# About this publication

The *<REDACTED> Guide* describes the <REDACTED> data model, components, and commands that allow provisioning and testing.

## Audience

This publication is for System Administrators and Rule Managers who need to provision and test the <REDACTED>, and Risk Analysts who need to see how the data model and rules are set up in the <REDACTED> .

## Syntax notation

Syntax descriptions in this publication use several symbols and conventions to denote how commands and naming conventions should be entered. These conventions are described in the table below.

| Notation | Meaning |
|---|---|
| UPPERCASE LETTERS | Indicate key words and literals that you must enter. These commands are not case sensitive. |
| *lowercase italics* | Identify variables that you must provide. If you are entering object names, they are case sensitive. |
| Brackets [ ] | Enclose optional syntax items that you can enter in the command. |
| Braces { } | Enclose a group of items from which you are required to choose one item. The items are separated within the braces by a vertical bar (\|). |
| Vertical bar \| | Separates alternatives in a list of items. |
| Ellipsis … | Indicates the immediately preceding syntactical item can occur one or more times. |
| Punctuation | Must be entered as shown. This includes parentheses, commas, semicolons, and other symbols not previously described. |
| Spaces | Are required as delimiters wherever it would be otherwise impossible to discriminate between adjacent words or symbols. You can insert additional spaces between any adjacent words or symbols, but not within a word or multiple character symbol. |
| Indented lines | Indicates a continuation of the preceding line of syntax. If the syntax of a command is too long to fit on a single line, each continuation line is indented. |

# What's new in this publication

This section identifies the changes that were made to this document since it was last published.

| Date | Release | Change description |
|---|---|---|
| March 2017 | | Updated the Overview topics.<br>Added the Key Concepts chapter.<br>Reorganized the commands in the Command Reference.<br><br>Added information about:<br>• Action Sets<br>• Attributes<br>• Catch-up command<br>• Dimensions<br>• Features commands<br>    • Complex features<br>    • Dependent features<br>    • Dependent Unary features<br>    • Dimensional features<br>    • EntityMap features<br>    • Filter features<br>    • Map features<br>    • Reduce features<br>• Constants<br>• Events<br>• Results<br>• Rules<br>• Lists |
| Dec 2016 | | Initial version of the document |

# Overview

The <REDACTED> service is part of <REDACTED COMPANY NAME>'s fraud detection system, <REDACTED>. The <REDACTED> provides a scalable feature computation and rules processing platform. As the <REDACTED> receives transactions (such as <REDACTED>), Web events from the GUI, and other events, it computes a predefined set of features
(based on the transaction or event type) and returns the resulting features to the caller. The Rules processor uses the features as input, and returns a result for the transaction. These results can show trends or outliers that could indicate fraud.

Various <REDACTED COMPANY NAME> products can use the <REDACTED> to assess the potential risk of fraud of their transactions. See the product-specific documentation for information about how each product interacts with the <REDACTED>.

<REDACTED IMAGE>

The **<REDACTED> Service** provides an interface for provisioning information about Events, Dimensions, Attributes, Features, Properties, Constants, Rules, and Action Sets.

The **Command Line Interface** (CLI) provides a text based interface to the service interfaces provided by the Metadata Service and the <REDACTED>. CLI commands can be aggregated into script files. You can script CLI commands to automate provisioning and testing of the Metadata Service.

The **<REDACTED> Service** and **<REDACTED> Service** provide user authentication, access control, and auditing.

# User roles

User roles determine access to the commands based upon security needs. The **<REDACTED>** Service provides the means for creating users, assigning roles to them, authenticating the user login, and enforcing the command restrictions. The <REDACTED> has the following roles defined:

- <REDACTED> Administrator - Role to permit full access to all <REDACTED> commands
- <REDACTED> Manager - Role to permit full access to create and update features
- <REDACTED> Manager - Role to permit full access to create and update lists
- <REDACTED> Manager - Role to permit full access to create and update rules
- <REDACTED> Analyst - full access to some commands, and no access to other commands

A user's access to entities is restricted based on both their parent organization and roles.

The "Command reference" section details which roles can use each command.

# Data model

The following diagram shows the relationship between the objects in the Metadata Service.

<REDACTED IMAGE>

The following topics describe these objects in more detail.

## *Organizations*

The <REDACTED> is a multi-tenant application, which means that it can support users from multiple organizations. Users of the <REDACTED> are assigned to an Organization. Organizations are organized into multilevel hierarchies. In Shield, there is a single top level root organization. The second level is composed of Clients, and the third level contains Subclients.

<REDACTED image>

Organizations help to determine the scope of a user's access to the objects that are defined in the <REDACTED>.

Multiple tenants or organizations can use the <REDACTED> simultaneously. Each organization can have its own set of objects. Therefore, it is important to know your organization's name in the <REDACTED> to make sure you are editing or showing the correct objects.

## *Dimensions*

A Dimension represents an entity (for example, Customer, Retailer, Bank, or Account) related to an Event. Dimensions can be concrete or abstract. Time of day is an example of an abstract Dimension. Bank is an example of a concrete Dimension.

Dimensions have properties that include Attributes, Features, and Constants. The following are examples of Dimensions:

**<REDACTED section with image and explanations>**

### Complex Dimensions

A complex dimension combines two or more dimensions.

For example, it is possible to create a complex dimension that combines the <REDACTED> Dimension and the <REDACTED> Dimension, where the complex dimension is <REDACTED> .

<REDACTED explanation>

<REDACTED additional explanations>

# The Command Line Interface

The Command Line Interface (CLI) provides a text-based interface to the service interfaces provided by the <REDACTED> and the <REDACTED>. A user interacts with the CLI for provisioning or testing tasks, in either interactive mode or in script mode. A command shell provides interactive access. In script mode, multiple commands can be saved to a file and invoked as a script. Results of the service request are then formatted and displayed to the user as output text to standard output.

## Install the CLI

**Before you begin:** Before installing the CLI module, make sure that you have the current versions of Java and the Java Development Kit installed on your PC, and environment variables must have the value JAVA_HOME. You must have at least 100 mb of available hard drive storage before installing the CLI.

Follow these steps to install the CLI shell program on the hard drive of your PC:

1. You must know the IP address of your computer before installing the CLI. If you do not know the IP address of your computer, follow these steps:

   a. Open a Windows command shell by typing "cmd" in the Windows Start icon's search box.
   b. Type "ipconfig".
   c. Your current address is the "IPv4 address".

   <REDACTED image>

   d. Download the zip file that contains the CLI files.
   e. Extract the zip file to a folder with a name of your choice on your hard drive.
   f. In this folder, open the "config" folder.
   g. Open the <REDACTED>.properties file with Notepad.
      <REDACTED IMAGE>
   h. In all lines that start with "<REDACTED>", replace all of the IP addresses with your computer's IP address. Using the examples above, the following Find and Replace will change the IP addresses to what is needed:

      <REDACTED>
   i. Save the <REDACTED> file.

      **Note:** Your IP address can change every time you log into VPN, or if you move from a local network to a wireless network, for example. You will need to change the bsicontext.properties file every time the IP address changes.

<REDACTED>

## Enter commands in the CLI

Commands can be entered in the CLI after you have logged on and received the `rms:user-name>` prompt. Use the **Enter** key after typing each complete command.

A detailed list of commands available in the <REDACTED> system are found in Section 3, "Command Reference" of this guide.

If you type a partial command and use the **Tab** key, you will see a list of the possible attributes. <REDACTED examples>

# Log out of the CLI

1. Type `logout` at the <REDACTED> prompt and press the Enter key.
2. Click the X button in the top right corner of the window to close the CLI command shell window.

# Key Concepts

This section provides information about important concepts for you to understand if you are a system administrator using the CLI to provision and test the <REDACTED> system, or if you are a Risk Analyst who wants to view how the data model and rules are set up in the <REDACTED> system.

## Enable system objects

You can enable system objects to make them available for use by the Metadata Service.

<REDACTED>

## Ownership of system objects

The organization associated with the user that created the object is the owner of the object.

## Sensitivity

Sensitive data is encrypted for its protection.

Use the Sensitive flag to identify properties with sensitive values. Examples of sensitive attributes include credit card numbers, phone numbers, and email addresses. Constants and Features can also contain sensitive data.

<REDACTED>

# Command reference

This section provides a list of all commands that you can enter in the Command Line Interface (CLI), along with syntax and examples. Refer to the "Syntax notations" at the beginning of this guide for a list of conventions and symbols used.

Note that when creating new objects, there is a set of dependencies. For example, Events must be created before the Attributes that call those Events. The recommended order of creation is as follows:

<REDACTED>

# Event commands

Use the following commands in the CLI or script to control events:

<REDACTED>

## Create Event

Use the Create Event command to create a new event definition.

### Command access

- Administrator
- <REDACTED>

### Command syntax

```
CREATE EVENT event-name
          [ORGANIZATION organization-name]
          [VISIBILITY {PRIVATE | PROTECTED | PUBLIC} ]
          [DESCRIPTION
          description] [ENABLED
          {TRUE | FALSE} ]
          CHILD-EVENTS [child-list,child-list,...]
```

| | |
|---|---|
| ***event-name*** | *Required.* The name of the event. The name must be alphanumeric without any spaces or special characters. |
| **ORGANIZATION** | Enter the name of the organization into the *organization-name* variable. If not present, the default will be used. The default is the organization associated with your user name. |
| **VISIBILITY** | Determines whether the entity is visible. For example, you may want to have it invisible while in test mode. Valid values are: |

- PRIVATE - the entity is only visible to the specific child organization. Default.
- PROTECTED - the entity is visible within the scope of its organization
- PUBLIC - the entity is visible to everyone.

| | |
|---|---|
| **DESCRIPTION** | Enter a description. If the description contains spaces, enclose it in quotes. |
| **ENABLED** | Determines whether the entity is available for the Metadata Service to use. For example, you may want to have it disabled while in test mode. Valid values are: |

- TRUE - this entity is available.
- FALSE - this entity is not available. Default.

> **Note:** You cannot set this value to false if the entity is used by other entities.

| | |
|---|---|
| **CHILD-EVENTS** | The child events must be in square brackets, and separated by commas. This value is case-sensitive. |

## Example

<REDACTED>