# Cisco Webex Contact Center 1.0 Business Rules Engine User Guide

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# Preface



## Change History

This table lists changes made to this guide. Most recent changes appear at the top.

| Change | Date |
| --- | --- |
| **Initial Release of Document** | May 2021 |

## About this Guide

The Webex Contact Center Business Rules Engine User Guide describes how to integrate Cisco Webex Contact Center with Business Rules Engine. This guide also describes how to configure the Business Rules Engine.

## Audience

This document is intended for users who use Cisco Webex Contact Center to run their contact centers.

## Related Documents

To view the list of Cisco Webex Contact Center documents, go to page https://www.cisco.com/c/en/us/support/customer-collaboration/webex-contact-center/series.html.

To view Cisco Webex Contact Center developer documents and API references, go to page https://apim-dev-portal.devus1.ciscoccservice.com/documentation/getting-started.

# Communications, Services, and Additional Information

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Cisco Bug Search Tool (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.

# Documentation Feedback

Provide your comments about this document to: mailto:contactcenterproducts_docfeedback@cisco.com.

# Conventions

This guide uses the following conventions.

| Convention | Description |
|---|---|
| **boldface** font | Boldface font is used to indicate commands, such as user entries, keys, buttons, and folder and submenu names. For example:<br>• Choose **Edit** > **Find**<br>• Click **Finish**. |

Preface

| Convention | Description |
|---|---|
| *italic* font | Italic font is used to indicate the following:<br>• To introduce a new term. Example: A *skill group* is a collection of agents who share similar skills.<br>• For emphasis. Example: *Do not* use the numerical naming convention.<br>• An argument for which you must supply values.<br>Example:<br>IF (*condition, true-value, false-value*)<br>• A book title. Example:<br>See the *Cisco Webex Contact Center Getting Started Guide*. |
| `window` font | Window font, such as Courier, is used for the following:<br>• Text as it appears in code or information that the system displays. Example:<br>`<html><title> Cisco Systems,Inc. </title></html>`<br>• File names. Example: `tserver.properties`.<br>• Directory paths. Example:<br>`C:\Program Files\Adobe` |

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CHAPTER 1

# Introduction



# Introduction

The Cisco Business Rules Engine (BRE) provides a means to upload customer specific data. The data can be retrieved at runtime to be used for routing decisions or information to be displayed to the agent.

For example, a tenant who wants to route calls to a specific group of agents based on the ANI dialed could simply upload a list of ANIs. If the ANI of the incoming call is on that list, it is routed to the group of agents specified. If the ANI is not on the list, it is routed straight through to the general queue.

A typical BRE implementation involves these major components:

- **Business Rules Engine utility** provides an interface for creating domains and rule sets. The BRE requires an incoming decision request to be associated with a *domain*. The domain contains a set of rules. Each rule is assigned a priority. The BRE tries to match the domain's highest priority rule with the decision request based on the conditions in the rules.
- **Call Control Script** interface provides a way to create a control script that invokes the BRE in the Webex Contact Center Routing Strategy module.
- **BRE DataSync** configuration utility provides an interface for defining the Data Sync instances to import data into the BRE database. After a Data Sync instance is defined, the tenant can upload a `.csv` file. The uploaded `.csv` data is converted into records in the BRE database.

CHAPTER 2

# Business Rules Engine Implementation

BRE consists of a real-time rules engine that gets invoked by the flow associated with an entry point. Typically the ANI of the incoming call along with other information associated with the call (such as an account number) are used by the rules engine to assess whether any special handling is needed for that call. This rules engine typically consults with a data repository to assess the desired call handling. The BRE configuration requires:



## Create a Set of Rules

The Business Rule Engine utility is invoked by the control script when a new voice request is presented to the ACD. This section explains how rules can be set up so that the BRE utility can assist the ACD to route the incoming request.


The BRE requires that there must be an incoming decision request for the BRE to be associated with a domain and a set of rules. The BRE tries to match the highest priority rule with the decision request based on conditions in the rules.

Be sure to create a rule set to cover all cases. For example, you should create rules for both *Match Found* and *Match Not Found* conditions. Or you could set up rules for multiple conditions. For example, *ANI Match* or *ANI No Match*, then *Gold* or *Silver*. In this case, you must create a rule for each possibility. For example:

- ANI Match and Gold
- ANI Match and Silver
- ANI No Match and Gold
- ANI No Match and Silver

To create a set of rules:

### Procedure

**Step 1** Log in to the Cisco Webex Contact Center Management Portal.

**Step 2** From the Webex Contact Center Management Portal navigation bar, click **Business Rules** to launch the Business Rules Engine utility.

BRE uses Common Identity and a Single Sign-On interaction. If the tenants have already logged in to Cisco Webex Contact Center Management Portal, they will automatically gain access to the BRE utility for their organization.

**Step 3** Create an attribute to associate with your organization:

a) Select **Attributes** and click **Add** on the **Attributes** page.
b) On the **Attributes** page, enter **`context`** in the **Name** field.
c) From the **Data Type** drop-down list, select **Text**.

   The data type has to be **`Text`** in the BRE utility.

d) Click **Save**.

**Step 4** Select **Contexts** to display the **Contexts** page.

a) Enter **Name** and an optional **Description**.
b) If more than one attribute has been created, select the attribute that you want to associate with this context from the **Attribute** drop-down list.
c) Click **Save**.

**Step 5** To create rules, select the **Contexts** page.

a) (Optional) Click **Add Rule** section of the page. Specify the settings that are described in the following table:

| Field | Description |
|---|---|
| Name | The name of the rule. |
| Description | An optional description of the rule. |
| Active | Select the check box to specify that the rule is active. |
| Priority | Drag the slider to assign a priority to the rule. The rules will be executed based on the assigned priority, from highest (100) to lowest.<br>It is recommended that you start assigning priorities from 100 in the descending order. |
| Conditions | Specify the conditions from the drop-down list and select the attributes and values. |

b) (Optional) Click **Add Rule (Editor)** section of the page. Specify the settings that are described in the following table:

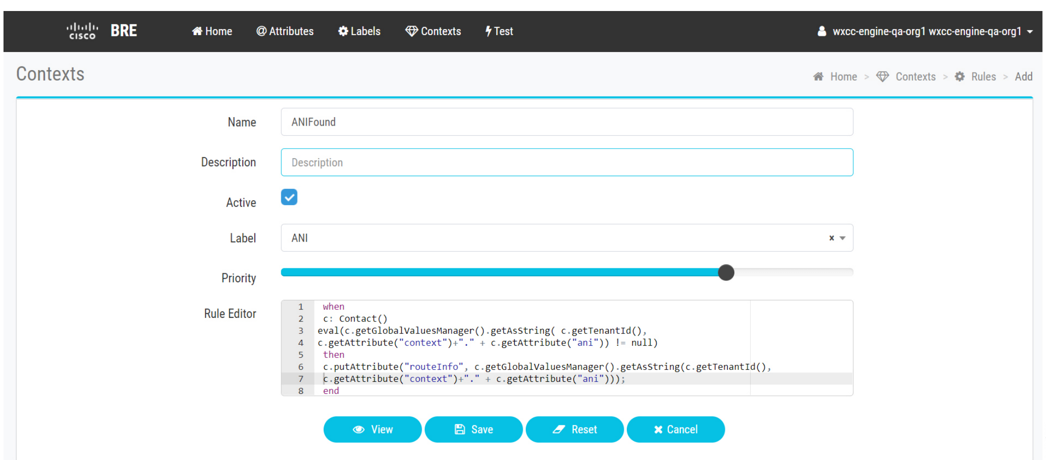
| Field | Description |
|---|---|
| Name | The name of the rule. |
| Description | An optional description of the rule. |
| Active | Select the check box to specify that the rule is active. |
| Priority | Drag the slider to assign a priority to the rule. The rules will be executed based on the assigned priority, from highest (100) to lowest. |
| Conditions | Select the conditions from the drop-down list and specify the attributes and values. |
| Rule Editor | Enter the rule. |

c) Click **Save**.

### Example

The following example returns the value for an attribute named *routeInfo* if the number that the caller dialed from (ANI) matches the ANI on the list of tenants that are uploaded to the BRE database. Copy and paste the following rule in the Rule Editor:

```
when
    c: Contact()
    eval(c.getGlobalValuesManager().getAsString( c.getTenantId(),
         c.getAttribute("context")+"."+
         c.getAttribute("ani")) != null)
 then
    c.putAttribute("routeInfo",
    c.getGlobalValuesManager().getAsString(c.getTenantId(),
    c.getAttribute("context")+"." + c.getAttribute("ani")));
 end
```

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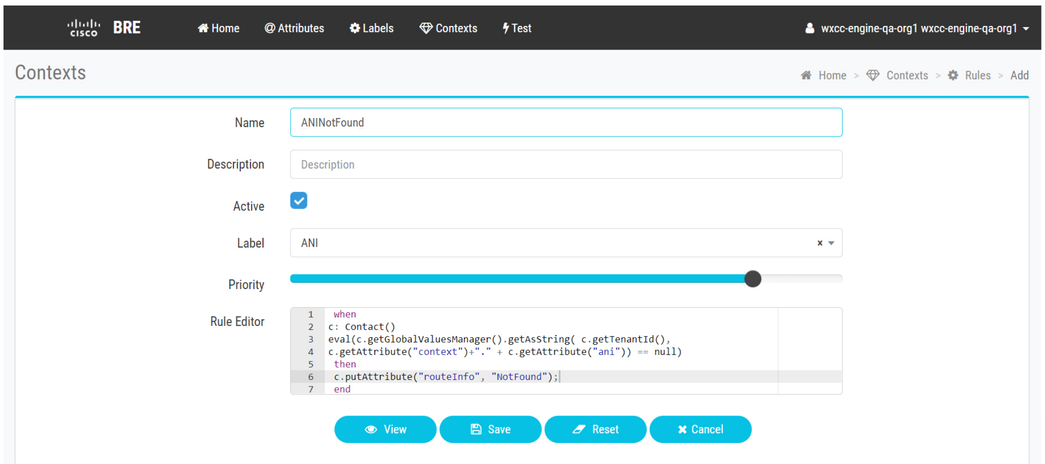
**Example** The following example code returns the value *NotFound* for the attribute *routeInfo*, if a number that the caller dialed from (ANI) did not match an ANI on the list of tenants that are uploaded to the BRE database. Copy and paste the following rule in the Rule Editor:

```
when
    c: Contact()
    eval(c.getGlobalValuesManager().getAsString( c.getTenantId(),
    c.getAttribute("context")+"." + c.getAttribute("ani")) == null)
 then
   c.putAttribute("routeInfo", "NotFound ");
 end
```

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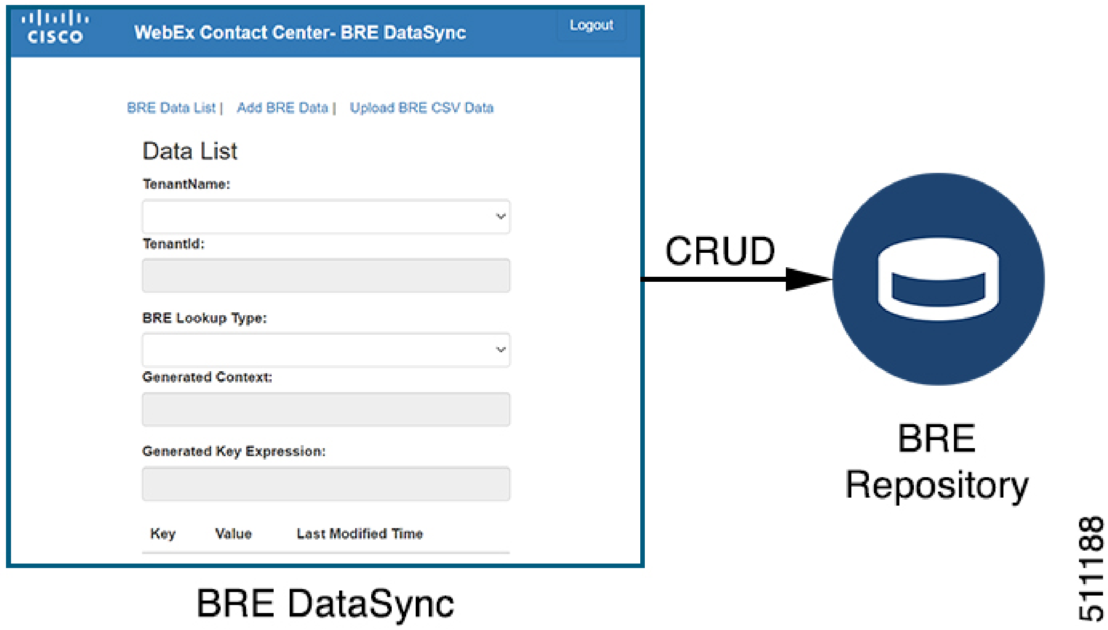
# Configure a BRE DataSync Instance

The BRE DataSync accesses a database to make routing decisions. You must periodically update the database with the appropriate information. This section describes how the BRE DataSync utility can be configured to update the BRE repository.

*Figure 1: BRE DataSync Utility*




The tenant administrator must create a BRE DataSync instance for every data set that the Rules Engine will be consulting during its decision-making process. The administrator can create the data set or upload a CSV file. The data is converted into records in the BRE repository.

**Note** Agents do not have access to the BRE DataSync utility.

### Before you begin

Contact Cisco Customer Service Account Manager to get access to the BRE DataSync account.

### Procedure

**Step 1** As an administrator, log in to the BRE DataSync utility.

The BRE DataSync utility URL is: https://rules.cjp.cisco.com/datasync/index.html.

The region specific BRE DataSync URLs are:

https://rules.wxcc-eu1.cisco.com/datasync/index.html

https://rules.wxcc-eu2.cisco.com/datasync/index.html

https://rules.wxcc-anz1.cisco.com/datasync/index.html

https://rules.wxcc-ca1.cisco.com/datasync/index.html

**Step 2** Select **BRE Data List** to view all the information that is related to the tenant organization.

**Step 3** (Optional) Select **Add BRE Data** to add data to the BRE repository.

a) Select the organization name from the **TenantName** drop-down list.
b) Select the **BRE Lookup Type** from the drop-down list.
c) Click **Add Data** to enter the **Key** and **Value**.
d) (Optional) Click **Remove** to delete an existing **Key** and **Value**.
e) Click **Submit**.

**Step 4** Select **Upload BRE CSV Data** to upload the CSV file.

a) Select the organization name from the **TenantName** drop-down list.
b) Select the **BRE Lookup Type** from the drop-down list.
c) Select **Upload** to browse and upload the CSV file.
d) Click **Submit**.

*Figure 2: Sample CSV File with Data*

| ANI | Extension | Action |
|---|---|---|
| 972516001 | 6001 | Delete |
| 972516002 | 6002 | Update |
| 972555999 | 5999 | Add |

The actions Delete, Update, and Add are not case sensitive. You can also use the syntax `725160001,,Delete` to delete the data.

# Create the Call Control Script

You can create a call flow using the call control script interface available in the Webex Contact Center Management Portal only for a BRE implementation.

### Before you begin

To create a call control script that interacts with the BRE, you will need the following information:

- Name of the attribute associated with your organization. For example, context.
- The URL to use in the call flow for executing the BRE request. This URL is provided by the Cisco Customer Service Account Manager.
- The TenantId provided by the Cisco Customer Service Account Manager during BRE DataSync account creation.

### Procedure

**Step 1** Log in to the Webex Contact Center Management Portal as an administrator.

**Step 2** Navigate to **Routing Strategy** > **Control Scripts**.

The call control scripts editor is displayed.

**Step 3** Click **+New** on the **Control Scripts** page.

A new call control script is created for BRE. For more information about creating a call control script, see *Creating Call Control Scripts* in the Cisco Webex Contact Center 1.0 Setup and Administration Guide.

**Step 4** In the **Control Scripts** page, drag and drop the 

icon in the editor.

**Step 5** In the **Control Scripts** page, double-click the 

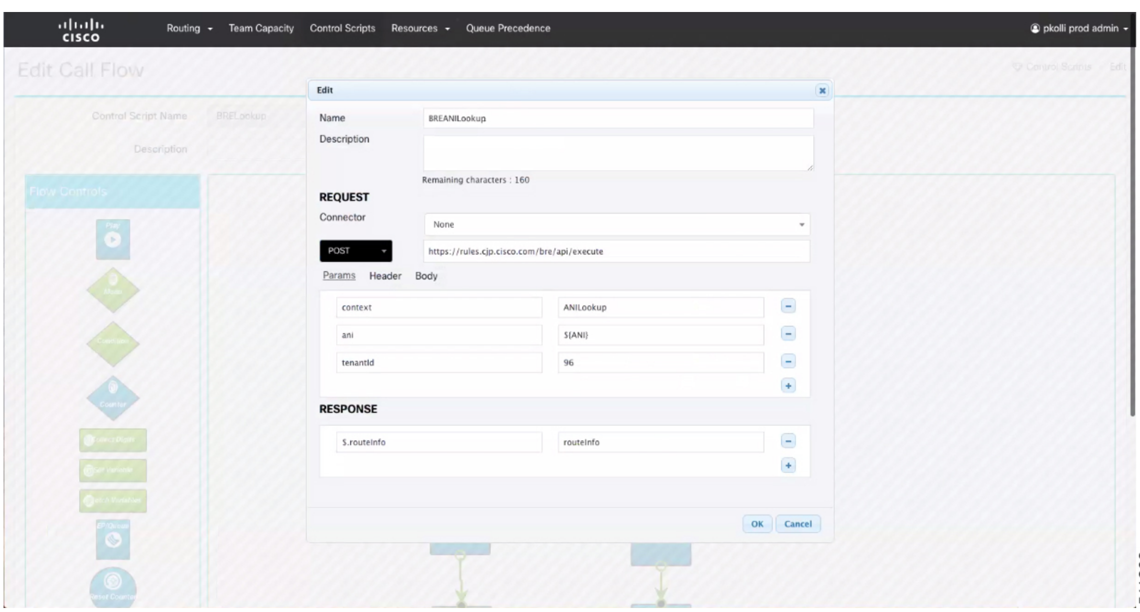
icon to edit the values for BRE.

Edit **Fetch Variables** with the following parameters:

| Parameter | Value |
|---|---|
| Request URL | Enter the URL that was provided by Cisco Customer Service Account Manager for executing the BRE request. |
| Connector | It is not required to specify the connector. |
| Request Variables | Select the names of the CAD variables to be sent on the request. The tenantId is provided by Cisco Customer Service Account Manager. For example, see Figure 3: BRE Fetch Variables Values , on page 9. |
| Response Variables | Add the name of the variable that will hold the data that is returned by the BRE, as defined in the rule. For example, you would add a variable *routeInfo* for the rule that is illustrated in routeInfo. |

Refer to the following image to edit the values:

***Figure 3: BRE Fetch Variables Values***

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a) Click **OK** to save the values.

**Step 6** Finish the control script based on the *routeInfo* returned in the Response.