, and validation has been added to WebSphere Integration Developer so that a not valid use of event sequencing is flagged as an error at build time.

There are also performance improvements for Event Sequencing in version 6.1.

Summary

- WebSphere Process Server enhancements
 - ▶ Relationships enhancements
 - ▶ Business object map enhancements
 - ▶ Business rules enhancements
 - ▶ Event sequencing enhancements

In summary, this presentation reviewed improvements in Relationships that provide users with three new APIs for querying relationship runtime data based on Relationship name, Relationship and Role names, and Relationship and a list of Role names. Next was the new Relationship Lookup transform for Business Object Maps. Also covered were several enhancements to Business Rules, including a new API that allows you to create your own business rules manager client, and new properties for business rule groups. These items are also supported in the Business Rule Manager, which added support for the documentation capabilities of Modeler V6.1. The Business Rule Manager has also added another install option; the Business Rule Manager can now be installed through the WSADMIN task, in addition to using JACL or the Administrative Console. Validation has been added to Event Sequencing in WebSphere Integration Developer to flag error conditions in event sequencing specifications for BPEL and BSM processes. There are also performance improvements for Event Sequencing in version 6.1.

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