IBM Cúram Social Program Management
8.0.0

IBM Cúram Data Mapping Editor Guide

IBM

Note

Before using this information and the product it supports, read the information in "Notices" on page 7

Contents

Chapter 1. Configuring with the Data Mapping Editor

Data mapping is the process by which data from the Cúram datastore is mapped into Cúram evidence entities. Data is mapped by the data mapping engine by using mappings that are configured in the data mapping editor. Mappings are created for a program on an intake application.

Introduction

Purpose

The purpose of this document is to describe how to use the Cúram Data Mapping Editor.

Audience

This guide is intended for individuals who are responsible for configuring data mappings.

Prerequisites

To better understand the topics covered in this guide, it is suggested that the reader has previously read the `Cúram Universal Access Guide`, `Using the Data Mapping Engine` guide and is familiar with the Cúram Data Store (CDS) and Cúram Dynamic Evidence.

Chapters in this Guide

The following list describes the chapters within this guide:

Data Mapping
This chapter introduces the concept of data mapping and what it is used for. It also explains how to create and release a mapping record for a program.

The Data Mapping Editor
This chapter details the various sections of the data mapping editor and how to move elements around the mapping workspace.

Creating Entity Mappings
This chapter details how to create entity mappings, how to add mapping conditions and explains why some mappings are not valid.

Data Mapping

Introduction

Data mapping refers to the process by which data from the Cúram Datastore (CDS) is moved or "mapped" into Cúram evidence entities. Data mappings are performed by the Cúram Data Mapping Engine using mappings configured in the visual "drag & drop" Cúram Data Mapping Editor (DME). Mappings are created for a program on an intake application. When an application is made for that program the configured mapping is used to determine how data should be mapped to the target system.

What Happens During a Mapping?

When an application is submitted online by a citizen, or internally by an agency worker, the answers to the questions provided in the application script are stored in the CDS and a Cúram case is created. The system can be configured to have this data mapped from the CDS into evidence entities on the Cúram case. In order for this to occur the system needs to know how attributes in the CDS entities should map to attributes of Cúram evidence entities.

Configuring a Mapping

Mapping configurations are created by selecting the Create Mapping row action from the application programs list. The New Data Mapping modal window prompts the user to enter an effective date for the mapping. The effective date of the mapping is the date from when the mapping configuration, once released, is active from. After the new mapping configuration has been saved it appears in the mappings list.

Editing a Mapping Configuration

Mapping configurations are edited by selecting the Edit row action from the program mappings list. This launches the Data Mapping Editor and from here the user can create entity and attribute mappings for the program application. The program mapping will remain in a status of 'in-edit' until it is released.

Releasing a Mapping Configuration

Mapping configurations are released by selecting the Release row action from the program mappings list. Once the mapping configuration has been released, the record status becomes 'released' and it is used by the system to perform mappings from the effective date specified. If the mapping being released has the same effective date as an already released mapping, the new mapping configuration takes precedence and supersedes the previous mapping configuration. A mapping configuration can not be edited once it has been released.

Deleting a Mapping Configuration

Program mappings are deleted by selecting the remove row action from the program mappings list. Once a program mapping has been deleted it is no longer available from the mappings list.

Maintaining Multiple Mapping Configurations

An agency may wish to change the mappings that occur over time. To cater for this, multiple program mappings can be created with different effective dates. This allows mapping configurations to change when the specified effective dates are reached.

The Data Mapping Editor

Introduction

The Cúram Data Mapping Editor is a visual "drag & drop" editor which allows a user to view CDS and evidence entities side-by-side on a mapping workspace. By drawing mapping lines between attributes on two respective entities, or between the entities themselves, the administrator creates a mapping rule between these attributes and entities. When an application is submitted, the data contained in the attribute captured in the CDS is mapped, or replicated, onto the corresponding evidence attribute. The value of the evidence attribute is then available for the case worker to view in the evidence workspace.

Once a program mapping has been created the editor is opened by selecting Edit from the program mappings list row action menu. The DME launches in a new top-level tab. The editor consists of the panels detailed in the following sections.

Title Bar

The Title Bar runs along the top of the main tab and displays the name of the Application and the Program.

Menu Bar

The Menu Bar runs directly underneath the Title Bar and displays menu icons, such as a Save button.

Information Panel

The Information Panel lies directly to the right of the Menu Bar. The Information Panel is a status panel displaying general information to the user.

Datastore Entity Tree

The Datastore Entity Tree is the leftmost of the three main panels that make up the editor. The editor reads the datastore schema configured for the application that the selected program is associated with and displays the entities in a hierarchical parent/child tree structure. This schema defines the Cúram Datastore that stores the application data for the client. The entity tree is used to select the datastore application data to be mapped to corresponding evidence using mapping definitions.

When initially opened, the tree will display all datastore entities, though child entities will have their attributes and their own child entities collapsed. Each item in the tree will contain the name of the entity and a representative entity icon on the left. Entities possessing child entities will additionally display a rightward facing arrow to the left of the entity icon. Clicking on the arrow will expand an indented list of child entities under the parent. This can be carried out recursively for all children of child entities. Clicking the arrow a second time will collapse the child entity list. Expand/collapse arrows are not present for entities that have no child entities. Entity attributes are not displayed in the Datastore Entity Tree.

Evidence Entity List

The Evidence Entity List is the rightmost of the three main panels that make up the editor. The panel works differently to the Datastore Evidence Tree. The primary difference is that only a list of top-level dynamic evidence entities are displayed. It is not possible to expand these entities in the list if they contain child entities. The child entities will however become accessible once the parent is dragged into the mapping workspace. The editor populates the list by reading the top-level evidence entities associated with the type of case that is created in response to the submission of an application. Entity attributes are not displayed in the Evidence Entity List.

Evidence Mapping Workspace

The Evidence Mapping Workspace is the middle of the three main panels that make up the editor and is the part of the editor where mappings between datastore entities and evidence entities are defined. Double-clicking on a datastore entity in the Datastore Entity Tree opens a tabbed panel for this entity in the Evidence Mapping Workspace. The tab title is set to the name of the datastore entity. The workspace can hold multiple tabs, one representing each datastore entity opened in the workspace. If the user double-clicks on an entity that already has a tab opened, that tab is brought into focus. The entity tabs are where the mappings are defined for the selected entity and any of its child entities.

Evidence Mapping Workspace Tab

An evidence mapping workspace tab can be opened for each entity represented in the Datastore Entity Tree, irrespective of whether it is a parent or child entity. The tab name will be that of the datastore panel selected. When initially opened the workspace tab displays the selected datastore entity in the main area of the tab. The entity consists of a title bar and an attribute tree. In order to differentiate it from an evidence entity, the datastore entity has a different colored title bar and an icon within the title bar to represent a datastore entity.

The parent datastore entity cannot be removed from the mapping workspace tab as it is specifically linked to the workspace tab.

The entity's internal tree lists its child entities in the same order as specified in the Datastore Entity Tree. In contrast to the Datastore Entity Tree, the internal entity tree displays attributes. Each item has an associated icon indicating if it is a child entity or an attribute.

Opening Child Datastore Entities

Child entities of the main datastore entity can be dragged out onto the workspace area and children of these children can recursively be dragged out onto the workspace. A connecting line is visible between the entities indicating the parent/child relationship. Child entities can be removed from the workspace tab by clicking the close button. Closing a child entity will also close any of its own child entities that are open on the workspace.

Opening Evidence Entities

Evidence entries can be dragged from the Evidence Entity List onto the mapping workspace. Children of these entities (and recursively children of these children) can be dragged into the workspace. A connecting line is visible between the entities indicating the parent/child relationship. Child entities can be removed from the workspace tab by clicking the close button. Closing a child entity will also close all of its own child entities that are open on the workspace.

The entity consists of a title bar and an attribute tree. In order to differentiate it from a datastore entity, the evidence entity has a different colored title bar and an icon within the title bar to represent a evidence entity. In contrast to the parent datastore entity opened on the tab workspace, all evidence entities dragged onto the workspace can be closed.

Moving Entities Around the Workspace

The user may click on the title bar of either a datastore entity, or an evidence entity, and drag it to a different location in the workspace. This allows for maximum usage of the workspace and allows entities to be moved out of the way so that all attributes can be accessed.

Creating Entity and Attribute Mappings

Introduction

This chapter describes how to create mappings between the Cúram Datastore (CDS) and Cúram evidence entities. Mappings can be created at both the entity and attribute level. Conditions can be added to mappings that specify under what condition(s) the mapping will be executed by the mapping engine. This chapter also explains the reasons why some mappings are not supported.

Creating Entity Mappings

Entity mappings create a mapping between a source datastore entity and a target evidence entity without specifying a link between individual entity attributes. An entity mapping causes the creation of a target record for each source record that exists. When used in conjunction with the set value functionality, the entity mapping can be used to specifically populate target data when a source record is created. Set value allows an entity attribute, which does not have a datastore attribute directly mapping to it, to be set to a constant value when an evidence record is created. Entity mappings can be used to allow a source attribute be mapped to a target attribute of a different type.

Entity mappings are created by clicking on the '>>' icon on the title bar of the source datastore entity, dragging the cursor across the workspace and dropping it onto the title bar of the target evidence entity. When the drag is initiated, a representation of the entity trails the cursor to indicate that it has been "picked up". When the cursor moves out of the datastore entity and into the workspace, a mapping line extends from the entity to the cursor.

Successful Entity Mappings

When the cursor is moved over and "dropped" onto the title bar of the evidence entity, the mapping is created and the mapping line permanently links the entities. Additional options to add a condition or remove the mapping are made available on the right-click menu on the evidence entity title bar.

It is possible to create an entity mapping between any datastore and evidence entity. Unlike attribute mappings, there are no invalid entity mappings.

Entity Mapping Conditions

An entity mapping condition allows for a source attribute to be mapped to a target attribute of a different type. The entity mapping condition is used in conjunction with the set value function available on the target entity.

For example, a source datastore entity may hold a boolean value indicating that a client is blind. The target entity does not contain a boolean value for blindness but does contain an attribute for disability type. The mapping condition is written to test for a positive answer to the blindness indicator on the source and if this passes create a target disability record and set the disability type to "blindness". The mapping has effectively taken a boolean value and mapped it to a string value on the target entity.

Entity mapping conditions are created by right-clicking on the target entity title bar and selecting the Add Condition action. The set value functionality is accessed by right-clicking on the target entity attribute and selecting the Set Value action.

The entity mapping and set value functions give the data mapping editor the flexibility to define mappings that are more complex than homogeneous type mappings.

Creating Attribute Mappings

Attribute mappings are created by selecting the source attribute on the datastore entity, dragging it across the workspace and dropping it onto the target attribute on the evidence entity. When the drag is initiated, a representation of the attribute trails the cursor to indicate that it has been "picked up". When the cursor moves out of the datastore entity and into the workspace, a mapping line extends from the entity to the cursor. When the cursor is moved into the evidence entity and placed over the evidence entity attributes, attributes to which a valid mapping can be created turn orange. The user can only create mappings to entity attributes that are highlighted in orange when the cursor is passed over them. If a mapping cannot be created then the attribute the cursor is over will not change color.

Successful Attribute Mappings

A successful mapping is created when the user "drops" the dragged attribute onto a valid entity attribute. A mapping line is then displayed joining the source attribute from the datastore entity to the target attribute on the evidence entity. A line is also displayed between the title bars of the entities themselves to indicate that the mapping link is also between the entities and not just the specific entity attributes. When subsequent mappings are created between attributes, lines are only drawn between these mapped attributes because the entity mapping line already exists.

Unsuccessful Attribute Mappings

When the source attribute is dragged over a target attribute to which a mapping is not possible, the target attribute will not be highlighted at all. If the user releases the cursor, the attribute trailing the cursor and the extending mapping line will disappear.

There are a number of reasons why a mapping may be invalid:

- An evidence attribute can only have one datastore attribute mapped to it.
- A mapping cannot be made between attributes with different underlying data types. For example a mapping cannot be made from an integer data type to a string data type.
- A mapping cannot be made between attributes of the same data type if the datastore entity attribute type is larger than the evidence entity attribute type. For example, a mapping cannot be created from a 32 bit integer to a 16 bit integer.
- It is not possible to create mappings that originate from evidence entity attributes, i.e. all mappings must originate from datastore entities.
- It is not possible to drag a datastore entity attribute onto another datastore entity attribute.

Attribute Mapping Conditions

An attribute mapping condition imposes a restriction on the source attribute and only performs the mapping if that condition is met. An attribute mapping condition is defined by right-clicking on the target attribute of an existing mapping and selecting the Add Condition action. This opens the Add Condition modal window. The condition is then entered in the Apply Condition field. An example of an attribute mapping condition would be a monetary field that is required to be greater than a certain value in order for it to be mapped. The condition checks the value of the datastore attribute and if it meets the specified criteria the data is mapped to the target attribute.

Code Table Mapping

Attributes which are defined as code tables can be explicitly mapped to evidence attributes defined as code tables. Code table mappings can be created by selecting the Code Table Mapping tab and selecting New Code Table mapping. The name of the source and target code tables must be defined. Once defined, items can be added by selecting the New List Item from the row action menu. The target data item and source data item should be specified.

Editing Entity and Attribute Mappings

It is not possible to edit an entity or attribute mapping after it has been created. The existing mapping must be deleted and a new mapping created.

Deleting an Entity Mapping

An entity mapping can be deleted by right-clicking on target entity title bar and selecting the Delete Mapping action. The user will be asked to verify if they wish to delete the mapping. When a mapping is deleted, if a condition exists on the mapping, it is also deleted.

Deleting an Attribute Mapping

An attribute mapping can be deleted by right-clicking on the target attribute and selecting the Delete Mapping action. The user will be asked to verify if they wish to delete the mapping. When a mapping is deleted, if a condition exists on the mapping, it is also deleted.

Notices

This information was developed for products and services offered in the United States.

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, MD-NC119 Armonk, NY 10504-1785 US

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. 19-21, Nihonbashi-Hakozakicho, Chuo-ku Tokyo 103-8510, Japan

INTERNATIONAL BUSINESS MACHINES CORPORATION 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 jurisdictions 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 websites are provided for convenience only and do not in any manner serve as an endorsement of those websites. The materials at those websites are not part of the materials for this IBM product and use of those websites is at your own risk.

IBM may use or distribute any of the information you provide 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 Director of Licensing IBM Corporation North Castle Drive, MD-NC119 Armonk, NY 10504-1785 US

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.

The performance data and client examples cited are presented for illustrative purposes only. Actual performance results may vary depending on specific configurations and operating conditions.

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-IBMproducts. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

Statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

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 actual people or business enterprises is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. The sample programs are provided "AS IS", without warranty of any kind. IBM shall not be liable for any damages arising out of your use of the sample programs.

Privacy Policy considerations

IBM Software products, including software as a service solutions, ("Software Offerings") may use cookies or other technologies to collect product usage information, to help improve the end user experience, to tailor interactions with the end user or for other purposes. In many cases no personally identifiable information is collected by the Software Offerings. Some of our Software Offerings can help enable you to collect personally identifiable information. If this Software Offering uses cookies to collect personally identifiable information, specific information about this offering's use of cookies is set forth below.

Depending upon the configurations deployed, this Software Offering may use session cookies or other similar technologies that collect each user's name, user name, password, and/or other personally identifiable information for purposes of session management, authentication, enhanced user usability, single sign-on configuration and/or other usage tracking and/or functional purposes. These cookies or other similar technologies cannot be disabled.

If the configurations deployed for this Software Offering provide you as customer the ability to collect personally identifiable information from end users via cookies and other technologies, you should seek your own legal advice about any laws applicable to such data collection, including any requirements for notice and consent.

For more information about the use of various technologies, including cookies, for these purposes, see IBM's Privacy Policy at http://www.ibm.com/privacy and IBM's Online Privacy Statement at http://www.ibm.com/privacy/details the section entitled "Cookies, Web Beacons and Other Technologies" and the "IBM Software Products and Software-as-a-Service Privacy Statement" at http://www.ibm.com/software/info/product-privacy.

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at " Copyright and trademark information " 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.

Java™ and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

The registered trademark Linux is used pursuant to a sublicense from the Linux Foundation, the exclusive licensee of Linus Torvalds, owner of the mark on a worldwide basis.

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.

Other names may be trademarks of their respective owners. Other company, product, and service names may be trademarks or service marks of others.

IBM ®

Part Number:

(1P) P/N: