IBM Cúram Social Program Management

Cúram Intake Developer's Guide

Version 6.0.5

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Note
Before using this information and the product it supports, read the information in "Notices" on page 17

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Chapter 1. Introduction

1.1 Overview

Curam Intake provides functionality to support the following intake processes:

- application
- triage
- screening

Each of these processes can be used for capturing data about the client when they apply to an organization for benefits and/or services provided by that organization.

Configuring an application is covered in the Curam Intake Configuration Guide. Defining triage and screening, and the configurations required for each, is covered in this guide.

1.2 Purpose

This document provides an overview of the Cúram Intake development process. It details key elements such as the configurations required for screening and triage as well as the rule sets which need to be configured for running PCR, checking eligibility, selecting clients, and authorizing at the application case level.

1.3 Audience

This guide is intended to be used by architects and developers interested in configuring a custom Intake solution.

1.4 Prerequisites

The reader of this guide should be familiar with the guides listed in the table below. The reader should also be familiar with both the basic elements of Social Enterprise Management and the functionality available in Cúram Intake.

Table 1. Selected Reading

Document Name	Description
Cúram Intake Business Guide	This document provides a detailed overview of the Cúram Intake functionality.
Intake Configuration Guide	This guide describes the configuration options available through administration for Cúram Intake functionality.
Cúram Priority, Complexity, Risk Configuration Guide	This guide describes the configuration options available for Priority, Complexity, Risk processing.
Cúram Advisor Configuration Guide	This document describes Advisor configuration and development tasks related to the Advisor.
Inside Cúram Eligibility and Entitlement Using Cúram Express Rules	This document provides a comprehensive overview of how CER rules are used to determine eligibility and entitlement.
Cúram Rules Editor Guide	This document describes how to configure CER rules in the Rules Editor.
CER Reference Manual	This document describes the CER rules language, development and runtime features.

1.5 Chapters in this Guide

Defining Triage
This covers the configurations necessary for defining a triage.

Defining Screenings
This chapter covers the screening definition configuration options.

Configuring a Check Eligibility Rule Set
This covers the configuration of an eligibility check rule set.

Configuring a PCR Rule Set
This details the configuration necessary for a priority, complexity and risk rule set.

Configuring the Authorization Rule Sets
This chapter covers the configuration of the application authorization and client selection rule sets.

Chapter 2. Defining Triage

2.1 Introduction

Triage allows a case worker to quickly gauge a client's needs when they phone or visit by asking a core set of fundamental questions. The result allows the case worker to understand the client's situation in relation to the core needs. A triage can be performed by the case worker resulting in a list of suitable services, service providers, and programs to help meet the client's needs.

2.2 Setting up a Triage Definition

- Open the `XML` document which represents the intake process definition - see Appendix A.
- Create or locate an `XML` element `IndividualConfiguration` as a direct child of the `IntakeProcess` element.

  Note: Only one `IndividualConfiguration` element may exist in the document.
- Create or locate an `XML` element `Triage` as a direct child of the `IndividualConfiguration` element previously located.
- On this element the following attributes can be specified which will define the Triage process:

Table 2. Triage Attributes.

This table describes the attributes for a triage definition:

Attribute Name	Type	Purpose
DataStore	String	This attribute specifies the name of the datastore schema to be used for the IEG script that will be executed to capture the details of the triage.
RuleSet	String	This attribute specifies the name of the CER rule set to be used to process the answers from the script into recommendations for programs and services.
RuleSetClass	String	This attribute specifies the name of the CER rule class in the CER rule set which is used to calculate the recommendations of the triage.
ScriptName	String	This attribute specifies the name of the IEG script which will be used to capture the details of the triage.
ScriptType	String	This attribute specifies the type of IEG script which will be used to capture the details of the triage.
ScriptVersion	String	This attribute specifies the type of IEG script which will be used to capture the details of the triage.

2.3 Adding Urgent Alerts to the Rule Set

To output an urgent alert from the CER rule set, the rule class defined in the triage definition should have an attribute named `alertMessages`. This attribute has as its type a list of rule classes of type `AlertMessage`. Each `AlertMessage` which is calculated and passed into this list will appear as an urgent alert on the Triage Result page in the application.

2.4 Recommending Services

To recommend a service from the CER rule set, the rule class specified in the triage definition should have an attribute named services. This attribute has as its type a list of rule classes which subclass the `AbstractService` type. Each `AbstractService` which is calculated and passed into this list will appear as a recommended service on the Triage Result page in the application.

2.5 Recommending Programs

To recommend a program from the CER rule set, the rule class defined as part of triage definition should have an attribute named `programs`. This attribute has as its type a list of rule classes which subclass the type `AbstractProgram`. Each `AbstractProgram` which is calculated and passed into this list will appear as a recommended program on the Triage Result page in the application.

Chapter 3. Defining Screenings

3.1 Introduction

Screening allows a client to determine if they are potentially eligible for one or more programs based on a set of high level, guided questions. Potential eligibility for the selected programs is determined by running eligibility rules against the client's responses to the questions.

3.2 Setting up a Screening Definition

- Open the `XML` document which represents the intake process definition - see Appendix A.
- Create or locate an `XML` element `IndividualConfiguration` as a direct child of the `IntakeProcess` element. Only one `IndividualConfiguration` element may exist in the document.
- Create or locate an `XML` element `Screening` as a direct child of the `IndividualConfiguration` element previously located. There can be as many `Screening` elements as are required.
- On this element the following attributes can be specified which are used to define the screening process.

Table 3. Screening Attributes.

This table describes the attributes that can be set for a screening definition.

Attribute Name	Type	Purpose
Type	Code Table Entry	This attribute specifies the category of screening. The category is an entry from the ScreeningCategory code table. Only one screening script can be specified for each screening category, and as such this is a unique attribute.
DataStore	String	This attribute specifies the name of the data store schema to be used for the IEG script that is executed to capture the details of the screening.
RuleSet	String	This attribute specifies the name of the CER rule set to be used to process the answers from the screening script into recommendations for programs.
RuleSetClass	String	This attribute specifies the name of the CER rule class in the CER rule set which is used to calculate the recommendations of the screening.
ScriptName	String	This attribute specifies the name of the IEG script which is used to capture the details of the triage.
ScriptVersion	String	This attribute specifies the type of IEG script which will be used to capture the details of the triage.

3.3 Adding Urgent Alerts to the Rule Set

To output an urgent alert from the CER rule set, the rule class defined in the screening definition should have an attribute named `alertMessages`. This attribute has as its type a list of rule classes of type `AlertMessage`. Each `AlertMessage` which is calculated for this list appears as an urgent alert on the Triage Result page in the application.

3.4 Recommending Programs

To recommend a program from the CER rule set, the rule class defined in the screening definition should have an attribute named `programs`. This attribute has as its type a list of rule classes which subclass the type `AbstractProgram`. Each `AbstractProgram` which is calculated into this list will appear as a recommended program on the screening result page in the application.

3.4.1 Specifying whether Programs are Available Internally or Externally

Each program that is output from the screening may be available internally or externally. If the program is available internally, then a link to start the application script is displayed; if the program is available externally, then a link to refer the client to the external agency will be displayed. Screening results behaviour can be defined to specify whether specific programs are available internally or externally. To achieve this:

- Open the `XML` document which represents the intake process definition.
- Locate the `XML` element Screening which is to be defined.
- For each program that the intake process will support, create an element ProgramType as a direct child of the Screening element.

Table 4. ProgramType Attributes for a Screening.

This table describes the attributes that can be set for the `ProgramType` element for a screening.

Attribute Name	Type	Purpose
ProgramType	Code Table Entry	This attribute should contain an entry from the code table 'ProgramType'. This is a code table which specifies a program type, e.g. medical assistance. This attribute is mandatory and must be specified.
Availability	String	This attribute should contain the value 'internal' if the program is available internally or 'external' if the program is available from a different agency.

Chapter 4. Configuring Check Eligibility

4.1 Introduction

The check eligibility process allows the user to execute a rule set to determine eligibility for programs applied for on the application. The eligibility rule set outputs a rules decision which can be displayed on the Eligibility Checks tab after execution. This document outlines the configurations required for this process.

4.2 Configuring an Application Case for Eligibility Checks

There are three configuration options on the application case that drive the check eligibility process.

- Eligibility Check Rule Set - the rule set used to check program eligibility. If not specified, the Check Eligibility action item is hidden from the application case tab action menu and the Eligibility Checks tab is not included on the application case
- Eligibility Check Strategy - the strategy to be used when checking a client's eligibility for programs associated with an application. This is only applicable when the Eligibility Check Rule Set option is specified. The three options available here are:
  - All
  - Programs Applied for Only
  - User Choice
- Results Display Page - this is a dynamic `UIM` page used to display the eligibility check results. If not specified, no information is displayed on the drop down panel of the check eligibility results page.

The user must configure the eligibility check rule set and results display page. Instructions for doing this are outlined in the following sections.

4.3 Configuring the Eligibility Check Rule Set

The eligibility check rule set must contain a rule class for each program on the application case for which eligibility can be checked. Each rule class must extend the abstract rule class, `AbstractApplicationCaseProgram`, in the `ApplicationCaseCheckEligibilityRulesInterface` rule set. The name of the rule class must correspond to the program type reference of the configured program. In the example below, the rule class is called ProgramOne, therefore the program reference must also be called ProgramOne.

Example

```
<Class extends="AbstractApplicationCaseProgram"
 extendsRuleSet="ApplicationCaseCheckEligibilityRulesInterface"
 name="ProgramOne ">
```

Each rule class must implement rules to populate the entitlement and decision rules attributes. If an explanation of the eligibility check needs to be displayed, it's necessary to add display rules to achieve this. These can be added to the rule class. An annotation of `<Display/>` is required on any rules attributes to be displayed for explanation purposes on the results display page - see the `Inside Cúram Eligibility and Entitlement Using Cúram Express Rules` guide for more information on this.

4.4 Configuring the Results Display Page

This results display page should invoke the façade method `ApplicationCaseCheckEligibility.viewCheckEligibilityDisplayRules` to retrieve the display rules. The dynamic `UIM` page should contain the page parameter `appCaseEligibilityResultID` which should be passed into the façade method. The rules are returned from the façade method as `XML` in an attribute called `displayXML`. This attribute is used on the dynamic `UIM` page for displaying the data required for explanation purposes. The individual elements to be displayed to the user are retrieved using extended path expressions in the dynamic `UIM` page.

Example

If a display attribute called `Income` has been added to our rule set, retrieval of this information would be achieved by adding the following `XML` to the display rules page:

```
<FIELD
 DOMAIN="CURAM_AMOUNT"
 LABEL="Field.Label.Income">
   <CONNECT>
     <SOURCE
       EXTENDED_PATH="/DecisionDetails/ProgramOne/Income"
       NAME="DISPLAY"
       PROPERTY="displayXML"
     />
   </CONNECT>
</FIELD>
```

The first item in the EXTENDED_PATH is always `DecisionDetails`, with the remainder of the path pointing to the attribute in the custom rule class.

Chapter 5. Configuring a PCR Rule Set

5.1 Introduction

This chapter provides an overview of the PCR rule set structure and details how a customer can create a PCR rule set. PCR rule sets are used to calculate a result for the priority, complexity, and risk rating for a case scenario. Each of the components which make up a PCR assessment is represented as an attribute in the PCR rule set. A rule can have an associated weighting which is added to the overall PCR calculation if it succeeds. The rules then determine the overall rating and classification of the case.

5.2 Configuring a PCR Rule Set

Each PCR Rule Set must contain a rule class which inherits from the AbstractPCR class. This rule class is the class which produces the PCR results to be displayed to the case worker.

To create a PCR rule class, first create the rule class using the CER editor, naming the rule class appropriately.

The usage of the PCRRuleSet rule class guarantees that the required attributes are available during rules execution. For more information on setting up rule sets see the `Cúram Express Rules Cookbook` for further details.

A PCR rule set must inherit from the PCRRuleSet and provide an implementation for each of the six abstract attribute within the defined rule set. The description attribute is inherited from the root rule class and each solution must also provide its own implementation of this attribute.

5.3 Mandatory Rule Attributes

Table 5. Mandatory Rule Attributes for PCR Rule Sets.

This table describes mandatory rule attributes to be used for PCR rule sets

Rule Attribute	Type	Purpose
caseID	Number	Specified case identifier attribute for which the PCR rules execution relates to.
description	String	This attributes represents the text defining the property description. The value that this attribute contains is a reference to one or more properties in a property file containing the actual text.
priorityRate	Number	This attribute is a calculated attribute representing the relative ranking of the case against a baseline to determine a timeline for response.
priorityReason	String	This attribute represents the text defining the property priority reason. The value that this attribute contains is a reference to one or more properties in a property file containing the actual text.

Table 5. Mandatory Rule Attributes for PCR Rule Sets (continued).

This table describes mandatory rule attributes to be used for PCR rule sets

Rule Attribute	Type	Purpose
complexityRate	Number	This attribute is a calculated attribute representing the ranking of a case against a baseline to determine the resource(s) required for a response.
complexityReason	String	This attributes represents the text defining the property complexity reason. The value that this attribute contains is a reference to one or more properties in a property file containing the actual text.
riskRate	Number	This attribute is a calculated attribute representing the relative ranking of a case against a baseline to determine its potential impact to the agency.
riskReason	String	This attributes represents the text defining the property risk reason. The value that this attribute contains is a reference to one or more properties in a property file containing the actual text.

5.4 Specifying Rule Set Properties Text

The rule set properties text is specified by creating an entry in a localized property file as follows:

- Create a property file, for example, PCRSample.properties.
- Add each entry to the property file that will be referenced by the Rule Class attributes. The value of each of these entries is the localized text to be displayed in the application. The following example outlines an example property entry in a PCRSample.properties file and how the property is referenced by a rule set attribute:

```
# This Properties file contains resource
strings for the Sample PCR Rule set.
 PCRSample.description=PCRSample
 PCRSample.samplePriorityReason=Sample Priority Reason

    <Attribute name="description">
      <type>
        <javaclass name="curam.creole.value.Message"/>
      </type>
      <derivation>
        <ResourceMessage
          key="PCRSample.description"
          resourceBundle="curam.pcrsample.rules.PCRSample"
        >
        </ResourceMessage>
      </derivation>
    </Attribute>
```

- Add the Properties file entry to the Resource Store by updating the 'Dynamic UIM' section of the Administration Application. In the above example, this entails adding a PCRSample.properties entry in the Dynamic UIM section of the administration application, along with a corresponding page ID, a resource store category, and a properties file.

Chapter 6. Configuring Authorization Rule Sets

6.1 Introduction

This chapter covers the rule sets used during authorization and the necessary configurations required by a custom solution.

6.2 Intake Rule Sets

There are two rule sets shipped out-of-the-box with Intake:

- ApplicationAuthorisationInterfaceRuleSet
- ClientSelectionInterfaceRuleSet

These provide flexibility to customers with regard to the strategies for program authorization, namely the determination of the programs to be authorized and the clients to be added to a product delivery as part of program authorization.

6.3 Determining the Programs to be Authorized

When authorizing at the application case level, the programs to be considered must be determined using rules. This is done via the `ApplicationAuthorisationInterfaceRuleSet` rule set.

6.4 Writing the Authorize Application Rule Class

The rule class for governing application authorization must extend from the abstract class `ApplicationAuthorisationInterfaceRuleSet.AbstractApplicationCase`. Here is a description of the attribute(s) inherited from `AbstractApplicationCase`:

Table 6. Abstract Attribute(s) To Be Implemented

Rule Attribute Name	Data Type	Description
programs	List of Program	The programs to be authorized on the application.

Program is an instance of the `ApplicationAuthorisationInterfaceRuleSet.Program` class. As it's optional for a product delivery to be created on authorization, `ApplicationAuthorisationInterfaceRuleSet.Program.primaryClient` is defaulted to null and `ApplicationAuthorisationInterfaceRuleSet.Program.additionalClients` is defaulted to an empty list.

A basic implementation might be the retrieval of all programs in a state of 'Pending' that are associated with the application case.

6.5 Determining the Clients to be Added to the Product Delivery

One of the configurations on a program is Client Selection Strategy. This can be one of the following:

- All
- User Selection
- Rules

The Rules strategy is governed by the `ClientSelectionInterfaceRuleSet` rule set.

6.6 Writing the Client Selection Rule Class

The rule class for governing client selection must extend from the abstract class `ClientSelectionInterfaceRuleSet.AbstractClients`. Here is a description of the attribute(s) inherited from `AbstractClients`:

Table 7. Abstract Attribute(s) To Be Implemented

Rule Attribute Name	Data Type	Description
primaryClient	Client	The primary client for the product delivery being created as a result of authorization.

Client is an instance of `ClientSelectionInterfaceRuleSet.Client`.

Appendix A. Intake Process XML Definition

This appendix provides a high level overview of the XML definition for an intake process.

A.1 Intake Process XML Definition

```
<IntakeProcess>

  <GlobalConfiguration>

  </GlobalConfiguration>

  <IndividualConfiguration>

    <Triage DataStore="Triage" RuleSet="SampleTriageRuleSet"
      RuleSetClass="Triage" ScriptName="Triage" ScriptType="Screening"
      ScriptVersion="V1"/>

    <Screening DataStore="Screening" RuleSet="SampleScreeningRuleSet"
      RuleSetClass="ScreeningResult" ScriptName="SampleScreening"
      ScriptVersion="V1" type="SC12345">

      <DisplayStatus status="SS12345"/>
      <DisplayStatus status="SS67890"/>

    </Screening>

  </IndividualConfiguration>

</IntakeProcess>
```

Appendix B. Intake Environment Variables

B.1 Application Properties

This appendix describes application properties for Intake. These may be administered through the Cúram system administration application - see the Cúram System Configuration Guide for more information.

Table 8. Intake Environment Variables.

This table contains Intake environment variables.

Property Name	Description	Default
curam.intake.map.default .zoom.level	This property is used to define the initial zoom level of the Google Maps display on the Service Provider screen. Zoom levels between 0 (the lowest zoom level, in which the entire world can be seen on one map) to 21+ (down to individual buildings) are possible.	11
curam.intake.map. default.center.latitude	This property is used to define the default latitude of the center of the Google Maps display on the Service Provider screen.	-89.40570831298828

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