BigFix Runbook AI Configuration Guide

Version 6.3

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Document Revision History

This guide is updated with each release of the product or when necessary.

This table provides the revision history of this Configuration Guide.

Version Date	Description
March, 2023	BigFix Runbook AI v6.3 Configuration Guide

1 Preface

This section provides information about the BigFix Runbook AI Configuration Guide and includes the following topics.

- Intended Audience
- About This Guide
- Related Documents
- Conventions

1.1 Intended Audience

This information is intended for administrators responsible for configuring BigFix Runbook AI.

1.2 About this Guide

This guide provides instructions to install and configure BigFix Runbook AI. This includes the configuration procedures for the product.

1.3 Related Documents

The following documents can be referenced in addition to this guide for further information on the BigFix Runbook AI platform.

- BigFix Runbook AI Installation Guide
- BigFix Runbook AI Introduction Guide
- BigFix Runbook AI Troubleshooting Guide

1.4 Conventions

The following typographic conventions are used in this document:

Table 1 - Conventions

Convention	Element
Boldface	Indicates graphical user interface elements associated with an action, or terms defined in text or the glossary
Underlined Blue face	Indicates cross-reference and links
Italic	Indicates document titles, occasional emphasis, or glossary terms
`Courier New` (Font)	Indicates commands within a paragraph, URLs, code in examples, and paths including onscreen text and text input from users
Numbered lists	Indicates steps in a procedure to be followed in a sequence
Bulleted lists	Indicates a list of items that is not necessarily meant to be followed in a sequence

2 BigFix Runbook AI Overview

BigFix Runbook AI is an Intelligent Runbook Automation product which is equipped with Artificial Intelligence, Machine Learning and Natural Language Processing capabilities for simplifying and automating the IT Operations issues resolution lifecycle including incidents, service request tasks, change request tasks and events. It leverages its NLP capabilities for analyzing and understanding the context of a specific issue, recommends the most relevant solution and even triggers the execution, thereby enabling Zero Touch Automated Remediation. It also provides AI-driven Knowledge Recommendation by suggesting relevant knowledge articles from various repositories, both internal and external, as and when required by human agents.

When no runbook is available for automated remediation, it searches & downloads relevant executable codes and scripts for subject matter expert to validate, customize, approve, and publish for future use.

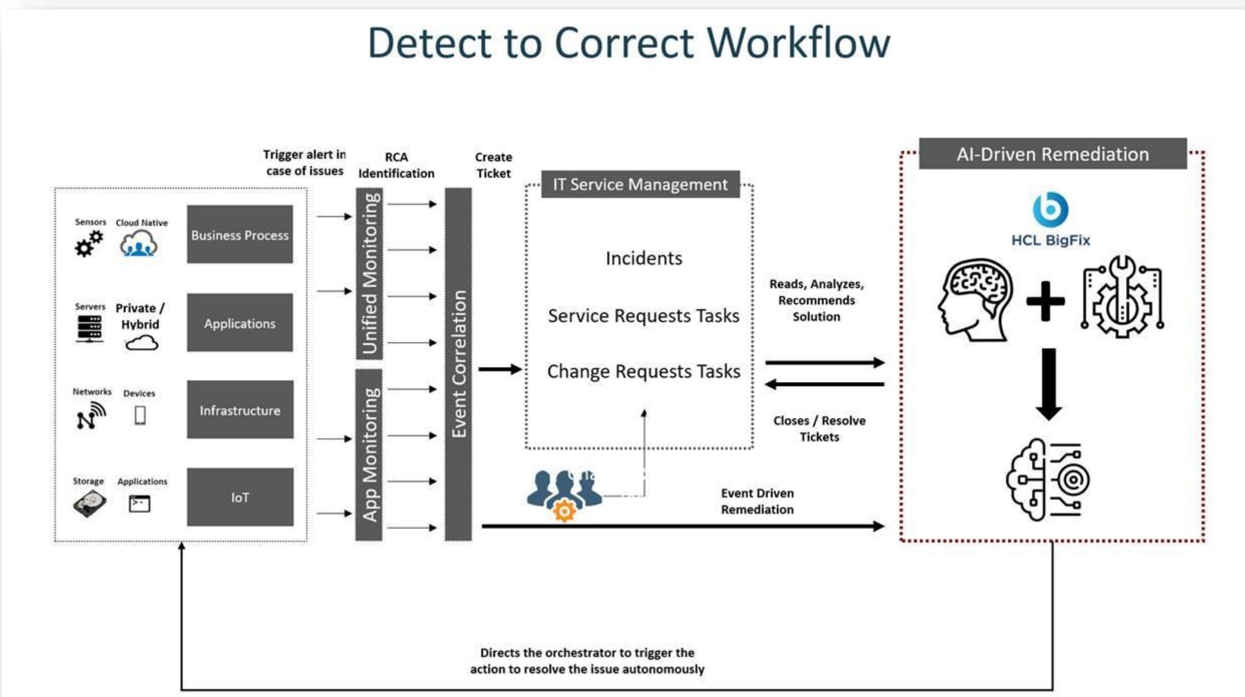


Figure 1 - BigFix Runbook AI Workflow

Intelligent automation powered by BigFix Runbook AI can make a tremendous impact in an enterprise, adjusting to the New Normal:

– **Reduce Costs**
  - Achieve up to 30% reduction in service desk related costs
  - Quick and High ROI

– **Mitigate Risks**
  - Avoid operational risks and ensure compliance by avoiding critical outages
  - Reduce escalations and improve SLA compliance by up to 20%
  - Achieve up to 85% reduction in MTTR

– **Drive Efficiency**
  - Automate redundant tasks and let employees focus on more creative activities
  - Reduce manual effort by 30% to 60%
  - Improve customer satisfaction by up to 50% by providing faster incident and service request resolutions.

– **Rapid Time to Value**
  - Quick implementation in 6 to 8 weeks*
  - Leverage 300+ reusable and configurable run books out of the box
  - Achieve zero-touch automation state in 4 to 5 months*

*Conditions Apply

3 Configure BigFix Runbook AI

This section describes the common tasks to be performed for the configuration of BigFix Runbook AI after installation of the product and its components on all servers.

Refer to the **BigFix Runbook AI Installation Guide** to know about the BigFix Runbook AI installation procedure.

By default, only users with the super administrator and administrator roles can configure BigFix Runbook AI and associated components. A user's role determines the tasks it can perform. Each role is associated with permissions or rules that define what features the role can access.

The following table outlines the predefined system roles.

Table 2 - Roles and Responsibilities

Role	Description
Super Administrator	- All privileges for the administrative features in BigFix Runbook AI - Add, remove, and set access rights and privileges of other administrator roles - Full operational and management control over all accounts
Organization Admin	- All privileges for the administrative features in BigFix Runbook AI at an organizational level - Add, remove, and set access rights and privileges of other users, roles, and domains in their organization
Operations Users	- Access and view all resources in an BigFix Runbook AI account but cannot make any changes. - Operational control over tickets, ticket logs, and the dashboard.
Operations Admin	- Access tickets and runbooks for analysis, can view all analysis.
SME Users	- Access ticket and runbook for analysis
Knowledge Users	- Operational and management control over Knowledge Analysis and Search Module

An BigFix Runbook AI administrator can define product users and assign one or more responsibilities to each user based on their roles.

To use BigFix Runbook AI, login to BigFix Runbook AI with the credentials of **Super Administrator**.

Your user role determines whether you can use this option.

3.1 Login to BigFix Runbook AI

If you are logging into BigFix Runbook AI for the first time, to perform BigFix Runbook AI configuration, the user must have super administrator's login credentials.

To login to the system, perform the following steps:

1. Launch a web browser and provide BigFix Runbook AI Web Portal URL. The BigFix Runbook AI Login Page appears.
2. On the **BigFix Runbook AI Login** Page, type the **Login ID**.

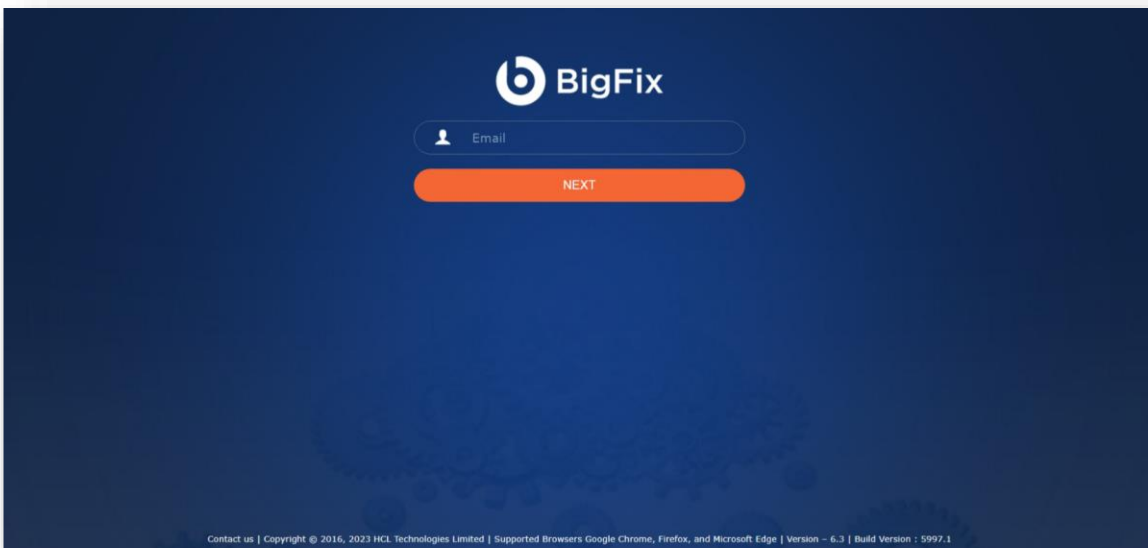


Figure 2 - BigFix Runbook AI Login Page

3. Click **Next**.
4. Next step is to enter the valid **License Key**.
5. If you are logging into BigFix Runbook AI console for the first time, you will have to provide a valid License Key.

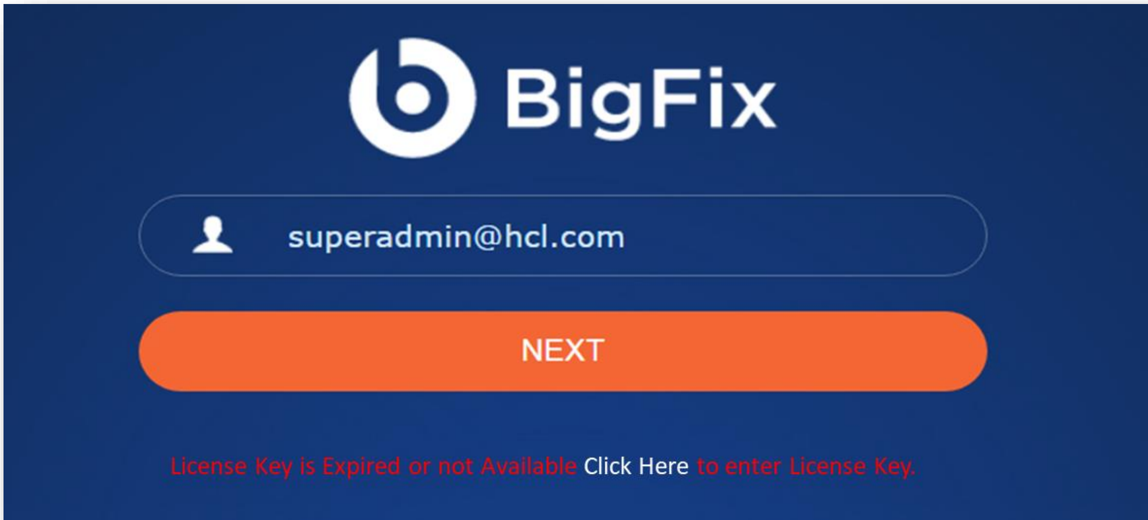


Figure 3 – Enter a Valid License Key on First Login

6. If your License Key has expired, you will get a notification to enter a new License Key, as mentioned in the image below.

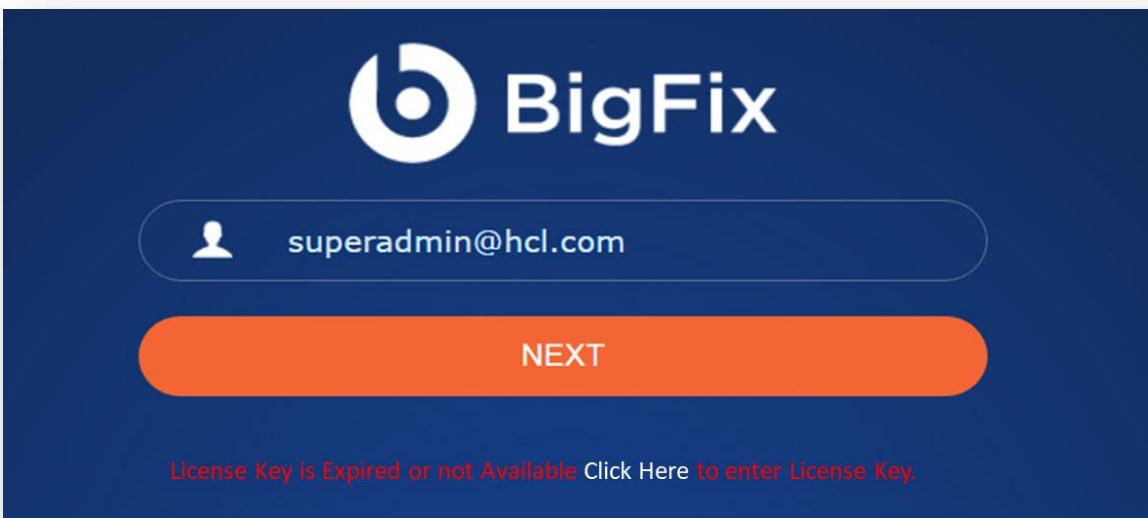


Figure 4 – Enter a Valid License Key on Expiry

7. Click on **Click Here** to enter the new License Key. You will be redirected to a new screen.

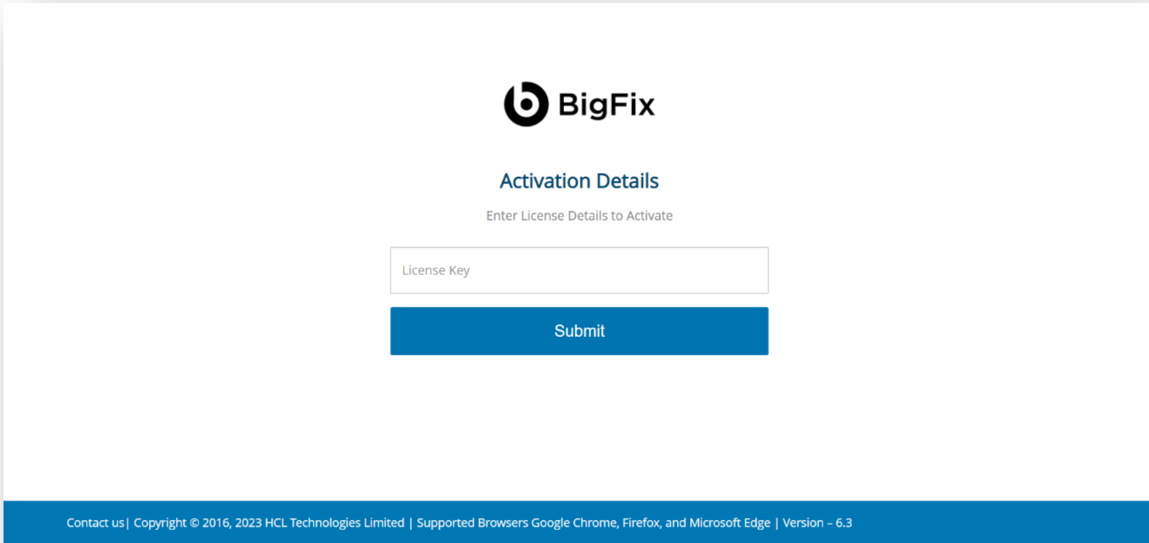


Figure 5 – Enter a Valid License Key

8. Enter the **License Key** and click **Submit**.

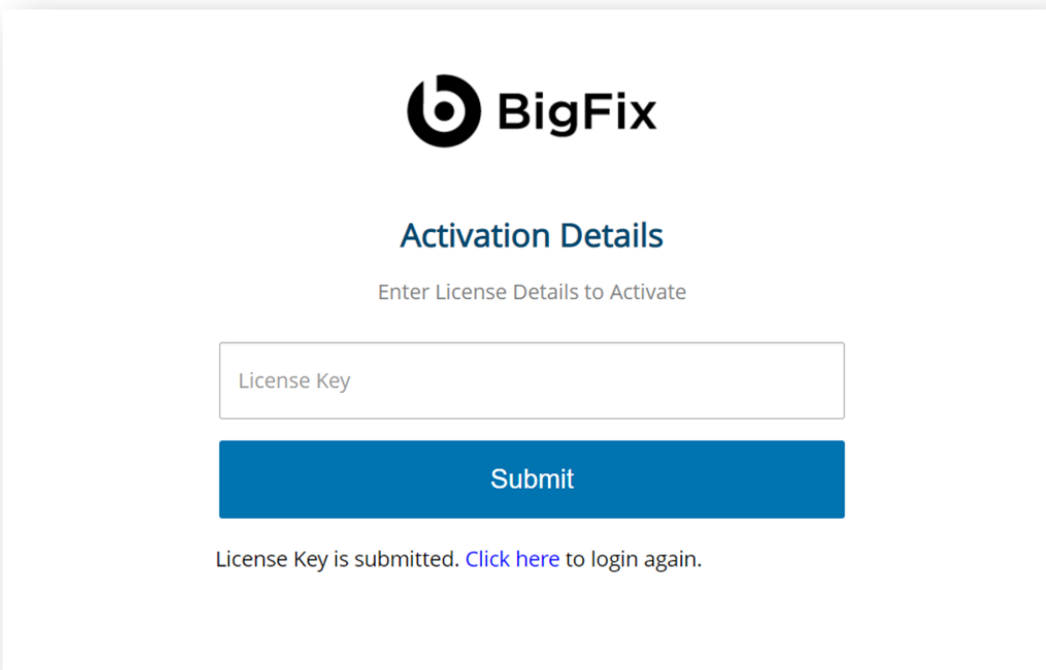


Figure 6 – Enter a Valid License Key

9. Click on **Click Here** to redirect to the Login page.

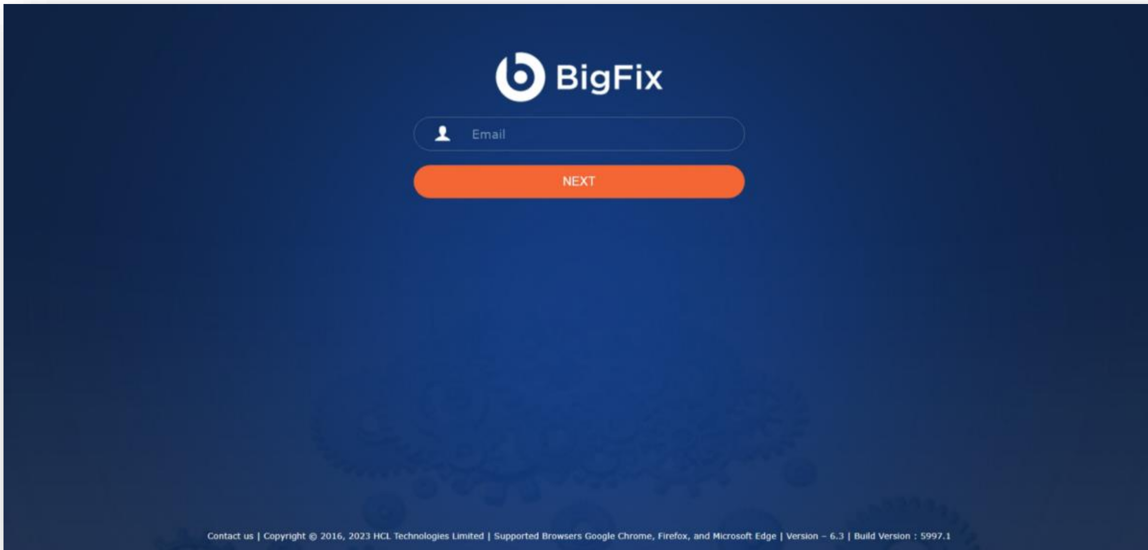


Figure 7 – Login Screen

10. Enter the **Login ID** and click **Next**.

11. Type password in the **Password** field.

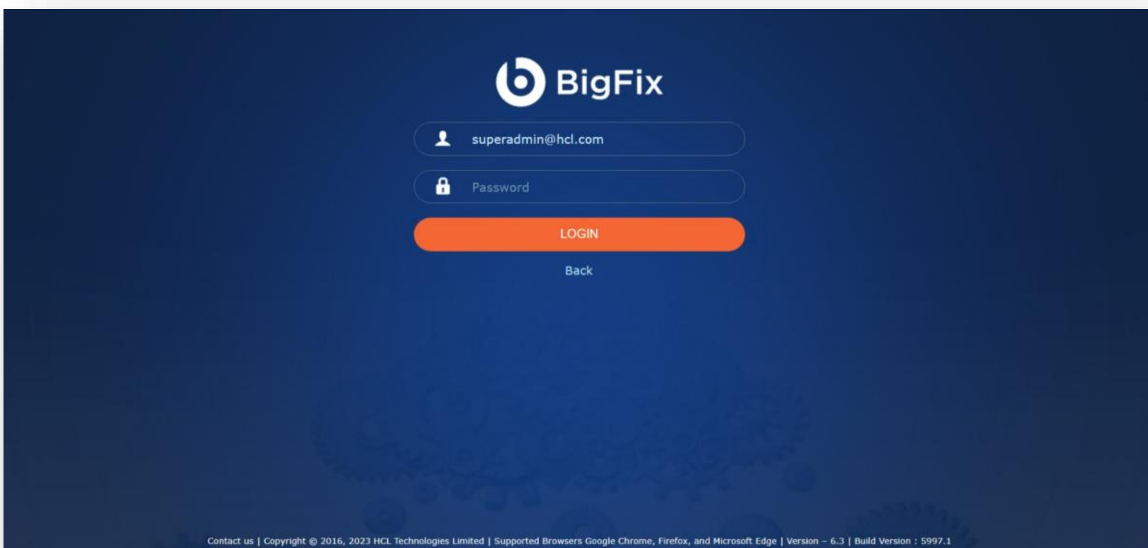


Figure 8 - BigFix Runbook AI Login Page

If you do not have login credentials, contact your product team administrator.
Change your password frequently, at least once a month, for security purposes.

12. Click **Login**.

The **BigFix Runbook AI Admin Console** home page appears.

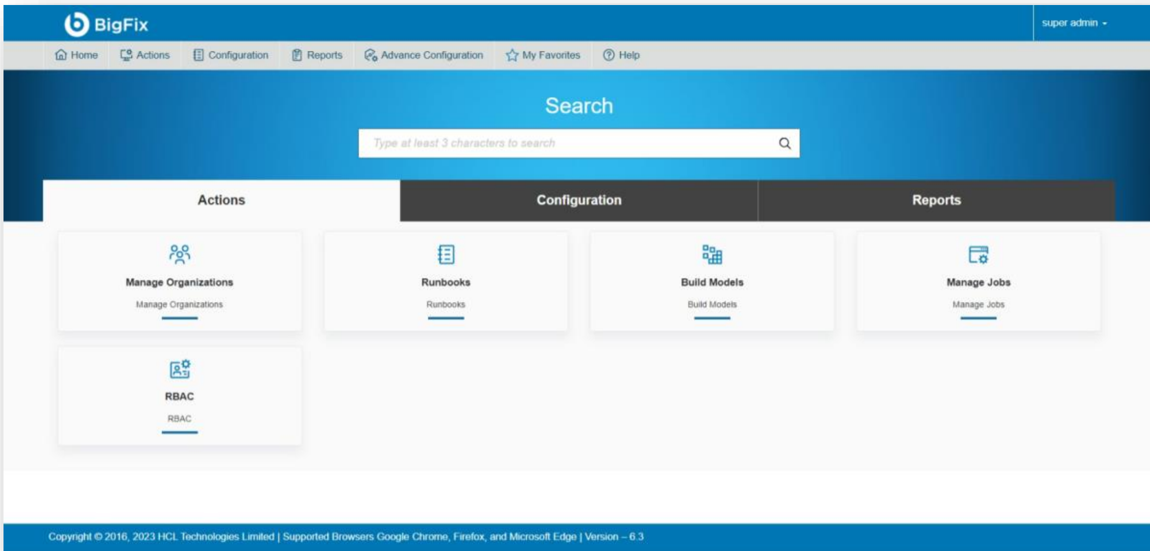


Figure 9 - BigFix Runbook AI Home Page

The **BigFix Runbook AI Admin Console** allows the user to view and access BigFix Runbook AI services, create and manage additional users, manage the organization and environment, and other configuration related activities.

3.2 BigFix Runbook AI Configuration

This section describes the steps to configure BigFix Runbook AI through Admin Console.

The BigFix Runbook AI Super Administrator is the first login that happens in any organization and helps in the organization specific configuration.

The BigFix Runbook AI Admin Console offers the capability to define multiple roles and grant access to each based on the organizational policies.

BigFix Runbook AI super admin console contain the following menus:

– Home

– Actions

  - Manage Organization

        - Runbooks
    - Inventory Runbooks
- Build Models
- Manage Jobs
- RBAC
    - User Management
    - Role Management
    - Group Management
    - Entity Management
- Configuration
    - Manage SMTP
    - Manage Proxy
- Reports
    - Component Logs
    - Ticket Evaluation Report
    - User Activity Logs
- Advance Configuration
    - Product Configuration
    - Parameter
        - Manage Parameter Master
        - Configure Parameter Type
        - Hyperparameter Configuration
        - Add Hyperparameters
    - iRecommend Rule Configuration
    - Configure Key Vault

- Connectivity
    - Component Key Value Configuration
    - Component configuration
    - iScrape API details
    - Connection Details
- Entity
    - Manage Named Entity
    - Create Entity
    - Entity Mapping
- Workbench
    - Unique Analysis
    - Recommend Analysis
- Knowledge
    - Manage Collections
    - Map Generic Collections
    - Knowledge Analysis
    - Knowledge Search
    - Manage API/Domains (Basic)

– My favorites

– Help

BigFix Runbook AI Organization Admin Console contains the following menus:

- Home
- Actions
  - Manage Data Sources
  - Runbooks
    - Manage Runbook Tool
    - Map Runbook Tool
    - Manage Runbooks
    - Map Runbooks
    - Manage Execution Scope
    - Manage Rules
    - Schedule Runbooks
    - Create Runbook
    - Inventory Runbooks
    - Ticket Flow
  - Build Models
  - Manage Jobs
  - RBAC
    - User Management
    - Group Management
  - Tickets
    - Actionable Tickets
    - Auto Execution View
    - Ticket Logs

    - Analysis
        - Ticket Analysis
        - Recommendation Analysis
        - Script Analysis
- Configuration
    - Manage Configuration
    - Manage SMTP
    - Manage Proxy
- Reports
    - License Report
    - Component Logs
    - Ticket Evaluation Report
    - User Activity Logs
    - Dashboard
- Advance Configuration
    - Product Configuration
    - Parameter
        - Manage Parameter Configuration
        - Configure Parameter Type
        - Manage Column
    - iRecommend Rule Configuration
    - Configure Key Vault
    - Connectivity
        - Component Key Value Configuration
        - Component configuration

    - iScrape API details
    - Connection Details
  - Entity
    - Manage Named Entity
    - Create Entity
    - Entity Mapping
  - Knowledge
    - Manage Collections
    - Knowledge Analysis
    - Knowledge Assistant
    - Knowledge Search
    - Manage API/Domains (Basic)
  - Script
    - Manage Custom Script
- My Favorites
- Help

From this console, the administrator can view and access all admin menus.

3.2.1 Home

On home screen, there is an option to search for menus for easy accessibility of the same. For that, on the home screen, there is a search bar given in which type at least 3 letters to search for a menu.

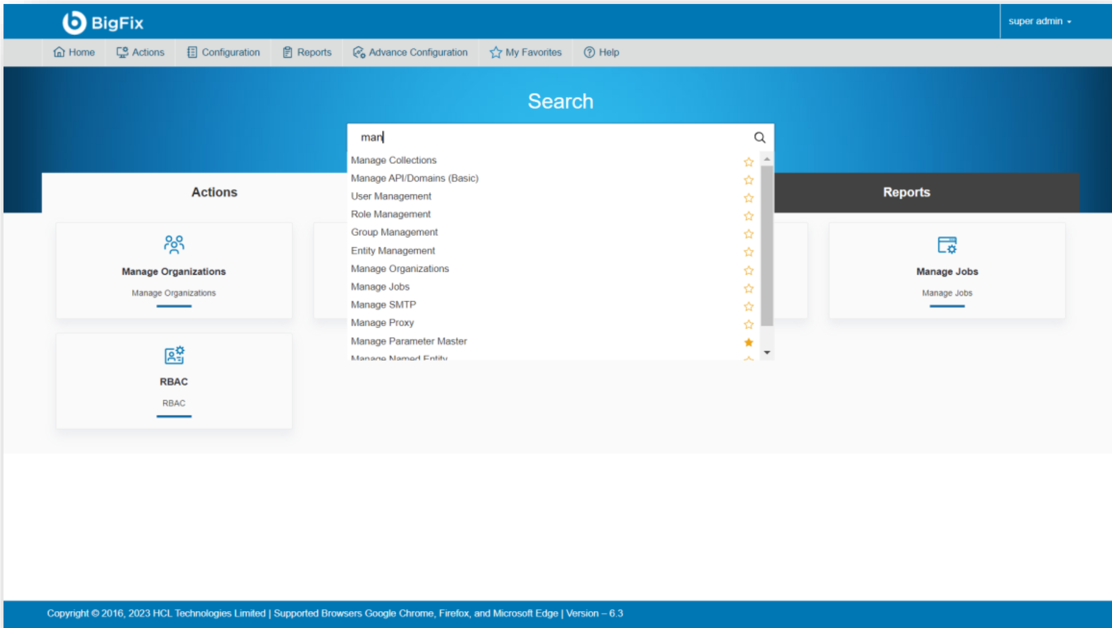


Figure 10 - BigFix Runbook AI Home Page

3.2.2 Actions →Runbooks

A runbook is a script that automatically resolves a ticket with no human involvement. A runbook coordinates multiple infrastructure elements such as applications, network components, or servers. The runbook tool is a platform used to specify these runbooks. Typically, a runbook contains procedures to start, stop, supervise, and debug the system.

To configure runbooks and the runbook tool, click **Runbook** on the main menu bar.

A drop-down menu appears with the following options:

- Map Runbook Tool
- Manage Execution Scope
- Manage Runbook Tool
- Map Runbooks
- Manage Runbooks
- Manage Rules
- Create Runbook

– Schedule Runbooks
– Inventory Runbooks
– Ticket Flow

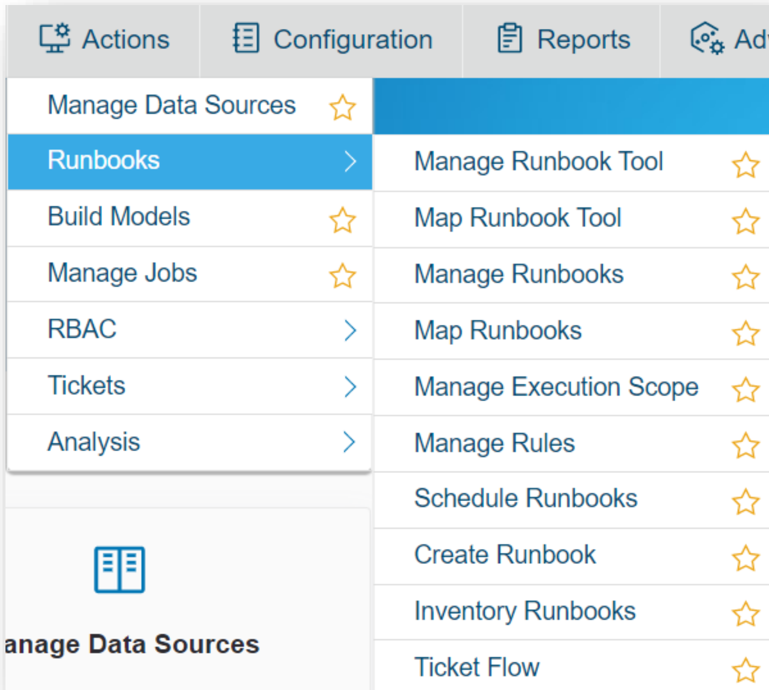


Figure 11 - Runbooks Section view for Organization Administrator

3.2.2.1 Manage Runbook Tool

The user must configure the runbook tool to define the runbooks in it.

Before proceeding with **Manage Runbook Tool**, the user is required to create the Organization. Please refer to **Create Organization** section and follow the mentioned steps. Proceed forward after a new organization has been created.

To manage the runbook tool, perform the following steps:

1. On the main menu bar, click Runbooks**, and then click** Manage Runbook Tool**.** The **Manage Runbook Tool** page appears.

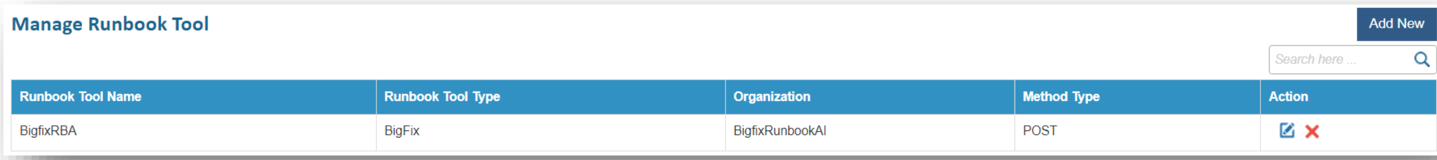


Figure 12 - Manage Runbook Tool

It lists the available runbook tools in a tabular view and lets the user add a new runbook tool using **Add New** button. User can also edit or delete the existing runbook tools.

3.2.2.1.1 Add Runbook Tool

User can add a runbook tool in an environment by performing the following steps:

1. On the **Manage Runbook Tool** screen, click **Add New**.

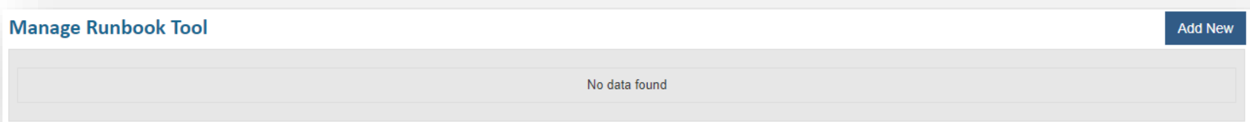


Figure 13 - Manage Runbook Tool

2. Fill in the following details to create a runbook tool. You must provide values for all the mandatory parameters.
   a. **Organization**: Select the organization name for which the runbook tool is to be created.
   b. **Runbook Tool Name**: Type the runbook tool name.
   c. **Runbook Tool Type**: Select the type of runbook tool from the drop-down.
   d. **Integration Method:** Select the integration method to integrate the runbook tool with BigFix Runbook AI.

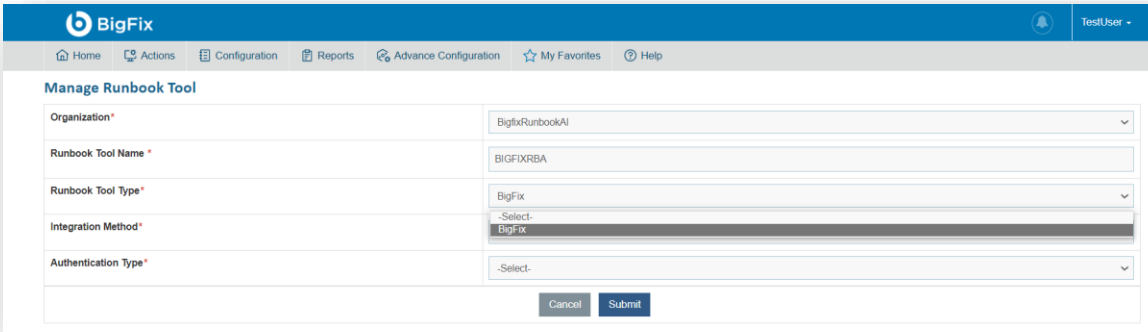


Figure 14 - Add Details

Selecting the integration method populates the data based on the selected runbook tool type and displays the following fields:

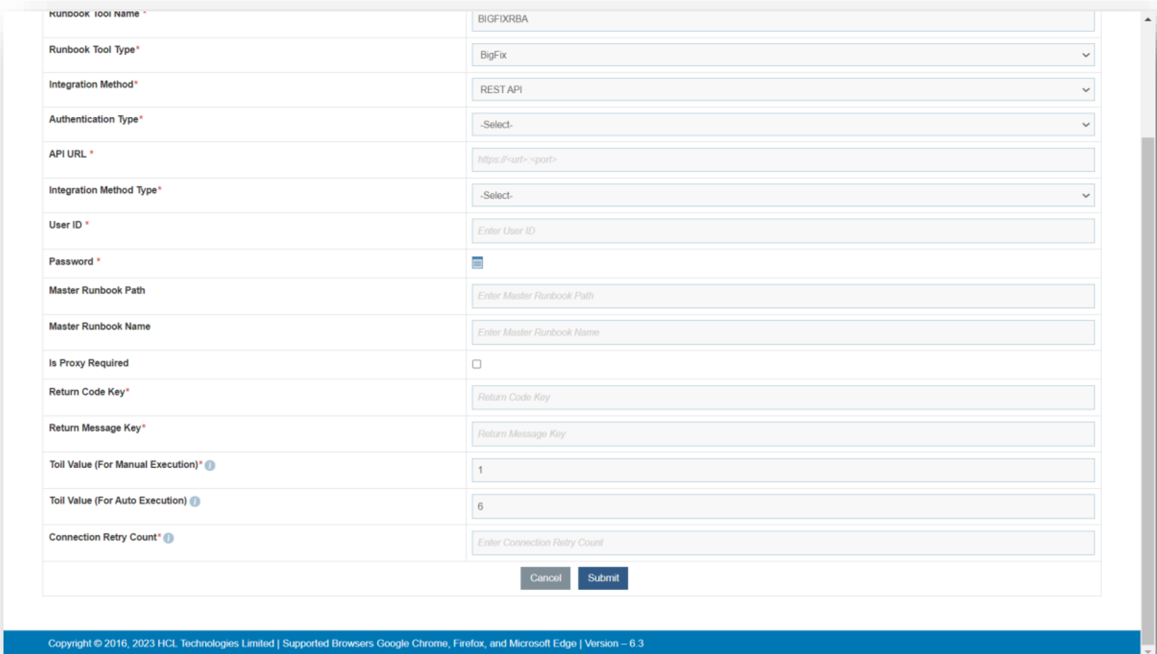


Figure 15 - Manage Runbook Tool (Cont.)

Secondary information is auto filled based on the selected integration methods.

3.2.2.1.1.1 Configure Runbook Tool

This section describes how to configure the runbook tool using the **SOAP API** in case of **CA ITPAM** integration method or **REST API** in case of **vRO**, **Microfocus Operations Orchestrator**, **BigFix**, **BMCAO**, and **Microsoft System Orchestrator** integration method.

To configure the runbook tool using the selected integration method,

1. Select the **Authentication Type** to authenticate the **Runbook Tool**.
2. Type the **API URL** as shown- *http<s>://sourceinstanceName.com* in the API URL field.
3. Select the integration method type from the **Integration** Method **Type** field.
4. Type the username and password in the **User ID** and Password field to get access to API web services.
5. For password, click on icon. If the password is available in plaintext, then select Input type as Input Text and enter the password in Value field. Else if it is available in any Key Vault such as CyberArk or Secret Manager then select Input Type as CyberArk or Secret Manager respectively and then select any of the configured details from the value field.

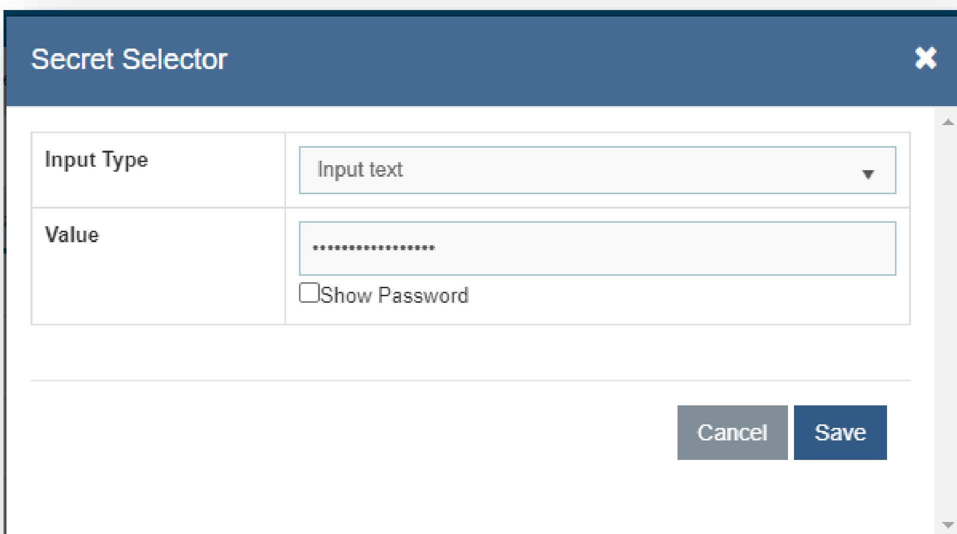


Figure 16 - Password in plaintext

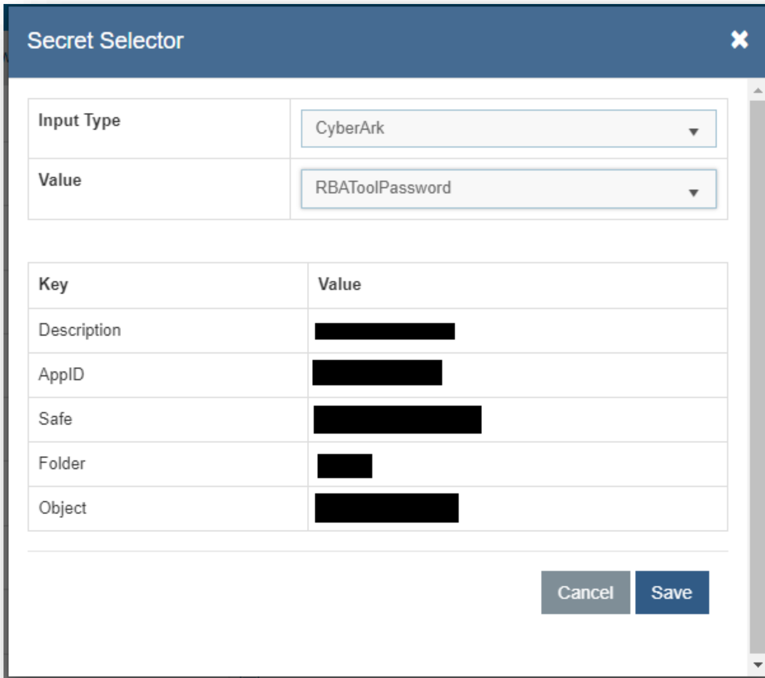


Figure 17 - Password from Key Vault (CyberArk)

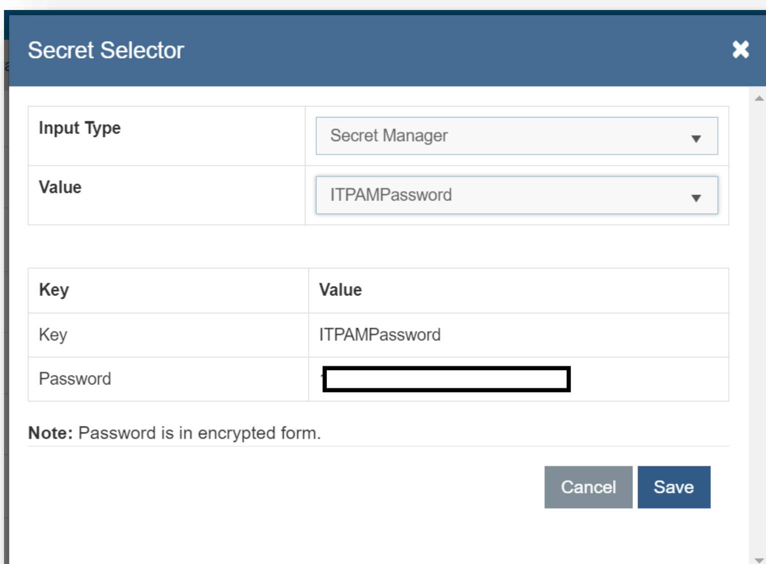


Figure 18 - Password from Key Vault (Secret manager)

API URL, User ID, and Password are dependent on the selected integration method

6. Specify the path to get the consolidated scripts for the execution of runbooks in the **Master Runbook Path** field. This will be provided by respective **Runbook Tool** teams if they have a master runbook.

This is not a mandatory field. Users can change and run these scripts later.

7. Select **Proxy Required** if the environment needs access to content from servers outside a firewall. On selecting a proxy, the system uses the proxy connection, as specified in the Manage Proxy section.
8. Type the return code key value – (Status) in the **Return Code Key** field to identify the success or failure of runbook execution.
9. Type the return message key value – (Result) in the **Return Message Key** field to display the success or failure of runbook execution.
10. Enter the **Toil Value (For Manual Execution)** which is the maximum manual execution time of runbook (in minutes). By default, it takes the value of the configured Toil value (For Manual Execution) on the BigFix Runbook AI Configuration page.
11. Enter the **Toil Value (For Auto Execution)** which is the maximum auto execution time of runbook (in minutes). By default, it takes the value of the configured Toil value (For Auto Execution) on the BigFix Runbook AI Configuration page
12. Enter the **Connection Retry Count** which is the number of retry counts in case the connection with RBA tool is failed when the ticket is triggered by BigFix Runbook AI.

All fields marked with an asterisk (*) are mandatory.

13. Click **Submit** to add the runbook tool.

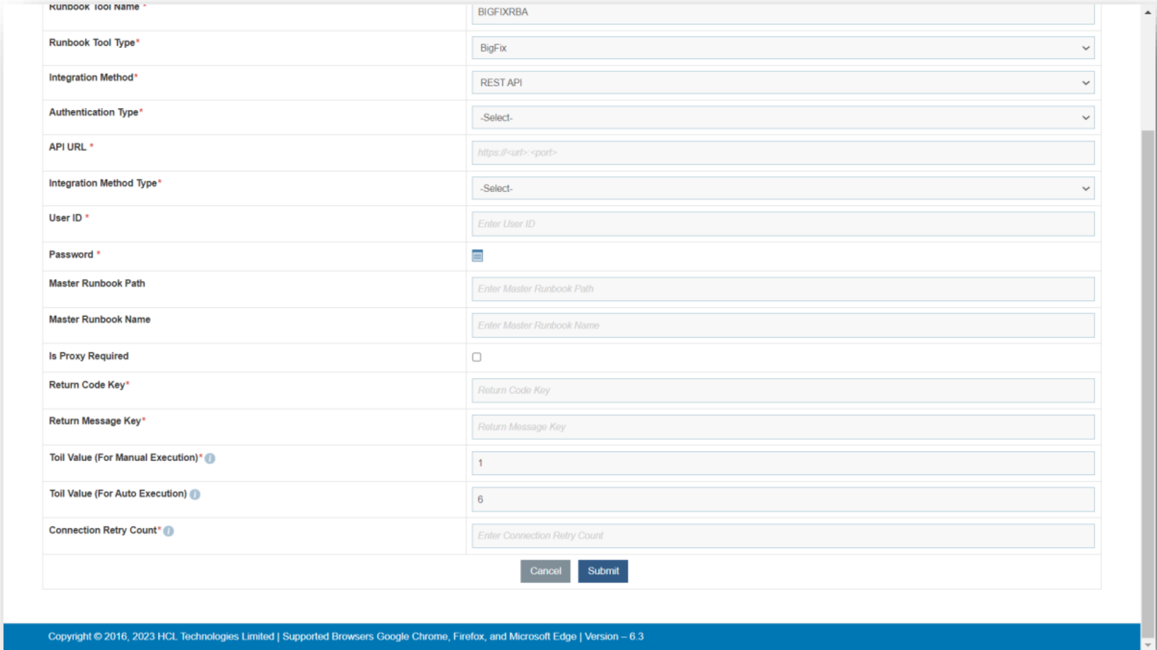


Figure 19 - Configure Runbook Tool

A confirmation dialog box appears.

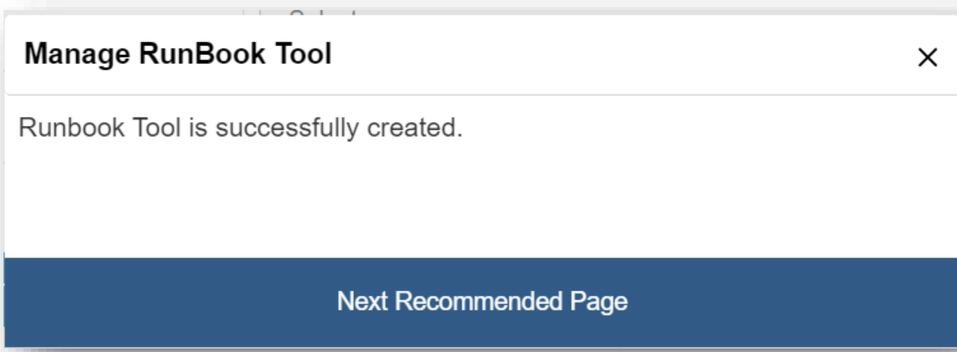


Figure 20 - Runbook Tool Created

The new runbook tool is created and listed in a tabular view.

If a connection to the BigFix Runbook AI configuration database cannot be established, an error message appears explaining what must be done to resolve the issue.

3.2.2.1.1.2 Edit Runbook Tool

User can open an existing runbook tool, review the available information, and edit the runbook tool details by performing the following steps:

1. On the **Manage Runbook Tool** screen, click corresponding to the runbook tool that you want to edit.

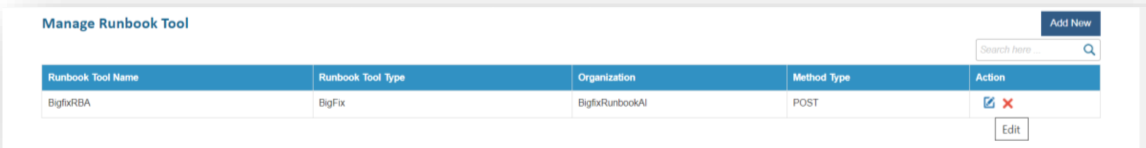


Figure 21 - Edit Runbook Tool

This displays the complete details of the runbook tool including the runbook tool name and type, integration method and type, API URL and its log on credentials, master runbook path, return code key, and the return message key.

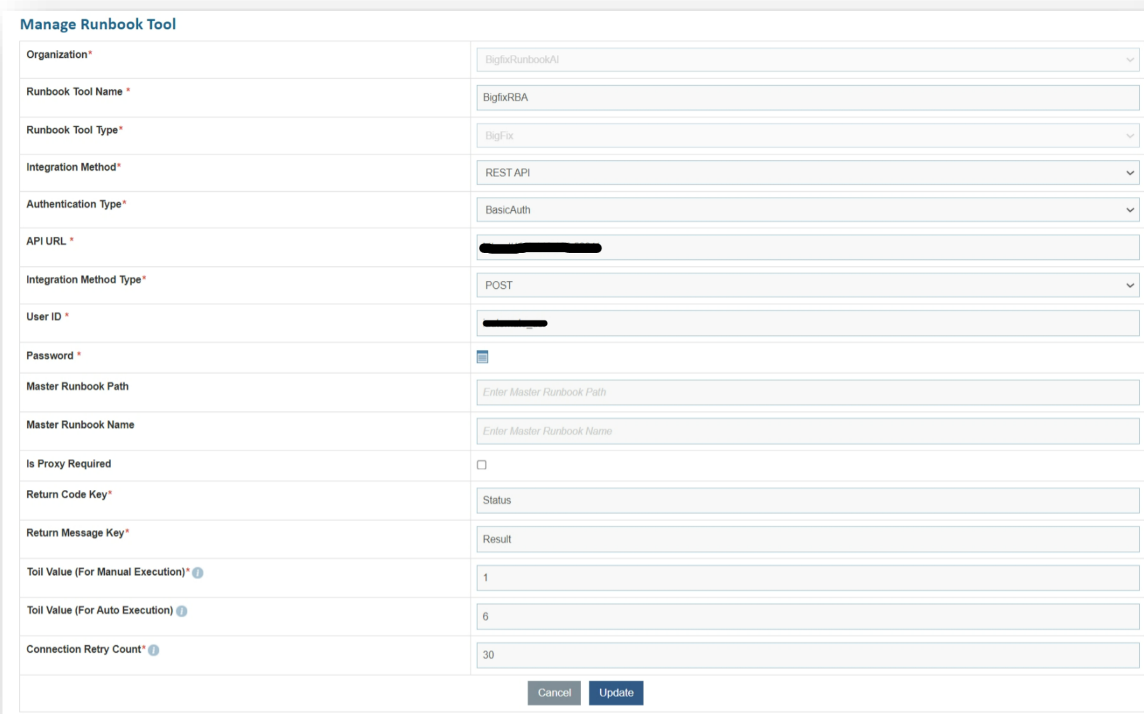


Figure 22 - Edit Runbook Tool (Cont.)

2. Edit the selected runbook tool details and click **Update** to commit the changes. Click **Cancel** to discard changes.

A confirmation dialog box appears.

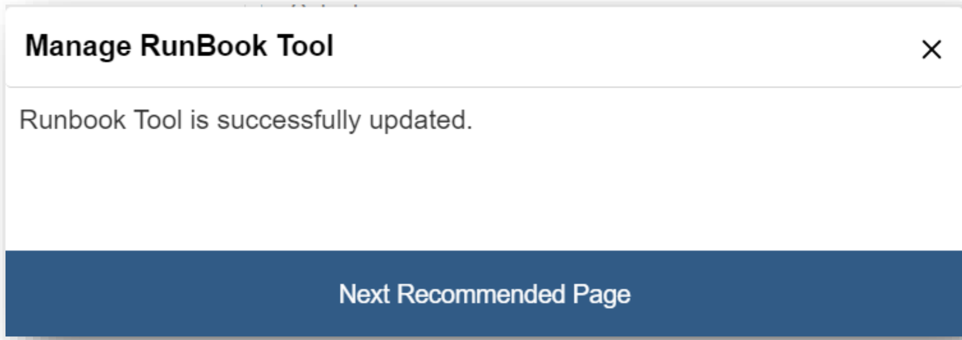


Figure 23 - Runbook Tool Edited

All fields marked with an asterisk (*) are mandatory.

3.2.2.1.1.3 Delete Runbook Tool

If a user no longer wants a specific runbook tool, he/she can delete it from the environment by performing the following steps:

1. On the **Manage Runbook Tool** screen, click corresponding to the runbook tool that you want to delete.

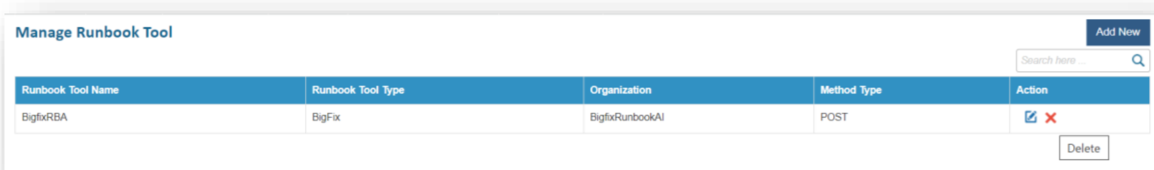


Figure 24 - Delete Runbook Tool

2. Click **OK** to confirm.

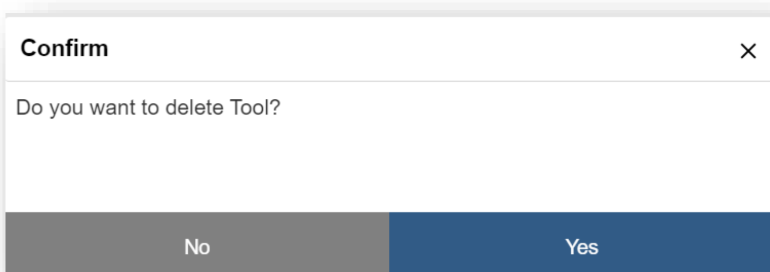


Figure 25 - Delete Runbook Tool (Cont.)

You cannot delete a runbook tool which is mapped to an active organization.

3.2.2.2 Map Runbook Tool

The user can map runbook tools to an organization to execute runbooks from the selected data source.

To map a runbook tool, perform the following steps:

1. On the main menu bar, click **Actions -> Runbooks** and then click **Map Runbook Tool**.
2. The **Map Runbook Tool** page appears and lists all the mapped runbook tools in a tabular view.

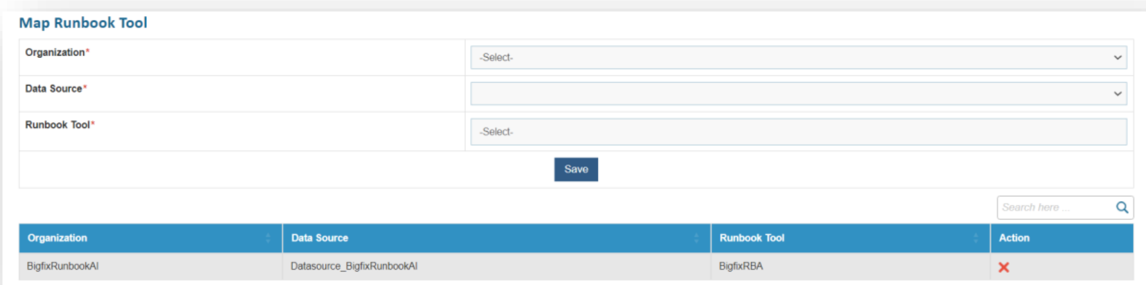


Figure 26- Map Runbook Tool

3. Select an organization from the list of organizations listed in the **Organization Name** field.
4. Select a data source to fetch the data from the list of data sources listed in the **Data Source Name** field.
5. Select a runbook tool to execute the data from the list of runbook tools listed in the **Runbook Tool Name** field.

You can map multiple runbook tools to an organization.

6. Click **Save.** The new runbook tool is mapped to an organization and lists in the tabular view.

All fields marked with an asterisk (*) are mandatory.

7. If required, the user can delete a mapped runbook tool from an organization by clicking corresponding to the runbook tool.

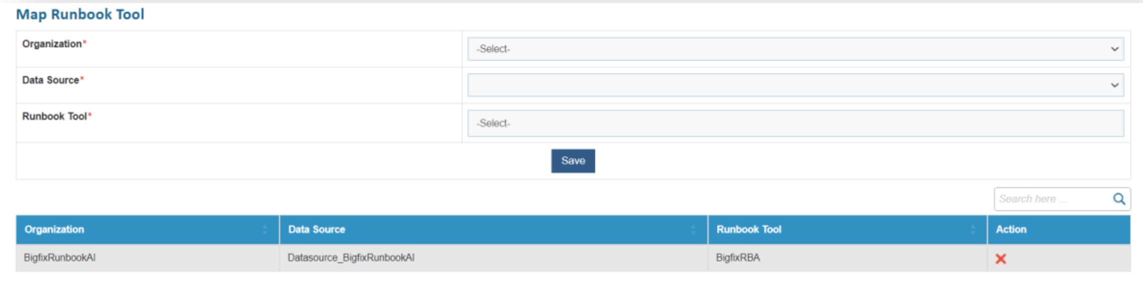


Figure 27- Map Runbook Tool (Cont.)

3.2.2.3 Manage Runbooks

BigFix Runbook AI admin can create the metadata for runbooks and configure them. Every runbook is unique and specific to the system and enables the user to effectively manage and troubleshoot a system. Each runbook must be configured using the runbook tool.

To create the metadata for runbooks, perform the following steps:

1. On the main menu bar, click **Runbooks**, and then **Manage Runbooks**. The **Manage Runbooks** page appears.

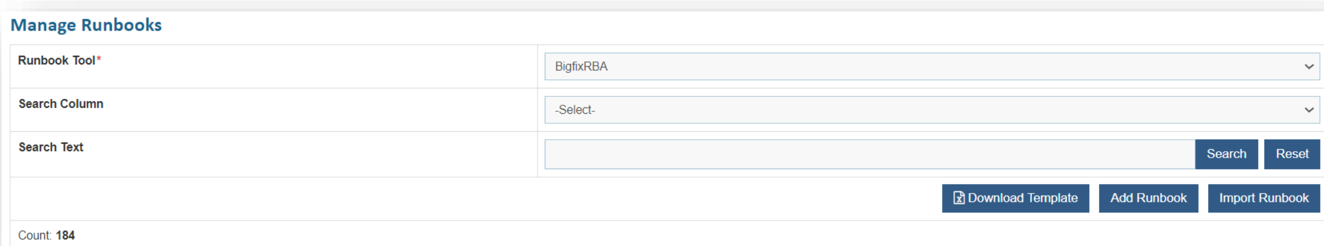


Figure 28 - Manage Runbooks

It lists the existing runbooks in a tabular view and enables user to add runbooks using **Add Runbook** or **Import Runbook**. User can also edit or delete the existing runbooks.

3.2.2.3.1 Add Runbook

User can add a single runbook into the runbook tool using **Add Runbook** button or import multiple runbooks together using **Import Runbook**.

3.2.2.3.1.1 Add a Single Runbook

To add metadata for one runbook, perform the following steps:

1. On the **Manage Runbooks** screen, click **Add Runbook**. The **Runbook Details** page appears.

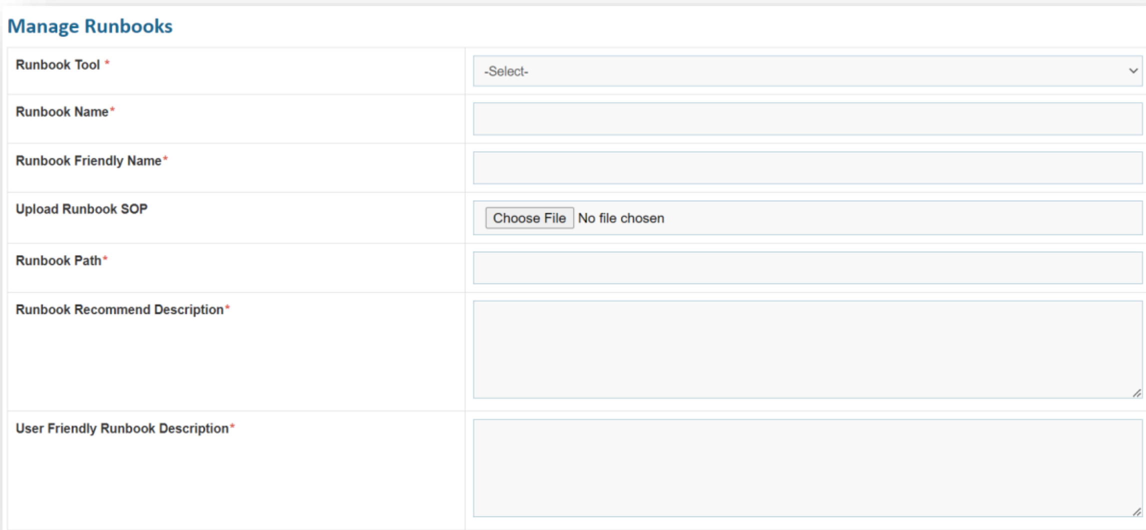


Figure 29 - Add Single Runbook

2. Select a runbook tool by clicking the drop-down button corresponding to the **Runbook Tool** field.
3. Type a name for the new runbook in the **Runbook Name** field. This will be referred by the system at the backend.
4. Type a runbook friendly name in the **Runbook Friendly Name** field to recognize the runbook in your repository. This name will be visible to the end user while getting recommendations and execution.
5. In the **Runbook Path** field, specify the path where the runbook is located within the runbook tool .
6. Type the runbook description in the **Runbook Recommend Description** field to be used during the recommendation process.
7. Type a user-friendly description in the **User-Friendly Runbook Description** field to be shown to the user when selecting the runbook.
8. Type the **Frequency Interval**, which is fixed by the user to fetch the status post runbook execution. This frequency varies with the type of runbook in terms of SS (seconds), MM (minutes), or HH (hours).
9. Type the runbook update frequency in the **Update Frequency** field.

Frequency Interval and Update Frequency are interrelated.

10. Selecting **Runbook Tool** type as '**BigFix'** enables three more fields:
    a. **Response File Path**: Type the location of the file from where response is to be read on target server.
    b. **Wait Frequency Interval**: Type the Frequency Interval, which is fixed by the user to wait before going to fetch the response post runbook execution. This frequency varies with the type of runbook in terms of SS (seconds), MM (minutes), or HH (hours).
    c. **Wait Frequency**: The time interval to wait before going to fetch the response.
11. Type the runbook tool category in the **Category** field.
12. Type the sub-category of the runbook tool in the **Sub-Category** field.
13. Specify the details of the runbook tool category in the **Category Granular Details** field.

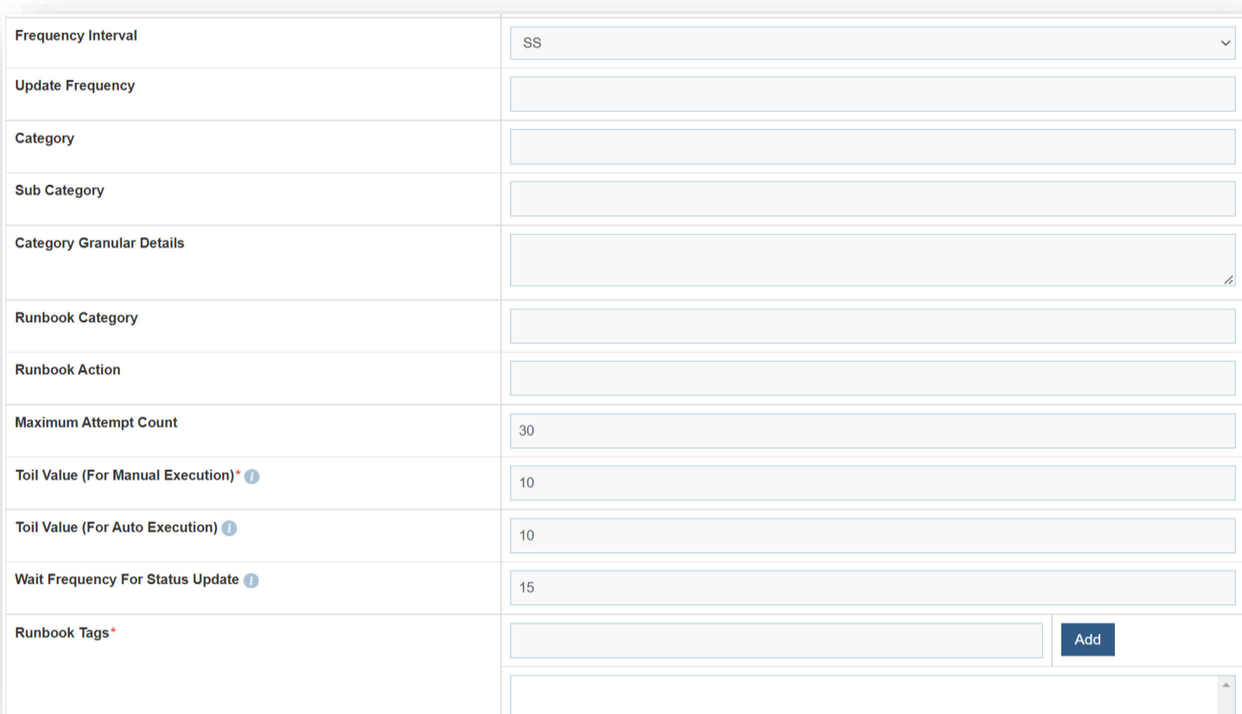


Figure 30 - Add Single Runbook (Cont.)

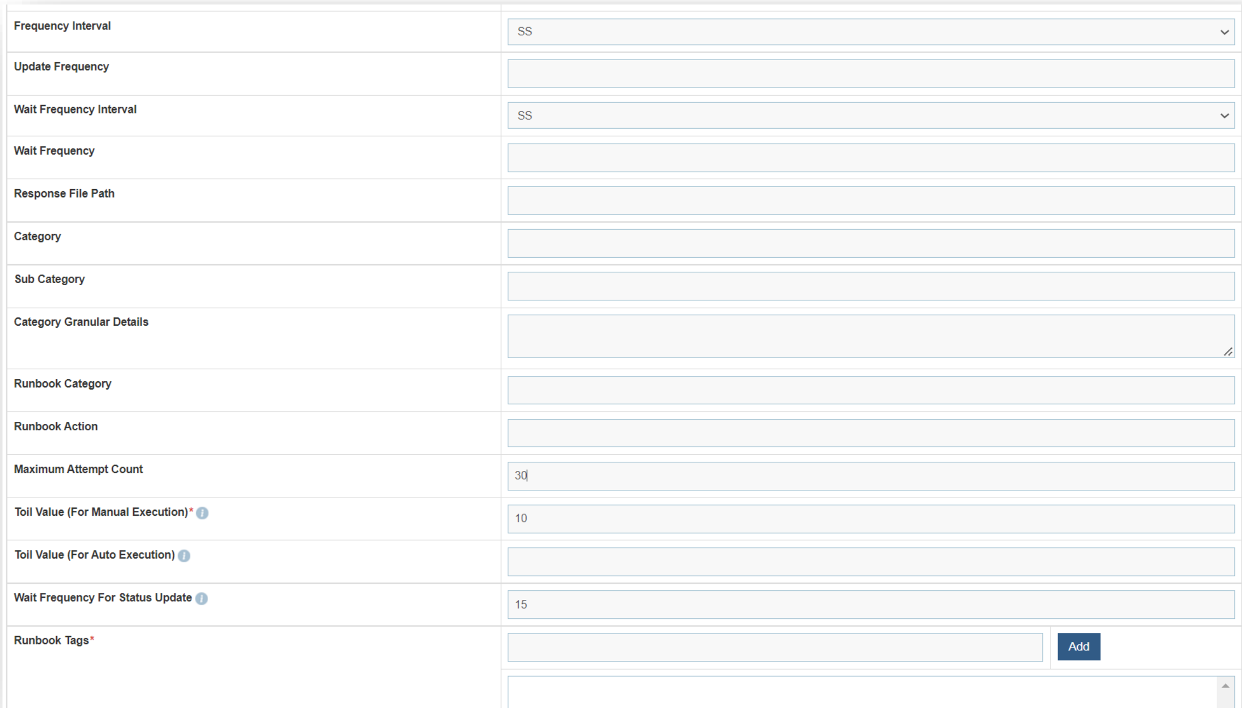


Figure 31 - Add Single Runbook for BigFix Tool Type (Cont.)

14. Type the runbook category in the **Runbook Category** field.
15. Specify the action to be taken by the runbook in the **Runbook Actions** field.
16. Specify the **Maximum Attempt Count** for the runbook to retry in case of failure.
17. Enter the **Toil Value (For Auto Execution)** which is the maximum manual execution time of runbook (in minutes). By default, it takes the value of the configured Toil Value (For Auto Execution) for the selected runbook tool.
18. Enter the **Toil Value (For Manual Execution)** which is the maximum auto execution time of runbook (in minutes). By default, it takes the value of the configured Toil Value (For Manual Execution) for the selected runbook tool
19. Enter the **Wait Frequency For Status Update** (in minutes) for the case when rba is unable to update execution status back to BigFix Runbook AI after successful interaction (in case push notification is enabled).

20. Type a tag for the runbook corresponding to the **Runbook Tags** field and click **Add**. Added tags appear in a box, below the Add button. Tags allow users to assign keywords to help identify a runbook while ticket parsing. User can specify multiple tags for a runbook.
21. If required, select **Enable Auto Execution** to enable auto execution of the runbook.
22. Once the above values are added successfully, provide the following parameters for runbook execution while ticket parsing.
    a. **Parameter Name**- Specifies a name of the parameter which is to be used in a runbook for ticket parsing.
    b. Parameter Label- **Specifies a unique user-friendly name for the parameter to be added.**
    c. **Is Mandatory-** Select True or False depending on whether the parameter details added are mandatory or not.
    d. **Parameter Description-** Describes the parameter.
    e. **Default Parameter Value-** Specifies the default value for the parameter.
    f. **Field Type**- Specifies the data type to be used in the parameter field. It may be of the following types:
        - Text
        - Password

g. **Parameter Type**- Lists all the parameter types configured in Configure Parameter Type. On selecting the parameter type, BigFix Runbook AI fetches the related data for ticket parsing.

h. **IsCIBasedParameter**- Check this checkbox if the parameter is a CI based parameter. It is mandatory to have at least one parameter as CI Based.

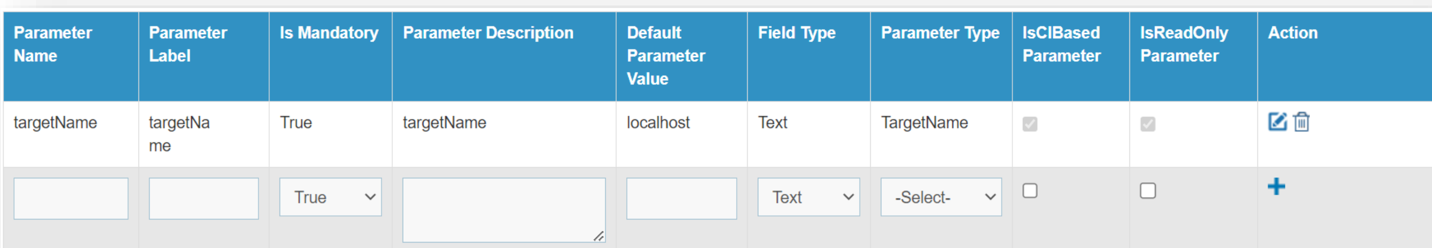
i. **IsReadOnlyParameter**- Check this checkbox if the parameter is read-only and user should not be able to change its value wherever parameter is parsed.

j. **Action**- Enables user to add, edit or delete the existing parameter by clicking respective action buttons.

k. **Add**- Adds a new row to add another parameter.

l. Click **Save**.

23. Click **Save** at the top of the screen to configure the newly added runbook to the selected runbook tool.



Parameter Name	Parameter Label	Is Mandatory	Parameter Description	Default Parameter Value	Field Type	Parameter Type	IsCIBased Parameter	IsReadOnly Parameter	Action
targetName	targetName	True	targetName	localhost	Text	TargetName			
		True			Text	-Select-			+

Figure 32 - Add Single Runbook (Cont.)

The new runbook is added and listed in a tabular view.

All fields marked with an asterisk (*) are mandatory.

3.2.2.3.1.2 Upload Spreadsheet to Configure Multiple Runbooks

If the user already has a Microsoft Excel spreadsheet with existing runbooks that were written or stored earlier, importing them to the runbook library is easy. Download the .xls file from the **Manage Runbook** page, update the runbook details, and import it to your system. If this runbook, is not required, it can be deleted.

To upload multiple runbooks, perform the following steps:

1. To download a template, click . The template asks for the details as described in Add a Single Runbook section.

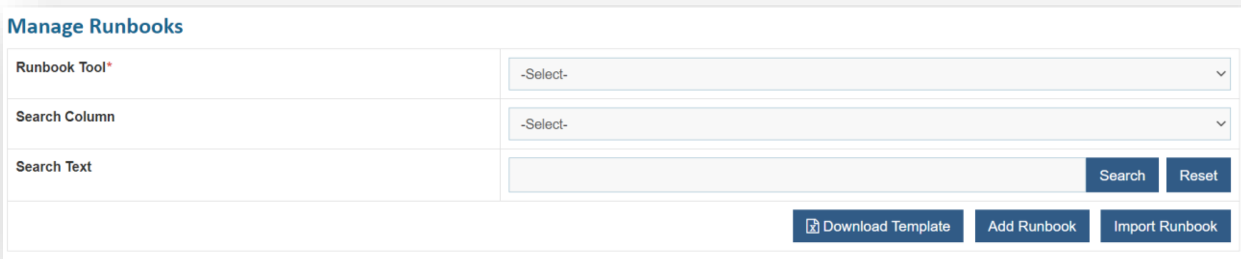


Figure 33 - Add Multiple Runbooks

This functionality allows users to create multiple runbooks together by uploading the required details simultaneously through a single excel document.

2. Fill the details in the downloaded template. See Add a Single Runbook section for more information.

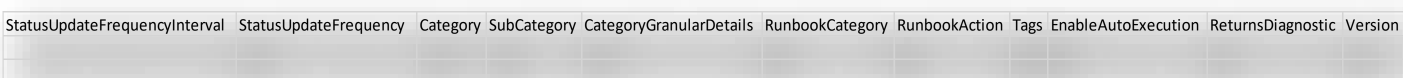


Figure 34 - Add Multiple Runbooks (Cont.)

3. Select a Runbook Tool, then click Import Runbook.

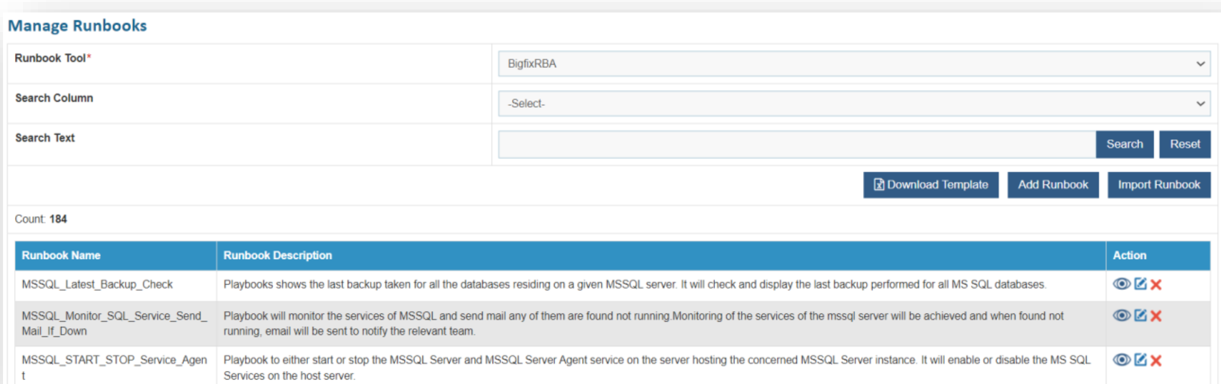


Figure 35 - Add Multiple Runbooks (Cont.)

All fields marked with an asterisk (*) are mandatory.

The **Upload Excel File** page appears.

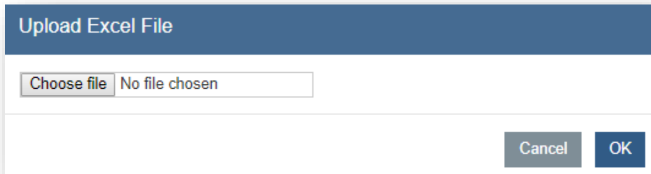


Figure 36 - Add Multiple Runbooks (Cont.)

4. Click **Choose file** to upload the updated .xls file.

The new runbooks are added and listed in a tabular view.

3.2.2.3.2 Edit Runbook

User can open an existing runbook, review the available information, and change the runbook details by performing the following steps:

1. On the **Manage Runbook** page, select **Runbook Tool** to specify the runbook tool. By default, all the runbooks mapped to the selected runbook tool appear in a grid.

   BigFix Runbook AI provides user with search capabilities to access runbook information. The user can limit his runbook search to a specific runbook type by specifying the search filters.
2. Select the required parameter in **Search Column**.
3. Type the search keywords in the **Search Text** field.
4. Click **Search**.

Users can also change the search filter by selecting the **Search Column** again.

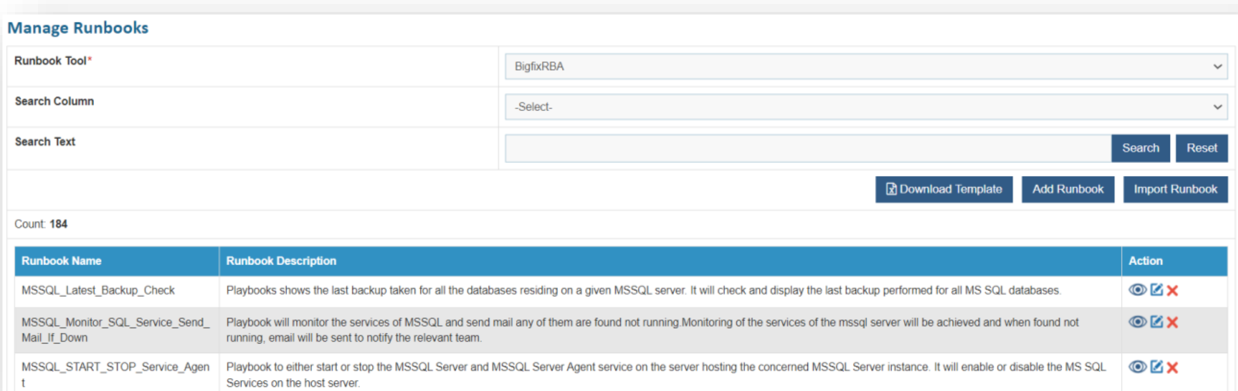


Figure 37 - Edit Runbooks

5. Click next to the runbook you want to edit that will redirect you to the **Add Single Runbook** screen. It auto-fills the details.

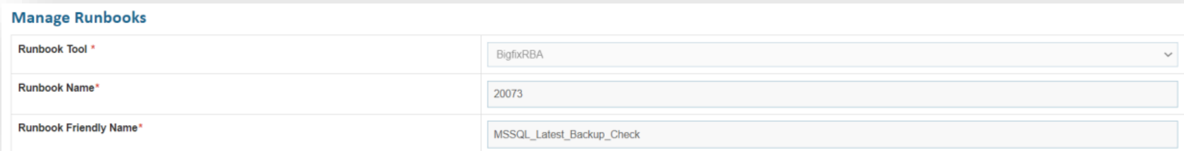


Figure 38 - Edit Runbooks (Cont.)

6. Change the selected runbook details.
7. Click **Update** to save the changes or click **Cancel** to discard all changes. A runbook updated confirmation dialog box appears.

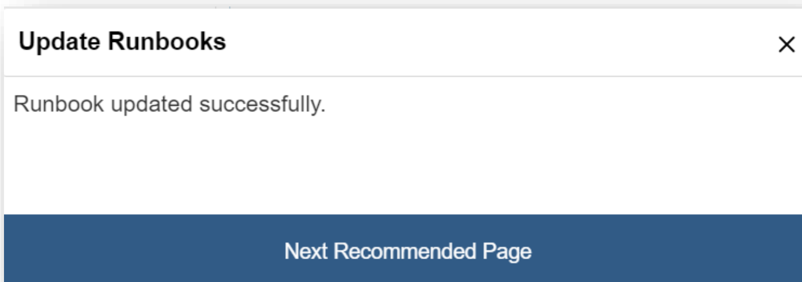


Figure 39 - Runbook Updated

Runbooks configured in this section will be shown while mapping a runbook to a customer. All fields marked with an asterisk (*) are mandatory.

3.2.2.3.3 Delete Runbook

If a user no longer wants a runbook in a runbook tool, the same can be deleted from the environment.

To delete a runbook from the runbook tool, perform the following steps:

1. On the **Manage Runbook** page, click corresponding to the runbook that the user wants to delete.

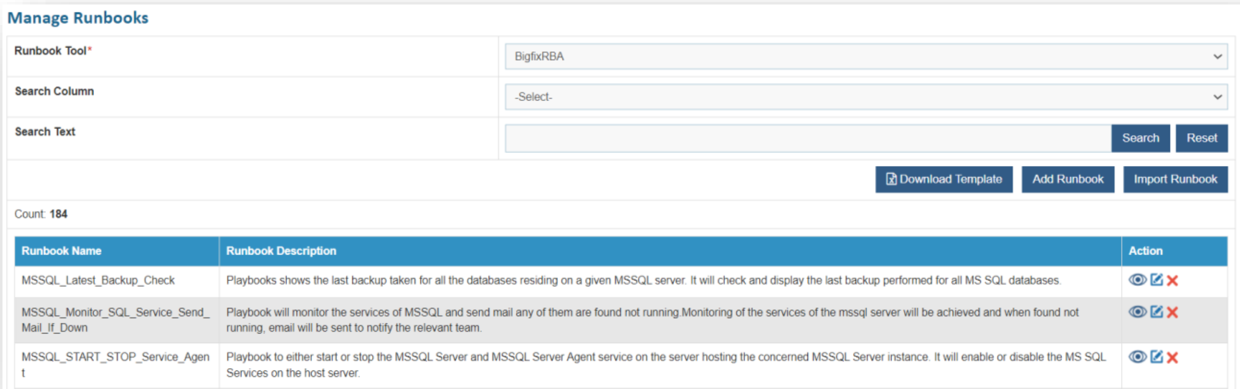


Figure 40 - Delete Runbook

2. Click **OK** to delete the selected runbook tool.

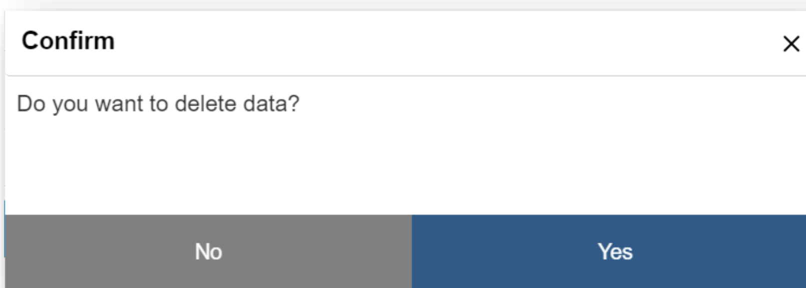


Figure 41 - Confirm Deletion

A confirmation dialog box appears.

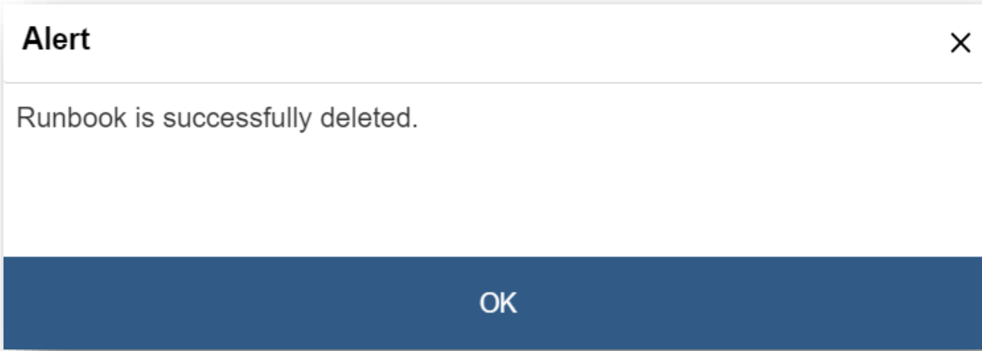


Figure 42 - Successful Deletion

3.2.2.4 Map Runbooks

A runbook is a script that automatically resolves a ticket with no human involvement. A runbook coordinates multiple infrastructure elements such as applications, network components, or servers. The runbook tool is a platform used to specify these runbooks. Typically, a runbook contains procedures to start, stop, supervise, and debug the system. Each runbook must be configured to an organization.

To map a runbook, perform the following steps:

1. On the main menu bar, click **Actions -> Runbooks**, and then click **Map Runbook**.
2. Select an organization from the drop-down list available in the **Organization** field.
3. Select a module from the list of modules configured to a selected organization in the **Module** field. This populates the runbooks in the following tabs.
   - **Organization Runbooks**- It lists all the runbooks mapped to the selected organization.
   - **All Runbooks**- It lists all the runbooks available for mapping.

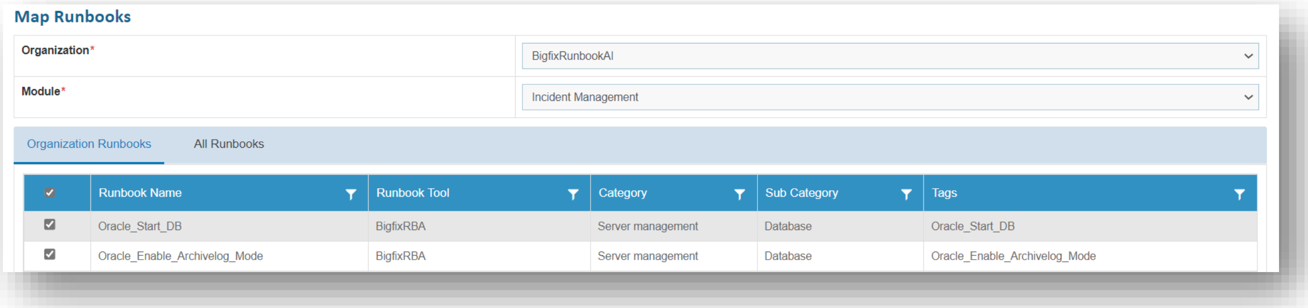


Figure 43- Map Runbooks

The **Map Runbook** page allows user to map a new runbook and delete an existing, mapped runbook from an organization.

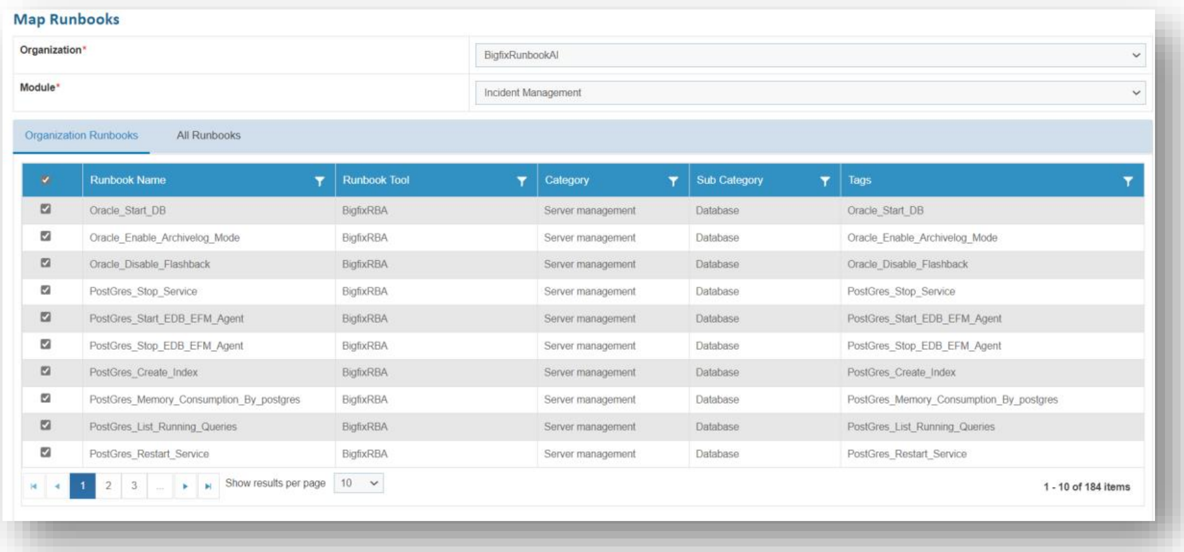


Figure 44- Map Runbooks (Cont.)

To map a runbook:

a. Go to the **All Runbooks** tab.

b. Select the **Runbook** to be mapped.

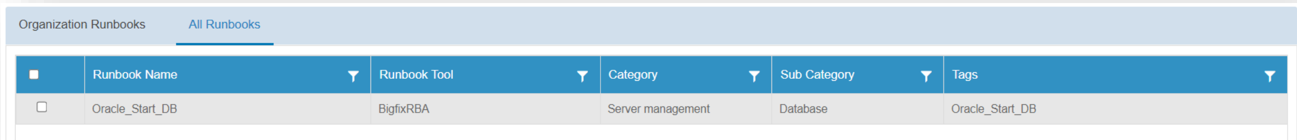


Figure 45- Map Runbooks (Cont.)

A confirmation dialog box appears.

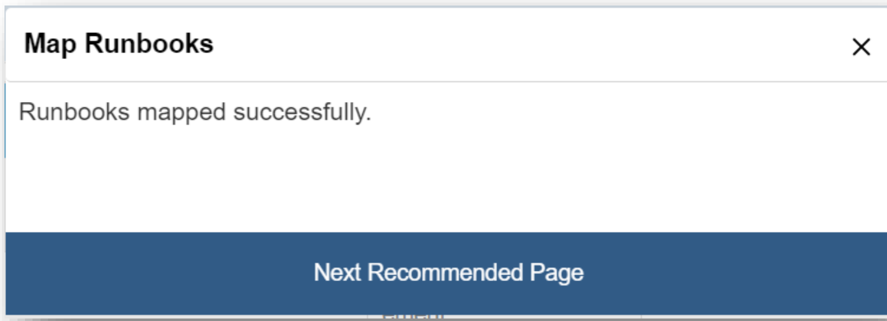


Figure 46- Map Runbooks (Cont.)

To remove a runbook from an organization,

a. Go to the **Organization Runbooks** tab.

b. To delete an existing mapped runbook, clear the check box of that runbook.

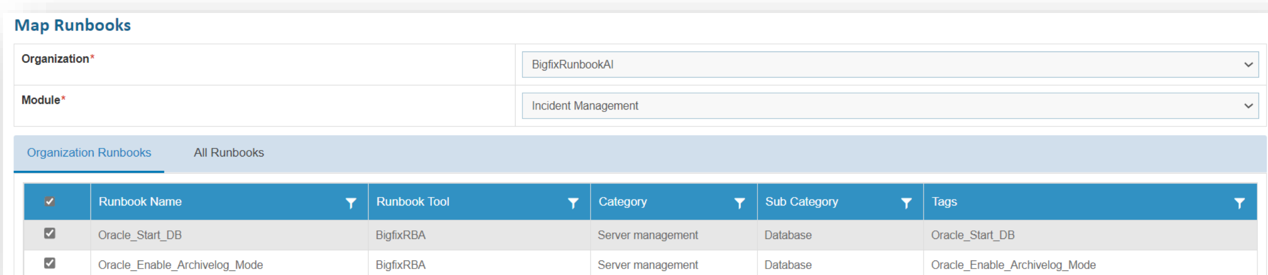


Figure 47- Map Runbooks (Cont.)

c. Click **Yes** to confirm that you want to un-map the selected runbook.

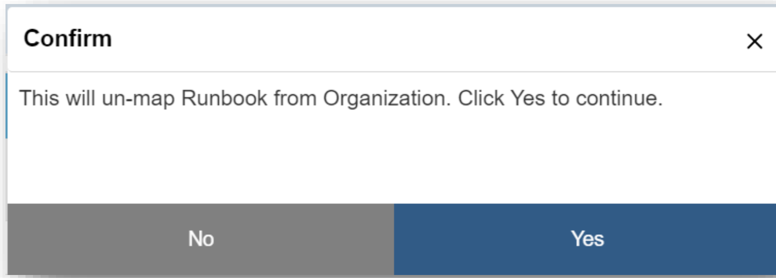


Figure 48- Map Runbooks (Cont.)

A confirmation dialog box appears.

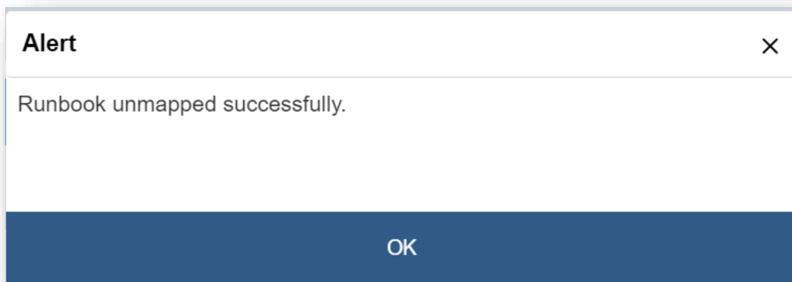


Figure 49- Map Runbooks (Cont.)

3.2.2.5 Manage Execution Scope

Execution scope specifies the rules set up to execute a ticket on a runbook tool. User can also define the execution scope for a data source in an organization.

To manage the execution scope, perform the following steps:

1. On the main menu bar, click **Actions -> Runbooks,** and then click **Manage Execution Scope**.

   The Manage Execution Scope page appears.

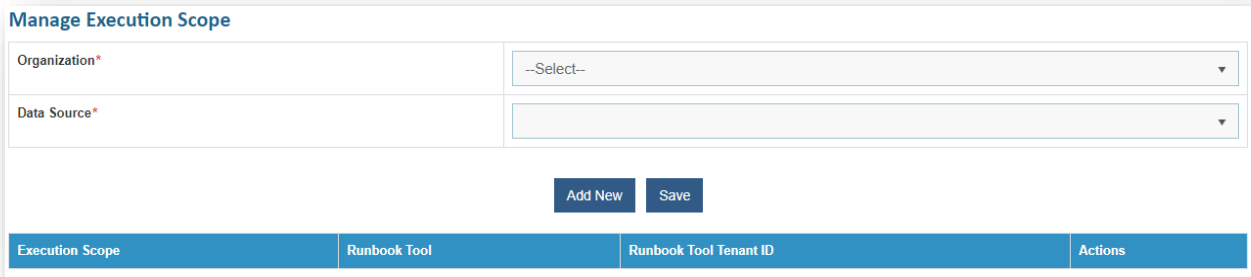


Figure 50- Manage Execution Scope

2. Select an organization from the drop-down list available in the **Organization** field.
3. Select the data source from the drop-down list available in the **Data Source** field.
4. This enables the **Add New** button to configure a new execution scope and lists the configured execution scope in a tabular view that allows users to edit or delete them.

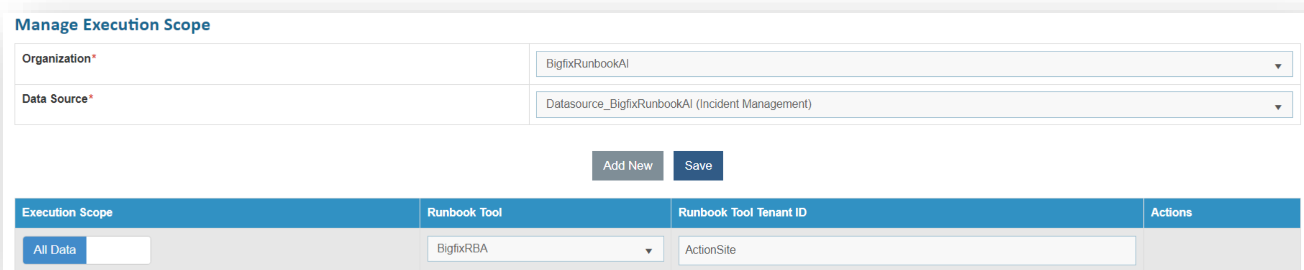


Figure 51- Manage Execution Scope (Cont.)

3.2.2.5.1 Add New Execution Scope

User can add a new execution scope for a data source in an organization by performing the following steps.

1. On the **Manage Execution Scope** page, click **Add New**.

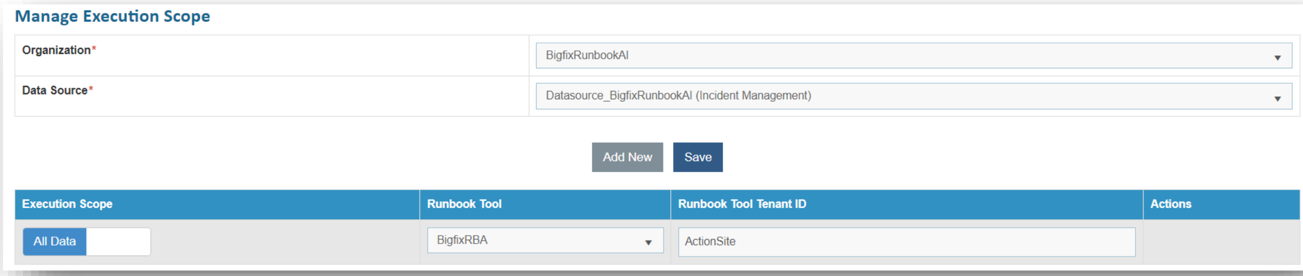


Figure 52- Add Scope of Execution

Before the user configures the execution scope, ensure the execution scope is set to Filter. In case of selecting **All Data**, all the runbook tools remain assigned to a single organization and the **Add New** button remains disabled. To assign a new runbook tool, set the **Execution Scope** from **All Data** to **Filter**, which enables the **Add New** button.

It lists the existing execution scope for the selected organization.

2. To define a new scope for execution, click **Add New** and add a new row below the existing execution scope.
3. Select a **Runbook Tool** in a new row and then type the **Runbook Tool Tenant ID**, that is assigned to a runbook tool for identification.

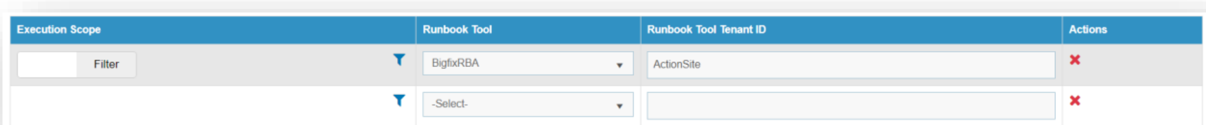


Figure 53- Add Scope of Execution (Cont.)

4. Click **Save Rule.** A confirmation dialog box appears.

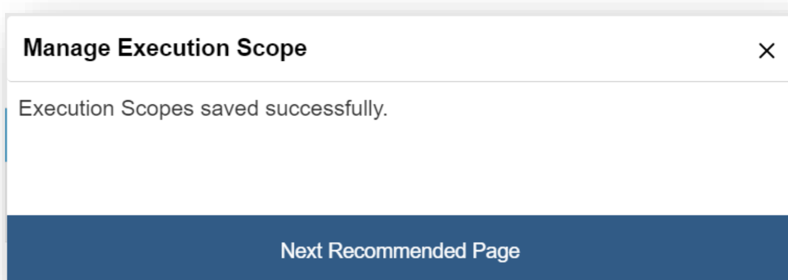


Figure 54- Add Scope of Execution (Cont.)

The new execution scope is defined and listed in a tabular view.

To delete an execution scope, click × corresponding to the execution scope that you want to delete.

3.2.2.6 Manage Rules

User can configure rules for the tickets released from BigFix Runbook AI. There are few default rules for release, but these rules can be customized based on the requirements.

To manage the release rule, perform the following steps:

1. On the main menu bar, click **Actions -> Runbooks**, and then click **Manage Rules**. The **Manage Rules** page appears:

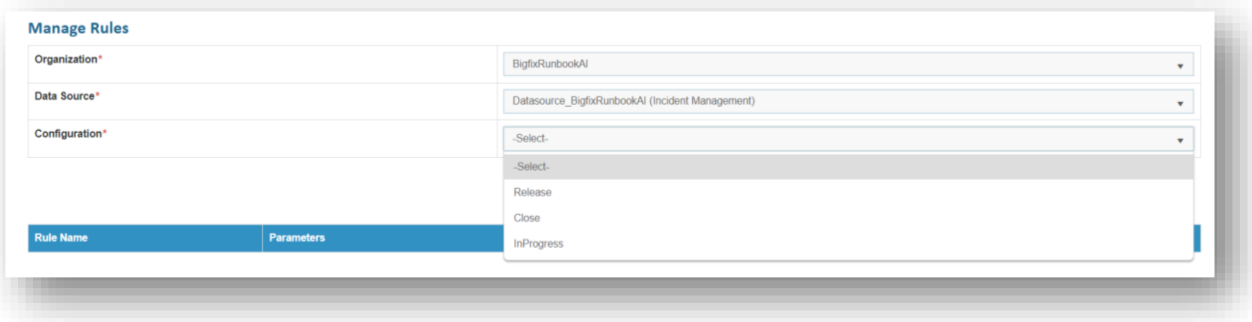


Figure 55- Manage Rules

2. Select an organization from the list of organizations available in the **Organization Name** field.
3. Select a data source to fetch the data from the list of data sources available in the **Data Source Name** field.
4. Select **Configuration** from the list of configurations available.

All the existing rules are listed in a tabular view with the associated parameters that allows user to manage the parameters for the existing rules.

No Rule in the condition column indicates the ***Else*** or ***Default*** condition. If **No Rule** is added against the selected Customer-Module combination, then BigFix Runbook AI will release the ticket without condition in case of Rule-based Release in the Manage Configuration tab.

3.2.2.6.1 Add Rules

User can define multiple release rules for an organization by performing the following steps.

1. On the **Manage Rules** page, select the organization for which user wants to configure the release rules from the drop-down in the **Organization** field.

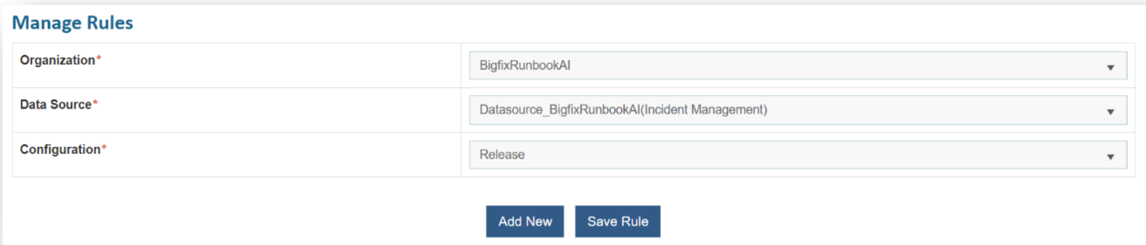


Figure 56- Manage Rules

The organizations listed in the drop-down are created using [Create Organization](#).

2. Select the data source, from where the organization fetches the data in BigFix Runbook AI, from the drop-down in the **Data Source** field.
3. Select **Configuration** from drop-down. It lists all the configured rules in a tabular view.
4. Click **Add New**.
5. It will prompt the user to type the **Rule Name**, which acts as an identifier for the added rule in the dialog box.
6. Click **Save**.

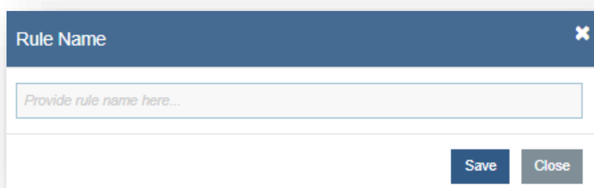


Figure 57- Add Release Rule (Cont.)

This adds the new rule, and it appears in the list of rules. After the rule is added, the user must set up the configuration parameters for the newly added rule.

Figure 58- Add Release Rule (Cont.)

To manage parameters:

a. On the **Release Rule** grid, click next to the rule for which user wants to set the parameters.

Figure 59- Add Release Rule (Cont.)

This prompts user to add the **Assignment Group**.

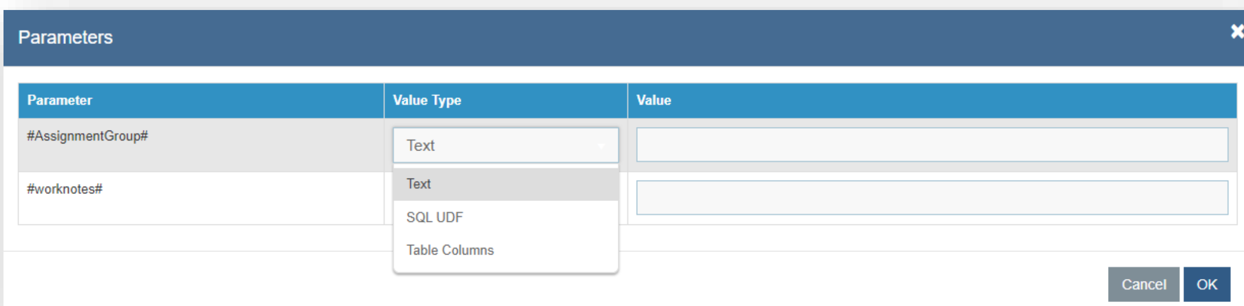


Figure 60- Add Release Rule (Cont.)

b. Select **Value Type** and enter the appropriate details in **Value** Field.

c. Click **OK** and the added parameter appears against the rule in the **Rule** grid.

d. You can edit the parameter name by clicking corresponding to the **Rule Name** in the rule list grid. It prompts you to edit the Rule Name.

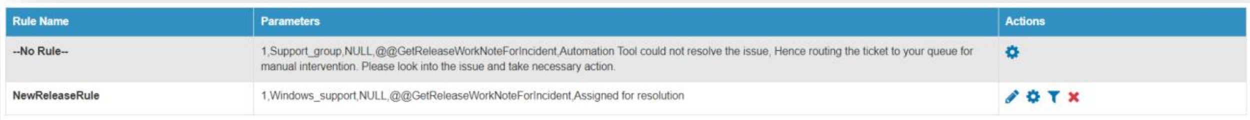


Figure 61- Add Release Rule (Cont.)

e. Click **Save** to update the changes.

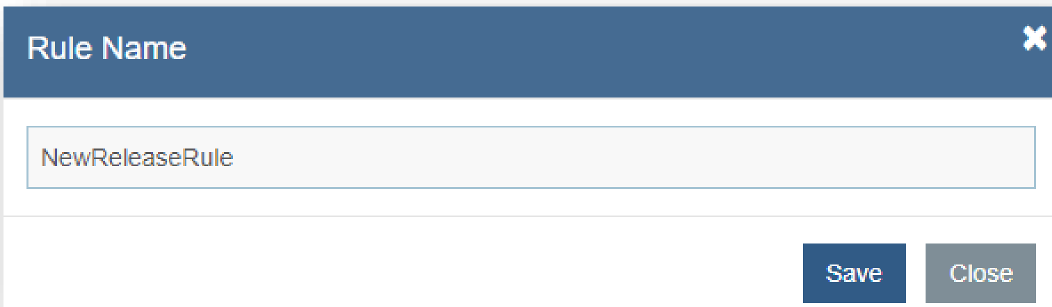


Figure 62- Add Release Rule (Cont.)

f. You can also filter the rule by clicking ⛛ corresponding to the **Rule Name** in the rule list grid.

It auto-fills the following attributes:

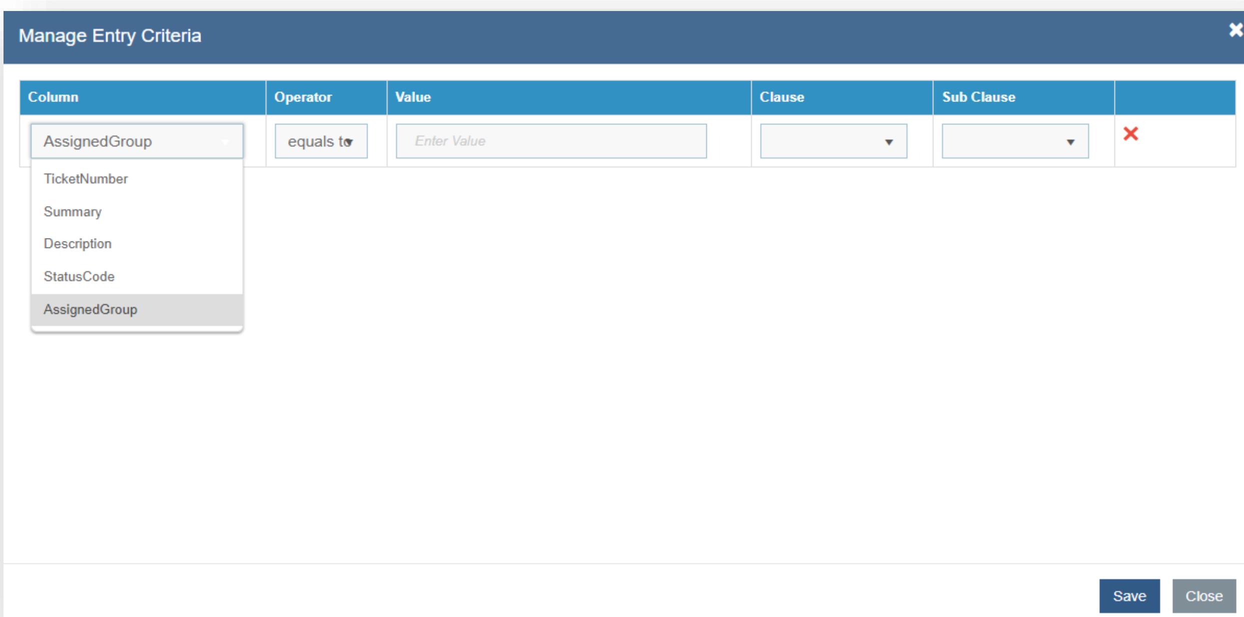


Figure 63- Add Release Rule (Cont.)

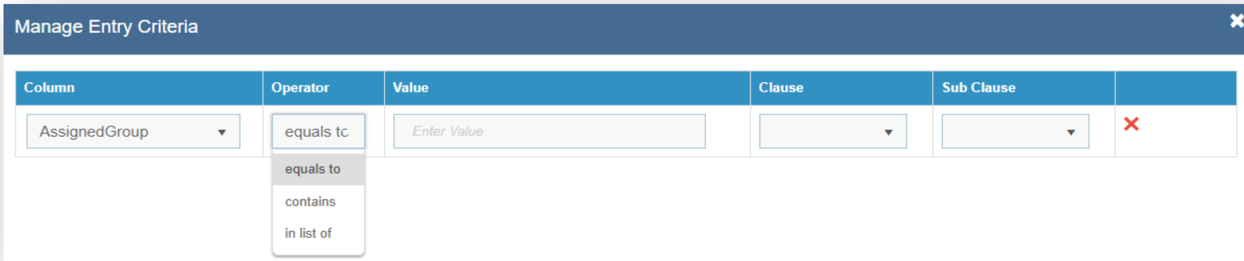


Figure 64- Add Release Rule (Cont.)

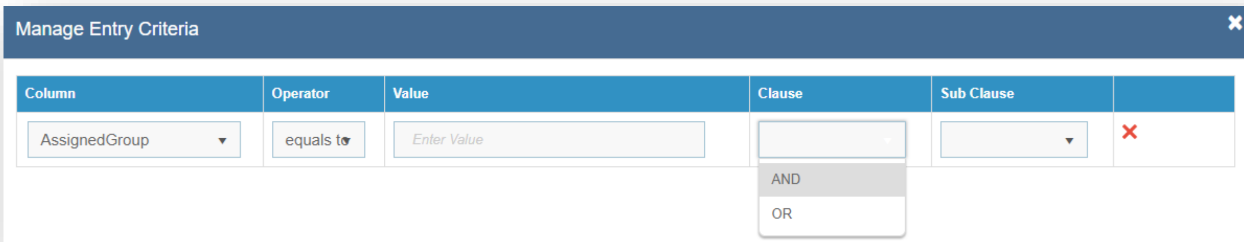


Figure 65- Add Release Rule (Cont.)

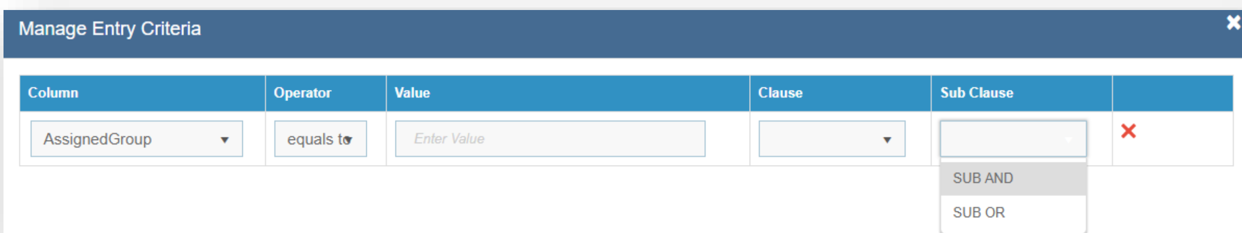


Figure 66- Add Release Rule (Cont.)

g. Optionally, you can fill the **Column**, **Operator**, **Value**, **Clause**, and **Sub-clause** attributes and then click ✕, if you want to delete the added attributes.

h. Click **Save** to update the filter attributes.

i. To delete a rule from an organization, click ✕ corresponding to the rule that you want to delete from the grid.

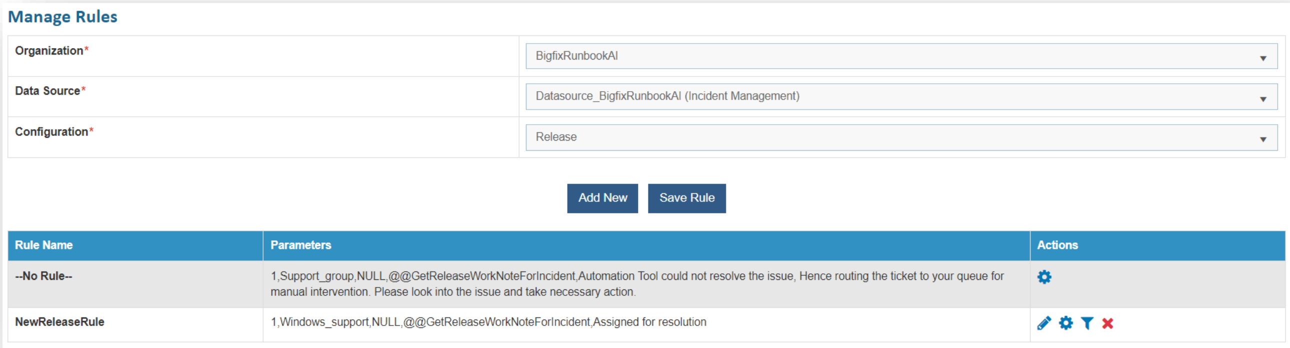


Figure 67- Add Release Rule (Cont.)

j. Click **OK** to confirm deletion of the selected release rule.

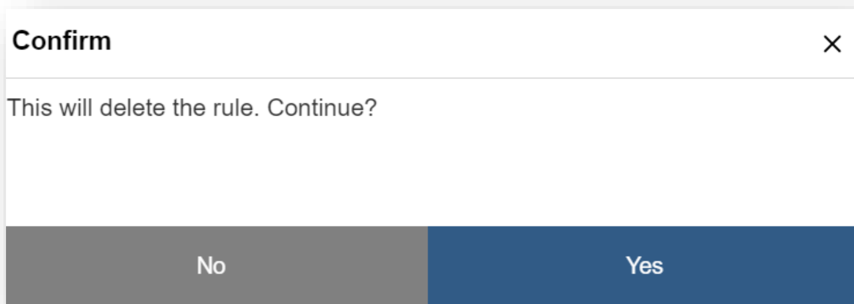


Figure 68- Add Release Rule (Cont.)

3.2.2.7 Schedule Runbooks

BigFix Runbook AI allows user to schedule runbooks to run at a specified time. A runbook can be scheduled to run once or on a recurring basis. User can also schedule them for weekly, monthly, specific days of the week or days of the month, or a particular day of the month.

To create a new runbook schedule, perform the following steps:

1. On the main menu bar, click **Actions -> Runbooks** and then **Schedule Runbooks**. The **Schedule Runbook** page appears.

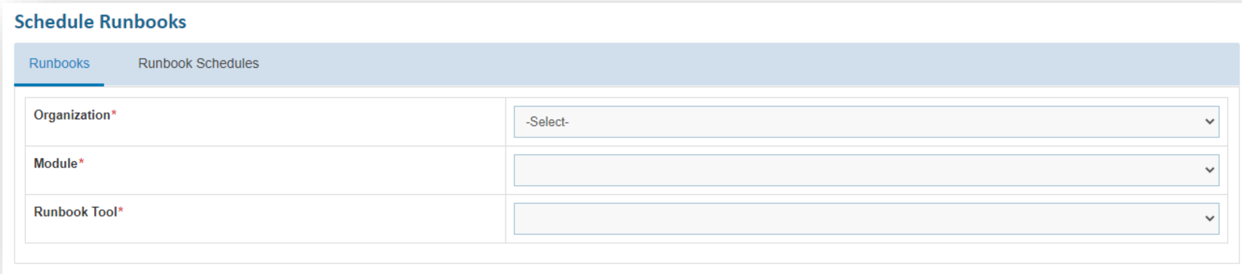
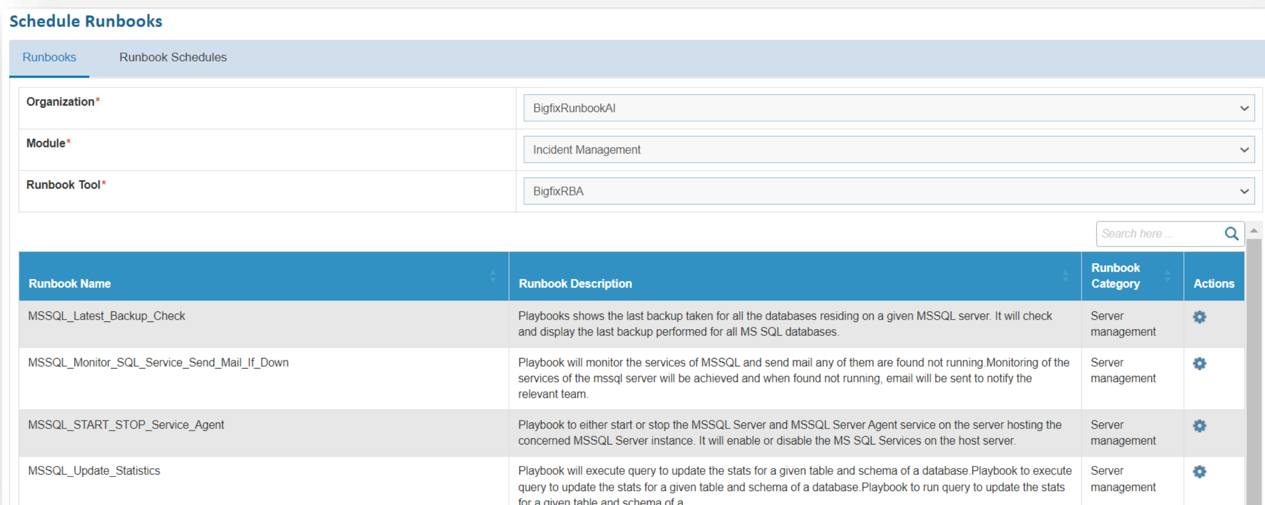


Figure 69 - Schedule Runbooks

2. Select an **Organization**, Module and then select the **Runbook Tool**. It lists all the runbooks configured with the selected runbook tool in a tabular view.



Runbook Name	Runbook Description	Runbook Category	Actions
MSSQL_Latest_Backup_Check	Playbooks shows the last backup taken for all the databases residing on a given MSSQL server. It will check and display the last backup performed for all MS SQL databases.	Server management	
MSSQL_Monitor_SQL_Service_Send_Mail_If_Down	Playbook will monitor the services of MSSQL and send mail any of them are found not running Monitoring of the services of the mssql server will be achieved and when found not running, email will be sent to notify the relevant team.	Server management	
MSSQL_START_STOP_Service_Agent	Playbook to either start or stop the MSSQL Server and MSSQL Server Agent service on the server hosting the concerned MSSQL Server instance. It will enable or disable the MS SQL Services on the host server.	Server management	
MSSQL_Update_Statistics	Playbook will execute query to update the stats for a given table and schema of a database.Playbook to execute query to update the stats for a given table and schema of a database.Playbook to run query to update the stats for a given table and schema of a	Server management	

Figure 70 - Runbook Search Results

3. Click and fill in the details to schedule a runbook.

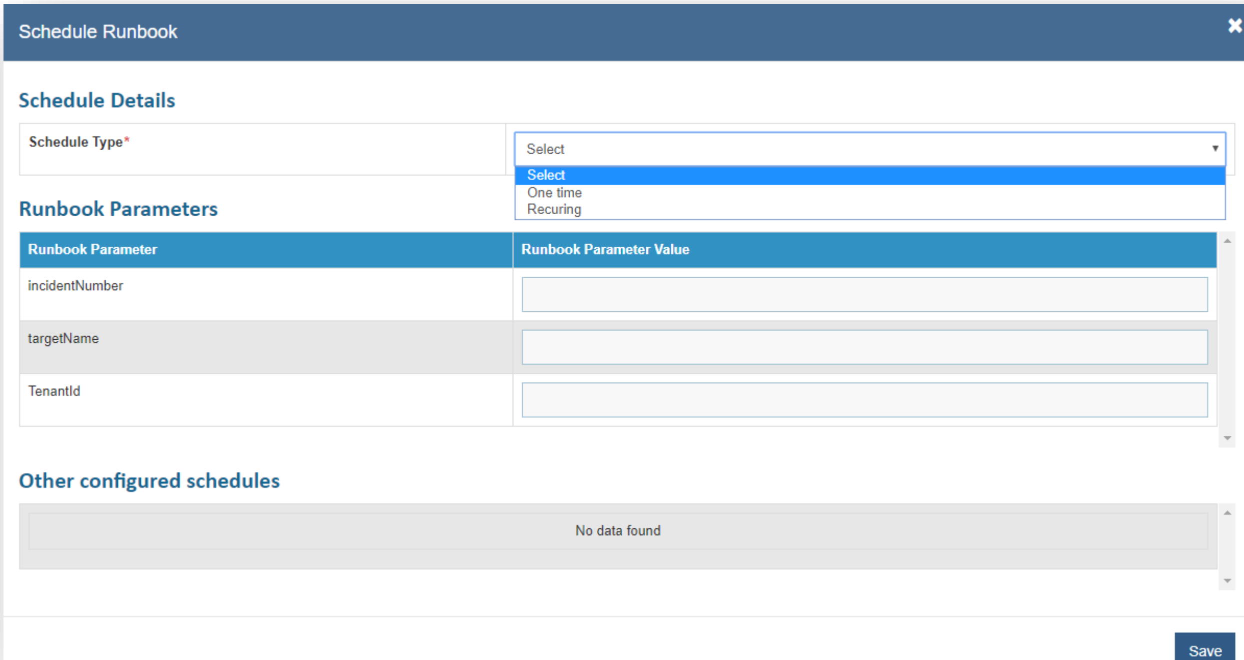


Figure 71 - Runbook Details

4. Select **One time** or **Recurring** from the **Schedule Type** drop-down menu to specify the scheduling frequency.

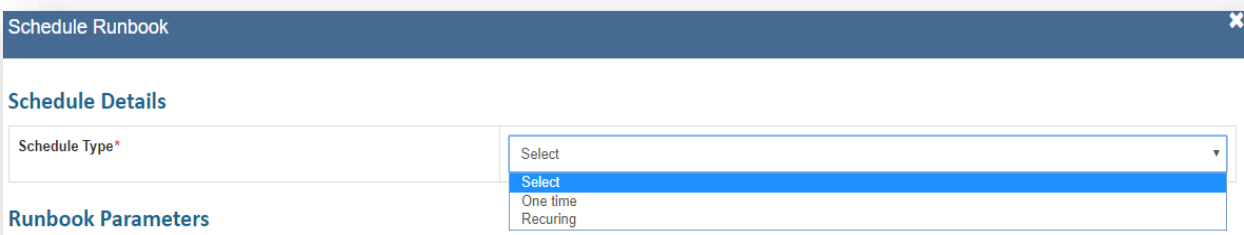


Figure 72 - Select Schedule Frequency

5. If the user selects **One time,** specify the **Start date** and **time.**

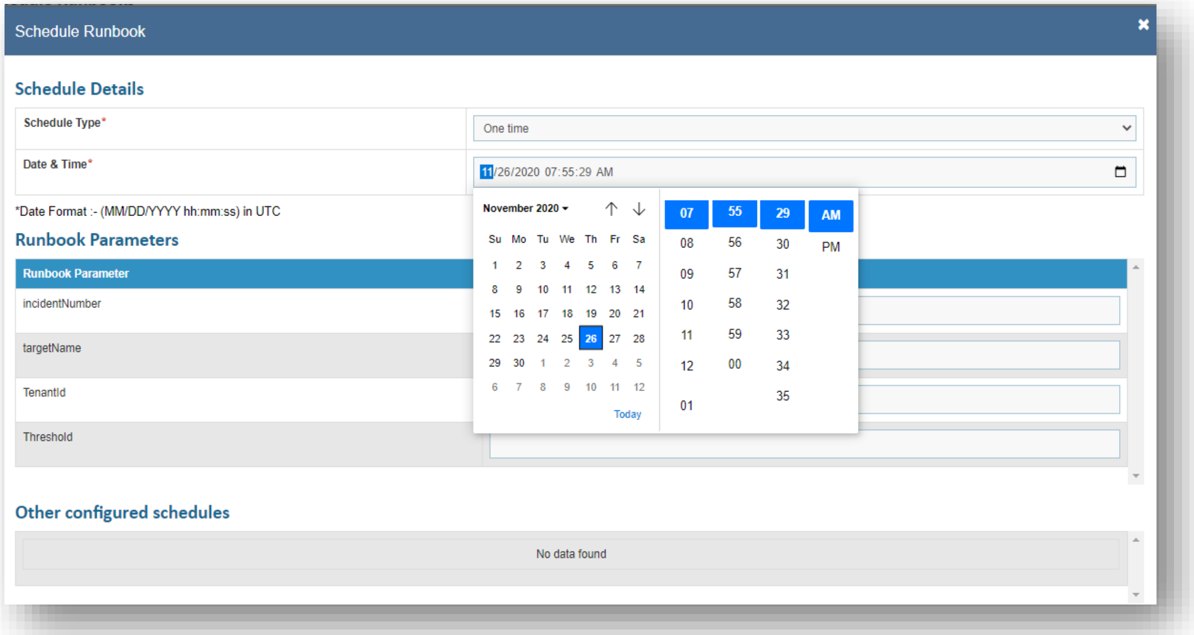


Figure 73 - Scheduled Runbook (One Time)

6. If the user selects **Recurring**, specify the **Time Out Period** and the **Schedule Frequency** for how often user wants the runbook to repeat by **hour**, **day**, **week**, or by **month**.

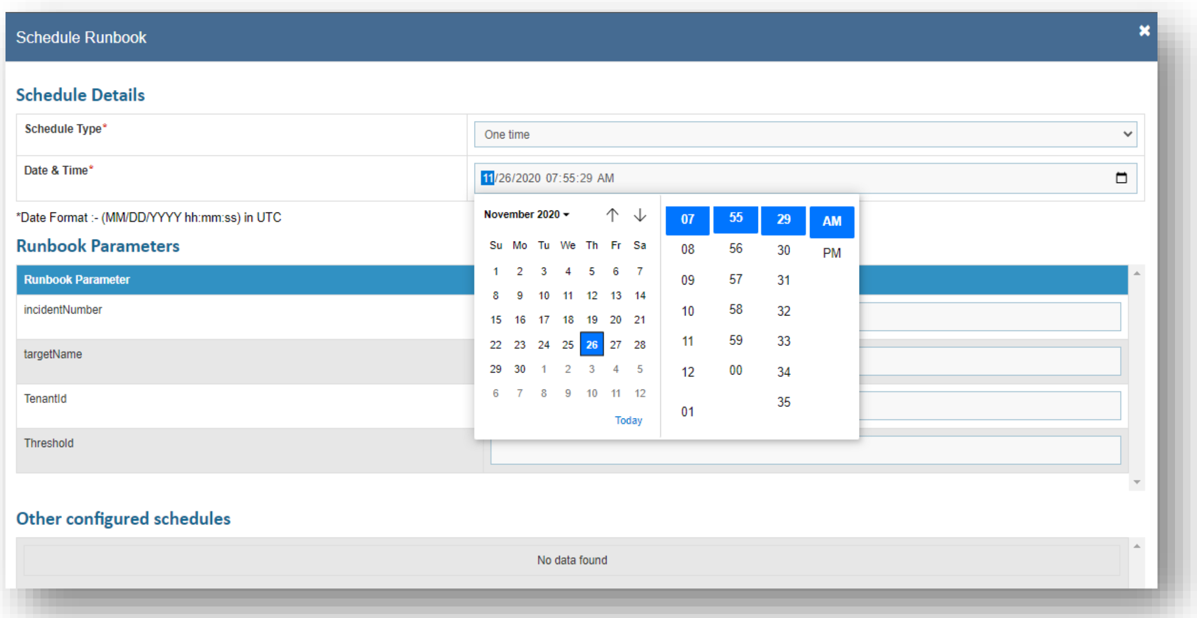


Figure 74 - Scheduled Runbook (Recurring)

7. Click **Save.** A confirmation dialog box appears.

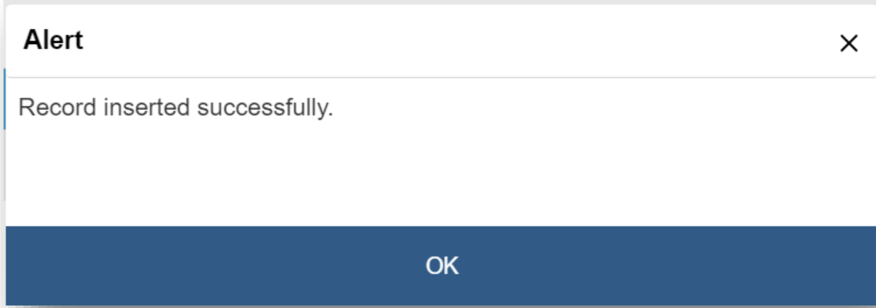


Figure 75 - Schedule Success Confirmation

This creates a new schedule and lists it in the **Runbook Schedule** page.

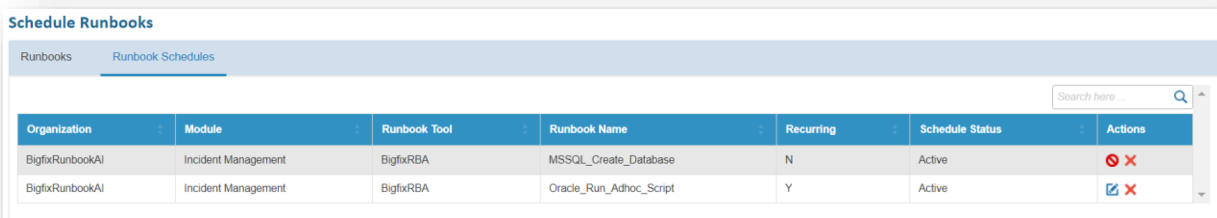


Figure 76 - Schedule Runbooks (Cont.)

The **Runbook Schedule** page enables users to edit or delete existing schedules.

One-time schedule type runbooks cannot be edited. In case user needs to modify it, it will have to be added as a new entry through **Schedule Runbook**

8. Click next to the schedule you want to edit. This opens the auto-filled Schedule Runbook page.
9. Click **Update** after editing the required details.

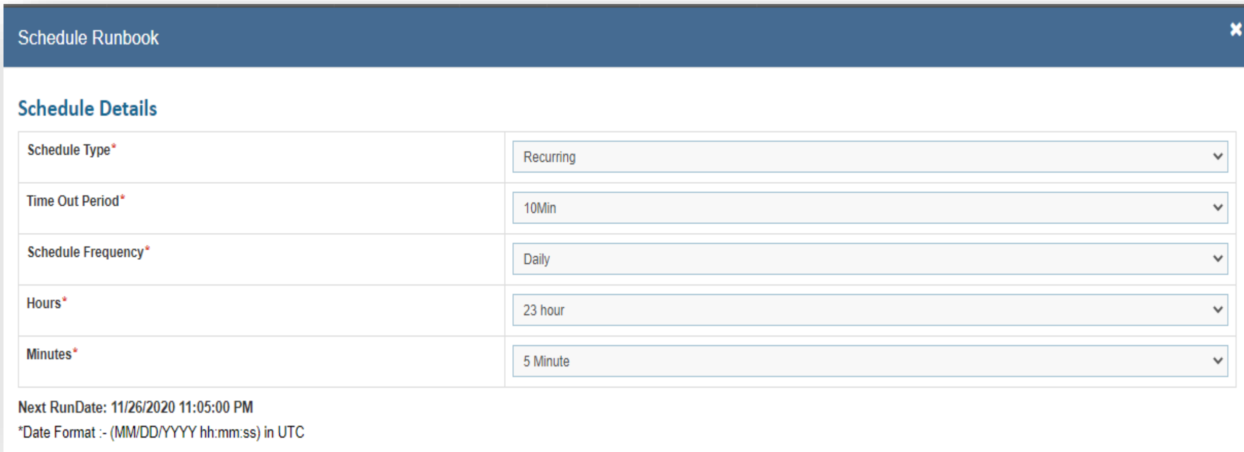


Figure 77 - Edit Details

A confirmation dialog box appears.

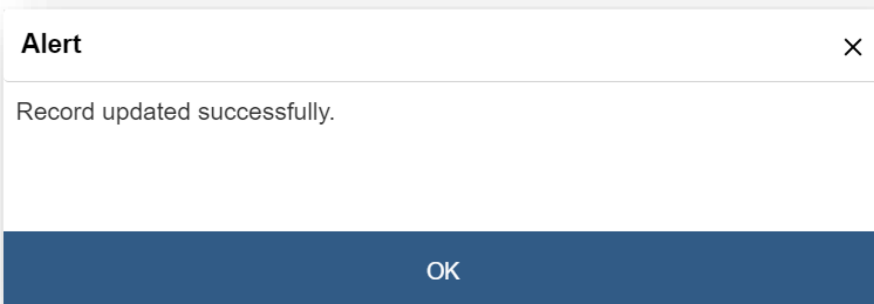


Figure 78 - Edit Success Confirmation

10. To delete an existing schedule, click corresponding to the schedule.
11. Click **Yes** to confirm.

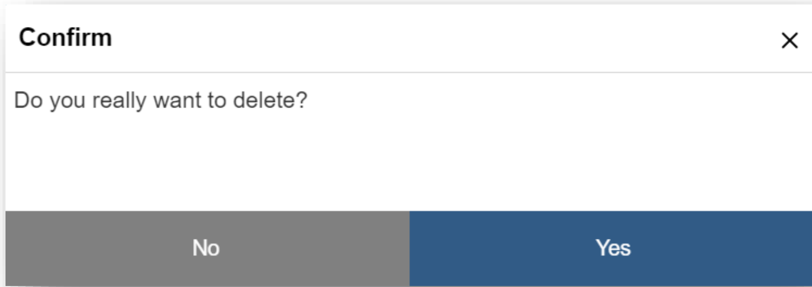


Figure 79 - Delete Success Confirmation

3.2.2.8 Create Runbook

This section describes the steps required to create a runbook, including the metadata and scripts. Only a user with super admin rights can access this module.

To create a runbook, perform the following steps:

1. On the main menu bar, click **Runbooks** and then **Create Runbooks**. The **Create Runbook** page appears.

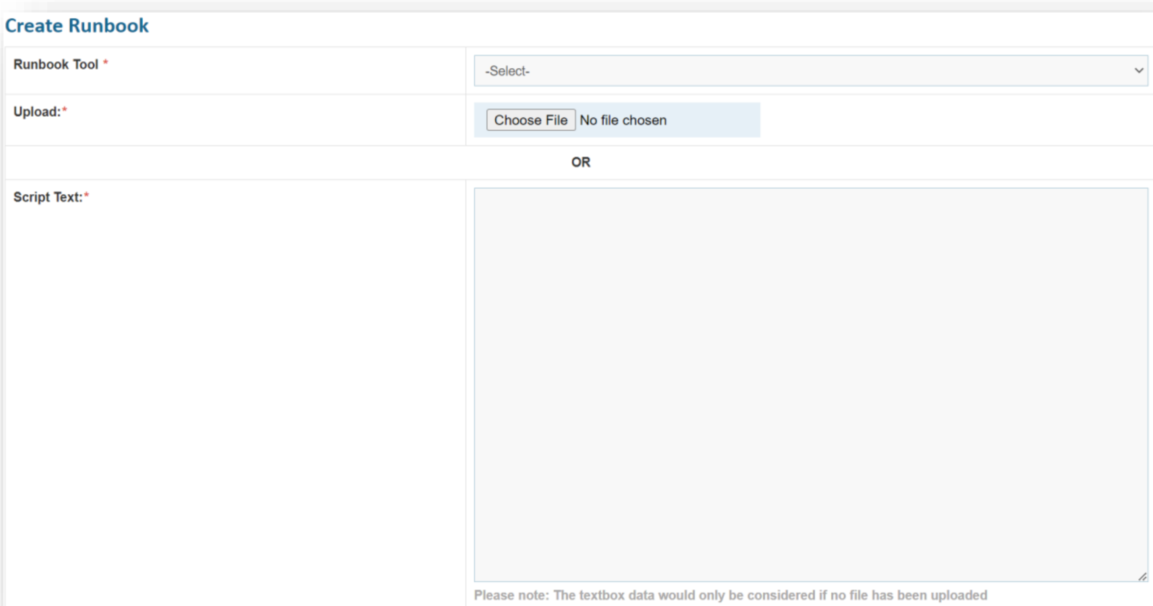


Figure 80 - Create Runbook

2. Select a runbook tool to specify the runbook by clicking the drop-down arrow next to the **Runbook Tool** field.
3. User can upload multiple scripts simultaneously using the **Upload** option or type the script for each runbook in the **Script** Text field.
4. Type a runbook name for the new runbook in the **Runbook Name** field.
5. Type a runbook friendly name in the **Runbook Friendly Name** field to easily recognize the runbook in your repository.
6. Selecting **Runbook Tool** as '**BigFix**' enables three more fields:
    a. **Response File Path**: Type the location of the file from where the response is to be read.
    b. **Wait Frequency Interval**: Frequency Interval, which is fixed by the user to wait before going to fetch the response post runbook execution. This frequency varies with the type of runbook in terms of SS (seconds), MM (minutes), or HH (hours).
    c. **Wait Frequency**: The time interval to wait before going to fetch the response.
7. Specify the path where the master runbook is located within the runbook tool in the **Master Runbook Path** field.
8. Specify the name of the master runbook in the **Master Runbook Name** field.
9. Type the runbook description in the **Runbook Description** field.
10. Type the user-friendly runbook description in the **User Runbook Friendly Description** field.
11. Type the **Frequency Interval**, which is fixed by a user to fetch the status post runbook execution. This frequency varies with the type of runbook in terms of **SS (seconds), MM (minutes), or HH (hours)**.
12. Specify the frequency for runbook updates in the **Update Frequency** field.

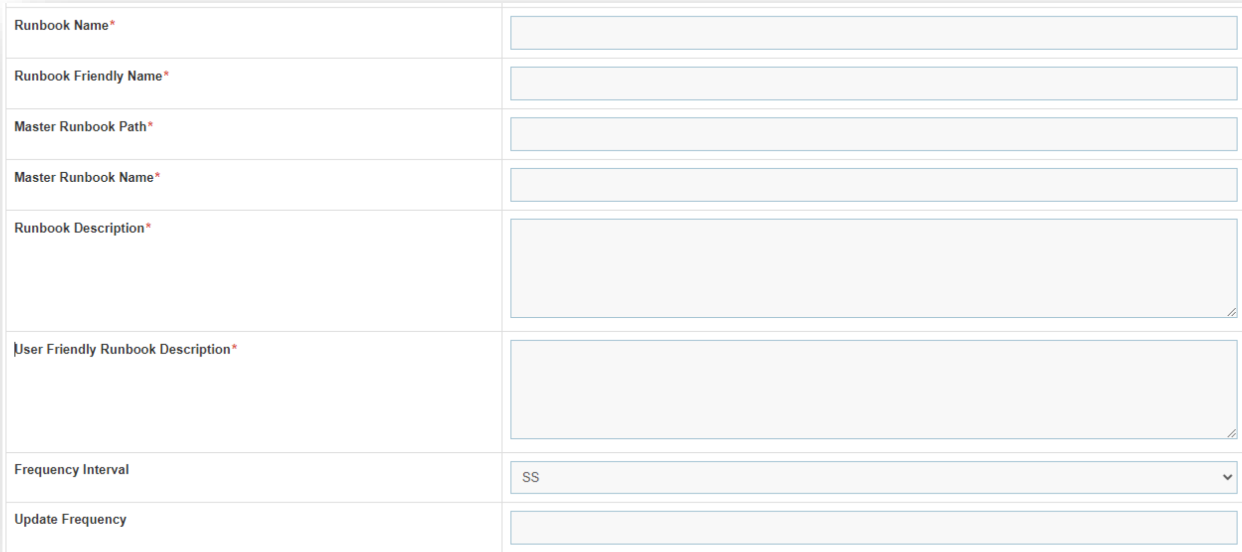


Figure 81 - Create Runbook (Cont.)

Frequency Interval and Update Frequency are inter-related.

13. Type the runbook tool category in the **Category** field.
14. Type the sub-category of the runbook tool in the **Sub-Category** field.
15. Specify the details of a runbook tool category in the **Category Granular Details** field.
16. Type the runbook category in **Runbook Category** field.
17. Specify the action to be taken by the runbook in the **Runbook Actions** field.
18. Specify the **Maximum Attempt Count** for the runbook to retry in case of failure.
19. Enter the **Toil Value (For Manual Execution)** which is the maximum manual execution time of runbook (in minutes). By default, it takes the value of the configured Toil Value (For Manual Execution) for the selected Runbook tool.
20. Enter the **Toil Value (For Auto Execution)** which is the maximum auto execution time of runbook (in minutes). By default, it takes the value of the configured Toil Value (For Auto Execution) for the selected Runbook tool.
21. Enter the **Wait Frequency For Status Update** (in minutes) for the case when RBA is unable to update execution status back to BigFix Runbook AI after successful interaction (in case Push Notification is enabled).

22. Type a tag for a runbook next to the **Runbook Tags** field and click **Add**. Added tags appear in a box below the **Add button**.

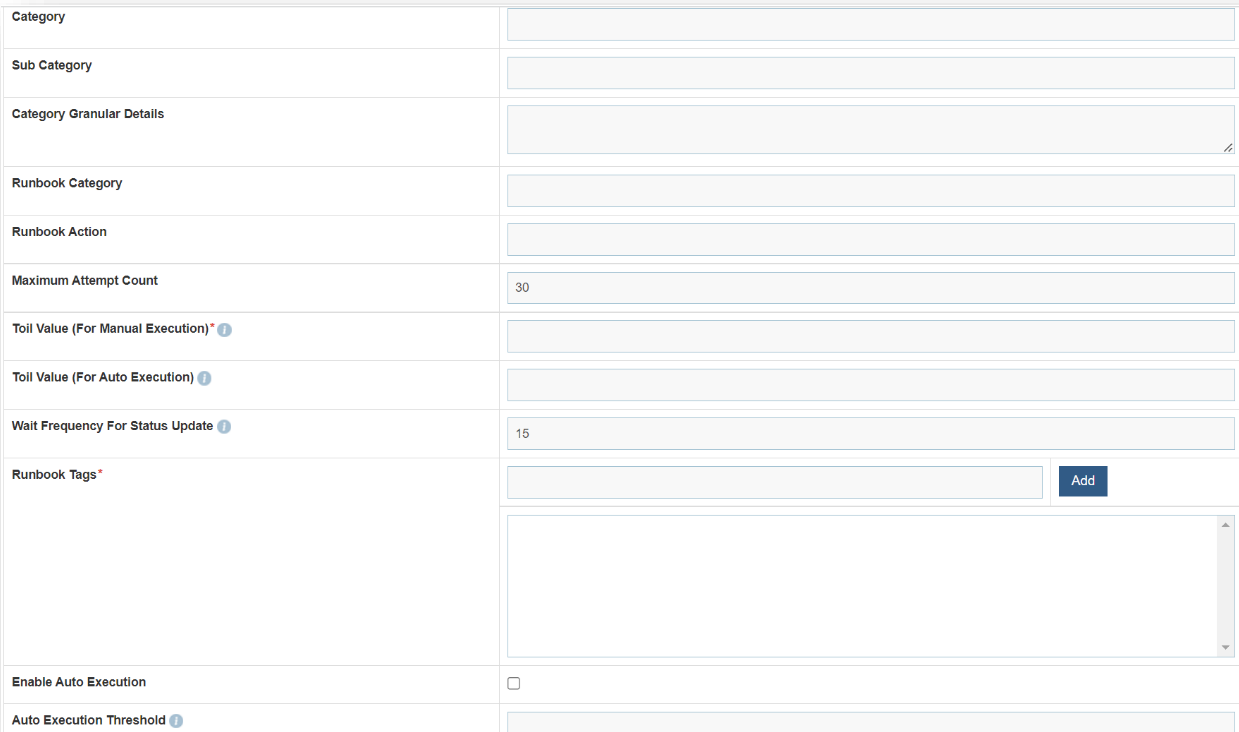


Figure 82 - Create Runbook (Cont.)

23. If required, select **Enable Auto Execution** to enable auto execution of the runbook.
24. Enter the **Auto Execution Threshold** so that the runbook above this threshold will be auto executed if auto execution is enabled.
25. Once the above values are added successfully, provide the following parameters for runbook execution while ticket parsing.

a. **Parameter Name**- Specifies a name of the parameter to be used in runbook for ticket parsing.
b. **Parameter Label**- Specifies a unique user-friendly name for the parameter.
c. **Is Mandatory**- Select True or False depending on if the parameter details added are mandatory or not.
d. **Parameter Description**- Describes the parameter.
e. **Default Parameter Value**- Specifies the default value for the parameter.
f. **Field Type**- Specifies the data type which is to be used in the parameter field. It may be of the following types:
   - Text
   - Password
g. **Parameter Type-** It lists all the parameter types configured in Configure Parameter Type. On selecting the parameter type, BigFix Runbook AI fetches the related data for ticket parsing.
h. IsScript Parameter- Check the checkbox if the parameter is the part of Script uploaded.
i. IsCiBased Parameter- Check the checkbox if the parameter is a CI based parameter. It is mandatory to have at least one parameter as CI based parameter.
j. IsReadOnly Parameter- Check the checkbox if parameter is read-only and user cannot update the same whenever it is parsed.
k. **Action-** Enables user to add, edit or delete the existing parameter by clicking respective buttons.

26. Click **Save** to configure the newly added runbook to the selected runbook tool.

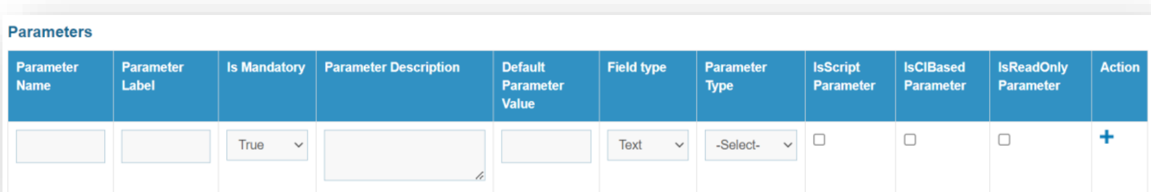


Figure 83 - Create Runbook (Cont.)

It adds a new runbook and lists it in a tabular view.

3.2.2.9 Inventory Runbooks

This section describes the steps required to view inventory runbook metadata. Only a user with super admin rights can access this module.

To access and view the inventory runbook data, perform the following steps:

1. On the main menu bar, click **Actions -> Runbooks** and then **Inventory Runbooks**. The **Inventory Runbooks** page appears.

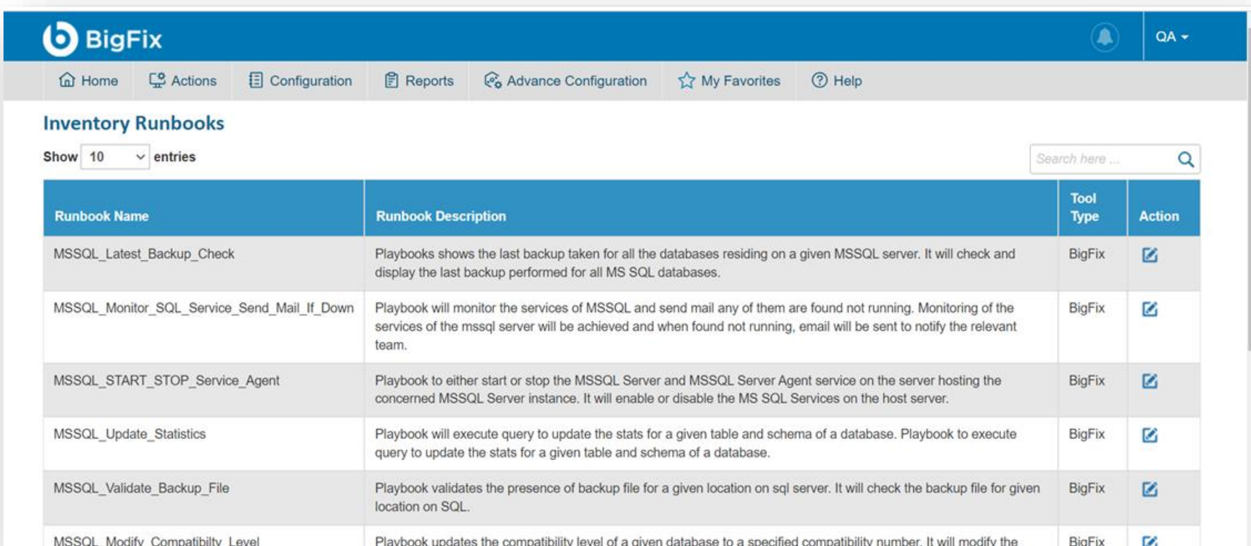


Figure 84 – Inventory Runbooks

2. Click on under the **Action** tab to view or edit the runbook details.

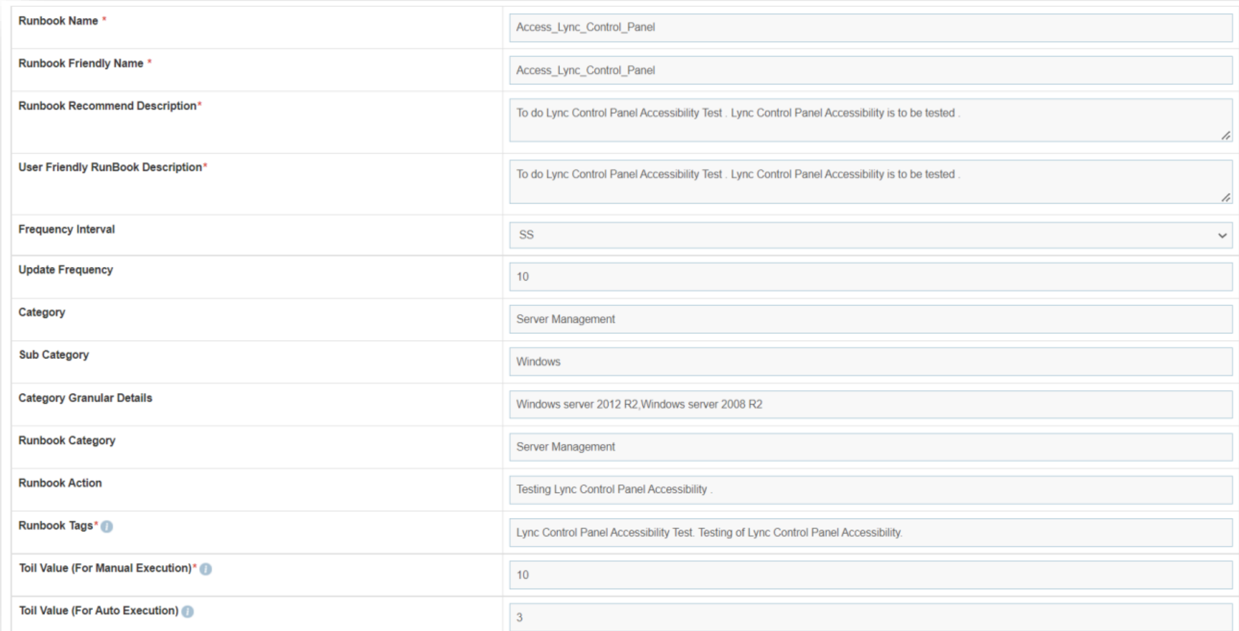
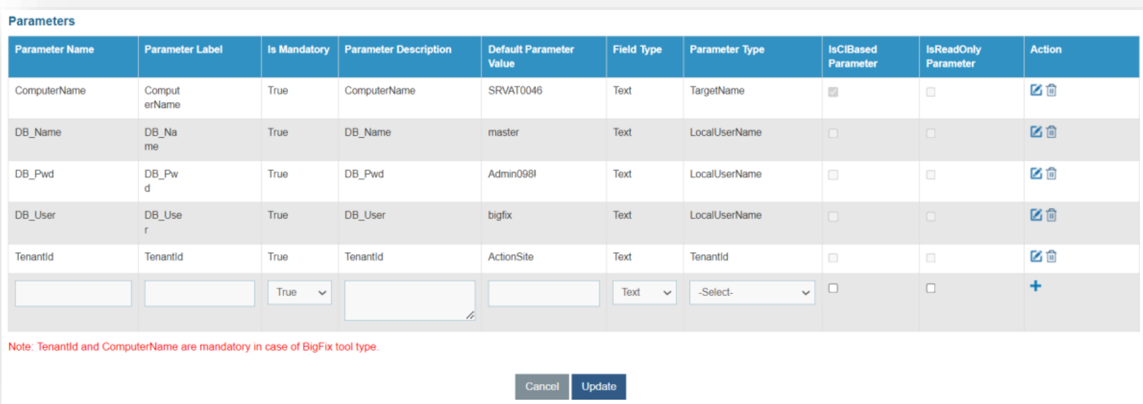


Figure 85 – Inventory Runbooks (Cont.)



Parameters

Parameter Name	Parameter Label	Is Mandatory	Parameter Description	Default Parameter Value	Field Type	Parameter Type	IsCIBased Parameter	IsReadOnly Parameter	Action
ComputerName	ComputerName	True	ComputerName	SRVAT0046	Text	TargetName			
DB_Name	DB_Name	True	DB_Name	master	Text	LocalUserName			
DB_Pwd	DB_Pwd	True	DB_Pwd	Admin098!	Text	LocalUserName			
DB_User	DB_User	True	DB_User	bigfix	Text	LocalUserName			
TenantId	TenantId	True	TenantId	ActionSite	Text	TenantId			
		True			Text	-Select-			+

Note: TenantId and ComputerName are mandatory in case of BigFix tool type.

Cancel Update

Figure 86 - Inventory Runbooks Parameters(Cont.)

3. Update the value of any field and click on update button. A confirmation box appears:

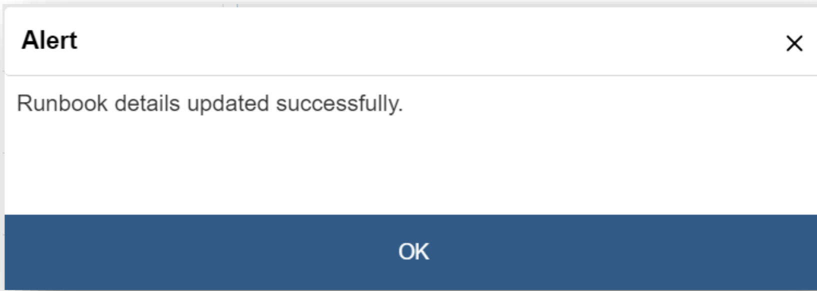
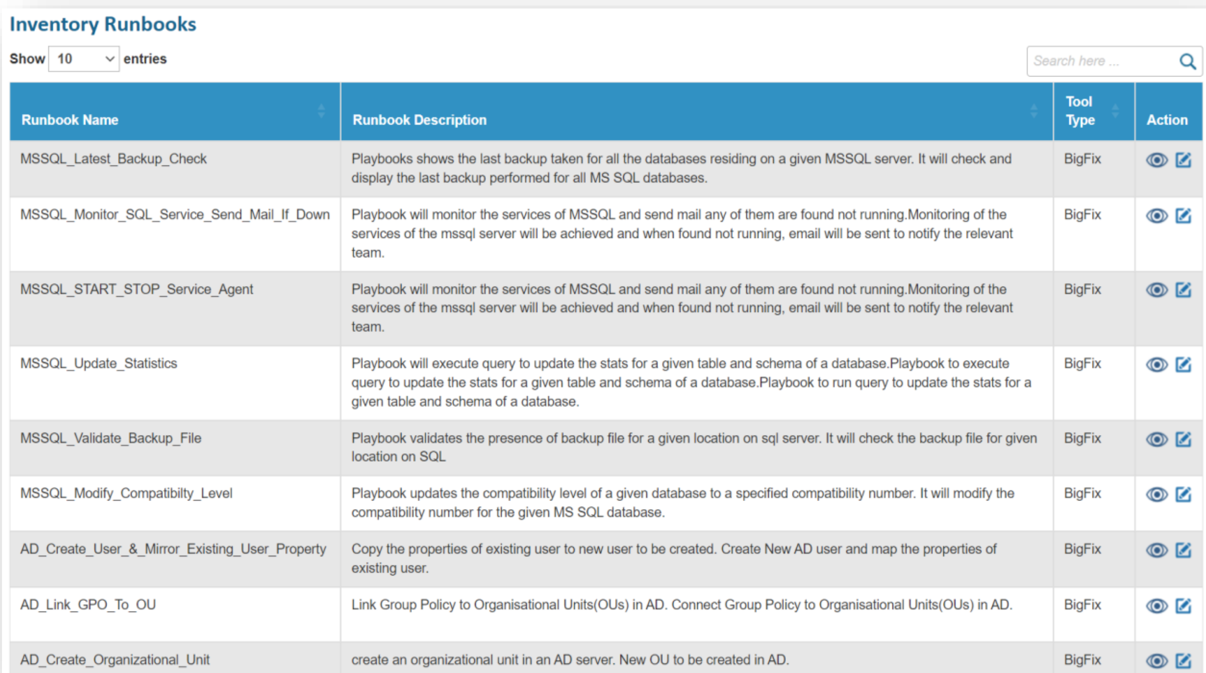


Figure 87 - Confirmation Box

4. Type the search text in the **Search here** box to search for the runbook.



Inventory Runbooks

Show 10 entries

Search here ...

Runbook Name	Runbook Description	Tool Type	Action
MSSQL_Latest_Backup_Check	Playbooks shows the last backup taken for all the databases residing on a given MSSQL server. It will check and display the last backup performed for all MS SQL databases.	BigFix	
MSSQL_Monitor_SQL_Service_Send_Mail_If_Down	Playbook will monitor the services of MSSQL and send mail any of them are found not running.Monitoring of the services of the mssql server will be achieved and when found not running, email will be sent to notify the relevant team.	BigFix	
MSSQL_START_STOP_Service_Agent	Playbook will monitor the services of MSSQL and send mail any of them are found not running.Monitoring of the services of the mssql server will be achieved and when found not running, email will be sent to notify the relevant team.	BigFix	
MSSQL_Update_Statistics	Playbook will execute query to update the stats for a given table and schema of a database.Playbook to execute query to update the stats for a given table and schema of a database.Playbook to run query to update the stats for a given table and schema of a database.	BigFix	
MSSQL_Validate_Backup_File	Playbook validates the presence of backup file for a given location on sql server. It will check the backup file for given location on SQL	BigFix	
MSSQL_Modify_Compatibilty_Level	Playbook updates the compatibility level of a given database to a specified compatibility number. It will modify the compatibility number for the given MS SQL database.	BigFix	
AD_Create_User_&_Mirror_Existing_User_Property	Copy the properties of existing user to new user to be created. Create New AD user and map the properties of existing user.	BigFix	
AD_Link_GPO_To_OU	Link Group Policy to Organisational Units(OUs) in AD. Connect Group Policy to Organisational Units(OUs) in AD.	BigFix	
AD_Create_Organizational_Unit	create an organizational unit in an AD server. New OU to be created in AD.	BigFix	

Figure 88 – Inventory Runbooks (Cont.)

3.2.2.10 Ticket Flow

This module helps in testing, ensuring that the relevant runbooks are being recommended using the current model and correct information is being parsed and extracted from the tickets as input parameters for the runbook.

To test the ticket flow, perform the following steps:

1. On the main menu bar, click **Runbooks** and then **Ticket Flow**. The **Ticket Flow** screen appears.

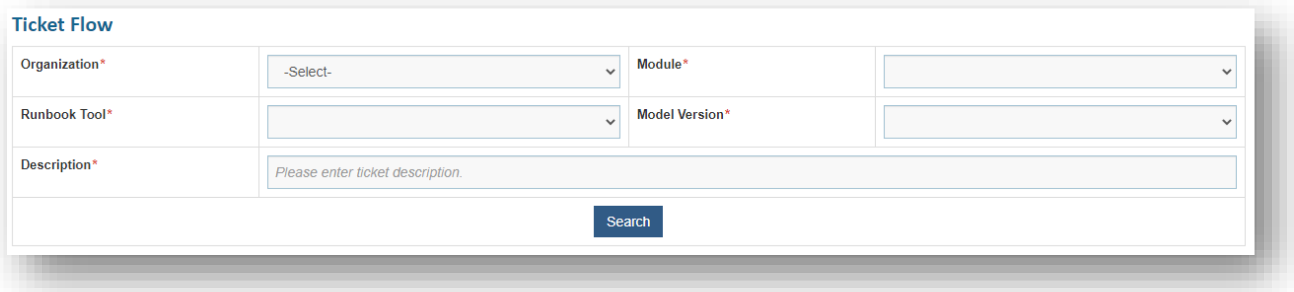


Figure 89 – Ticket Flow

2. Select **Organization**, **Module**, **Runbook Tool,** and **Model Version**.
3. Enter the description of the event / ticket for which you would like to test the runbook recommendations and the extracted input parameter values. Click **Search** to view the results.

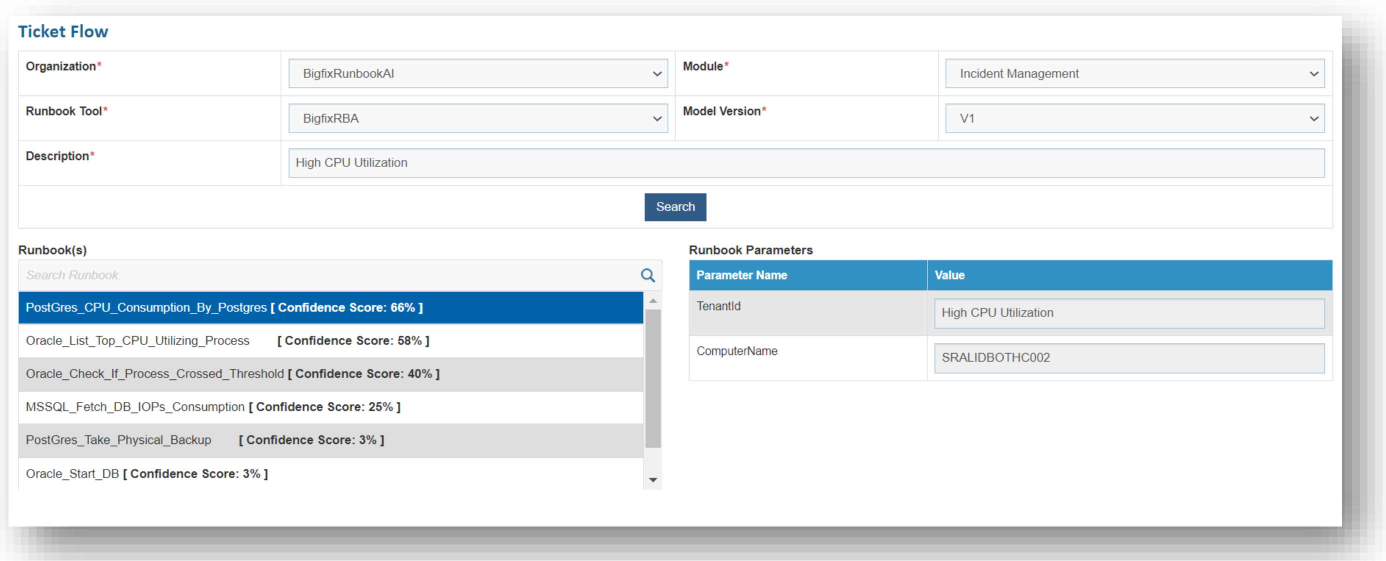


Figure 90 - Ticket Flow (cont.)

3.2.3 Actions

User can define multiple organizations to leverage BigFix Runbook AI features and functionalities for various kinds of automation opportunities.

To manage an organization, on the main menu bar, click **Actions**. The drop-down menu lists following options:

- RBAC
- Manage Organization
- Manage Data Source
- Runbooks
- Build Models
- Manage Jobs
- Tickets
- Analysis

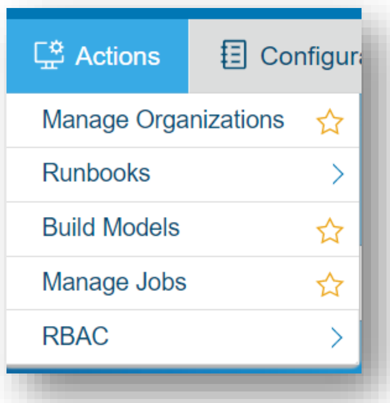


Figure 91 - Actions Menu(Super Admin view)

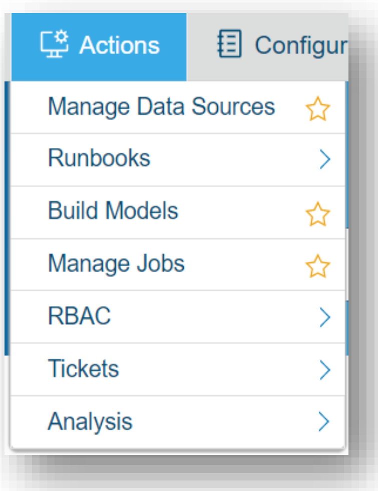


Figure 92 - Actions Menu(Organization Admin view)

Ensure you are logged on to BigFix Runbook AI as super administrator or organization admin to create and manage the organization parameters. Menus accessible to **Super Administrator** and **Organization Admin** will be different.

3.2.3.1 Manage Organization

As a Super Administrator, user can use the **Manage Organization** page to set up an organization and begin the BigFix Runbook AI configuration.

To create an organization, perform the following steps:

1. On the main menu bar, click **Actions** and then **Manage Organization**. Then click on **Add New.**

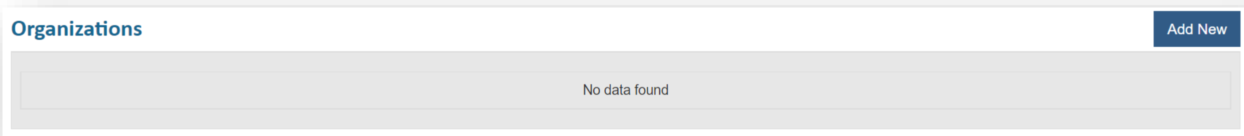


Figure 93 - Manage Organization

The **Create Organization** page appears.

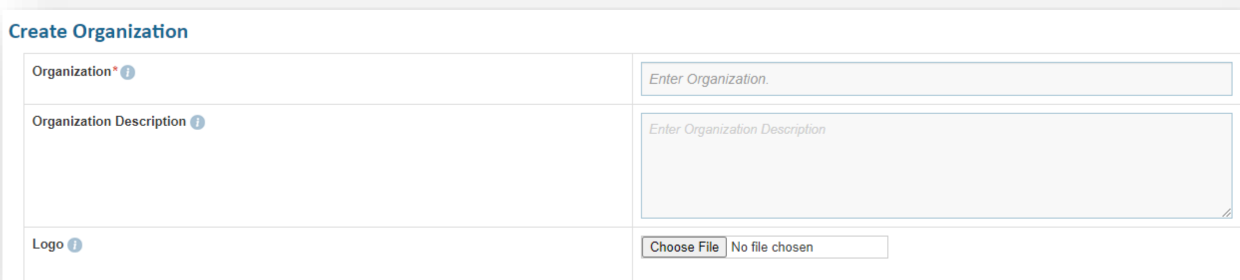


Figure 94 - Create Organization

2. Type the name of the customer to be created in the **Organization** field.
3. Type the customer description in the **Organization Description** field.

The supported file type for uploading an image as a logo is .jpg, .jpeg, .gif, and .png and the recommended file size is not over 10 KB.

4. Select the **ITSM Tool Type** from the **Module Name** field.

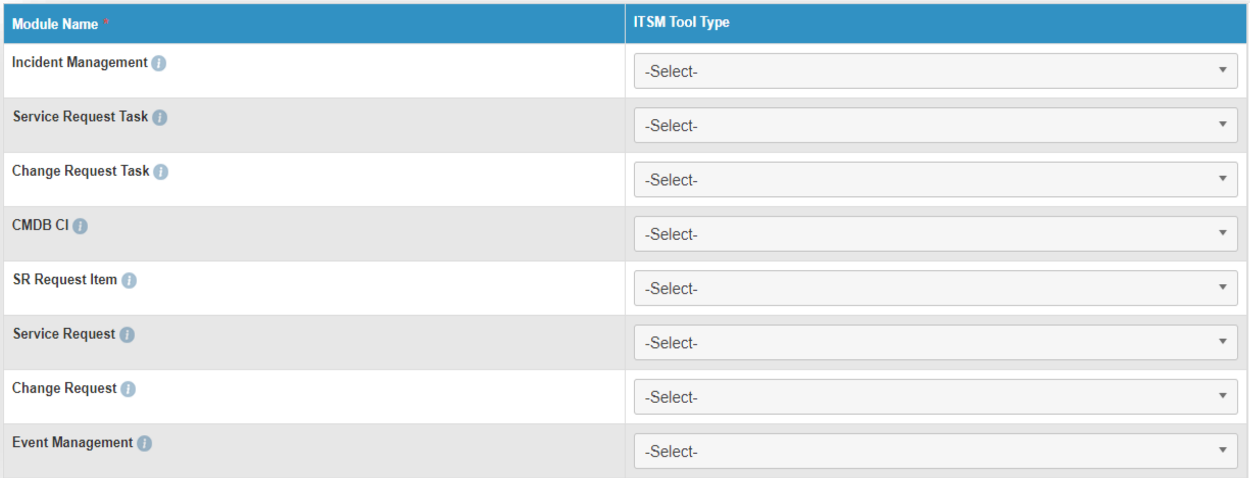


Figure 95 - Select ITSM Tool Type

5. Select the required **Runbook Tool** from the list of tools.

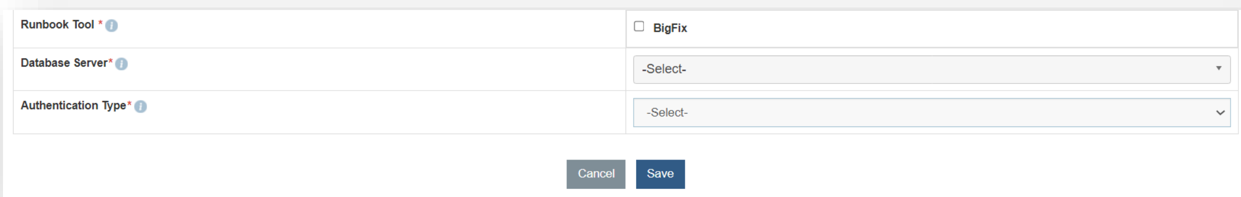


Figure 96 - Select Runbook Tool

You can select single or multiple automation tools against the selected module.

6. To manage database files, select the **Database Server** from the lists available in the **Database Server** field.
7. Select the **Authentication Type** from the following options:
   - **Form**: Users are authenticated without Active Directory (AD) support.
   - **LDAP**: Users are authenticated using their AD credentials.
   - **SAML**: Users are authenticated using the SSO (Single Sign On) credentials that allows security credentials to be shared by multiple computers across a network.

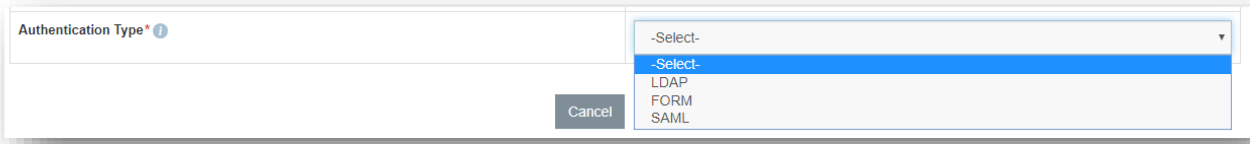


Figure 97 - Authentication Type Selection

The selected authentication type will reflect while managing the user as explained in Add New User.

8. **Enter a numeric value in the** Password Expiration Days **field. This numeric value defines the password expiration days for the user of the corresponding user.**

Password Expiration days will be visible only in case of FORM authentication type.

9. Selection of SAML authentication prompts the additional fields to be filled.
   a. Type the ID in the **SSO ID** field.
   b. Type the URL in the **SSO URL** to access the BigFix Runbook AI website.
   c. Type the name ID in the **SSO Name** ID field.
   d. Enter the tool in the **SSO Tool** field.
   e. Enter the **Logout URL**.

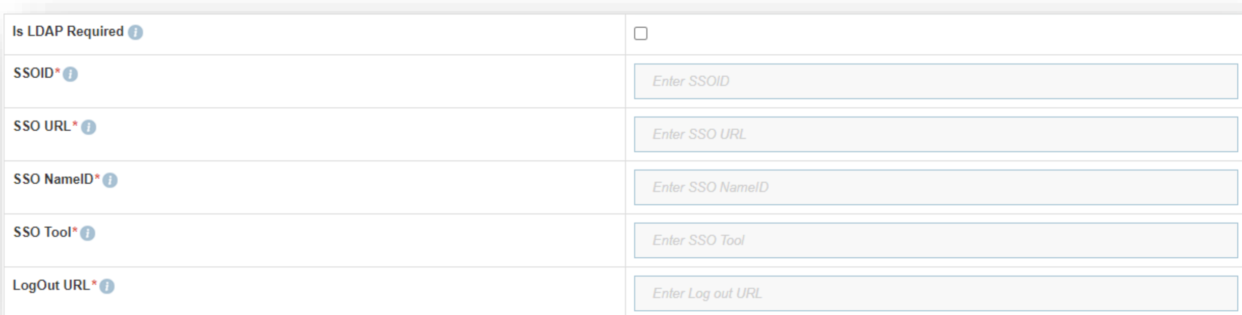


Figure 98 - Select Authentication Type (SAML)

10. Enable **Is LDAP Required** field if the user needs to fetch the data from LDAP. Selection of LDAP authentication prompts the additional fields to be filled.

a. Enable **Is SSL Required** field if configuration Run over **LDAPS**

b. Type the **LDAP URL**.

c. Type the **LDAP UserID**.

d. Enter the **LDAP Password**.

e. For LDAP password, click on icon next to it. If the password is available in plaintext, then select Input type as Input Text and enter the password in Value field. Else if it is available in any Key Vault such as CyberArk or Secret Manager then select Input Type as CyberArk or Secret manager respectively and then select any of the configured details from the value field.

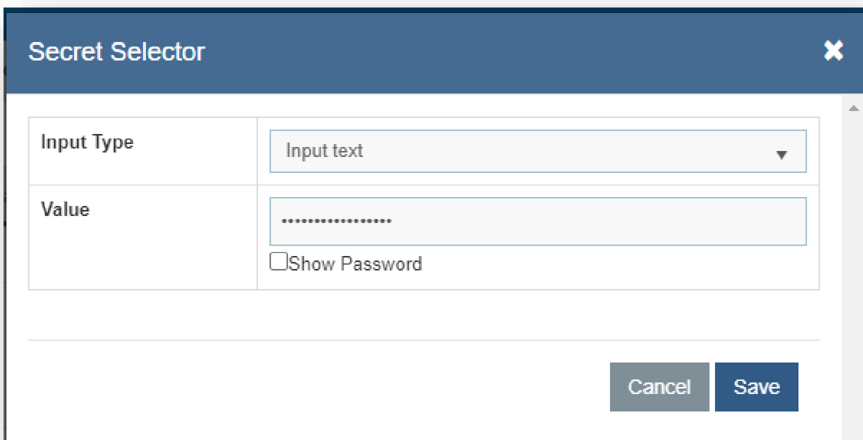


Figure 99 - Password in plaintext

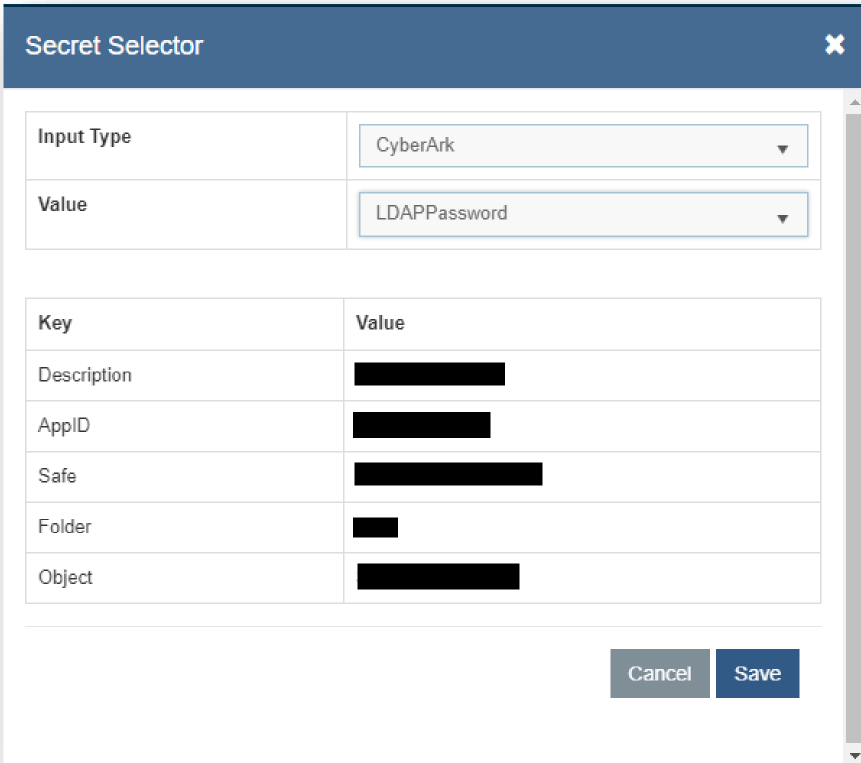


Figure 100 - Password from Key Vault (CyberArk)

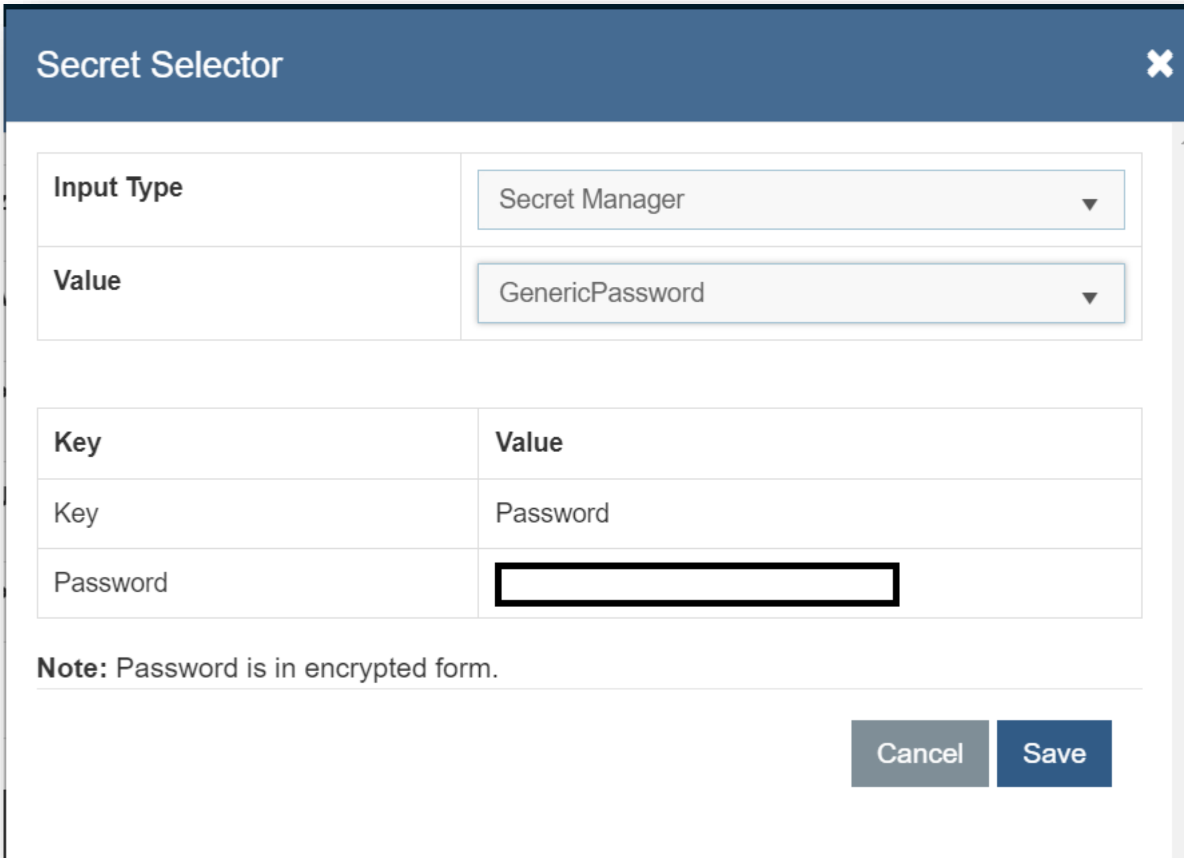


Figure 101 -Password from Secret Manager

f. Click on **Test Connection** to check accessibility of **LDAP** from service

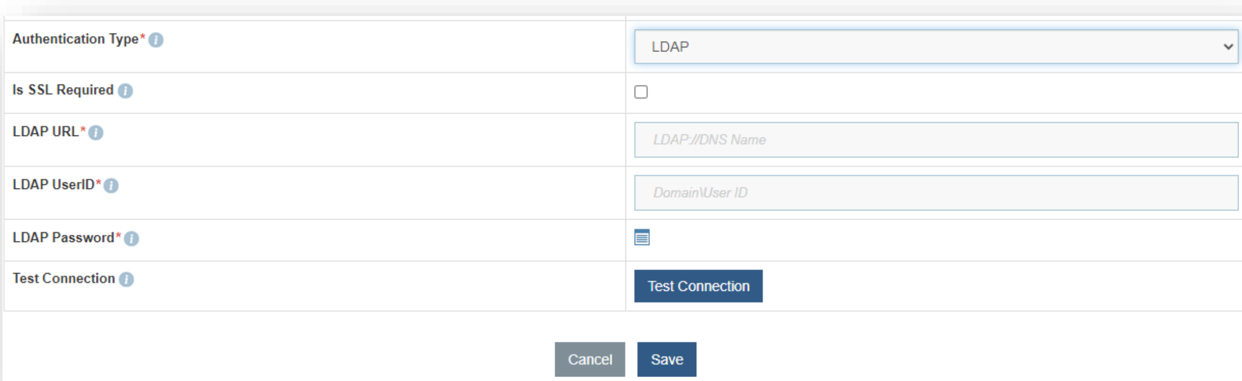


Figure 102 - Select Authentication Type (LDAP)

11. Click **Save**.

12. A confirmation dialog box appears. Click **OK**.

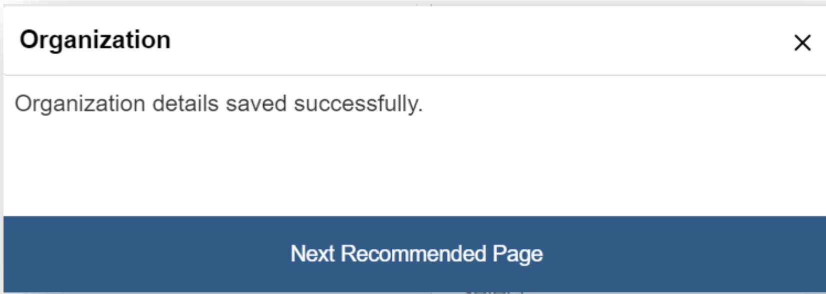


Figure 103 - Organization Creation Confirmation

The new organization is added and listed in a tabular view.

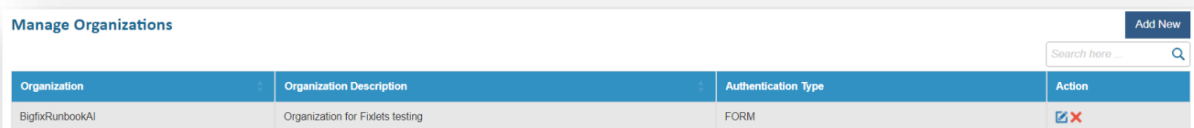


Figure 104 - Organization Creation Confirmation

13. In case of LDAP, click to enter the **LDAP Group Information**.

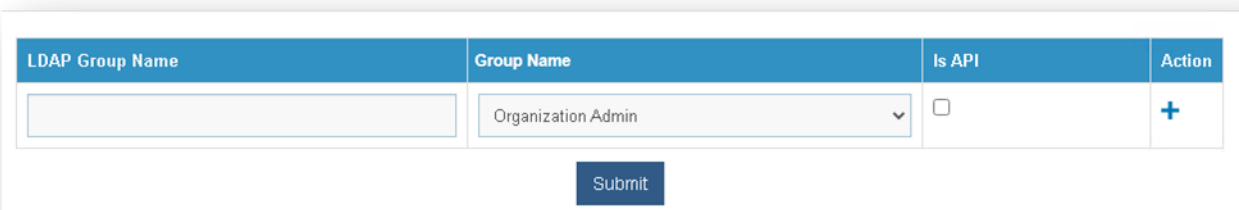


Figure 105 – Enter LDAP Information

a. Enter **LDAP Group Name** and select the **BigFix Runbook AI Group Name** from the dropdown.

b. Check **Is API** if this group user needs to be treated as an API user.

c. Click **+** to add group.

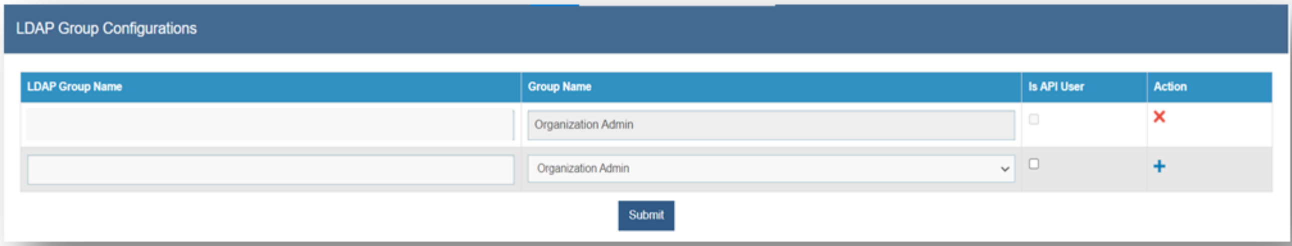


Figure 106 – Enter LDAP Group Name

User can add multiple groups, and a group can be deleted by clicking icon.

d. After having added the group details, click **Submit**.

All fields marked with an asterisk (*) are mandatory.

3.2.3.2 View Organization

User can view the organizations available in the BigFix Runbook AI environment by performing the following steps.

1. On the main menu bar, click **Actions → Manage Organization**.

   The **Organizations** page appears.

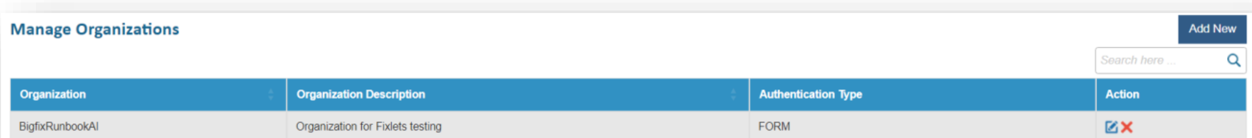


Figure 107 - View Organization

This screen lists all the available organizations in a tabular view with the organization name and organization description. It also allows user to create an organization by clicking **Add New**, which redirects you to Create Organization screen to create an organization and edit or delete existing organizations.

3.2.3.2.1 Edit Organization

User can open an existing organization, review the available information, and edit the organization's details.

To edit the existing organization, perform the following steps:

1. On the **Organizations** page, click corresponding to the organization that you want to edit.

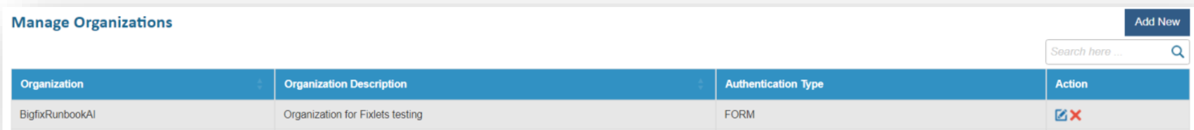


Figure 108- Edit Organization

This redirects you to the **Edit Organization** page with all the details auto filled.

2. Edit the required details and click **Update**.

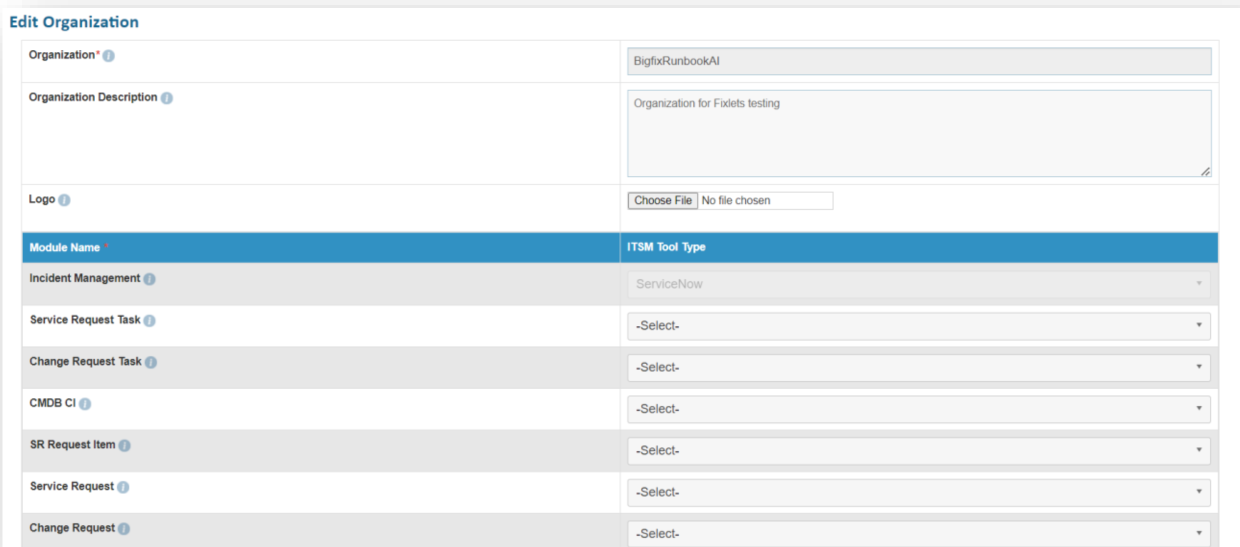


Figure 109 - Edit Organization

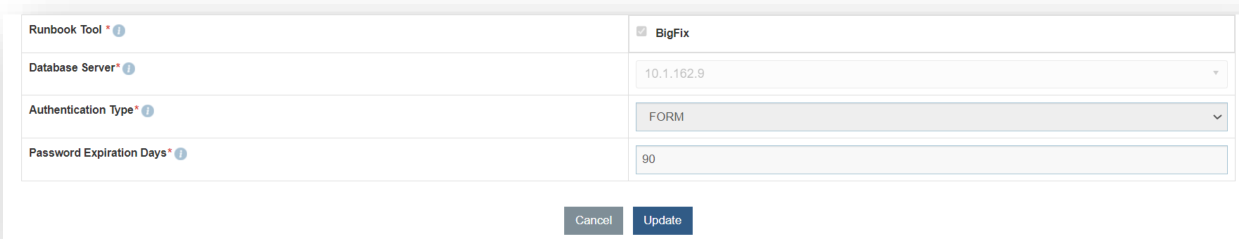


Figure 110 - Edit Organization (Cont.)

3. To view the updated organization, click **List**. This will redirect you to Manage Organization.

3.2.3.2.2 Delete Organization

If a user no longer requires a certain organization, it can be deleted from the environment.

To delete an organization, perform the following steps:

1. On the **Organization List** page, click ✕ next to the organization user wants to delete.

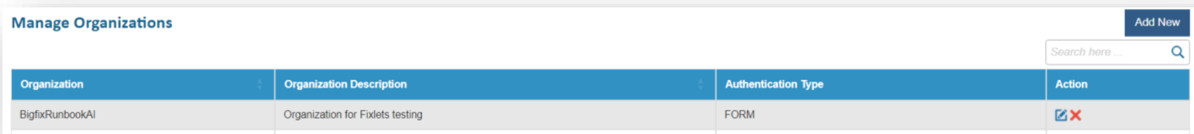


Figure 111 - Delete Organization

2. Click **OK** to confirm.

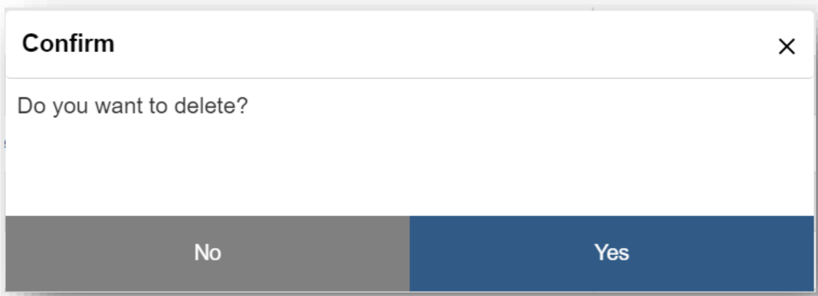


Figure 112 - Confirm Deletion

3.2.3.3 Manage Data Sources

This section describes how to specify the data source and how the data is processed for automation and analysis in an organization.

To create a data source, perform the following steps:

1. Log in with Organization Admin user.
2. On the main menu bar, click **Actions → Manage Data Sources**.
3. On the Data Sources screen, click **Create Data Source.**

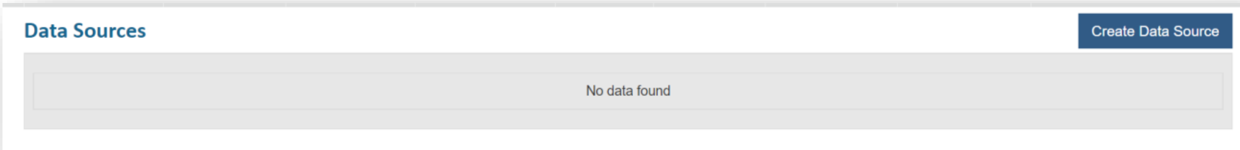


Figure 113 - Data Sources

4. The **Create Data Source** page appears with the following tabs:
   - Organization
   - Data Source
   - Fetch Data Configuration
   - Release Rules Configuration

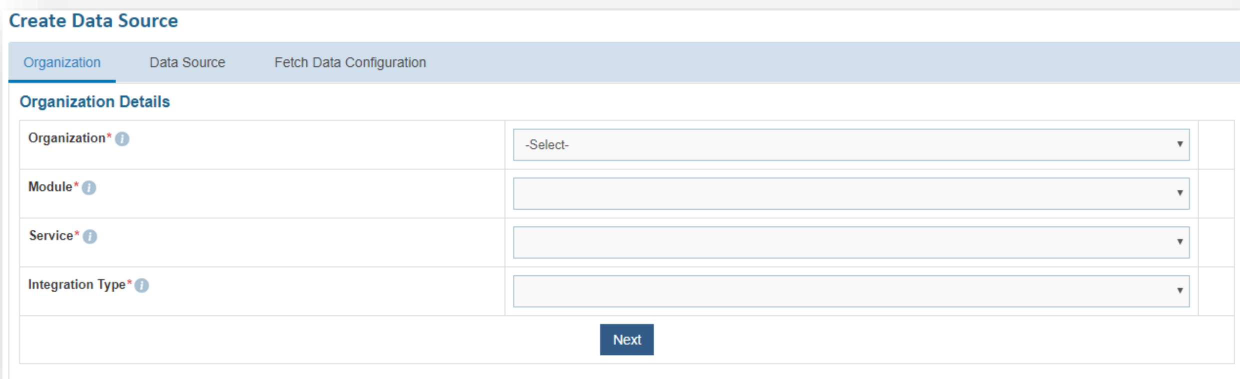


Figure 114 - Create Data Source

Release Rules Configuration is only applicable for the following **Module** types- **Incident Management, Change Request Task and Service Request Task.** This tab will not be activated for other module types.

3.2.3.3.1 Organization

User can set up an organization, for which the data source will be created, by performing the following steps:

1. On the **Organization** tab, select the organization for which user wants to create the data source from the **Organization Name** field.

The organizations listed in the drop-down list are created through Create Organization.

2. Select a module, where the organization brings the data from the data source in BigFix Runbook AI, from the **Module** field.
3. Upon selection of the Module, the following two additional input parameters will be populated. Select the appropriate option.
    a. Is Ticket Closure Managed by BigFix Runbook AI job: Check this option if you want BigFix Runbook AI to manage the ticket closure updates instead of the RBA tool. In this scenario, an additional tab "Close Rules Configuration" will be activated for providing further details, steps for which are mentioned later.
    b. Is ticket InProgress Managed by BigFix Runbook AI job: Check this option if you want BigFix Runbook AI to manage the tickets in progress status updates instead of the RBA tool. In this scenario, an additional tab "InProgress Rules Configuration" will be activated for providing further details, steps for which are mentioned later.

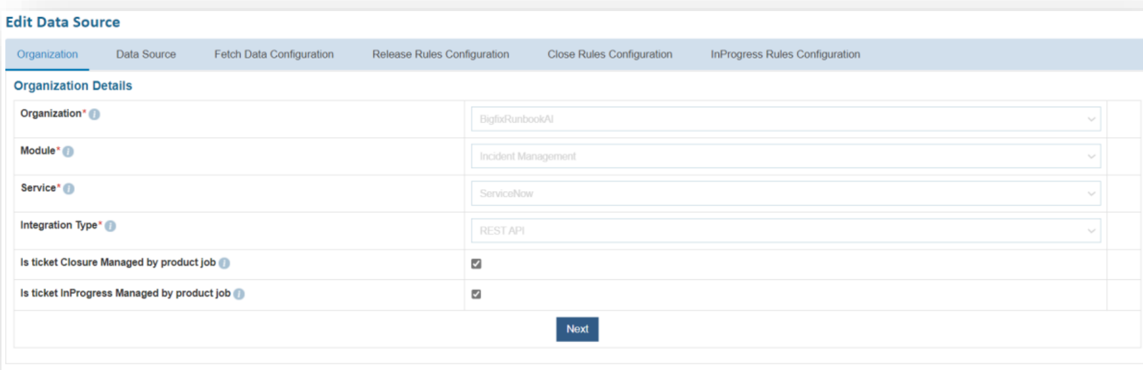


Figure 115 - Select Organization Details

4. Select a service, with which BigFix Runbook AI is integrated and pulls data for automation, from the **Service** field.

Multiple source types are available.

5. Select the integration method to integrate between BigFix Runbook AI and the selected service type from the **Integration Type** field.
6. Click **Next** to update the data source details.

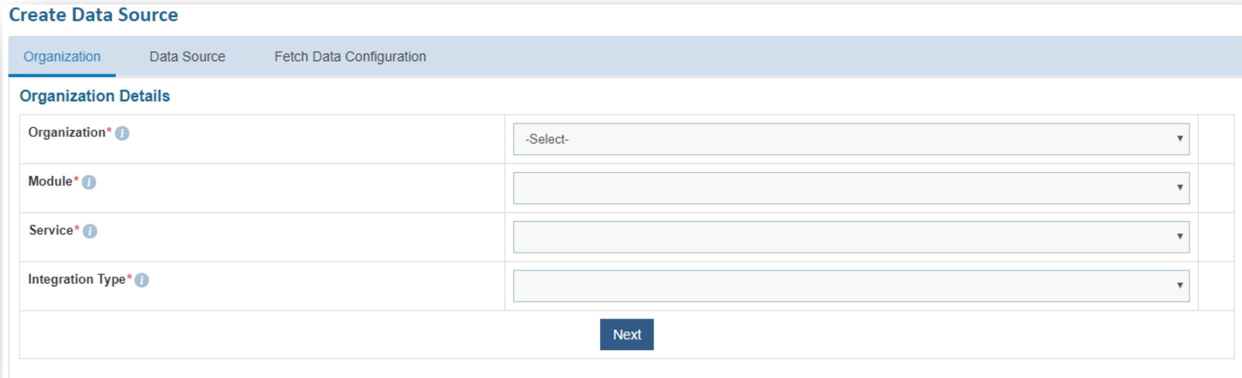


Figure 116 - Select Organization Details (cont.)

All fields marked with an asterisk (*) are mandatory.

3.2.3.3.2 Data Source

The user can create a data source for an organization, to fetch data for automation, by performing the following steps:

1. On the **Data Source** tab, type the new data source name in the **Name** field.
2. Select the **Timezone** to specify the time zone of the selected data source.
3. Select **Timestamp** to view the present data with date and time.
4. Select **Analysis Enabled?** If you want to analyze the data retrieved from the data source.
5. Type the numeric value to specify the batch size of the data fetched from the data source in the **Seed Limit** field. The recommended value for this field is 1000.
6. Click **Next** to update the data configuration details.

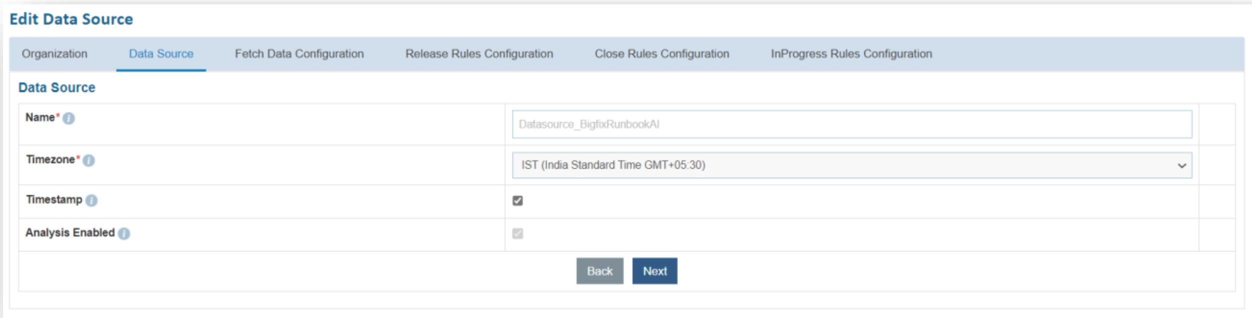


Figure 117 - Select Organization Details (Cont.)

All fields marked with an asterisk (*) are mandatory.

3.2.3.3.3 Fetch Data Configuration

User can configure a method for fetching data from the data source by using the following steps:

1. On the **Fetch Data Configuration** page, type the URL of the selected service type in the **URL** field to fetch data.

This URL contains the placeholders that display the parameters based on the applied clause such as the number of records to be fetched, query type, date on which the data is fetched, and the order by and so on. It is dependent on the URL or API provided by the tool.

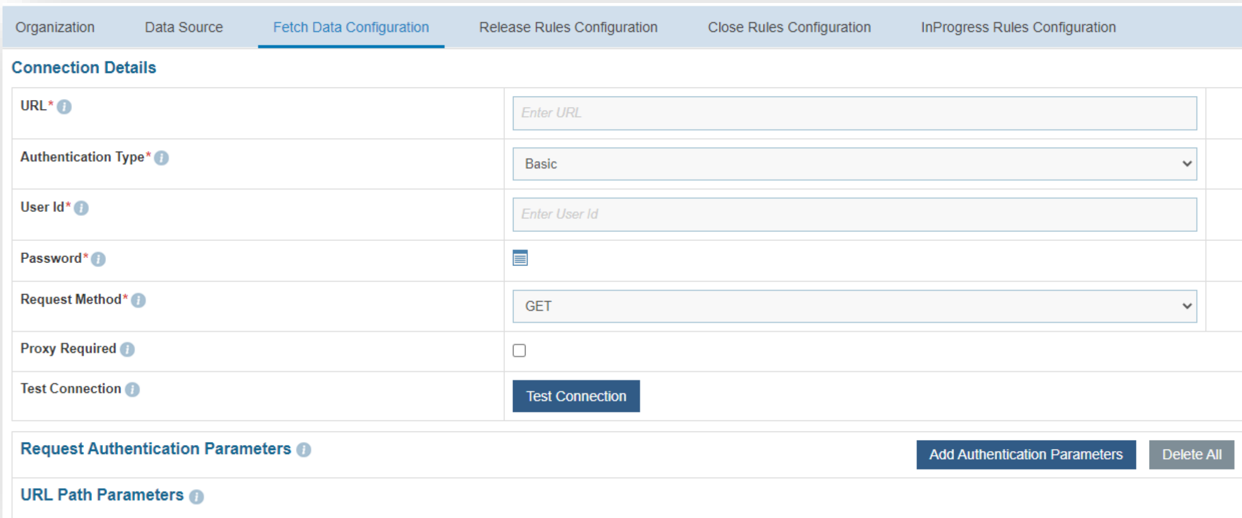


Figure 118 - Fetch Data Configuration

The user can apply multiple clauses into the URL to display only the required parameter into the placeholder. Once you hit the URL, only the placeholders with a hashtag will be displayed with the associated parameters in the **URL Path Parameters** column. Whenever a user wants to change the data to be filtered, always change the logic in the URL to get the specific parameters.

2. Select the **Authentication Type**. BigFix Runbook AI supports the following types of authentications:
   - Windows
   - JWT
   - OAuth 2.0
   - Basic
   - NoAuth

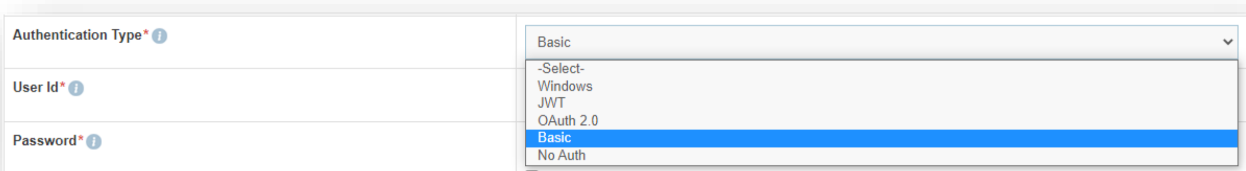


Figure 119 - Authentication Types

   a. Selection of **Windows / Basic Authentication** requires only Username and Password.

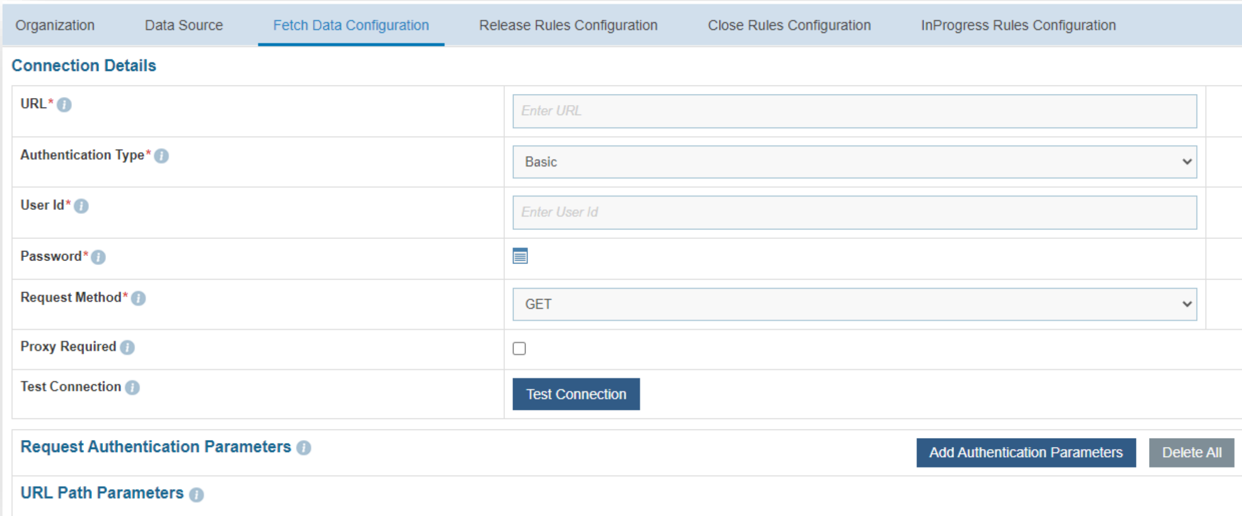


Figure 120 - Authentication Type (Windows / Basic)

b. Selection of **JWT / OAuth 2.0** authentication type, user needs to provide the below details:

  - Type the Authentication URL.
  - Type the Username and Password.

c. For password, click on icon next to it. If the password is available in plaintext, then select Input type as Input Text and enter the password in Value field. Else if it is available in any Key Vault such as CyberArk or Secret Manager then select Input Type as CyberArk or Secret Manager and then select any of the configured details from the value field.

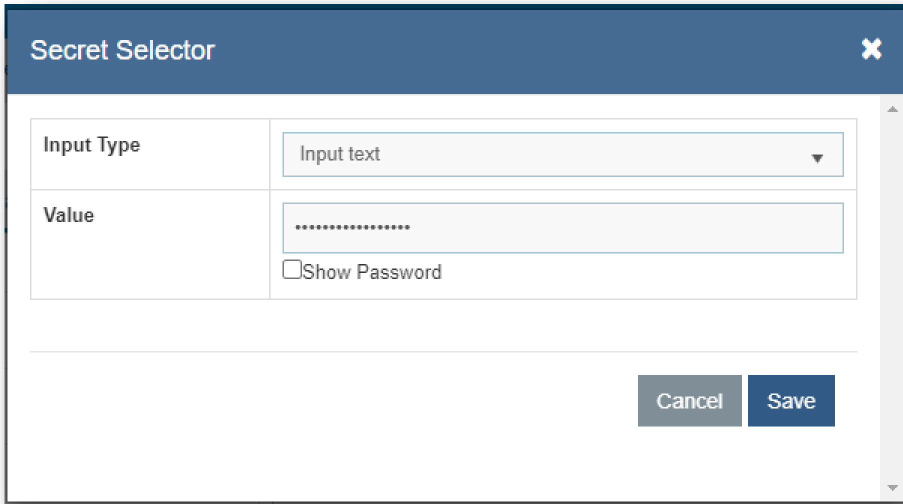


Figure 121 - Password in plaintext

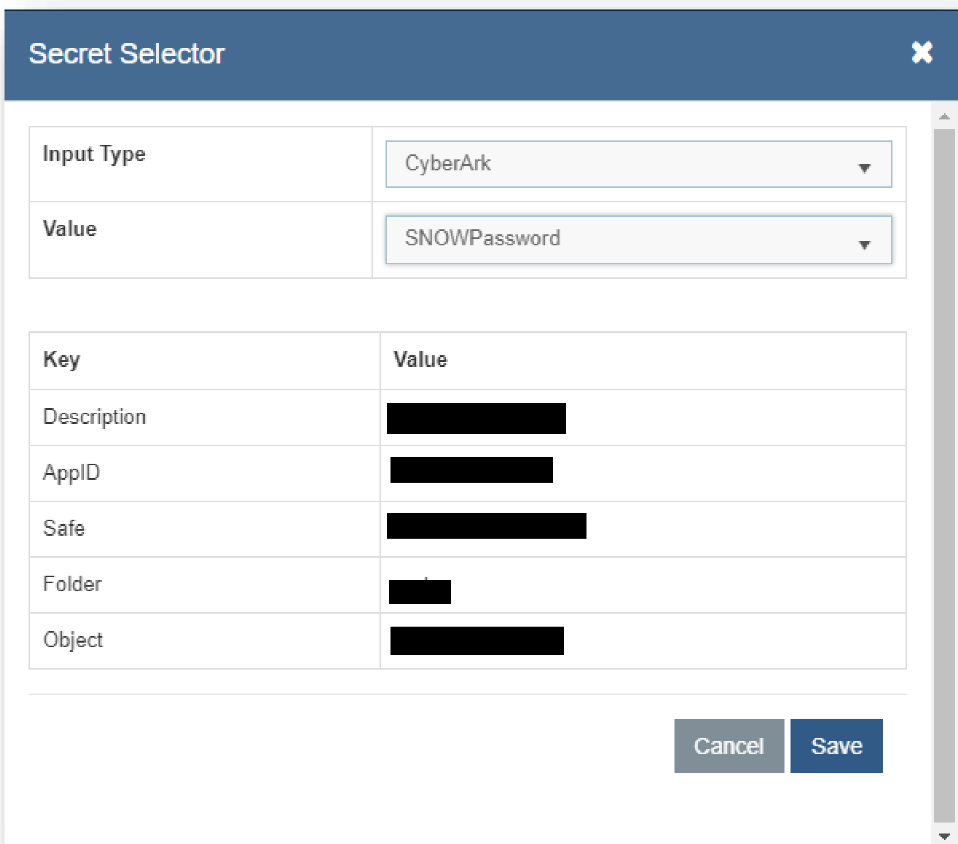
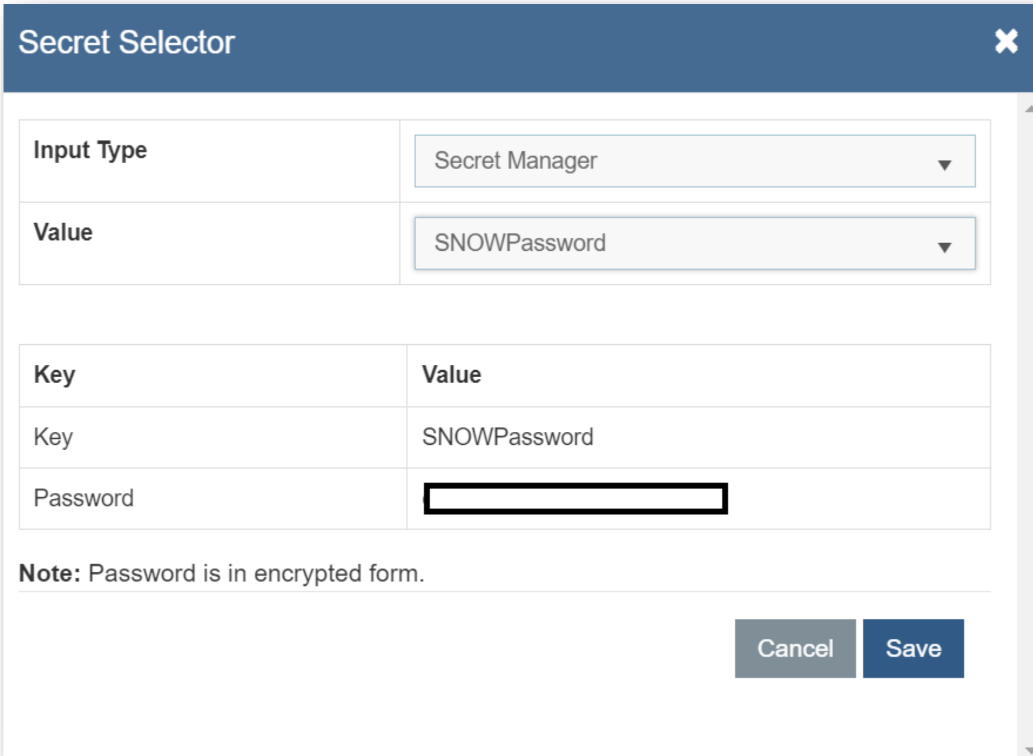


Figure 122 - Password from Key Vault (CyberArk)



Password from Secret Manager

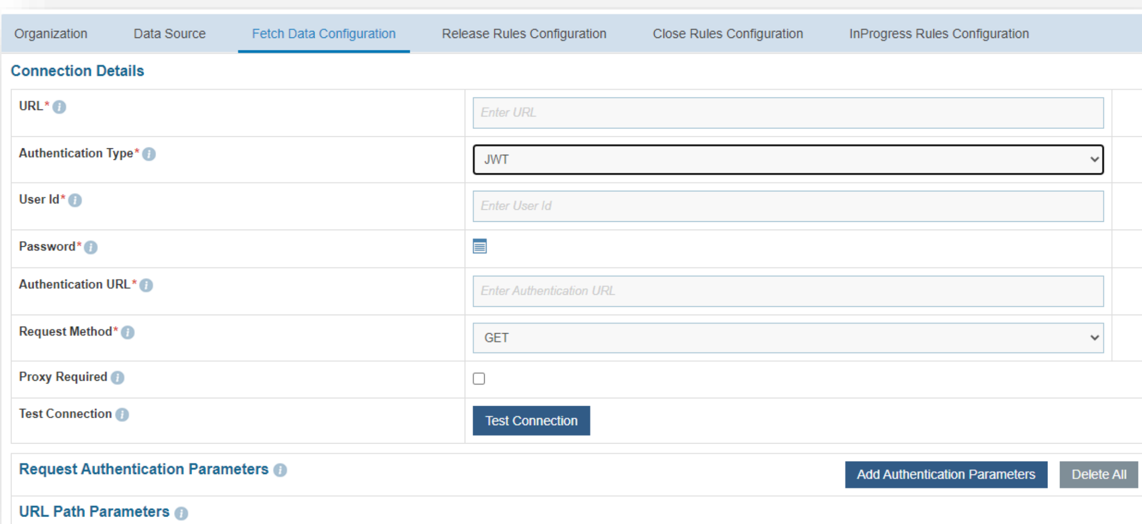


Figure 123 - Authentication Type (JWT / OAuth 2.0)

3. Select Request Method as **GET**, **PUT**, **POST** or **PATCH**.

4. Select **Proxy Required** if the environment needs access to content from data sources outside the firewall.
5. Click on **Test Connection** to check accessibility of URL from service. Testing the connection is not mandatory, you can still create Data source
6. If the user has additional parameters, click Add Authentication Parameters under the Request Authentication Parameters tab.

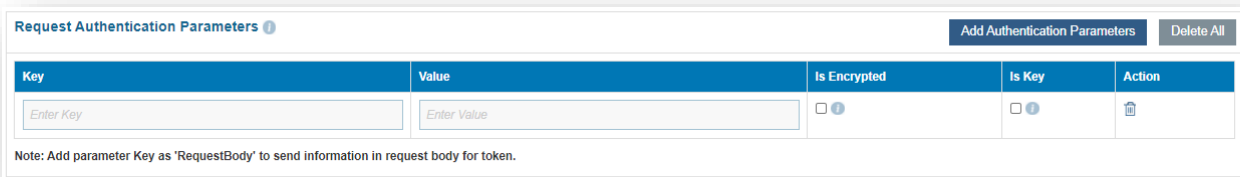


Figure 124 - Add Authentication Parameters

7. Type the ‘Request Header Parameter’.

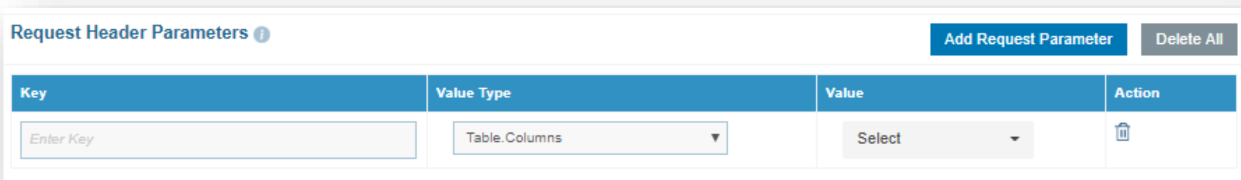


Figure 125 - Request Header Parameter

8. Type the **Request Body** in JSON format.
9. Type the **Response Body** in JSON format.
10. Click **Extract Keys**. It adds the parameter and lists in the Mandatory page.
11. Click **Add Response Parameter** if you want to add a new parameter in the **Mandatory** page.

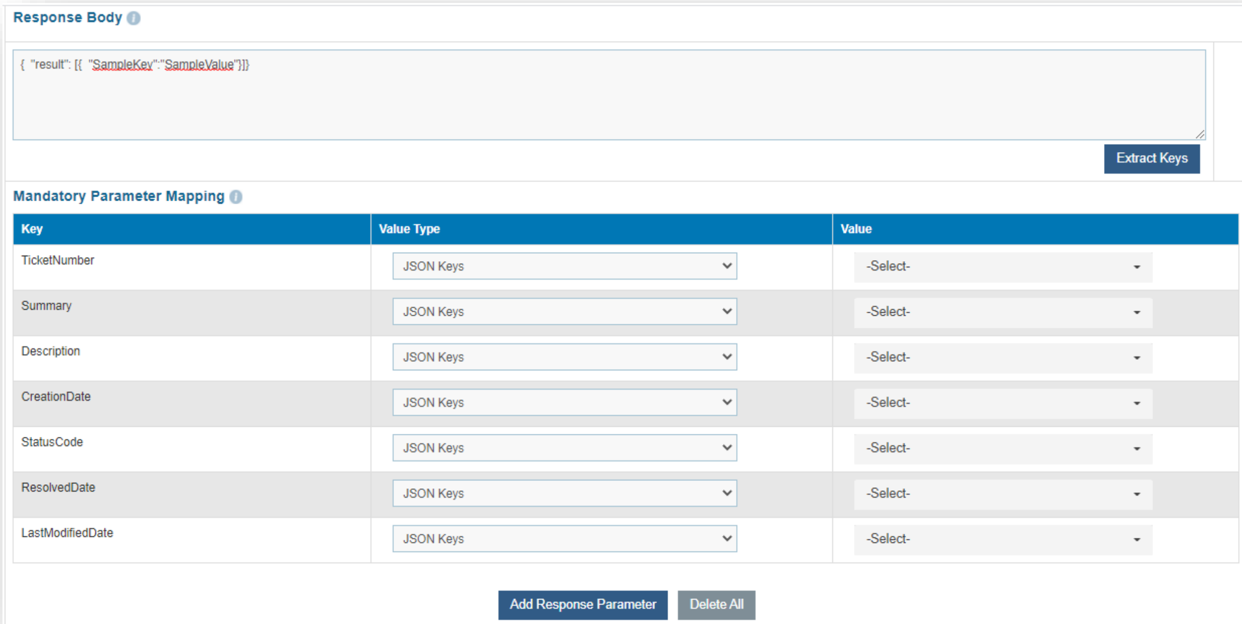


Figure 126 - Create Data Source (Cont.)

3.2.3.3.4 Release Rules Configuration

User can configure a method for releasing the ticket from BigFix Runbook AI queue by performing the following steps.

Release Rules Configuration is only applicable for Incident Management, Service Request Task and Change Request Task

1. On the **Release Rules Configuration** page, type the URL of the selected service type in the **URL** field to release data.

This URL contains the placeholders that display the parameters based on the applied clause. It is dependent on the URL or API provided by the tool.

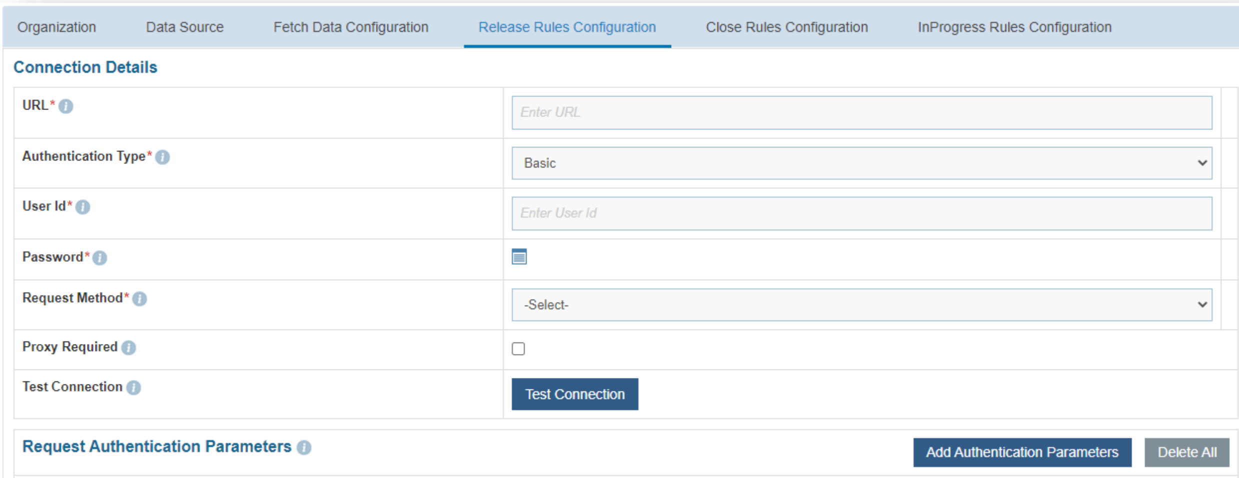


Figure 127 – Release Rule Configuration

User can apply multiple clauses into the URL to display only the required parameter into the placeholder. Once you hit the URL, only the placeholders with a hashtag will be displayed with the associated parameters in the URL Path Parameters column. Whenever user wants to change the data to be filtered, always change the logic in the URL to get the specific parameters.

2. Select the **Authentication Type**. BigFix Runbook AI supports the following types of authentications:

   - Windows
   - JWT
   - OAuth 2.0
   - Basic
   - NoAuth

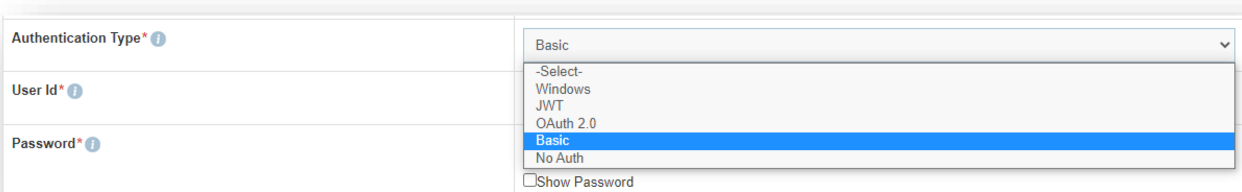


Figure 128 - Authentication Types

   a. Selection of **Windows / Basic** authentication requires only **Username** and **Password**.

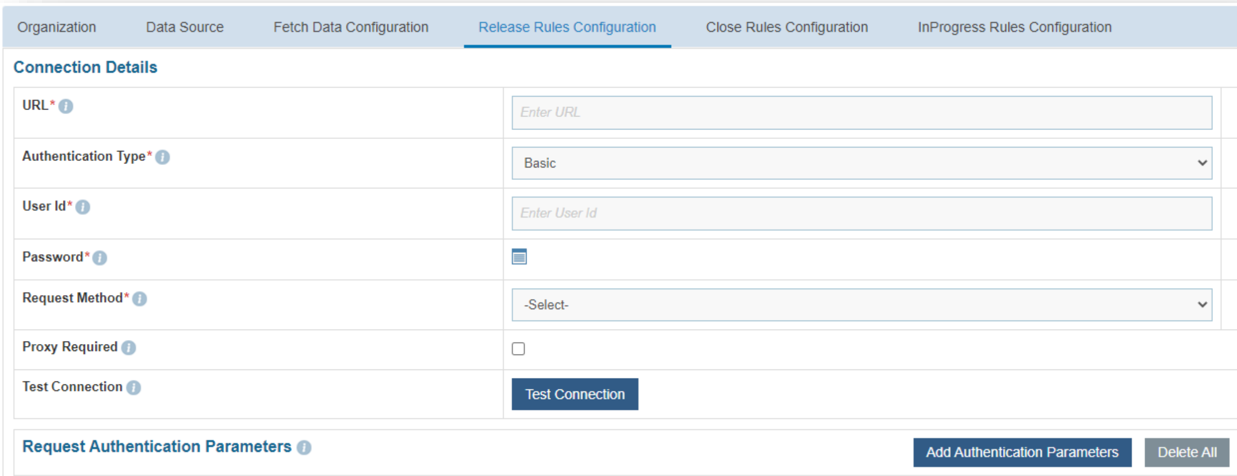


Figure 129- Authentication Type (Windows / Basic)

b. Selection of **JWT / OAuth 2.0** authentication type, user needs to provide the below details.

   - Type the Authentication URL.
   - Type the Username and Password.

c. For password, click on icon next to it. If the password is available in plaintext, then select Input type as Input Text and enter the password in **Value** field. Else if it is available in any Key Vault such as CyberArk or Secret Manager then select Input Type as CyberArk or Secret Manager respectively and then select any of the configured details from the value field.

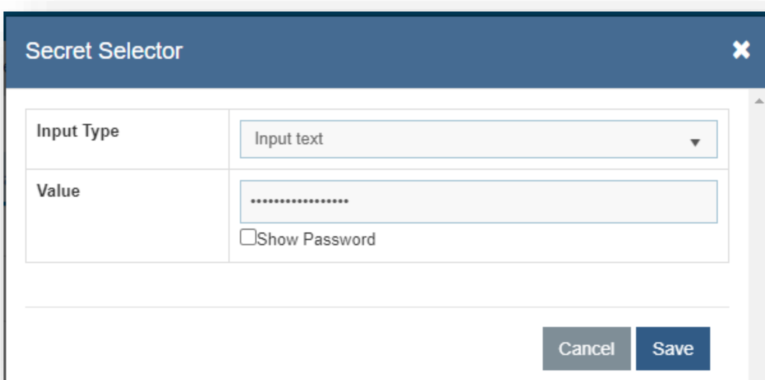


Figure 130 - Password in Plaintext

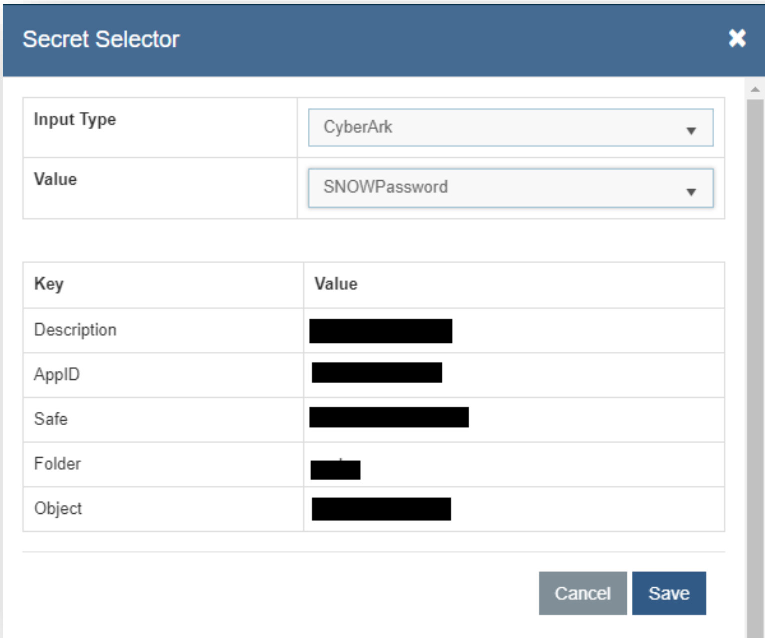


Figure 131 - Password from Key Vault (CyberArk)

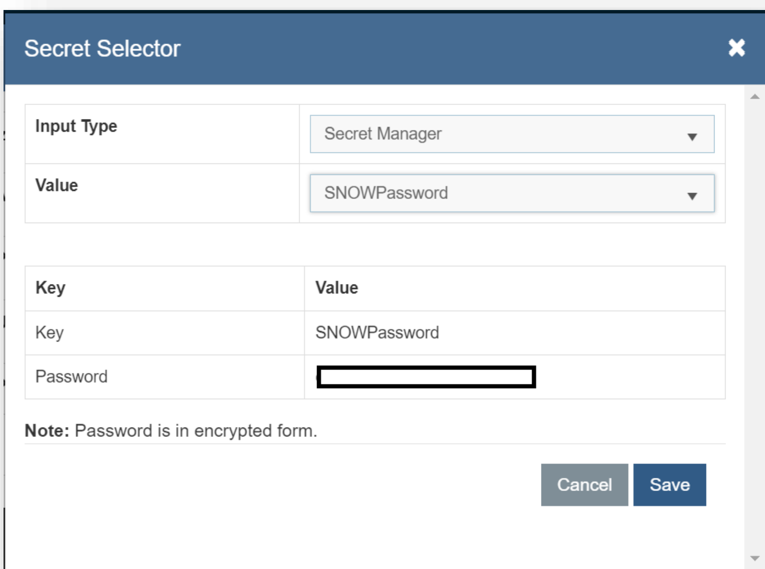


Figure 132 - PASSWORD FROM SECRET MANAGER

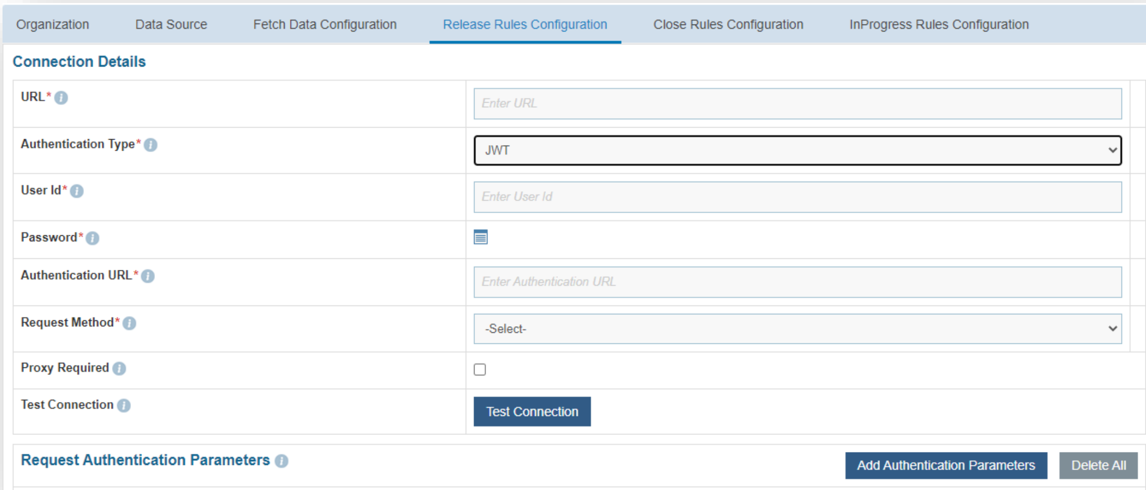


Figure 133 - Authentication Type (JWT / OAuth 2.0)

3. Select **Request Method** as GET, PUT, POST or PATCH.
4. Select **Proxy Required** if the environment needs access to content from data sources outside the firewall.
5. Click on **Test Connection** to check accessibility of URL from service. Testing the connection is not mandatory, you can still create Data source
6. If the user has additional parameters, click **Add Authentication Parameters** under the **Request Authentication Parameters** tab.

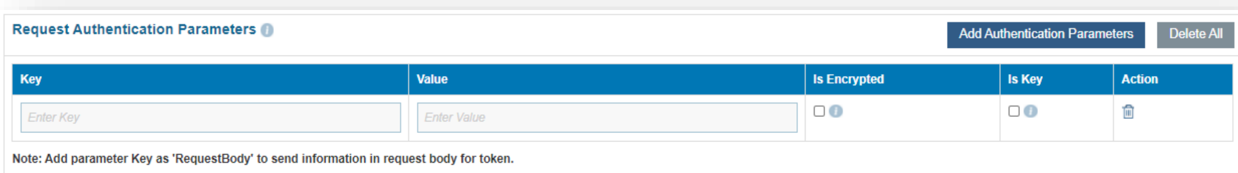


Figure 134 - Authentication Type (Windows / Basic)

7. Type the Request Header Parameter.

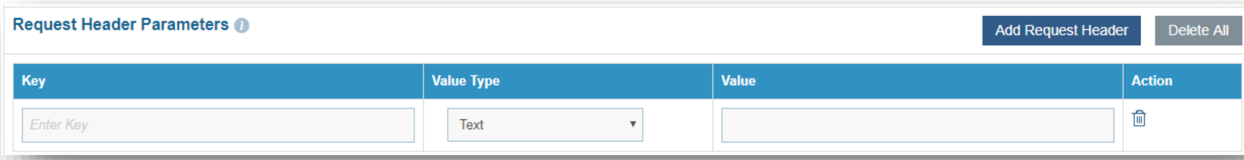


Figure 135 - Request Header Parameter

8. Type the **Request Body** in JSON format.

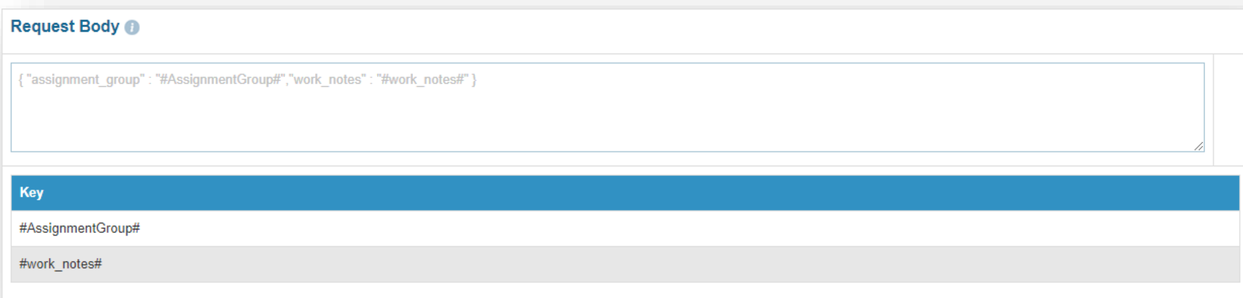


Figure 136 - Request Body

The values for the parameters will be set in the **Manage Rules** section.

9. Type the **Response Body** in JSON format.

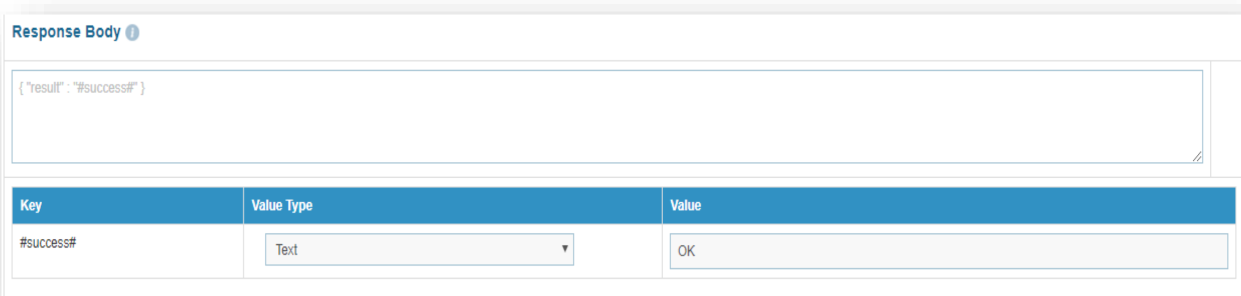


Figure 137 - Response Body

10. Click **Submit** to create the **Data Source**.

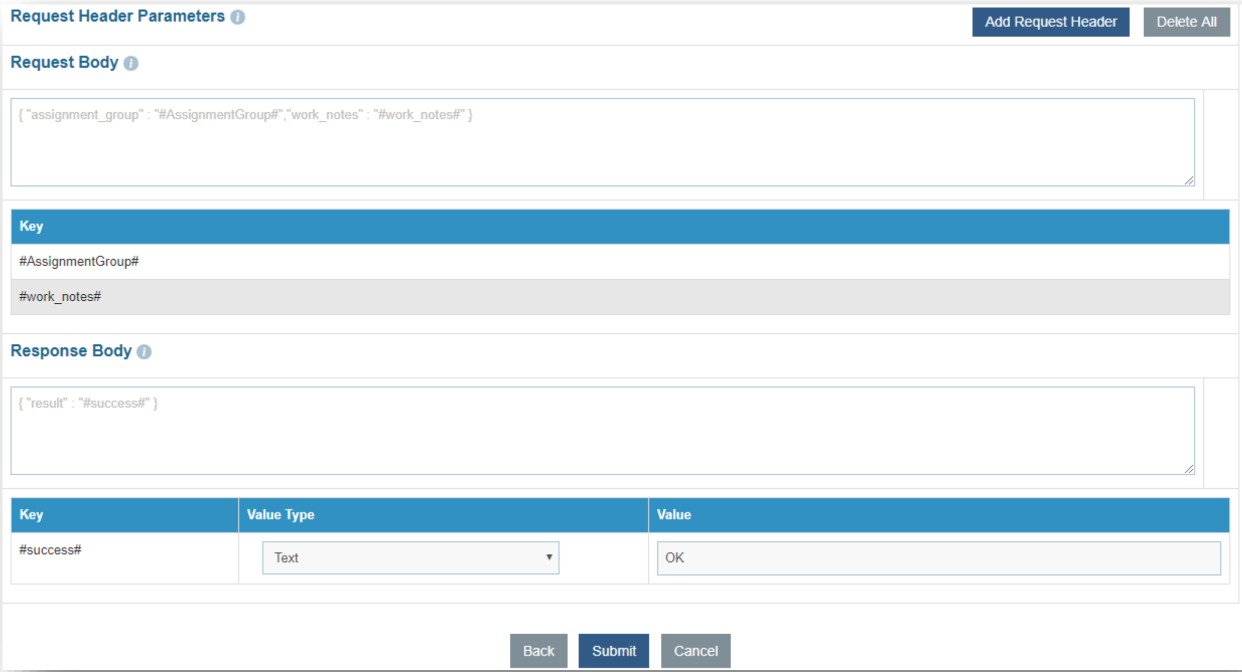


Figure 138 - Create Data Source (Cont.)

All fields marked with an asterisk (*) are mandatory.

3.2.3.3.5 Close Rules Configuration

User can configure the method for Closing the ticket from BigFix Runbook AI queue by performing the following steps.

Close Rules Configuration is only applicable for Incident Management, Service Request Task and Change Request Task

1. On the **Close Rules Configuration** page, click on **Same as Release** if similar configurations as mentioned in “**Release Rules Configuration**” are required, else proceed ahead.
2. Type the URL of the selected service type in the **URL** field to release data.

   This URL contains the placeholders that display the parameters based on the applied clause. It is dependent on the URL or API provided by the tool.

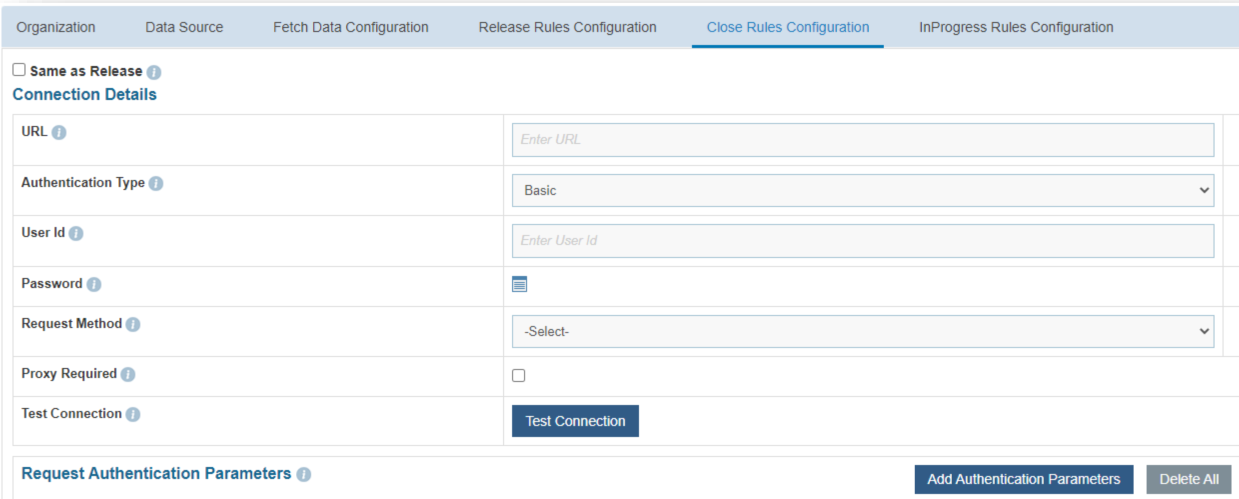


Figure 139 – Close Rules Configuration

User can apply multiple clauses into the URL to display only the required parameter into the placeholder. Once you hit the URL, only the placeholders with a hashtag will be displayed with the associated parameters in the URL Path Parameters column. Whenever user wants to change the data to be filtered, always change the logic in the URL to get the specific parameters.

3. Select the **Authentication Type**. BigFix Runbook AI supports the following types of authentications:
    - Windows
    - JWT
    - OAuth 2.0
    - Basic
    - NoAuth

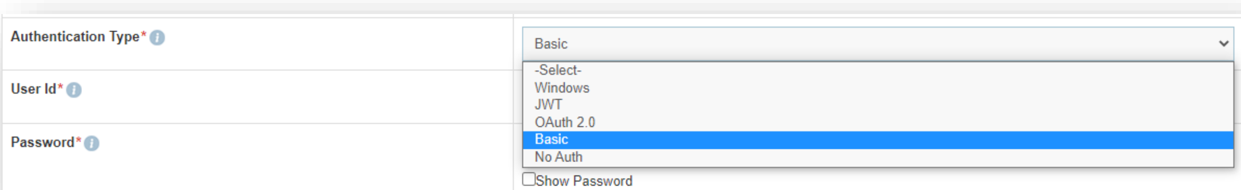


Figure 140 - Authentication Types

    a. Selection of **Windows / Basic** authentication requires only **Username** and **Password**.

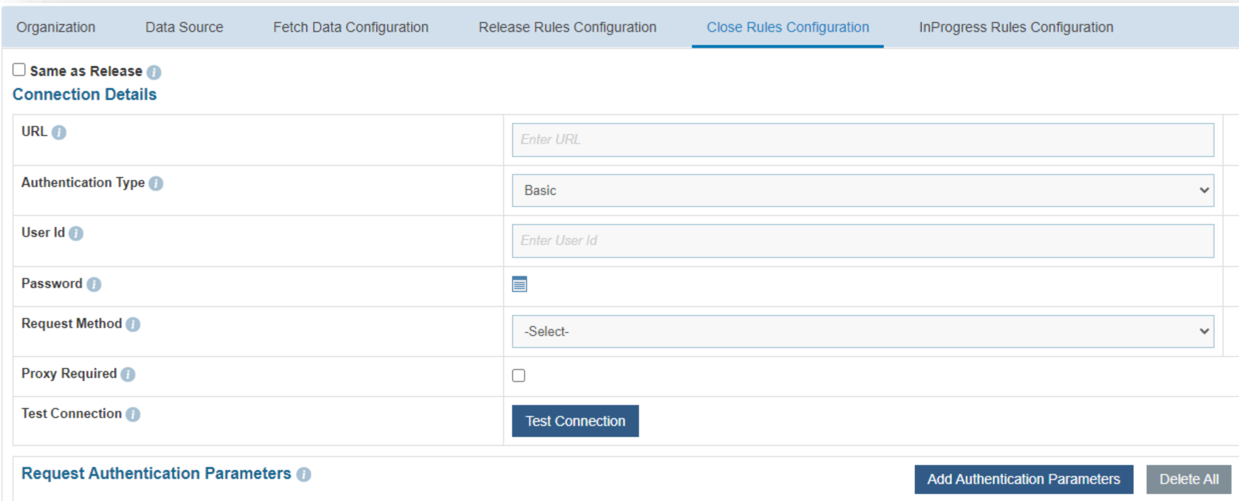


Figure 141- Authentication Type (Windows / Basic)

b. Selection of **JWT / OAuth 2.0** authentication type, user needs to provide the below details.

  - Type the Authentication URL.
  - Type the Username and Password.

c. For password, click on icon next to it. If the password is available in plaintext, then select Input type as Input Text and enter the password in **Value** field. Else if it is available in any Key Vault such as CyberArk or Secret Manager then select Input Type as CyberArk or Secret Manager respectively and then select any of the configured details from the **Value** field.

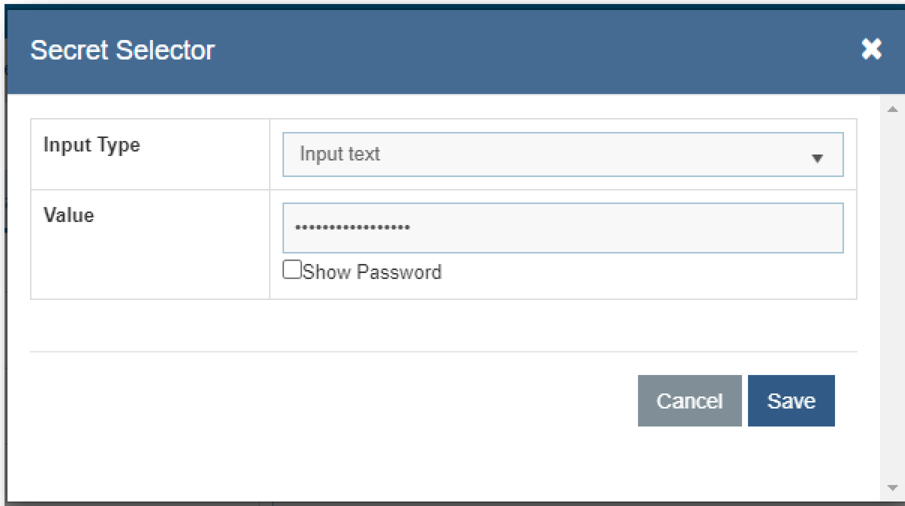


Figure 142 - Password in plaintext

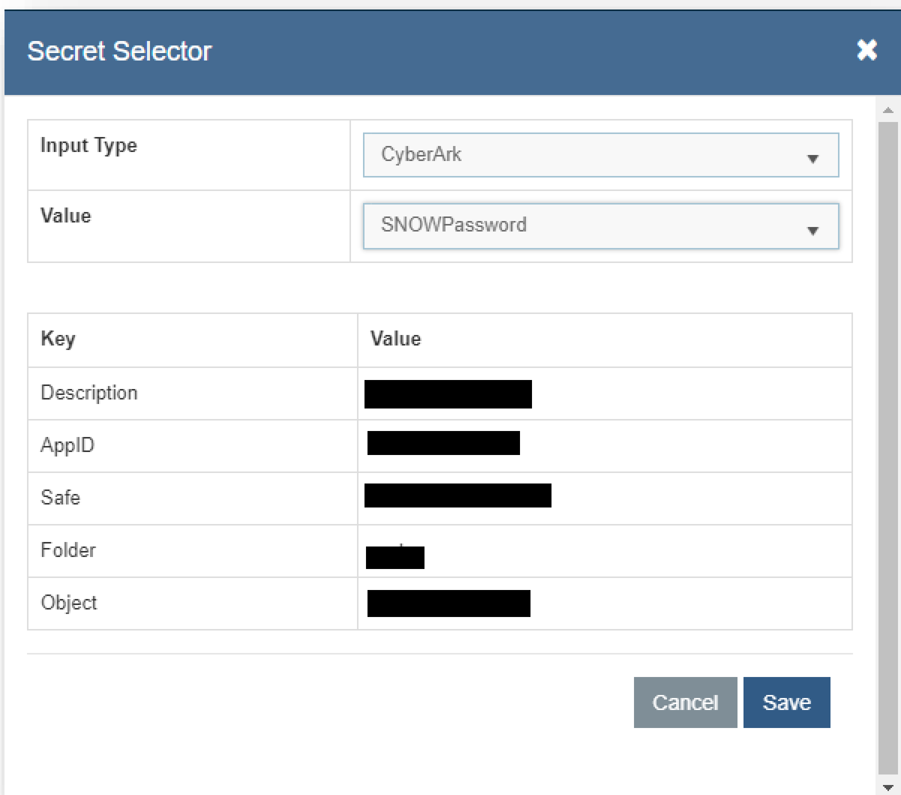
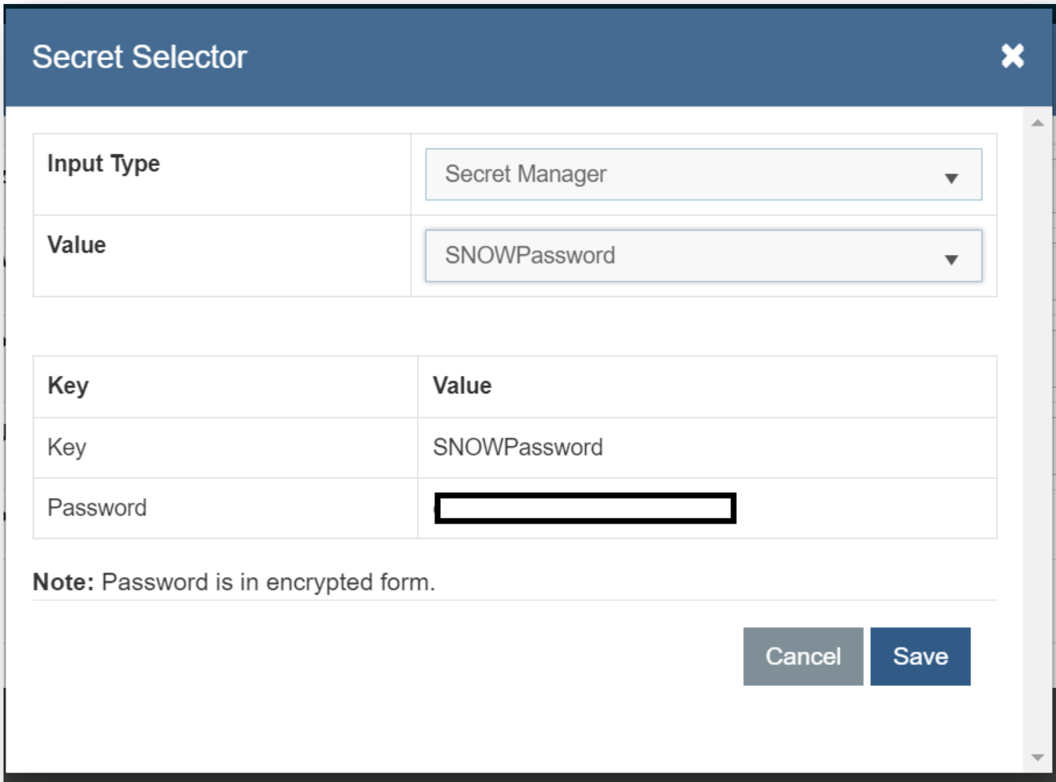


Figure 143 - Password from Key Vault (CyberArk)



Password from Secret Manager

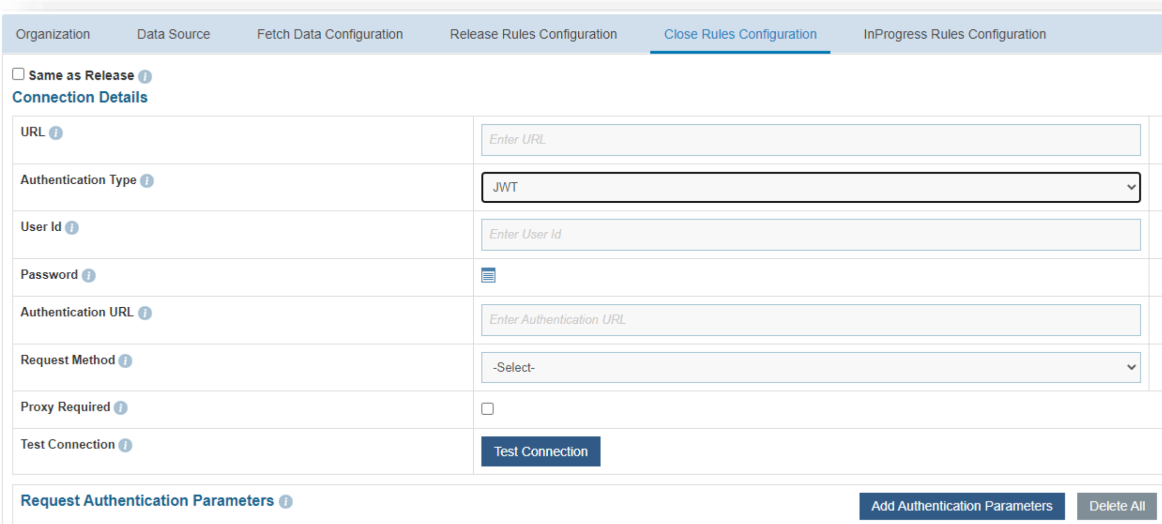


Figure 144 - Authentication Type (JWT / OAuth 2.0)

4. Select **Request Method** as GET, PUT, POST or PATCH.

5. Select **Proxy Required** if the environment needs access to content from data sources outside the firewall.
6. Click on **Test Connection** to check accessibility of URL from service. Testing the connection is not mandatory, you can still create **Data source**
7. If user has additional parameters, click **Add Authentication Parameters** under the **tab Request Authentication Parameters**.

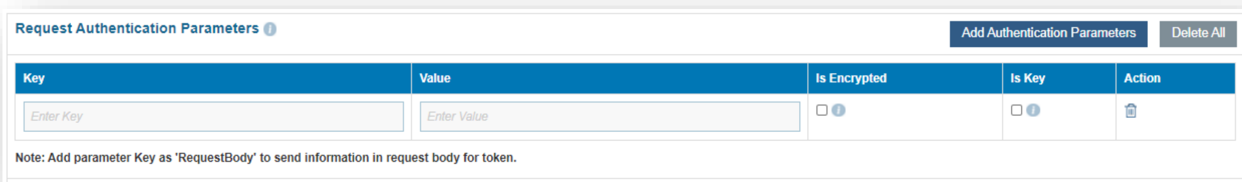


Figure 145 - Authentication Type (Windows / Basic)

8. Type the **Request Header Parameter**.

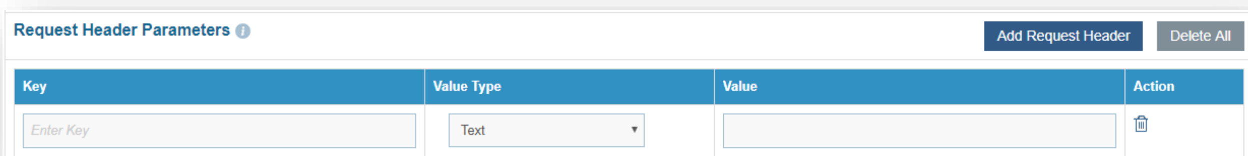


Figure 146 - Request Header Parameter

9. Type the **Request Body** in JSON format.

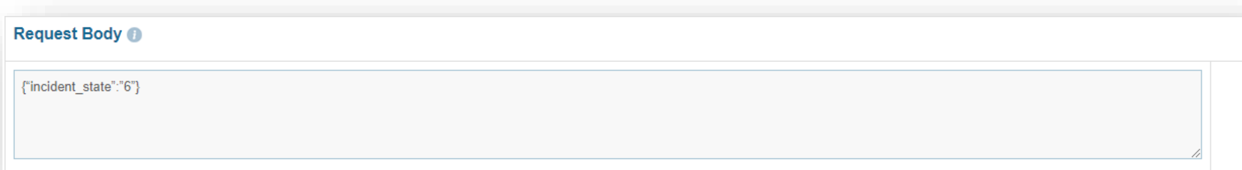


Figure 147 - Request Body

The values for the parameters will be set in the **Manage Rules** section.

10. Type the **Response Body** in JSON format.

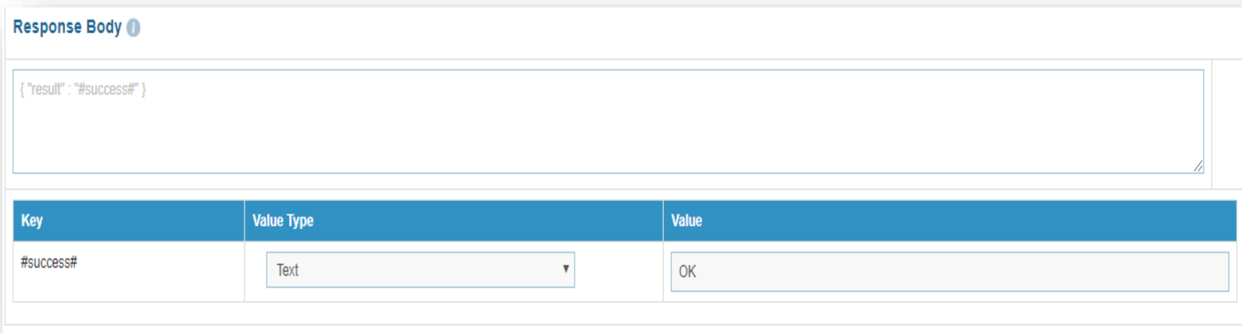


Figure 148 - Response Body

11. Click **Next** to move to next section.

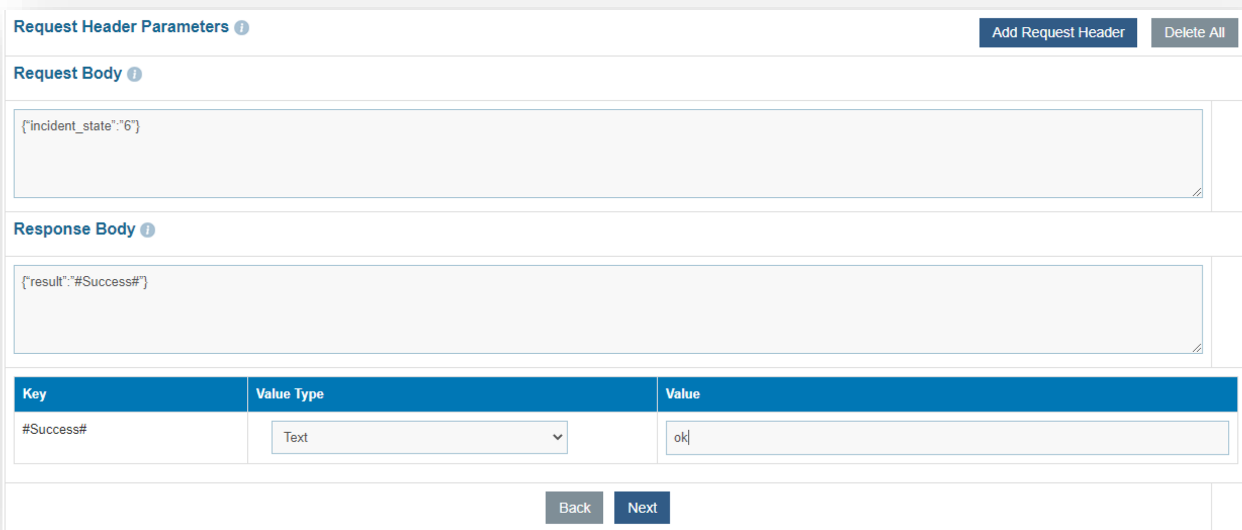


Figure 149 - Create Data Source (Cont.)

3.2.3.3.6 InProgress Rules Configuration

User can configure a method for releasing the ticket from BigFix Runbook AI queue performing the following steps.

InProgress Rules Configuration is only applicable for Incident Management, Service Request Task and Change Request Task

1. On the **InProgress Rules Configuration** page, click on **Same as Release** if similar configurations as mentioned in "Release Rules Configuration" are required, else proceed ahead.

2. Type the URL of the selected service type in the **URL** field to release data.

   This URL contains the placeholders that display the parameters based on the applied clause. It is dependent on the URL or API provided by the tool.

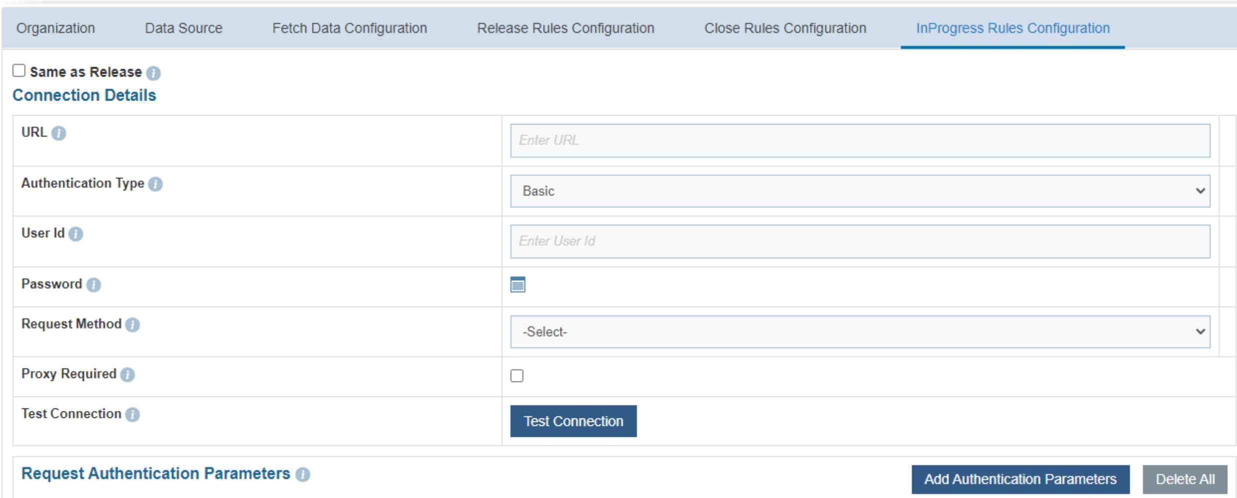


Figure 150 – InProgress Rules Configuration

User can apply multiple clauses into the URL to display only the required parameter into the placeholder. Once you hit the URL, only the placeholders with a hashtag will be displayed with the associated parameters in the URL Path Parameters column. Whenever user wants to change the data to be filtered, always change the logic in the URL to get the specific parameters.

3. Select the **Authentication Type**. BigFix Runbook AI supports the following types of authentications:
   - Windows
   - JWT
   - OAuth 2.0
   - Basic
   - NoAuth

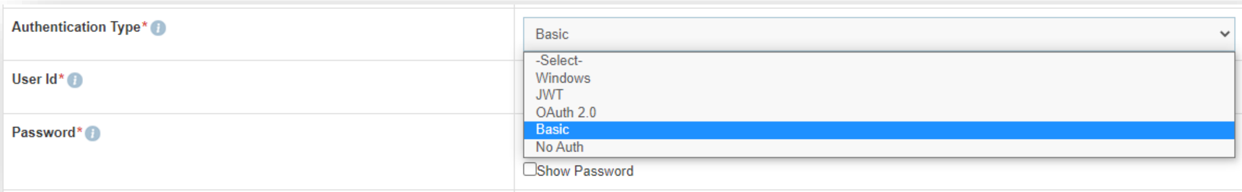


Figure 151 - Authentication Types

a. Selection of **Windows / Basic** authentication requires only **Username** and **Password**.

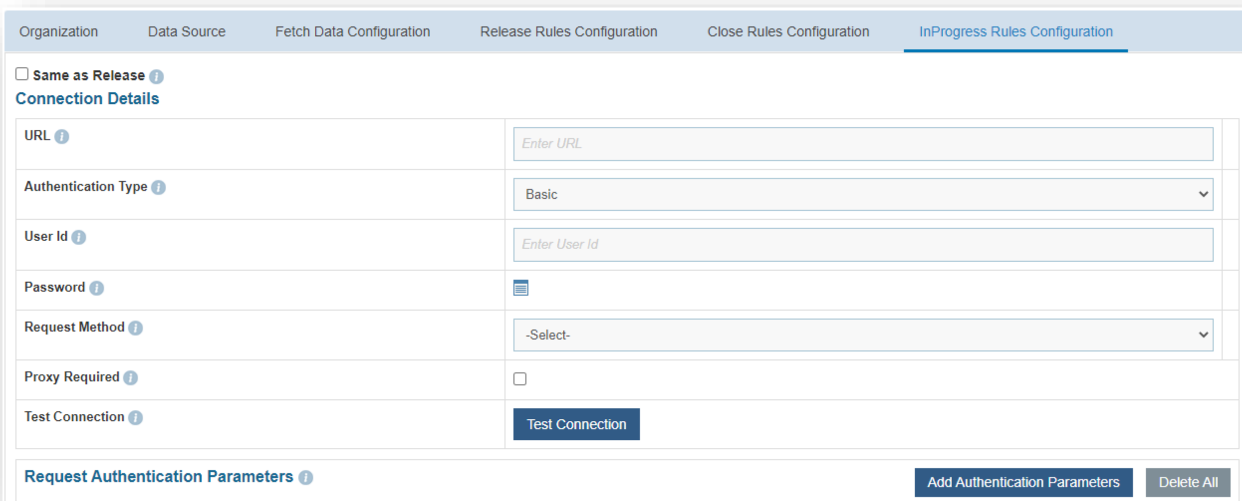


Figure 152- Authentication Type (Windows / Basic)

b. Selection of **JWT / OAuth 2.0** authentication type, user needs to provide the below details.

   - Type the Authentication URL.
   - Type the Username and Password.

c. For password, click on icon next to it. If the password is available in plaintext, then select Input type as Input Text and enter the password in Value field. Else if it is available in any Key Vault such as CyberArk then select Input Type as CyberArk and then select any of the configured details from the value field.

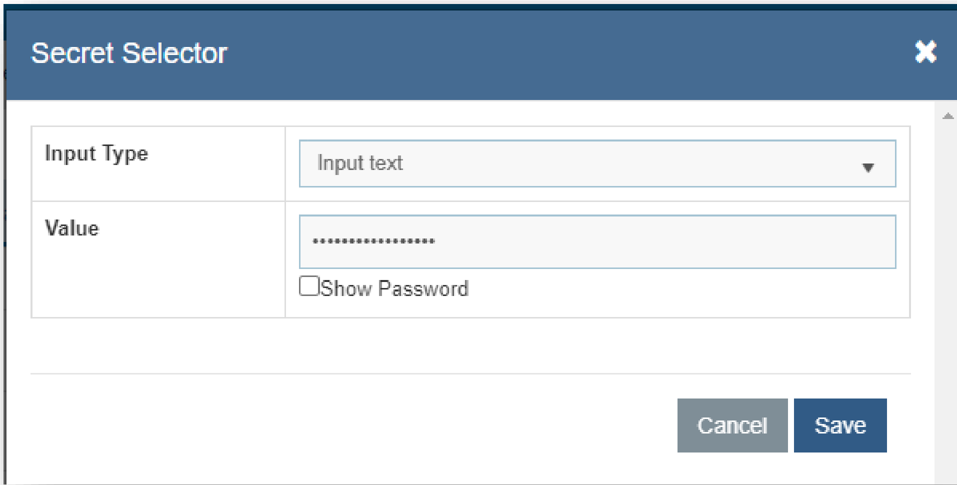


Figure 153 - Password in plaintext

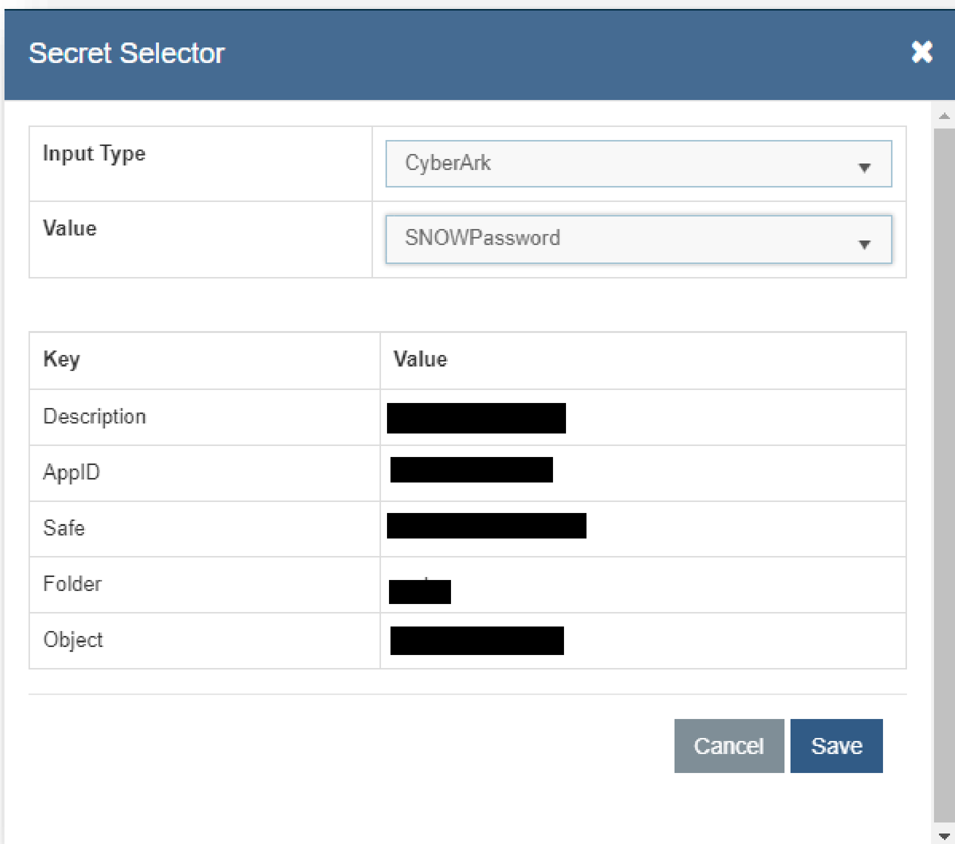
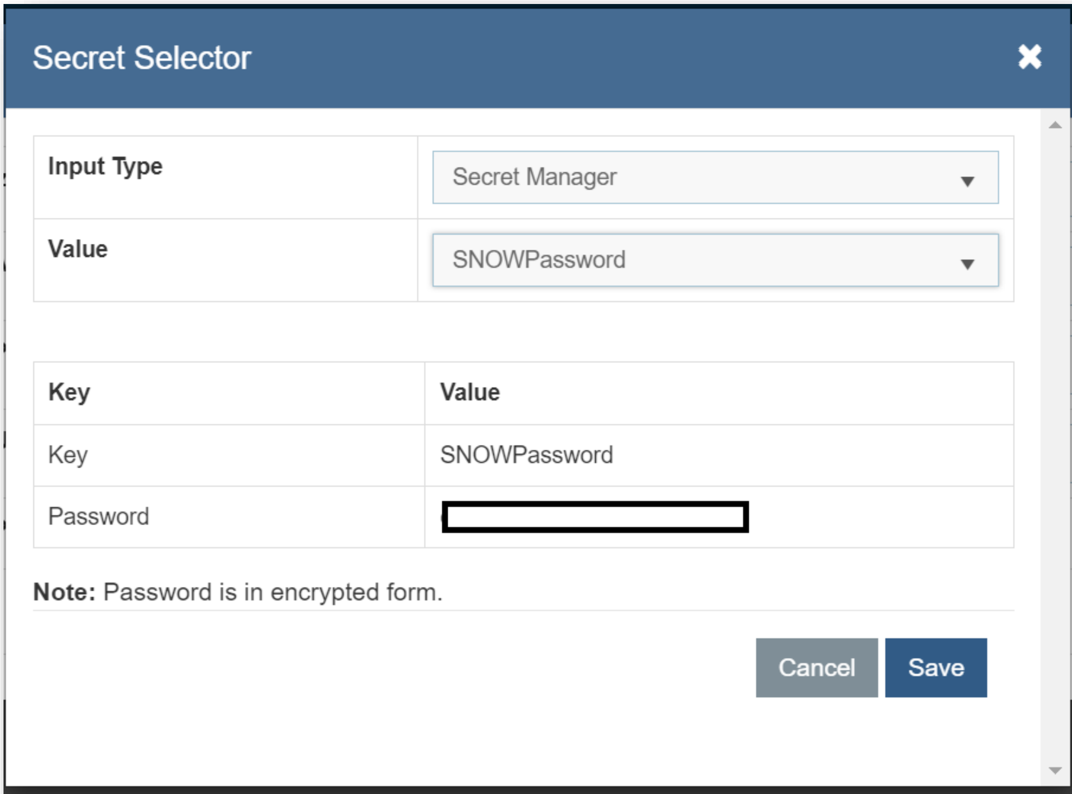


Figure 154 - Password from Key Vault (CyberArk)



Password from Secret Manager

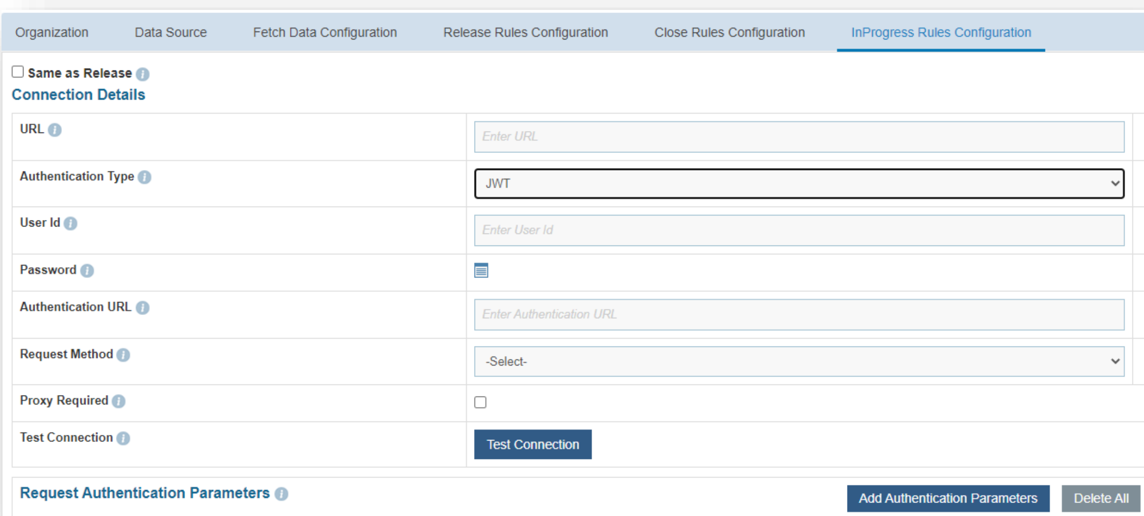


Figure 155 - Authentication Type (JWT / OAuth 2.0)

4. Select **Request Method** as GET, PUT, POST or PATCH.

5. Select **Proxy Required** if the environment needs access to content from data sources outside the firewall.
6. Click on **Test Connection** to check accessibility of URL from service. Testing the connection is not mandatory, you can still create **Data source**
7. If user has additional parameters, click **Add Authentication Parameters** under the tab **Request Authentication Parameters**.

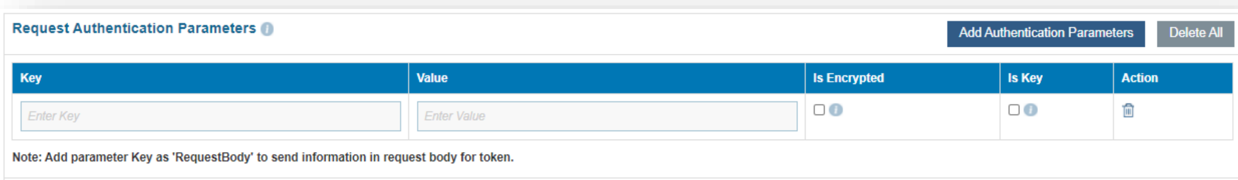


Figure 156 - Authentication Type (Windows / Basic)

8. Type the **Request Header Parameter**.

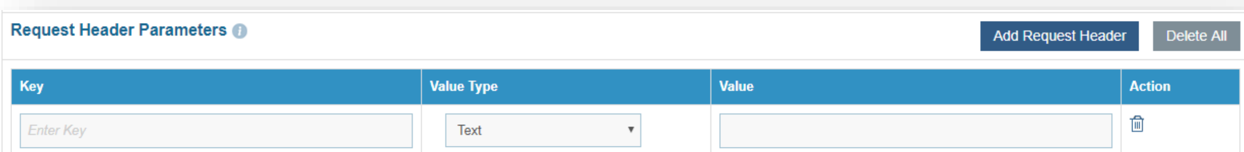


Figure 157 - Request Header Parameter

9. Type the **Request Body** in JSON format.

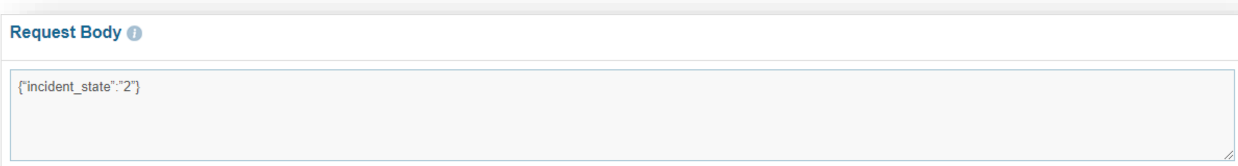


Figure 158 - Request Body

The values for the parameters will be set in the **Manage Rules** section.

10. Type the **Response Body** in JSON format.

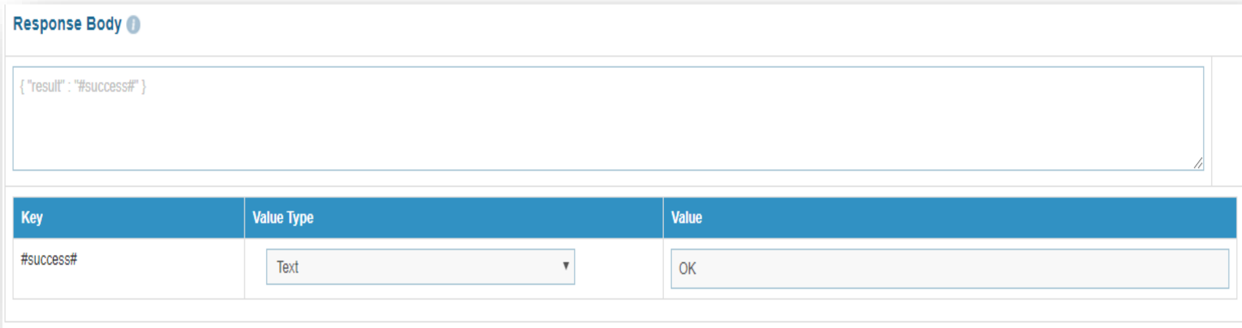


Figure 159 - Response Body

11. Click **Submit** to create the **Data Source**.

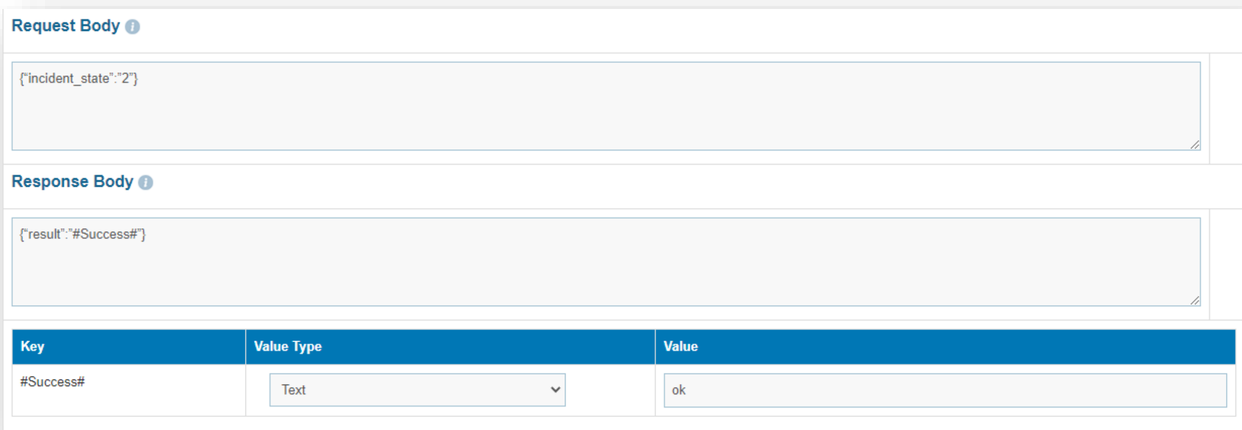


Figure 160 - Create Data Source (Cont.)

3.2.3.4 View Data Sources

User can view and manage the data sources configured within an organization.

To view and manage data sources, perform the following steps:

1. On the main menu bar, click **Actions → Manage Data Sources**.

   The **Data Sources** page appears.

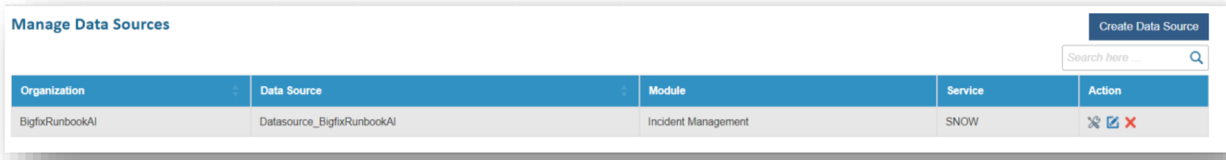


Figure 161 - View Data Source

This lists the available data sources in a tabular view with their associated organization, module, and service type. Users can create a new data source by clicking Create Data Source. Users can also edit or delete the data source and manage the entry criteria for the data source.

3.2.3.4.1 Edit Data Source

User can open a data source, review the available information, and change the data source details.

To edit the existing data source, perform the following steps:

1. On the **Data Sources** page, click next to the data source user wants to edit.

Figure 162 - Edit Data Source

2. This redirects you to the Mange Data Source page. Edit the details as required.
3. Click **Update** to commit the changes or click **Cancel** to discard all changes.

3.2.3.4.2 Manage Entry Criteria

Entry criteria are a set of conditions or requirements that must be fulfilled to fetch the data from the data source.

To manage entry criteria, perform the following steps:

1. On the **Data Sources** tab, click next to the data source user wants to manage.

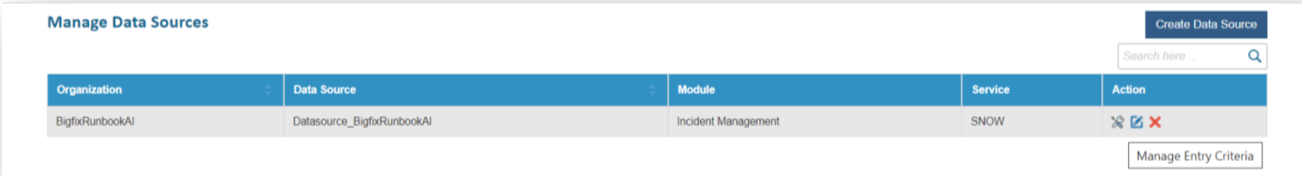


Figure 163 - Manage Entry Criteria

2. The **Manage Entry Criteria** page appears. You will be prompted to apply the following conditions:
   - Column
   - Operator
   - Value
   - Clause
   - Sub-Clause
3. Click **Save** to go to the next screen.

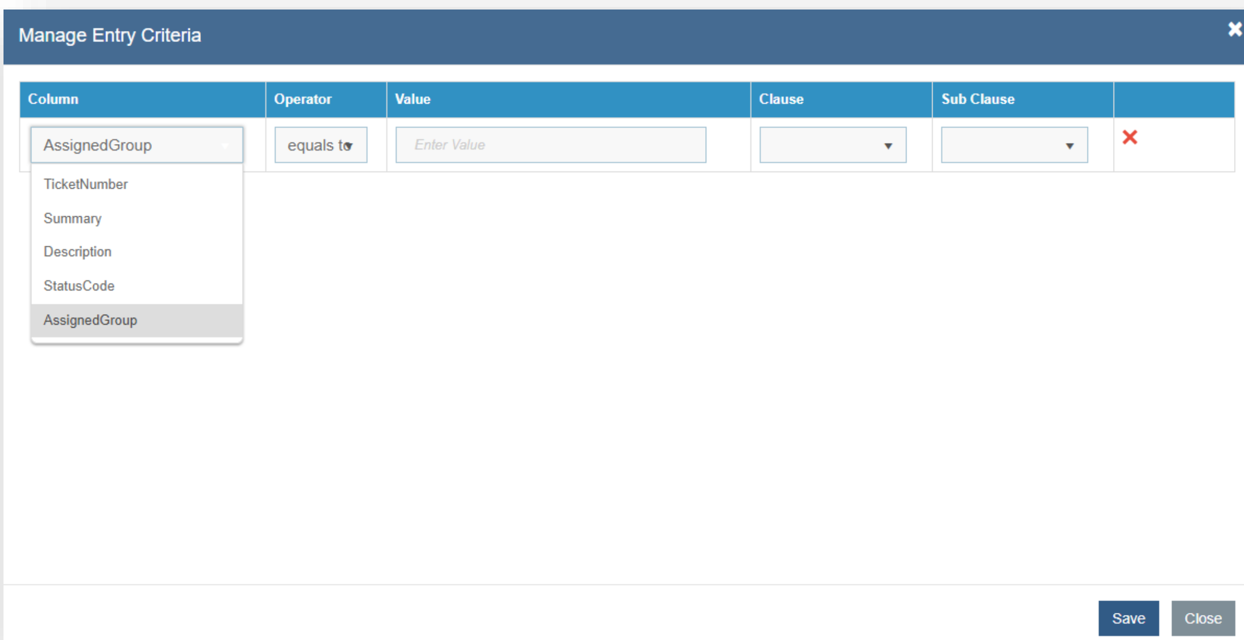


Figure 164- Manage Entry Criteria (Cont.)

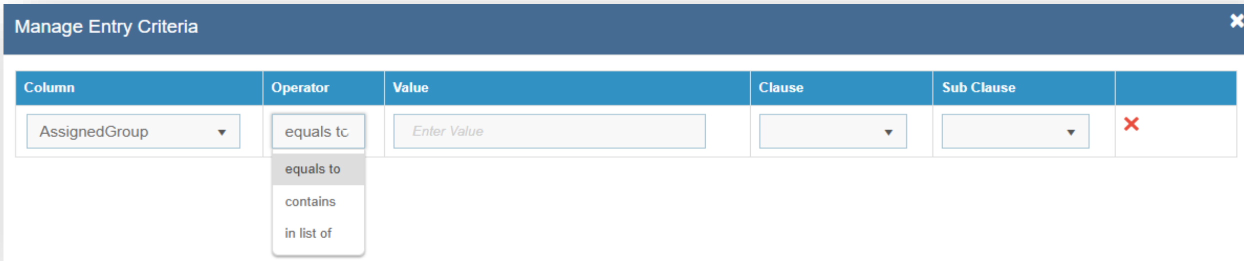


Figure 165- Manage Entry Criteria (Cont.)

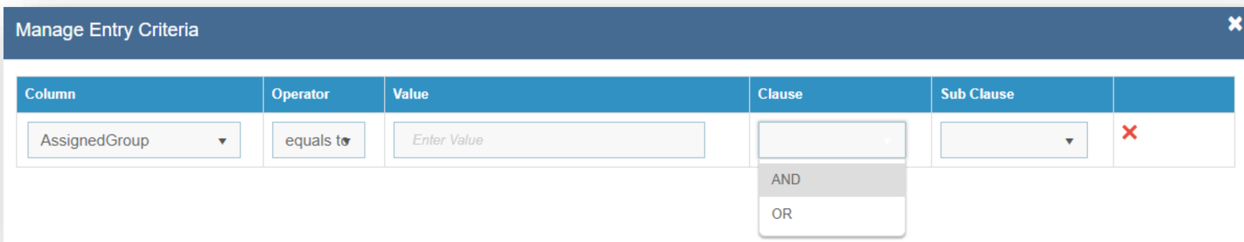


Figure 166- Manage Entry Criteria (Cont.)

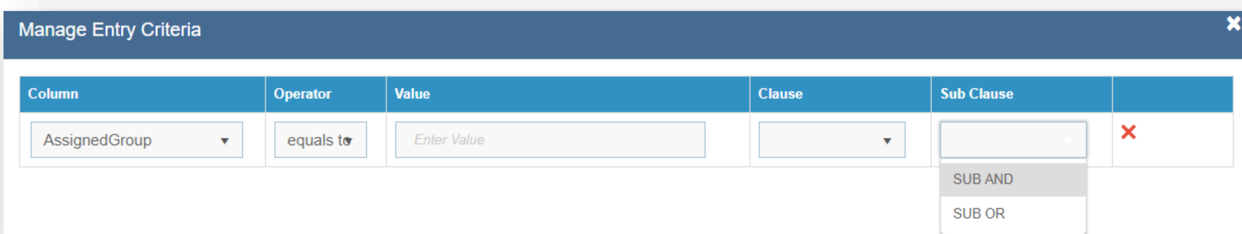


Figure 167- Manage Entry Criteria (Cont.)

3.2.3.4.3 Delete Data Source

If a data source in an organization is no longer required, the user can delete it by performing the following steps:

1. On the **Data Sources** tab, click ✕ to delete the Data Source.

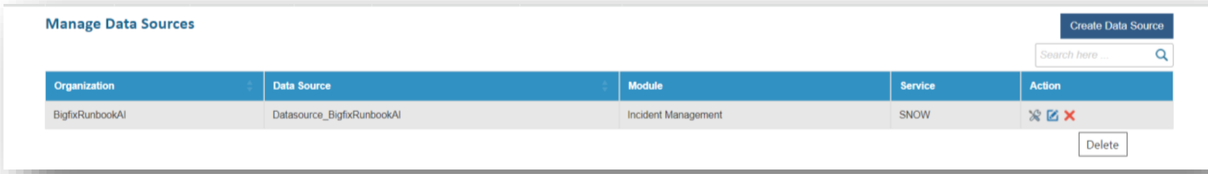


Figure 168- Delete Data Source

2. Click **OK** to confirm.

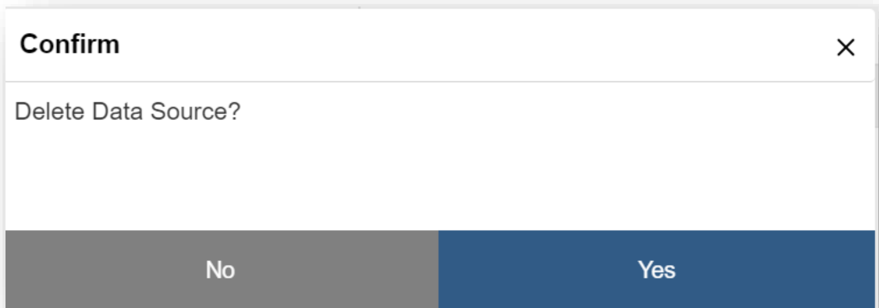


Figure 169- Delete Confirmation

A confirmation dialog box appears.

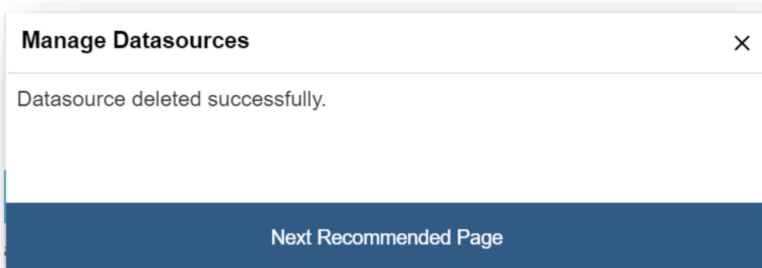


Figure 170- Delete Success

3.2.3.5 Build Models

This section describes the procedure to build various types of Machine Learning models in BigFix Runbook AI.

To build a model, perform the following steps:

1. On the main menu bar, click **Actions**.

2. Click **Build Models**.
3. The **Build Models** page appears and lists the available build models with their status, the associated organization, module, and the runbook tool in a tabular view.

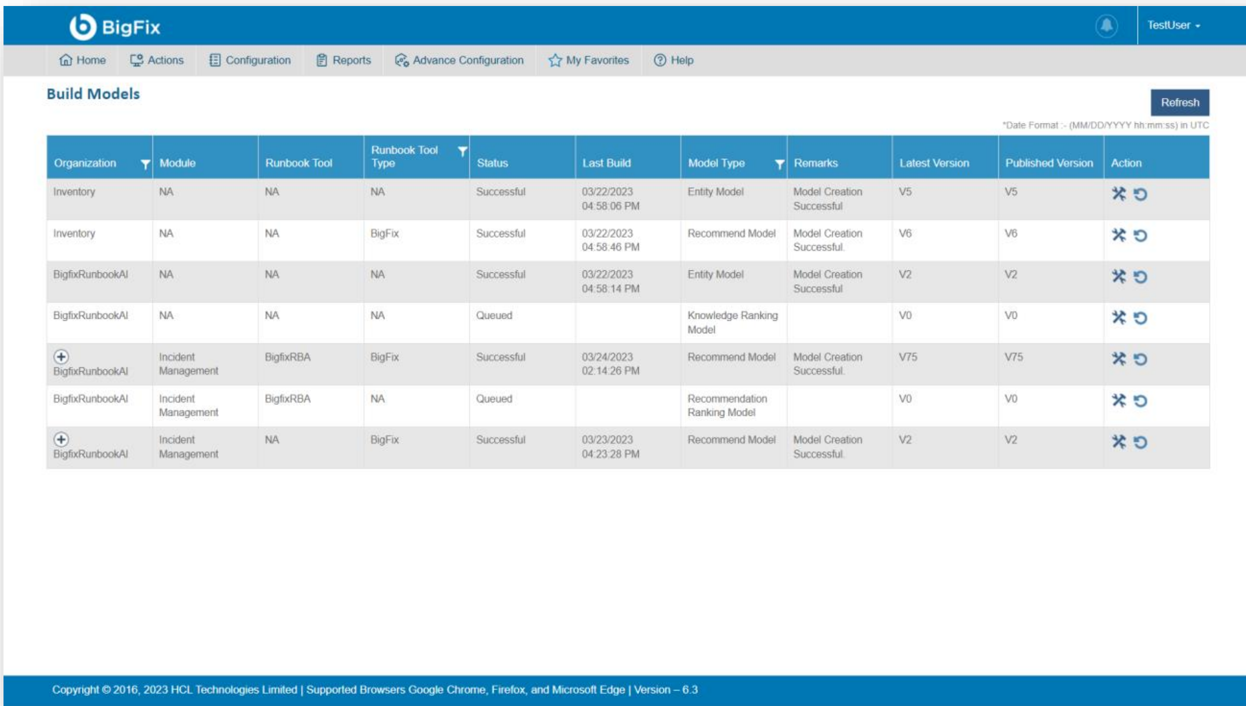


Figure 171- Build Models

Using this page, a user can build four types of models:

- **Entity Model** – This model is used to identify the entities from the runbook description and ticket summary.
- **Recommendation Model** – This model is used to recommend the list of relevant runbooks based on the ticket summary.
- **Recommendation Ranking Model** – This model is used to re-rank the list of recommended runbooks based on the resolution status of past executions.
- **Knowledge Ranking Model** – This model is used to re-rank the list of relevant documents based on the user feedback.

A **Recommendation Model** cannot be created without creating the Entity Model. Also, a **Recommendation Ranking Model** cannot be created without the **Recommendation Model**.

3.2.3.5.1 Build Model

User can build any type of model for an organization by performing the following steps. Here, we have used Entity model as reference:

1. On the **Build Models** page, click next to the organization to build the model.

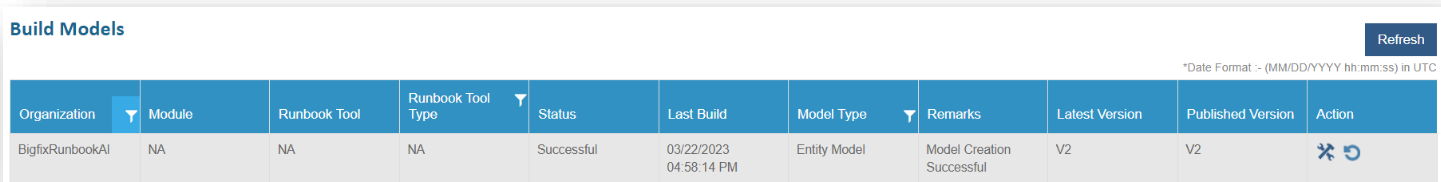


Figure 172- Build Models

A message confirming the initiation of model build appears.

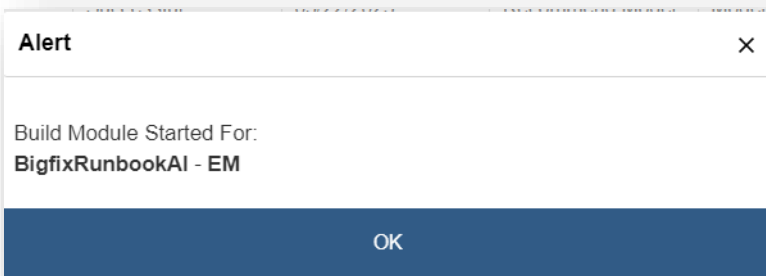


Figure 173- Build Models (Cont.)

The status of the build changes from **Queued** to **Initiate**.

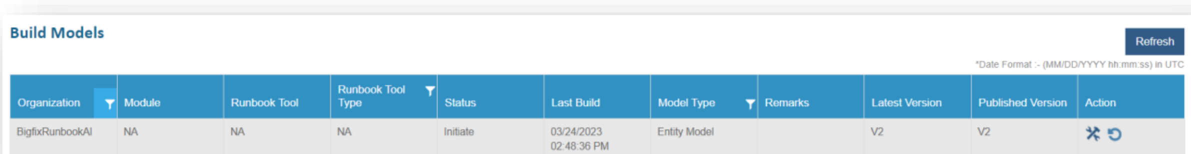
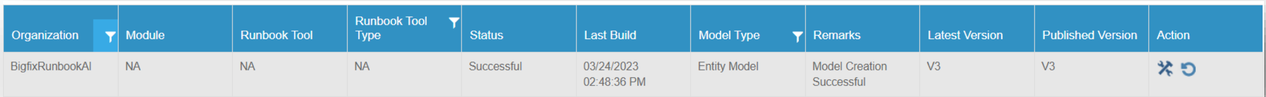


Figure 174- Build Models (Cont.)

Once the build is successfully created, the status changes from **Initiate** to **Successful** and the **Remarks** column is updated.



Organization	Module	Runbook Tool	Runbook Tool Type	Status	Last Build	Model Type	Remarks	Latest Version	Published Version	Action
BigfixRunbookAI	NA	NA	NA	Successful	03/24/2023 02:48:36 PM	Entity Model	Model Creation Successful	V3	V3	

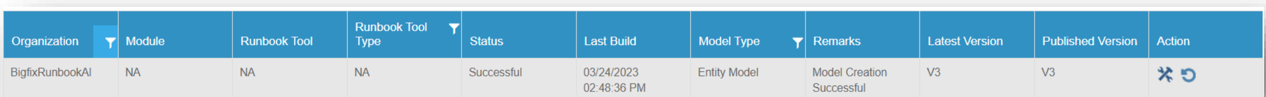
Figure 175- Build Models (Cont.)

- For Entity, Recommendation and Recommendation Ranking models, the model created will be saved in the location defined in BigFix Runbook AI Configurations or it will save the model at the location where the iRecommend services are installed.
- For Knowledge Rating, the model will be saved in the MongoDB database

3.2.3.5.2 Reset Model

The user can reset the status of the existing build model in an organization to its initial state.

1. On the **Build Models** tab, click corresponding to the organization for which you want to reset the model to its initial state.



Organization	Module	Runbook Tool	Runbook Tool Type	Status	Last Build	Model Type	Remarks	Latest Version	Published Version	Action
BigfixRunbookAI	NA	NA	NA	Successful	03/24/2023 02:48:36 PM	Entity Model	Model Creation Successful	V3	V3	

Figure 176- Reset Models

On resetting the model, the status changes to **Queued** and a confirmation dialog box appears.

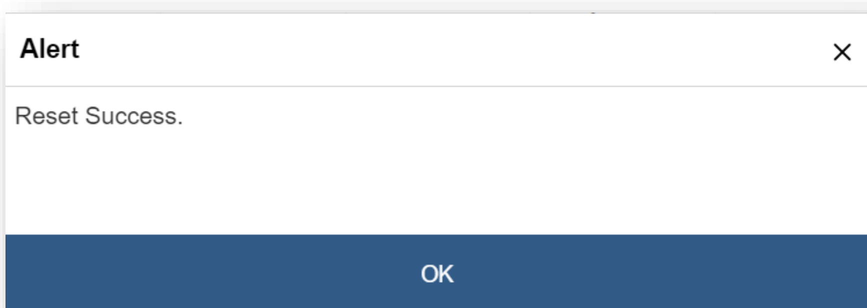


Figure 177- Reset Models (Cont.)

3.2.3.5.3 Evaluate Recommendation Model

Through this module, user can evaluate a recommendation model, view its performance report, publish different versions of the model, and view the list of runbooks on which the specific model was created.

To evaluate the recommendation model, perform the following steps:

1. On the **Build Models** tab, click ⊕ corresponding to the recommendation model associated with a tool for the organization for which you want to evaluate the model.

Figure 178- Evaluate Recommend Model

This opens a model version grid where user can view the different versions of the models listed. Under the **Action** tab, multiple options are available to the user.

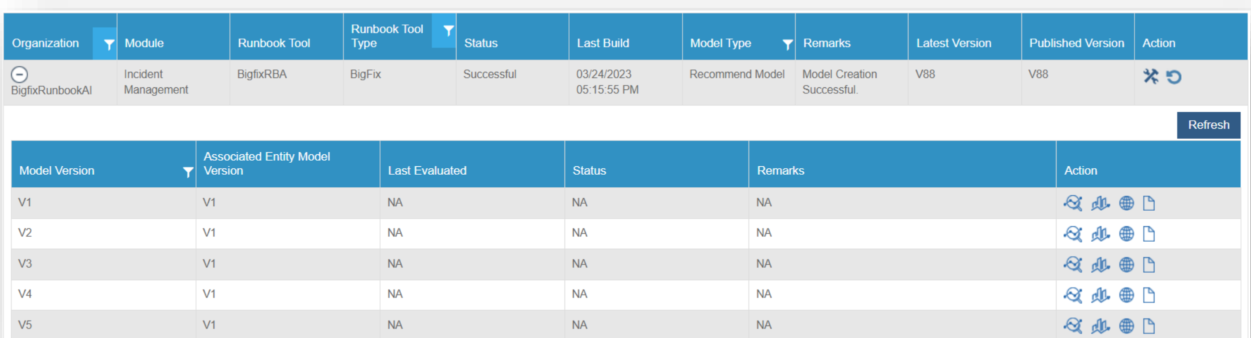


Figure 179- Evaluate Recommend Model (cont.)

2. Click to trigger the model evaluation process.

Figure 180- Evaluate Recommend Model (cont.)

3. Upon completion of the model evaluation process, a success message appears as below.

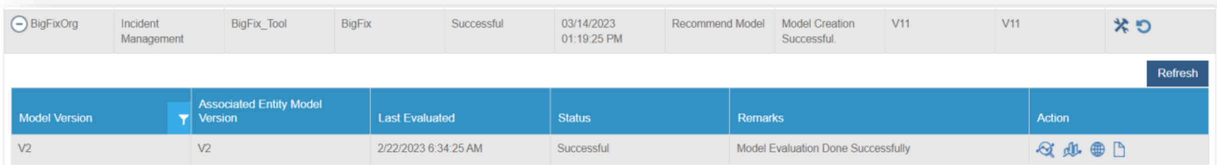


Figure 181- Evaluate Recommend Model (cont.)

4. After successful evaluation, click to view the dashboard.

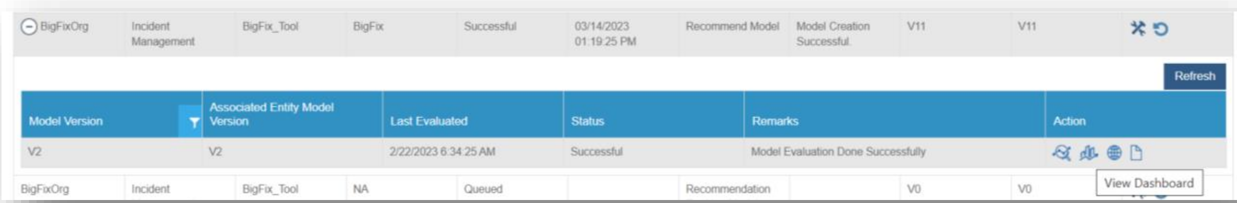


Figure 182- Evaluate Recommend Model (cont.)

5. On view dashboard popup, three types of charts are available:

a. Precision-Recall Graph:

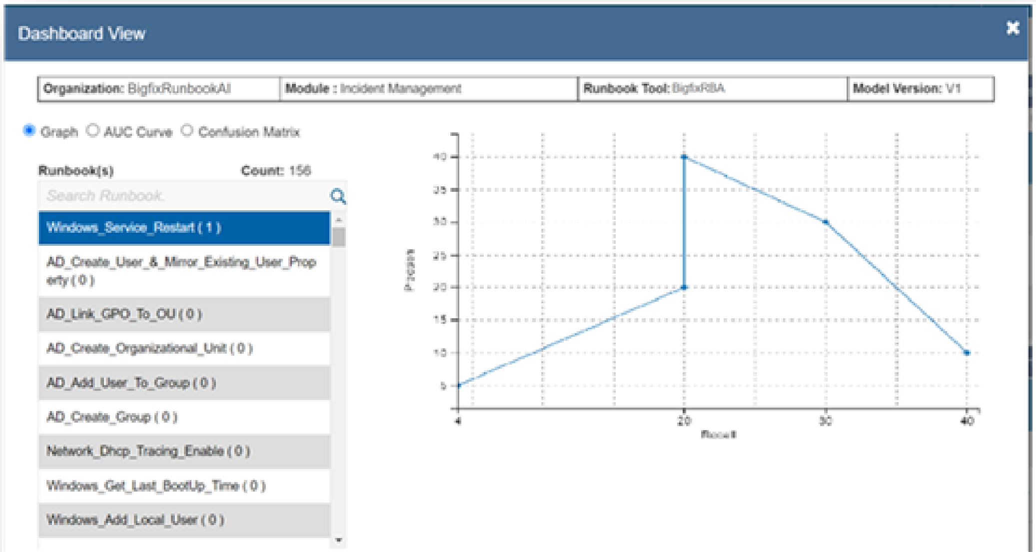


Figure 183- Evaluate Recommend Model (cont.)

b. AUC Curve:

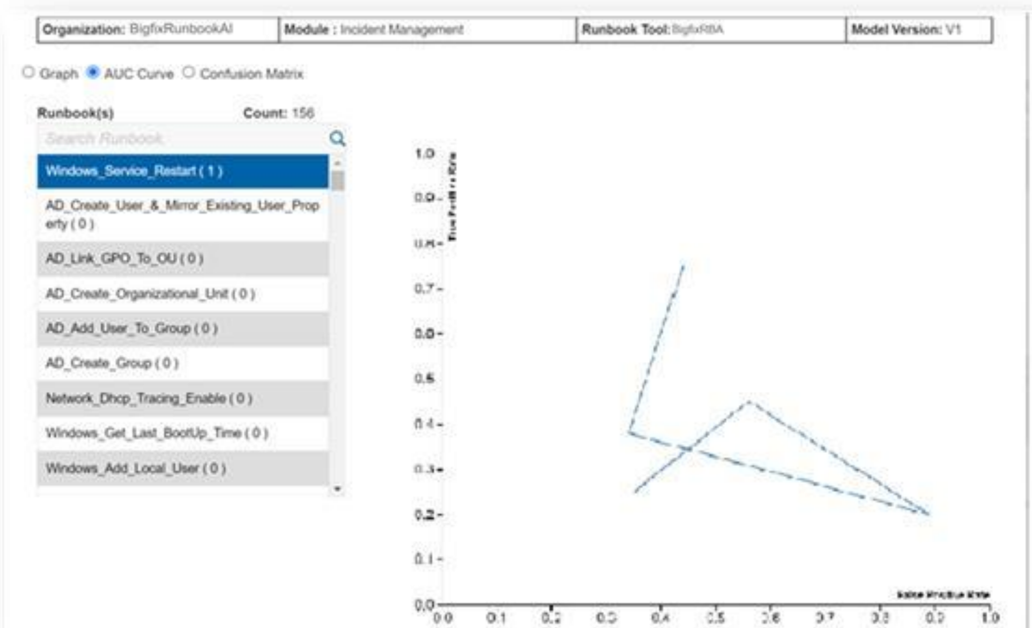


Figure 184 - Evaluate Recommend Model (cont.)

c. Confusion Matrix:

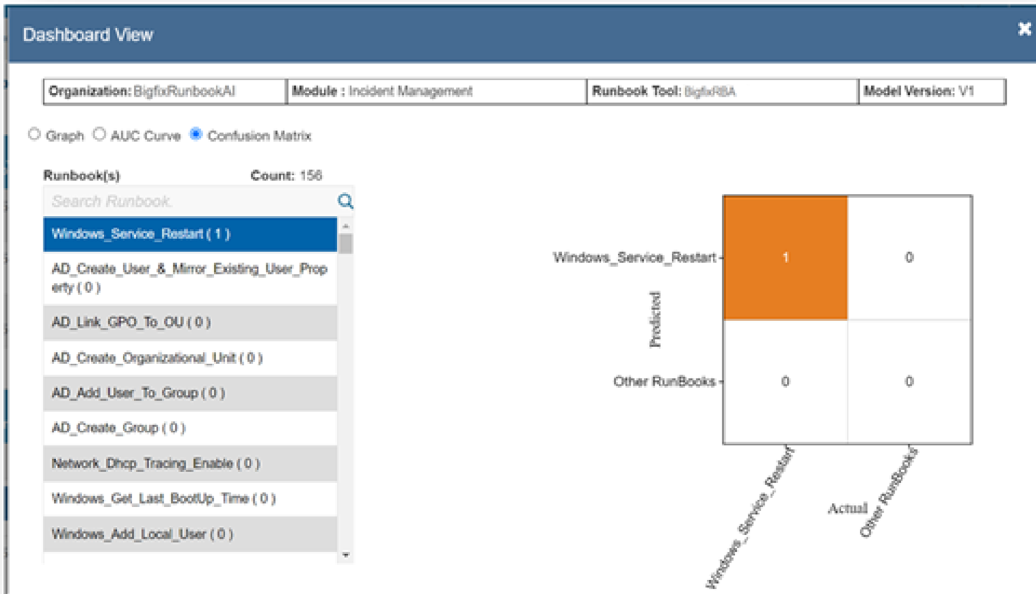


Figure 185- Evaluate Recommend Model (cont.)

6. Click to publish the model version of choice.

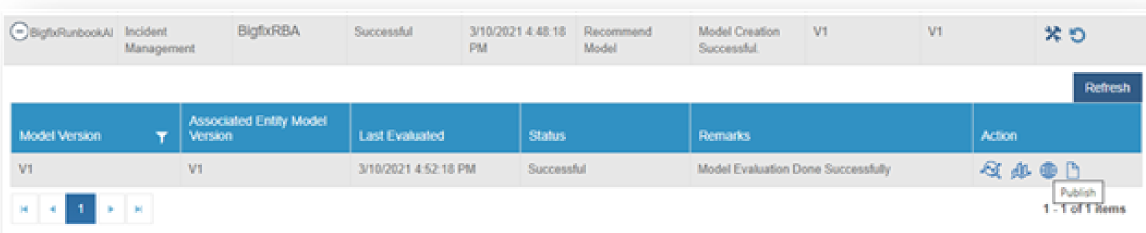


Figure 186- Evaluate Recommend Model (cont.)

A success message appears after the model is published successfully.

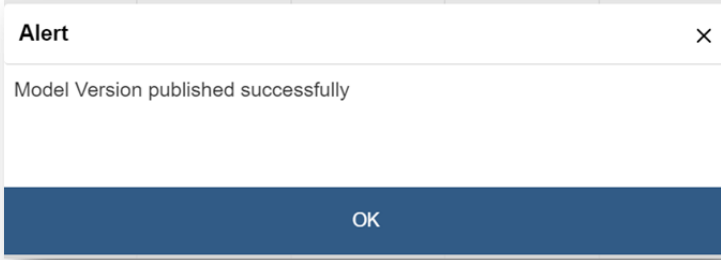


Figure 187- Evaluate Recommend Model (cont.)

7. User can also view the set of runbooks on which the model was built. Click to view the list of runbooks.

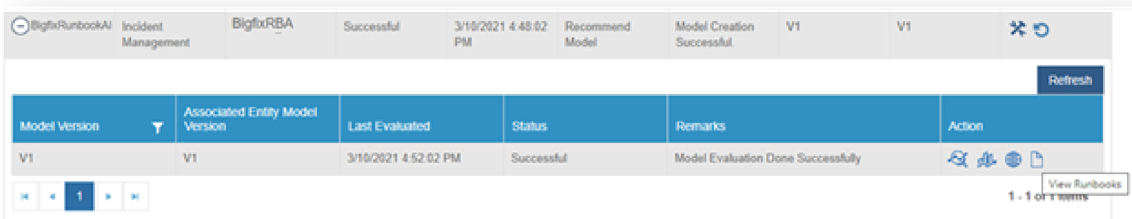


Figure 188- Evaluate Recommend Model (cont.)

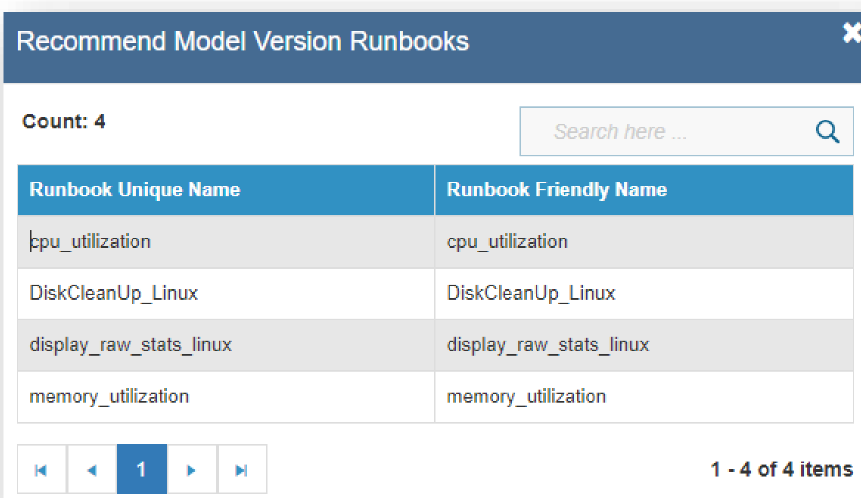


Figure 189- Evaluate Recommend Model (cont.)

3.2.3.6 RBAC → User Management

RBAC enables access management to access the BigFix Runbook AI environment. Using RBAC, user can segregate roles and responsibilities within the system and grant access to the users, organizations, and applications they need to perform their jobs.

To manage role-based access, perform the following steps:

1. On the main menu bar, click **Actions -> RBAC**.

   The drop-down appears with the menu below.

   – Role Management

   – User Management

   – Group Management

   – Entity Management

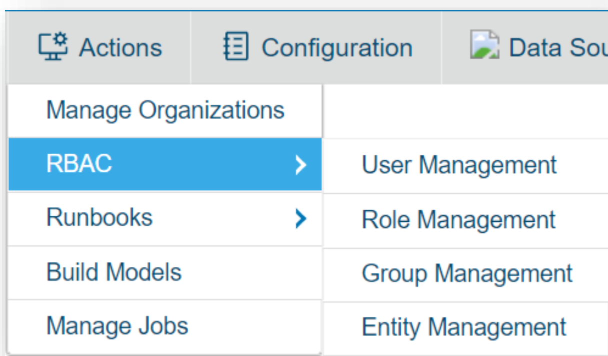


Figure 190- RBAC (Role Based Access Control)

A Super Administrator or Organization Admin can add other users in an organization.

For user management, perform the following steps:

1. On the main menu bar, click **Actions then RBAC**.
2. Click **User Management**. The **User Management** page appears.

Figure 191- User Management

It lists the available users in a tabular view and allows user to create a new user, edit the existing user, and assign widgets to users.

3.2.3.6.1 Add New User

A Super Administrator or Organization Admin can add a new user in an organization by performing the following steps:

1. On the **User Management** screen, click **Add New**. The **Add User** page appears.

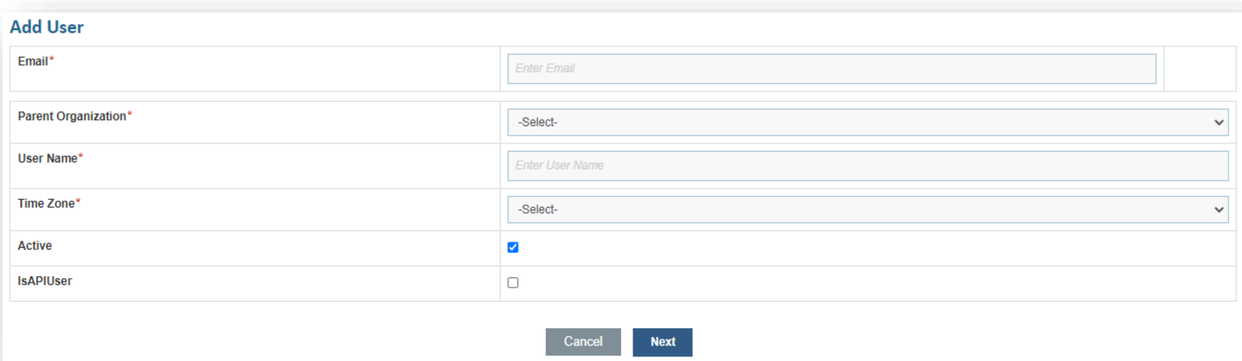


Figure 192- Add New User

2. You must provide the details for the following fields on the **Add New User** page.
    a. Specify the email address to send or receive notifications in the **Email** field.
    b. Select the organization to which the user belongs in the **Parent Organization**.

Further fields get auto populate based on the authentication type of selected organization.

In case of selecting the organization with **Form Based Authentication**, the user password will be auto generated in the **Password** field.

This password field remains invisible in case of organization with **SAML** and **LDAP** based authentication.

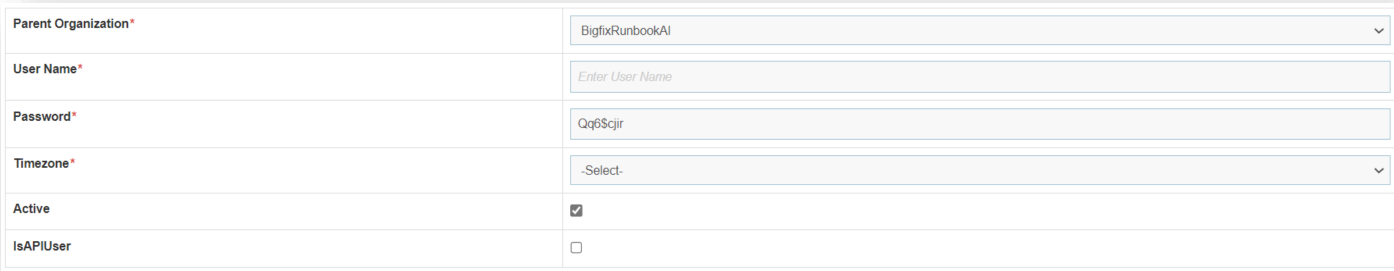


Figure 193 - Select Organization

3. Type the username of the user in the **UserName** field to authenticate the user.
4. Select **Time Zone** to which the user belongs.
5. Select **Active** check box to activate the user immediately after creation.
6. Select **IsAPIUser** check box to enable the user to access certain services of BigFix Runbook AI only through APIs and not the Web User Interface.
7. **Click** Next**.** It prompts the user to select an **Organization**.

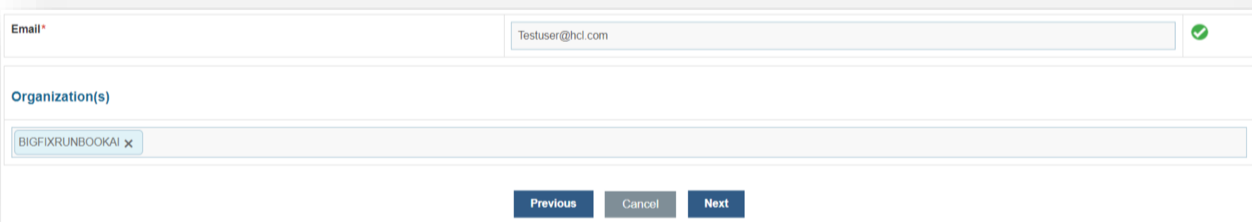


Figure 194- Add New User (Cont.)

8. Click **Next**.

This navigates the user to another screen that lists the existing organization and module to configure the organization for the selected user.

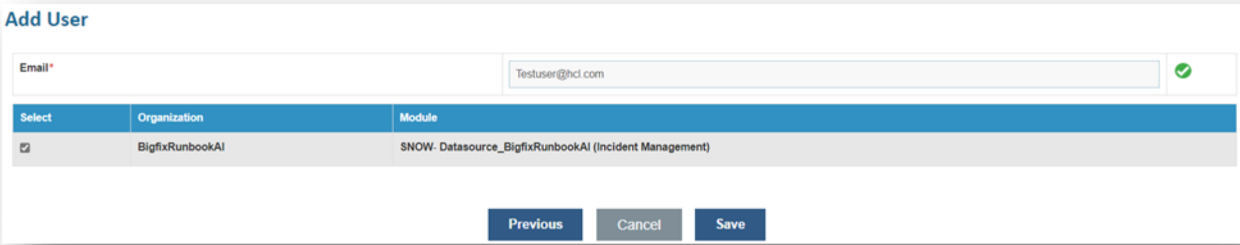


Figure 195- Add New User (Cont.)

9. Select the checkbox of the specific customer and then click **Save**. A confirmation dialog box appears.

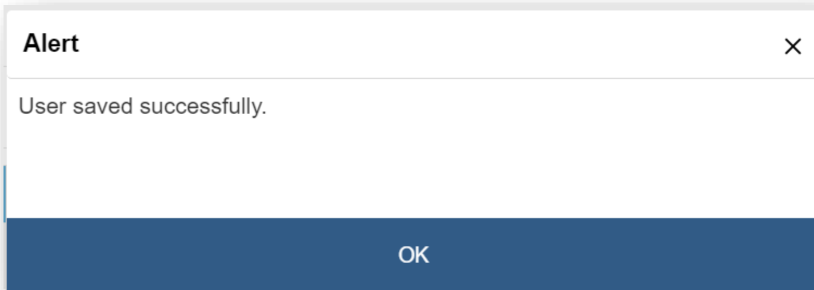


Figure 196- Add New User (Cont.)

The new user is added and appears in a list of users.

3.2.3.6.2 Edit User

User can view an existing user, review the available information, and edit the user details.

To edit the existing user, perform the following steps:

1. On the **User Management** page, click next to the user, the user wants to edit.

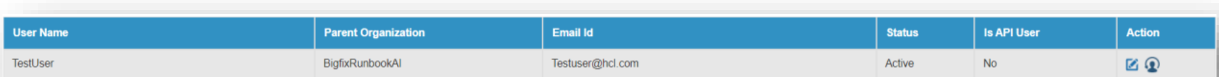


Figure 197- Edit User

2. Edit the details as required and click **Update** to save changes.

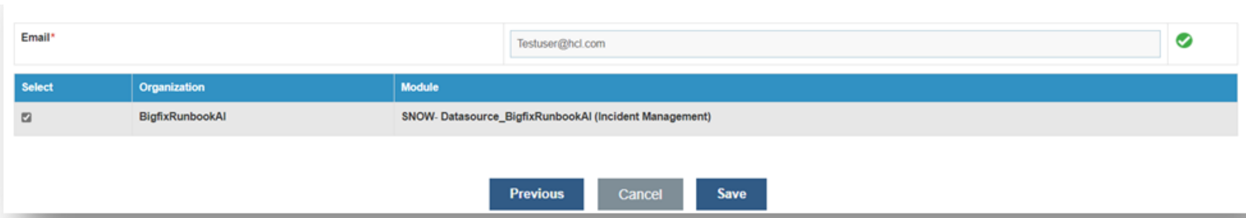


Figure 198- Edit User (Cont.)

A confirmation dialog box appears.

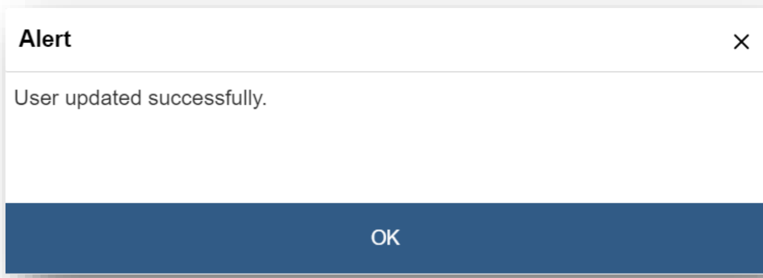


Figure 199- Edit User (Cont.)

3.2.3.6.3 Assign Widgets

User with admin privileges can assign widgets to a user, which helps to track various metrics through the **Dashboard**.

To assign a widget, perform the following steps:

1. On the **User Management** page, click next to the user who the user wants to assign widgets.

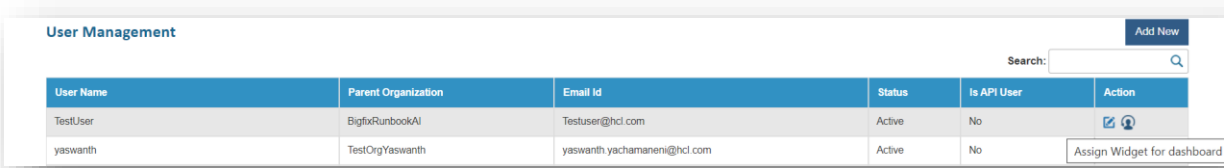


Figure 200- Assign Widgets

A widget page appears with mapped **Organization** and **Module** dropdown.

2. Select **Organization** and respective module from the dropdown which then lists the available widgets to be mapped to the user.

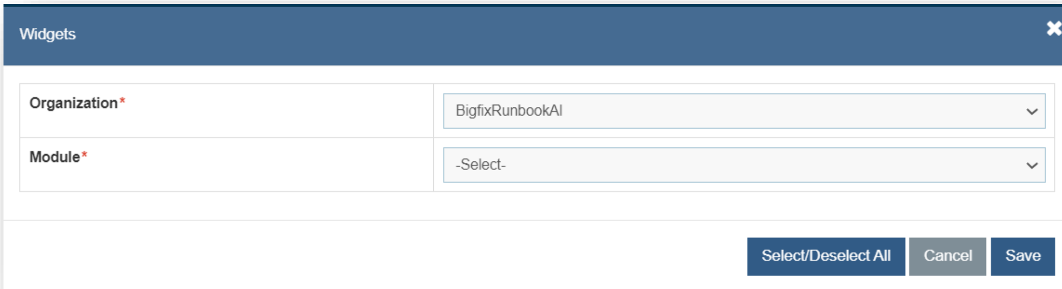


Figure 201- Assign Widgets

3. Select the widgets to be mapped to the user.

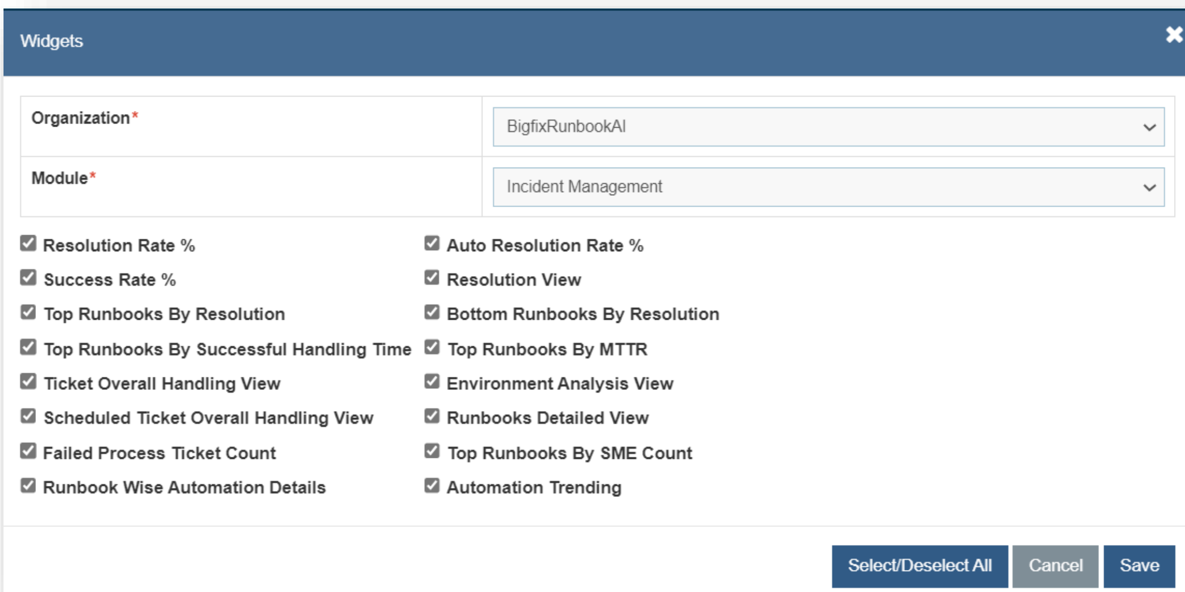


Figure 202- Assign Widgets (Cont.)

4. Click **Submit**. A confirmation dialog box appears.

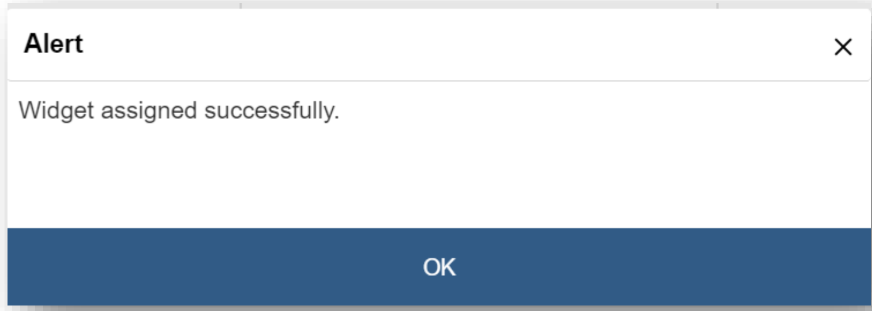


Figure 203- Assign Widgets (Cont.)

You can also search for a user from the list of users if you know certain words or set of characters.

On the **User Management** screen, type a keyword in the **Search** to search for the user details.

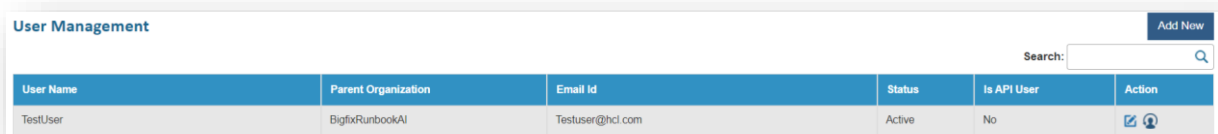


Figure 204- Search User

Super Admin has the capability to unblock any user if the user has been locked due to entering wrong passwords. For that, click on  icon corresponding to that locked user.

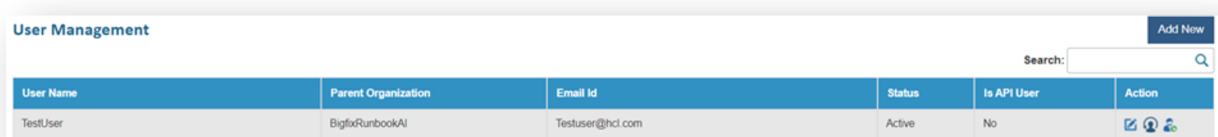


Figure 205 - Unblock Users

A confirmation box appears:

Figure 206 - Confirmation Message

Clicking **Yes** unblocks the user successfully. The following success message appears:

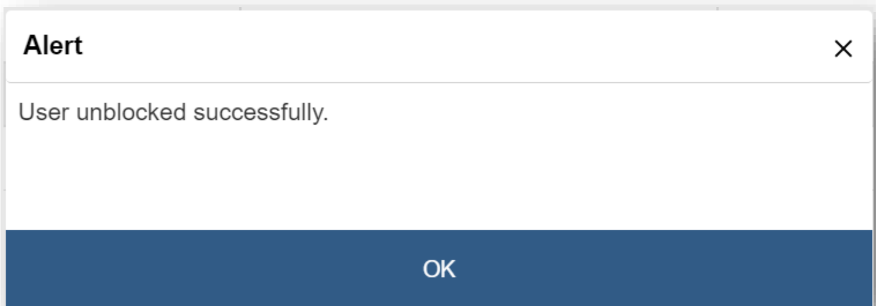


Figure 207 - Success Message

3.2.3.7 RBAC → Role Management

In BigFix Runbook AI, the following table lists the built-in roles supported by a user account.

Table 3 - Role Types

Role	Description
Super Administrator	- All privileges for the administrative features in BigFix Runbook AI - Add, remove, and set access rights and privileges of other administrator roles - Full operational and management control over all accounts
Organization Admin	- All privileges for the administrative features in BigFix Runbook AI at an organizational level - Add, remove, and set access rights and privileges of other users, roles, and domains in their organization

Role	Description
Operations Users	- Access and view all resources in an BigFix Runbook AI account but cannot make any changes. - Operational control over tickets, ticket logs, and the dashboard.
Operations Admin	- Access tickets and runbooks for analysis, can view all analysis
SME Users	- Access ticket and runbook for analysis
Knowledge Users	- Operational and management control over Knowledge Analysis and Search Module

A Super Administrator can manage roles in the BigFix Runbook AI environment by performing the following steps.

1. On the main menu bar, click **Actions->RBAC.**
2. Click Role Management. The **Role Management** page appears.

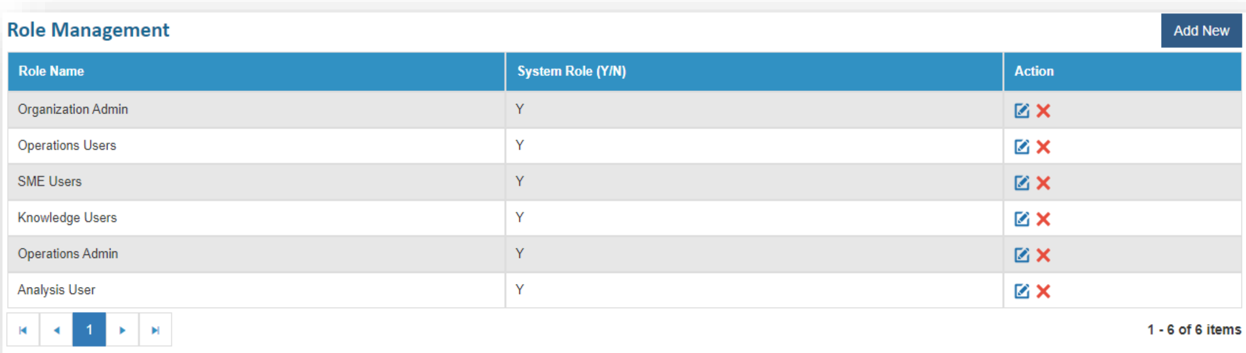


Figure 208- Role Management

It lists the available users in a tabular view and enables user to create a new role and edit or delete the existing role.

The **Status** column displays the active or inactive status of the roles as **Y** or **N**. The **System Role** column denotes the default role that cannot be modified or deleted from the environment as **Y** and editable roles that can be modified or deleted as **N**.

3.2.3.7.1 Add New Role

As a super admin, user can add a new role into the BigFix Runbook AI environment by using the following steps.

1. On the **Role Management** page, click **Add New**.

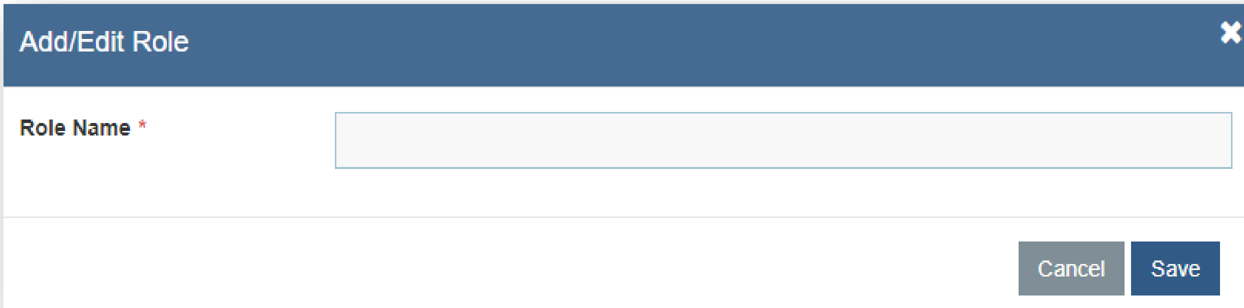


Figure 209- Add New Role

2. Enter the **Role Name** and then click **Save**. The newly added role will be visible in the grid.

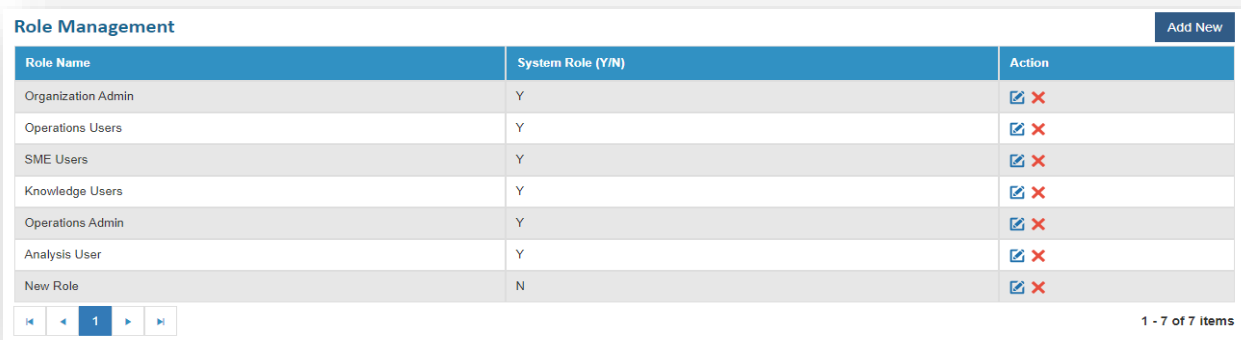


Figure 210- Add New Role (cont.)

This adds the new role and lists it the bottom of the **Role Name** column.

3.2.3.7.2 Edit Role

User can open and review the available information in existing roles and change the details by using the following steps.

1. On the **Role Management** screen, click next to the role user wants to edit.

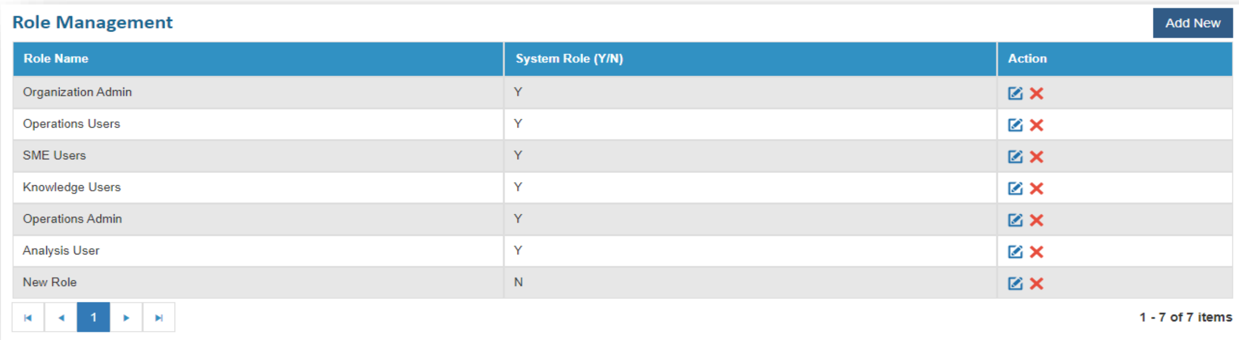


Figure 211- Edit Role

2. Edit the **Role Name** as required and click **Update**.

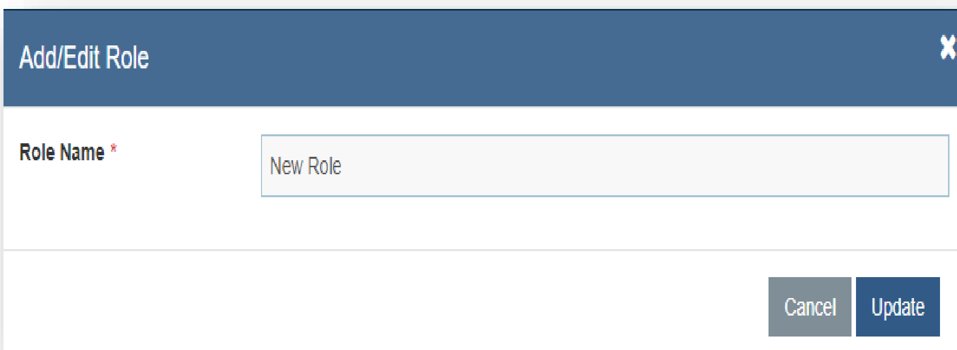


Figure 212- Edit Role (cont.)

A dialog box appears with the confirmation of the updates.

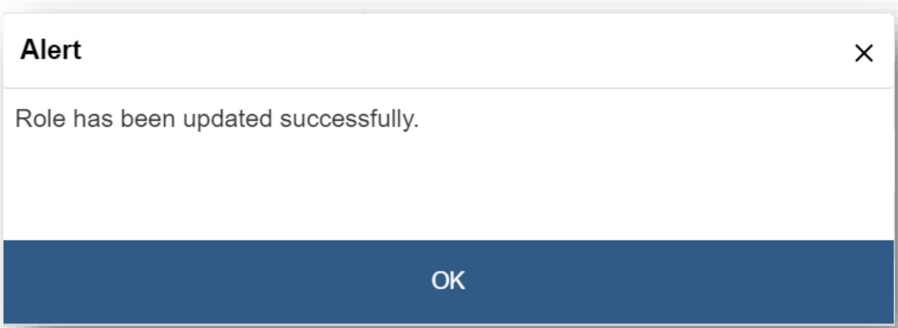


Figure 213- Edit Role (cont.)

3.2.3.7.3 Delete Role

If user no longer requires a role, it can be deleted from BigFix Runbook AI environment. To delete a role, perform the following steps:

1. On the **Role Management** screen, click ✕ next to the role user wants to delete.

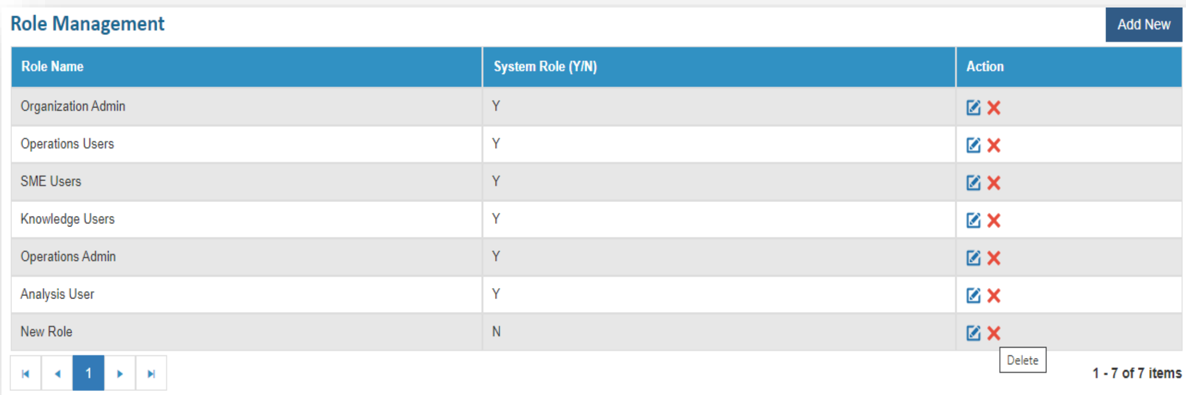


Figure 214- Delete Role

2. Click **OK** to confirm deletion.

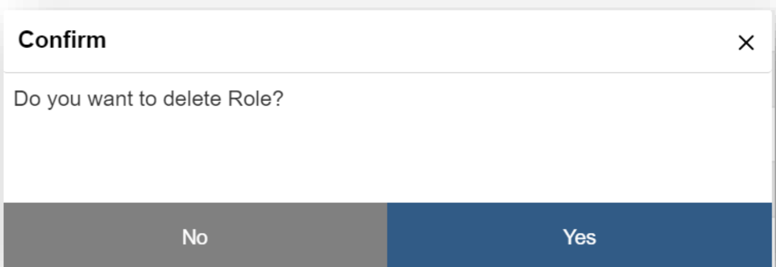


Figure 215- Delete Role (Cont.)

A confirmation dialog box appears.

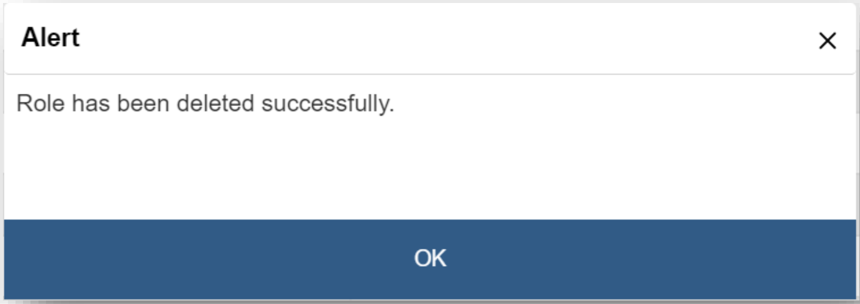


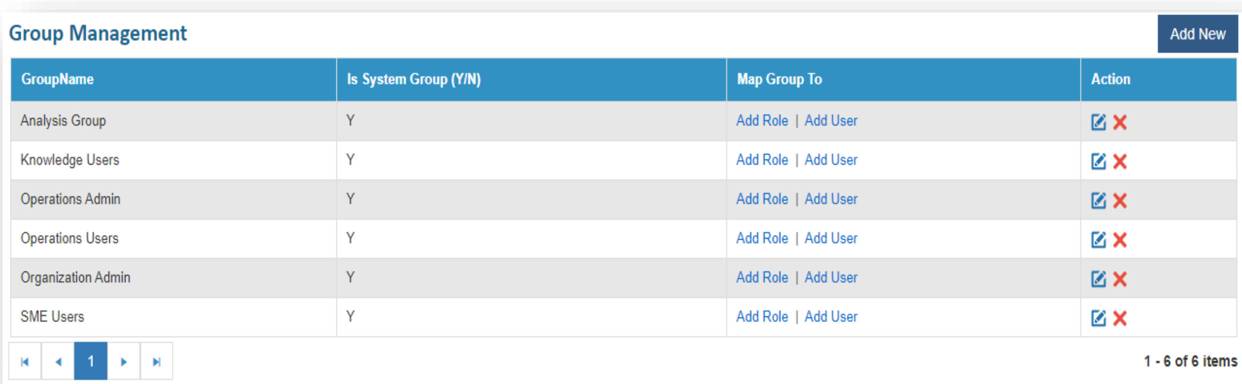
Figure 216- Delete Role (Cont.)

3.2.3.8 RBAC → Group Management

RBAC defines a management role group that simplifies the assignment of roles to a group of users. All members of a role group are assigned the same set of roles.

For group management, perform the following steps:

1. On the main menu bar, click **Actions -> RBAC.**
2. Click **Group Management**. The **Group Management** page appears.



GroupName	Is System Group (Y/N)	Map Group To	Action
Analysis Group	Y	Add Role | Add User	
Knowledge Users	Y	Add Role | Add User	
Operations Admin	Y	Add Role | Add User	
Operations Users	Y	Add Role | Add User	
Organization Admin	Y	Add Role | Add User	
SME Users	Y	Add Role | Add User	

Figure 217- Group Management

It lists the available groups in a tabular view. User can create a new group and edit or delete the existing group.

- The Status column represents the active or inactive status of the Groups as Y and N.

- The Is System Group column represents the default group that cannot be modified or deleted from the environment as Y and custom groups that can be modified or deleted from the environment as N.
- The Action column represents the action that can be performed for the custom groups. No actions can be performed for the default groups.

3.2.3.8.1 Add New Group

A Super Administrator can add a new group into BigFix Runbook AI environment by using the following steps:

1. On the **Group Management** screen, click **Add New**.

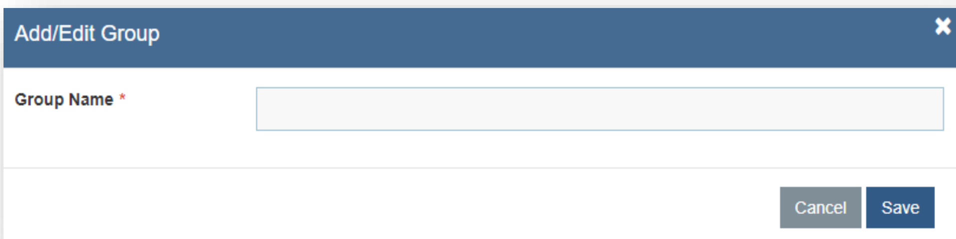


Figure 218- Add New Group

2. Enter the **Group Name** and click **Save.** The newly created group will appear in the grid.

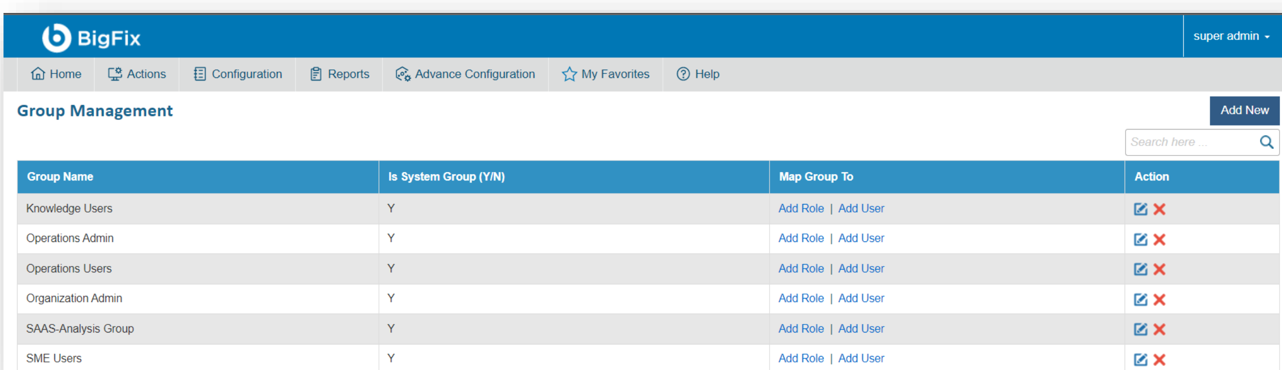


Figure 219- Add New Group (cont.)

After the group is created, user can map roles and users to the group.

3.2.3.8.2 Map Role to Group

A Super Administrator can map a role to a new group by using the following steps:

1. On the **Group Management** screen, click **Add Role** next to the group user want to map to a role.

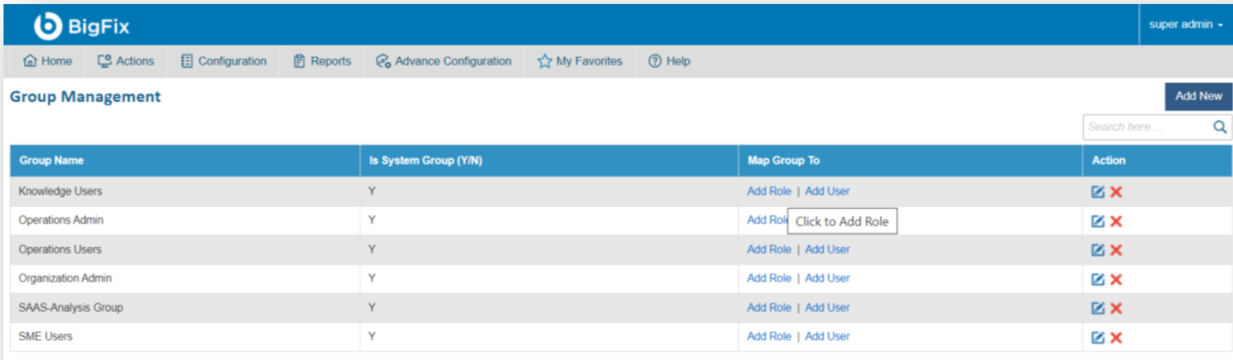


Figure 220- Add New Group (Cont.)

The **Assign Role To** page appears.

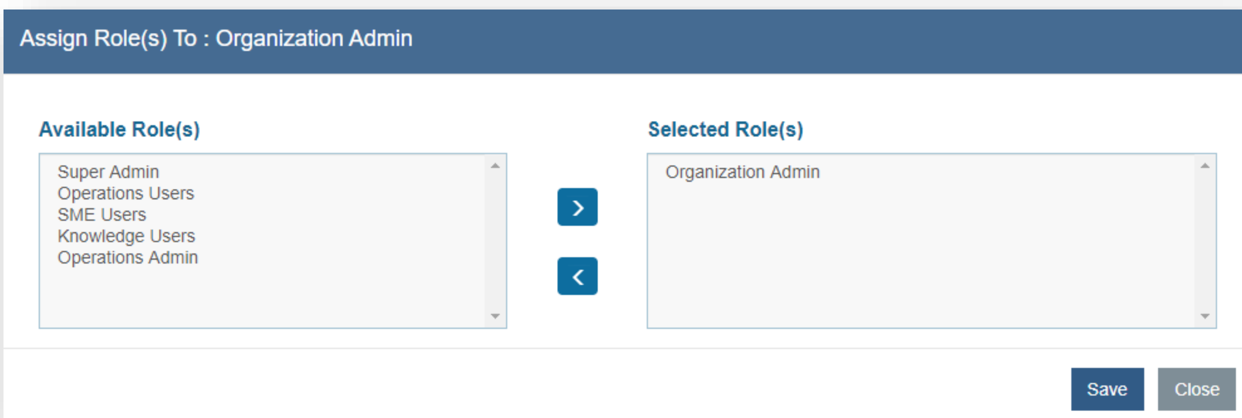


Figure 221- Add New Group (Cont.)

2. Select a role from the **Available Roles** pane and move it to the **Selected Role** pane by clicking .
3. Click **Save**. A confirmation dialog box appears.

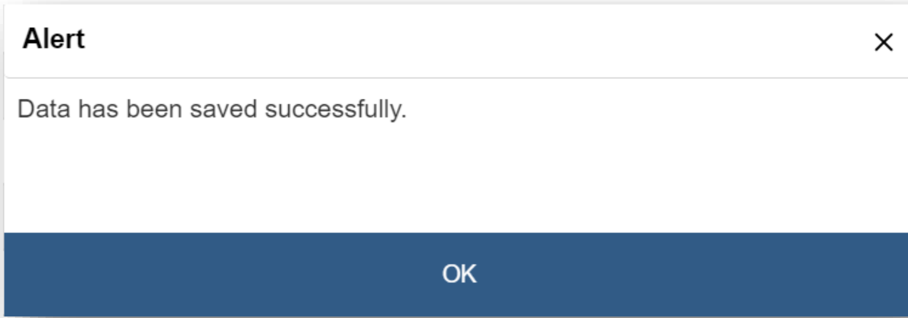


Figure 222- Add New Group (Cont.)

3.2.3.8.3 Map User to Group

A Super Administrator can map users to a new group by performing the following steps.

1. On the **Group Management** screen, click **Add User** next to the group to which user want to map to a user.

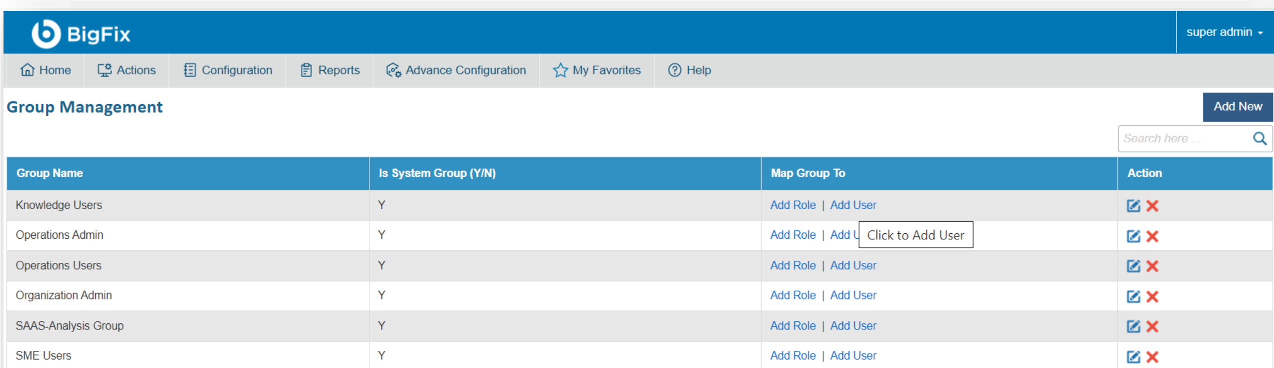


Figure 223- Map a User

The **Assign Users To** page appears.

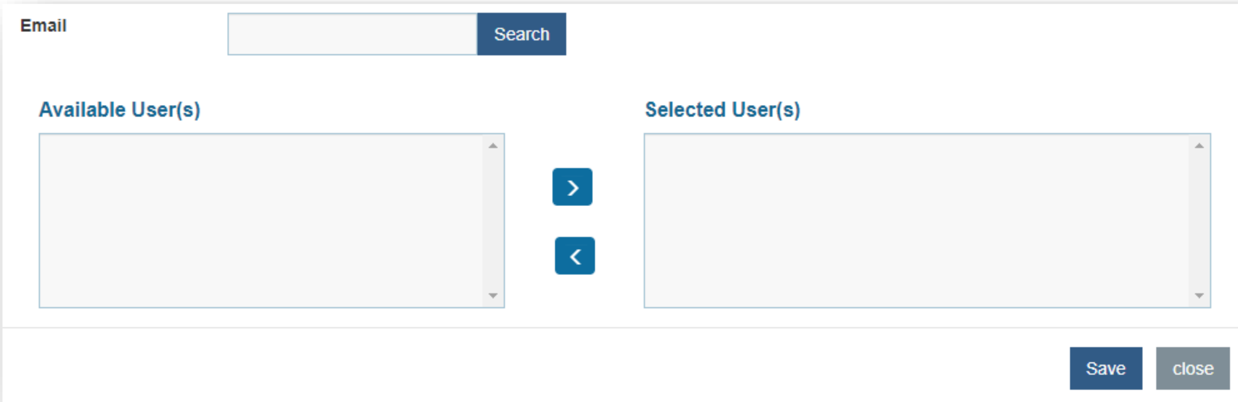


Figure 224- Map a User (Cont.)

2. Specify an email address to send or receive notifications in the **Email** field.
3. Select a role from the **Available Users** pane and move it to the **Selected Users** pane by clicking .
4. Click **Save**. A confirmation dialog box appears.

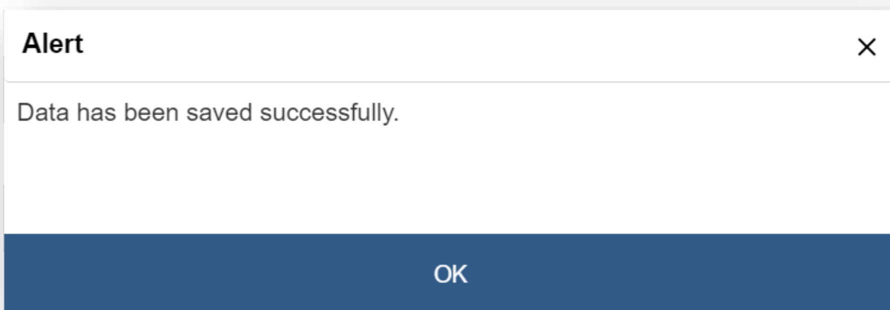


Figure 225- Map a User (Cont.)

3.2.3.8.4 Edit Group

User can open an existing group, review the available information, and change the group details by using the following steps.

1. On the **Group Management** screen, click next to the group user wants to edit.

Figure 226- Edit Group

2. The **Group Name** and **Group Status** fields are enabled.

User cannot edit the roles of users with administrator privileges.

3. Edit the **Group Name** and click **Update**.

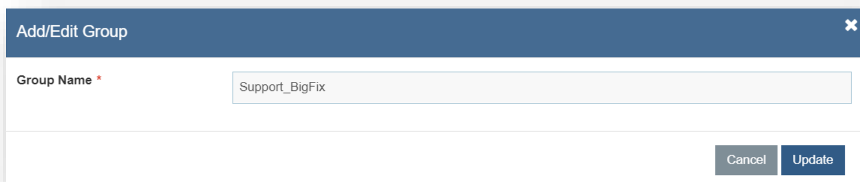


Figure 227- Edit Group (Cont.)

A dialog box appears with the confirmation message.

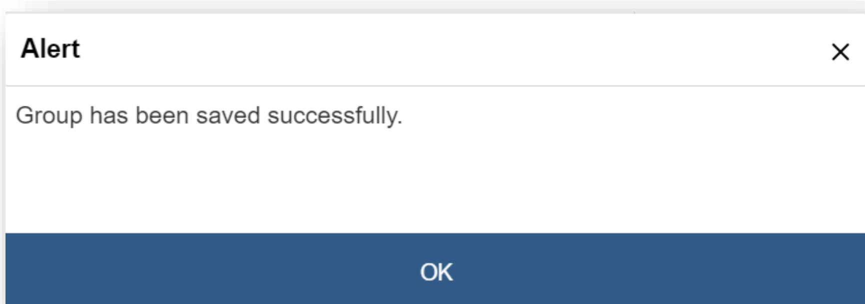


Figure 228- Edit Group (Cont.)

3.2.3.8.5 Delete Group

If user no longer needs a group, it can be deleted from BigFix Runbook AI environment by performing the following steps.

1. On the **Group Management** screen, click  next to the group user wants to delete.

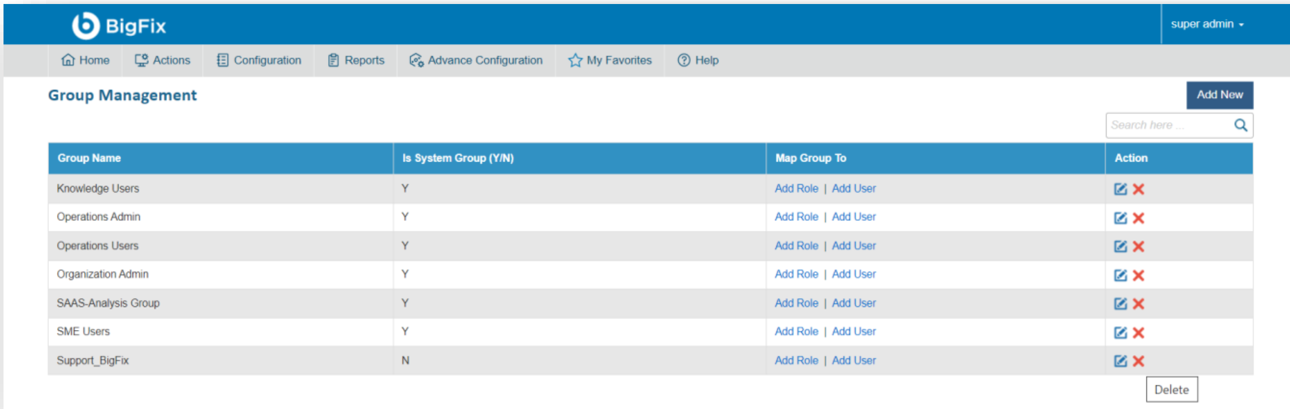


Figure 229- Delete Group

User cannot delete a group containing users with admin privileges.

2. Click **OK** to confirm.

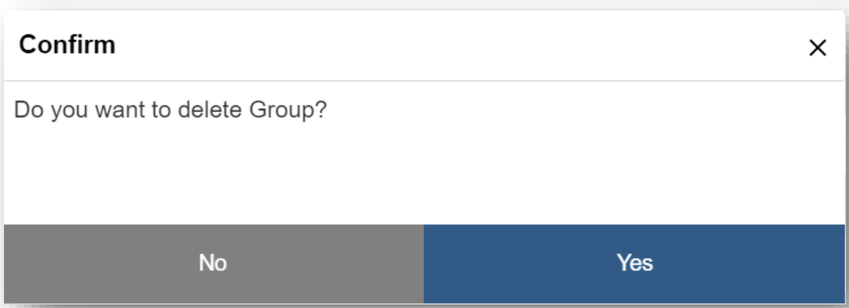


Figure 230- Delete Group (Cont.)

A confirmation dialog box appears.

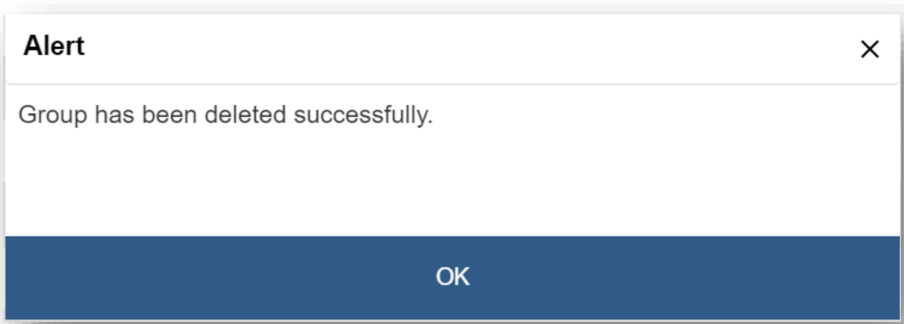


Figure 231- Delete Group (Cont.)

3.2.3.9 RBAC →Entity Management

Entity management is a process by which menus and tasks are assigned to a selected role.

To configure entity management, perform the following steps:

1. On the main menu bar, click **Actions -> RBAC** and then click the **Entity Management**. The **Entity Management** page appears.

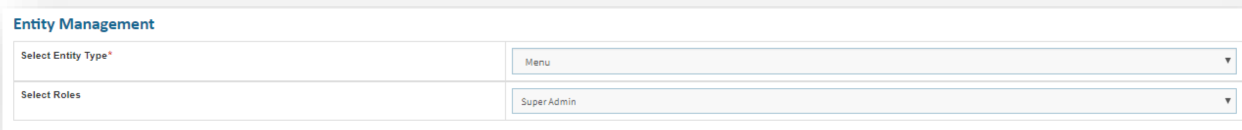


Figure 232- Entity Management

2. Select the entity type which specifies the type of data user wants to configure to a role from the **Entity Type** field.
3. Select the type of role to which user wants to configure the selected entity type from the **Select Roles** field. It auto-fills the available list of menus.

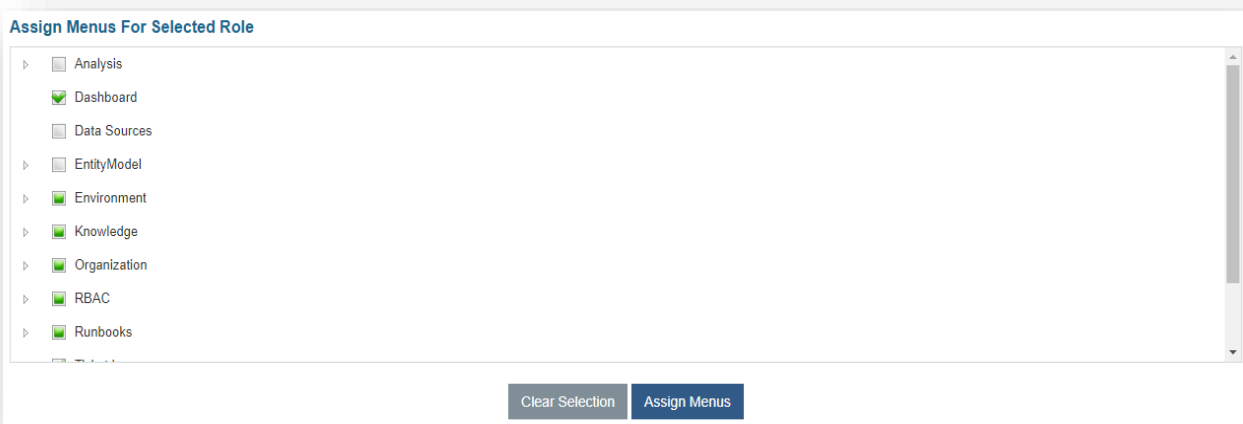


Figure 233- Entity Management (Cont.)

All fields marked with an asterisk (*) are mandatory.

4. Select the check box for the required menu, and then click **Assign Menus**. A confirmation dialog-box appears.

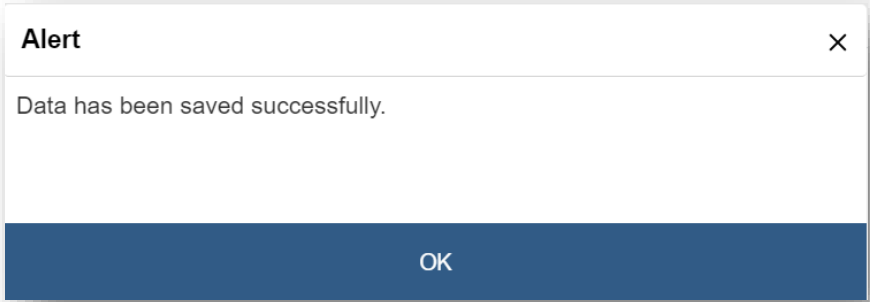


Figure 234- Entity Management (Cont.)

Assigned menus will appear only on the main menu bar of logged-on users with the appropriate role and will apply to all the users mapped to the selected role.

For user management, perform the following steps:

5. On the main menu bar, click **Actions then RBAC**.
6. Click **User Management**. The **User Management** page appears.

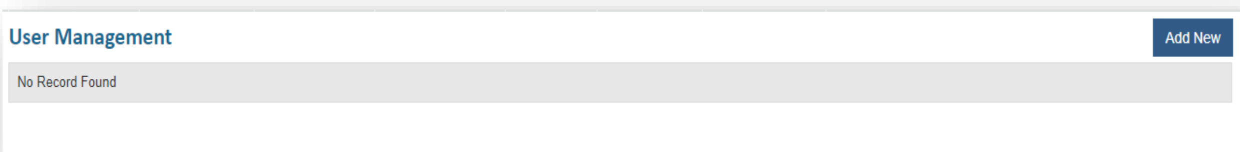


Figure 235- User Management

It lists the available users in a tabular view and allows user to create a new user, edit the existing user, and assign widgets to users.

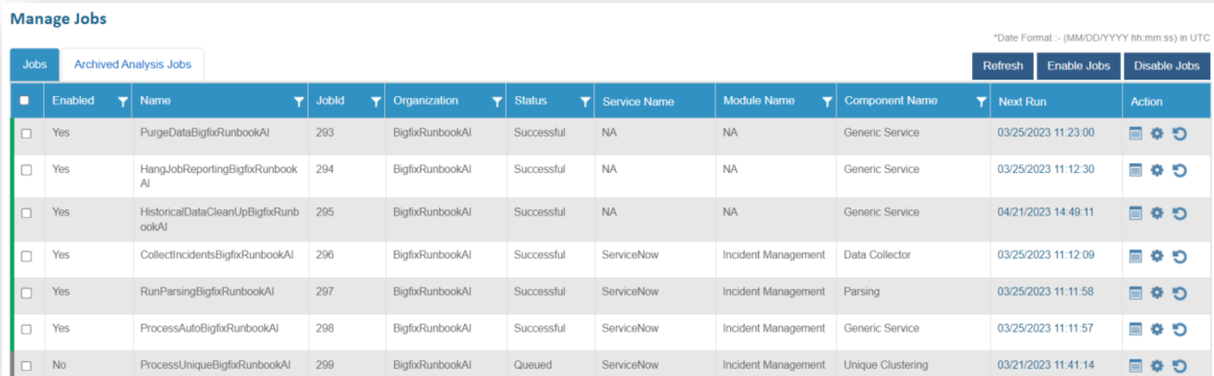
3.2.3.10 Manage Jobs

This section describes how to manage a job in the customer environment.

To manage jobs, perform the following steps:

1. On the main menu bar, click **Actions**.
2. Click **Manage Job**.

The **Manage Jobs** page appears.



Enabled	Name	JobId	Organization	Status	Service Name	Module Name	Component Name	Next Run	Action
Yes	PurgeDataBigfixRunbookAI	293	BigfixRunbookAI	Successful	NA	NA	Generic Service	03/25/2023 11:23:00	
Yes	HangJobReportingBigfixRunbookAI	294	BigfixRunbookAI	Successful	NA	NA	Generic Service	03/25/2023 11:12:30	
Yes	HistoricalDataCleanUpBigfixRunbookAI	295	BigfixRunbookAI	Successful	NA	NA	Generic Service	04/21/2023 14:49:11	
Yes	CollectIncidentsBigfixRunbookAI	296	BigfixRunbookAI	Successful	ServiceNow	Incident Management	Data Collector	03/25/2023 11:12:09	
Yes	RunParsingBigfixRunbookAI	297	BigfixRunbookAI	Successful	ServiceNow	Incident Management	Parsing	03/25/2023 11:11:58	
Yes	ProcessAutoBigfixRunbookAI	298	BigfixRunbookAI	Successful	ServiceNow	Incident Management	Generic Service	03/25/2023 11:11:57	
No	ProcessUniqueBigfixRunbookAI	299	BigfixRunbookAI	Queued	ServiceNow	Incident Management	Unique Clustering	03/21/2023 11:41:14	

Figure 236- Manage Jobs

It lists the job name and status, assigned service type, module name, and component name in a tabular view. User can view the job log, change the status of the job, and edit or delete existing jobs.

There are two tabs on this screen-

a. **Jobs** tab that lists the job name and status, assigned service type, module name, and component name of all the jobs except successfully completed analysis jobs in a tabular view. User can view the job log, change the status of the job or edit the job properties.
b. **Archived Analysis Jobs** that list the job name and status, assigned service type, module name, and component name of all the analysis jobs that are completed successfully in a tabular view. User can only view the job log.

Table 4 – Job Details

JobPrefixName	JobSuffixName	JobDescription	ComponentName
CollectChangeRequest	OrganizationName	Collects Service Requests	Data Collector
CollectChgTasks	OrganizationName	Collects All and Actionable Change TASK Data	Data Collector
CollectCMDBData	OrganizationName	Collects CMDB data	Data Collector
CollectIncidents	OrganizationName	Collects All and Actionable Incident Data	Data Collector
CollectRequestData	OrganizationName	Collects Service Requests	Data Collector
CollectRequestItem	OrganizationName	Collects Request Item Data	Data Collector
CollectSRTasks	OrganizationName	Collects All and Actionable Service Request Data	Data Collector

JobPrefixName	JobSuffixName	JobDescription	ComponentName
FetchClusterId	OrganizationName	This job fetches the cluster details used by iUnique Service	Fetch Unique Cluster
CreateHistoryAndPopulateFact	OrganizationName	This job moves the eligible tickets to history table and populates fact, using the same for reporting	Generic Service
ProcessAuto	OrganizationName	This job picks and process based on the auto criteria	Generic Service
PurgeData	OrganizationName	This job purges the tables configured in Organization DB	Generic Service
iAutomatePurgeData		This job purges the tables configured in the Configuration DB (delete records from log table)	Generic Service
ScheduleRunbook	OrganizationNam e	This job creates scheduled Ticket in BigFix Runbook AI for the Scheduler	Generic Service
RunParsing	OrganizationName	This job fetches and parse the tickets	Parsing
ExecuteRunbook	OrganizationName	This job is used for processing the tickets based on run book selected	RBA Service
FetchUniqueRecommendation	OrganizationName in case of Environment Analysis else Analysis Name Provided by user while creating CSV analysis or workbench Analysis	This job picks recommendation for the unique clusters created (Analysis)	Recommendation
RunRecommendation	OrganizationName	This job picks and binds recommendations to the qualifying tickets	Recommendation

JobPrefixName	JobSuffixName	JobDescription	ComponentName
ReleaseTickets	OrganizationName	This Job picks the applicable tickets and Release in the underlying tool	Release Service
ProcessUnique	OrganizationName in case of Environment Analysis else Analysis Name Provided by user while creating CSV analysis or workbench Analysis	This job picks data from all and creates unique clusters	Unique Clustering
FetchScriptForUnique	OrganizationName in case of Environment Analysis else Analysis Name Provided by user while creating CSV analysis	This Job fetches scripts for unique tickets identified	Unique Script
Crawler		This Job crawls the Document for Advanced Knowledge Service	Crawler
Indexer		This Job processes the Document for Advanced Knowledge Service	Indexer
ActiveDircetory	OrganizationName	This Job fetches user from Active directory	ADSync
EmailProcessing		This Job processes the email related tasks	Email Service
ASPState Delete Expired Sessions		This job is responsible to delete active session	Generic Service
iAutomateHangJobReporting		This job is responsible to notify user if any job stuck from a pre-defined time	Generic Service

JobPrefixName	JobSuffixName	JobDescription	ComponentName
HangJobReporting	OrganizationNam e	This job is responsible to notify user if any job stuck from a pre-defined time	Generic Service

To see the latest job log entries, click **Refresh** on the **Manage Jobs** page.

3.2.3.10.1 View Job Log

The job log displays information about job execution. In the **Job Log Details** view, every row provides details of the job execution. The number of log entries kept depends on the configuration of the scheduled procedure responsible for clearing old log entries. It creates separate log files for each job.

To view the job log details, perform the following steps:

1. On the **Manage Jobs** screen, click  in the **Action** column next to the job user wants to review in the job log.

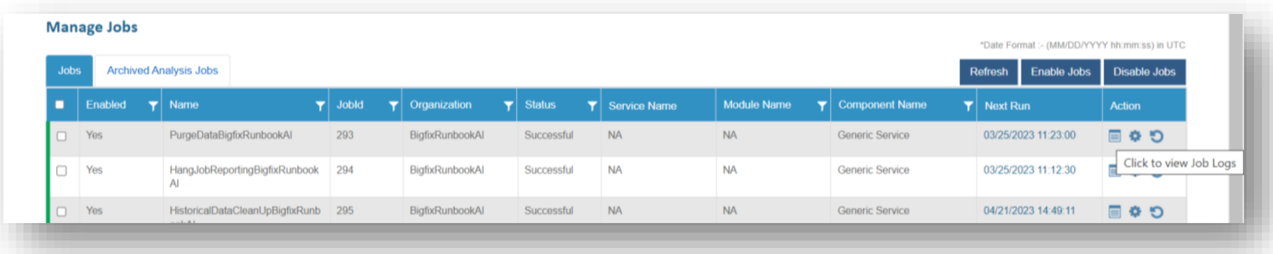
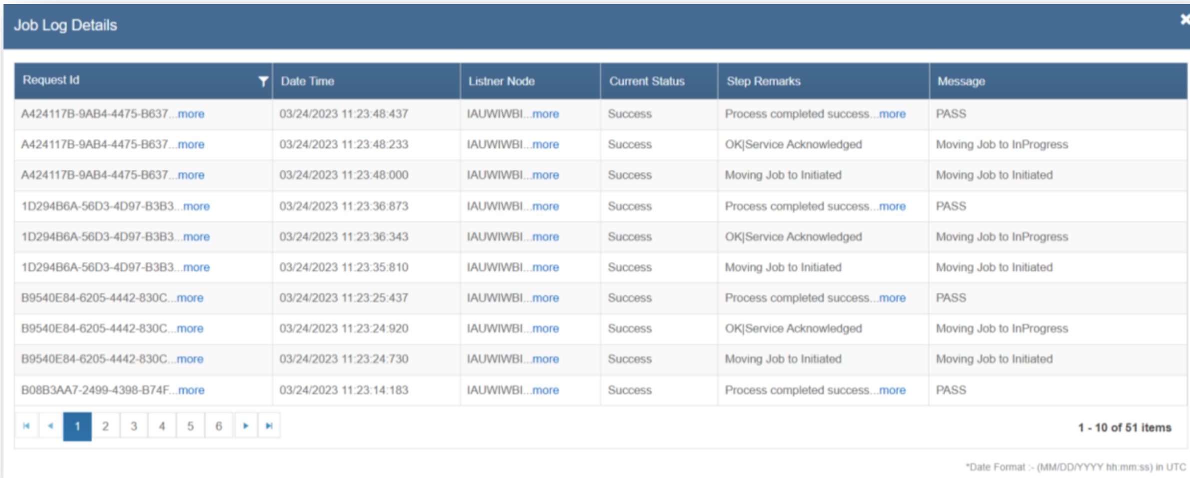


Figure 237- View Job Log

The **Job Log Details** page appears.



Job Log Details

Request Id	Date Time	Listner Node	Current Status	Step Remarks	Message
A424117B-9AB4-4475-B637...more	03/24/2023 11:23:48:437	IAUWIWBI...more	Success	Process completed success...more	PASS
A424117B-9AB4-4475-B637...more	03/24/2023 11:23:48:233	IAUWIWBI...more	Success	OK|Service Acknowledged	Moving Job to InProgress
A424117B-9AB4-4475-B637...more	03/24/2023 11:23:48:000	IAUWIWBI...more	Success	Moving Job to Initiated	Moving Job to Initiated
1D294B6A-56D3-4D97-B3B3...more	03/24/2023 11:23:36:873	IAUWIWBI...more	Success	Process completed success...more	PASS
1D294B6A-56D3-4D97-B3B3...more	03/24/2023 11:23:36:343	IAUWIWBI...more	Success	OK|Service Acknowledged	Moving Job to InProgress
1D294B6A-56D3-4D97-B3B3...more	03/24/2023 11:23:35:810	IAUWIWBI...more	Success	Moving Job to Initiated	Moving Job to Initiated
B9540E84-6205-4442-830C...more	03/24/2023 11:23:25:437	IAUWIWBI...more	Success	Process completed success...more	PASS
B9540E84-6205-4442-830C...more	03/24/2023 11:23:24:920	IAUWIWBI...more	Success	OK|Service Acknowledged	Moving Job to InProgress
B9540E84-6205-4442-830C...more	03/24/2023 11:23:24:730	IAUWIWBI...more	Success	Moving Job to Initiated	Moving Job to Initiated
B08B3AA7-2499-4398-B74F...more	03/24/2023 11:23:14:183	IAUWIWBI...more	Success	Process completed success...more	PASS

1 2 3 4 5 6 — 1 - 10 of 51 items

*Date Format :- (MM/DD/YYYY hh:mm:ss) in UTC

Figure 238- View Job Logs

The log contains information about the specific job execution, which includes the following:

- The request Id for the job and user can filter the data based on the request Id
- The date and time when the job was run.
- The listener node that has picked the job for processing.
- The status of each job displayed with the help of system generated messages relevant to the job execution in the Message column.
- Messages that apply to each step in the Step Remarks column.

To enable a job, select the check box of the corresponding job and then click Enable Jobs. To disable a job, click Disable Jobs. After a job is enabled, the job status changes to Initiate.

3.2.3.10.2 Manage Job Parameters

Job parameters control which records are to be included or how they are executed when a job runs. A job can have multiple parameters with different data types or no parameters at all.

To manage job parameters, perform the following steps:

1. On the **Manage Jobs** page, click ⚙ in the **Action** column next to the job you want to manage.

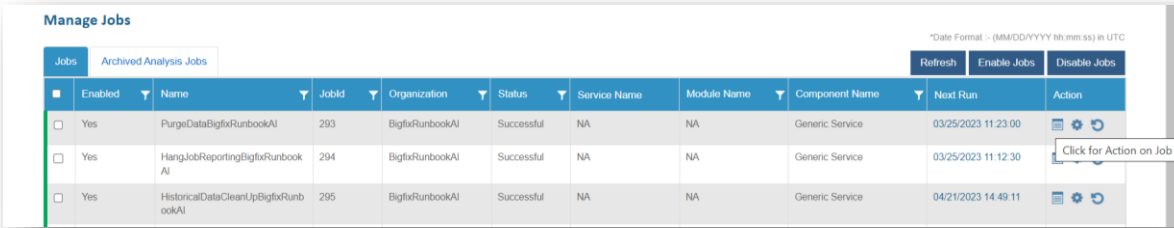


Figure 239- Manage Job Parameters

The **Job Actions** page appears. It includes the following tabs:

- General
- Schedule
- Parameter

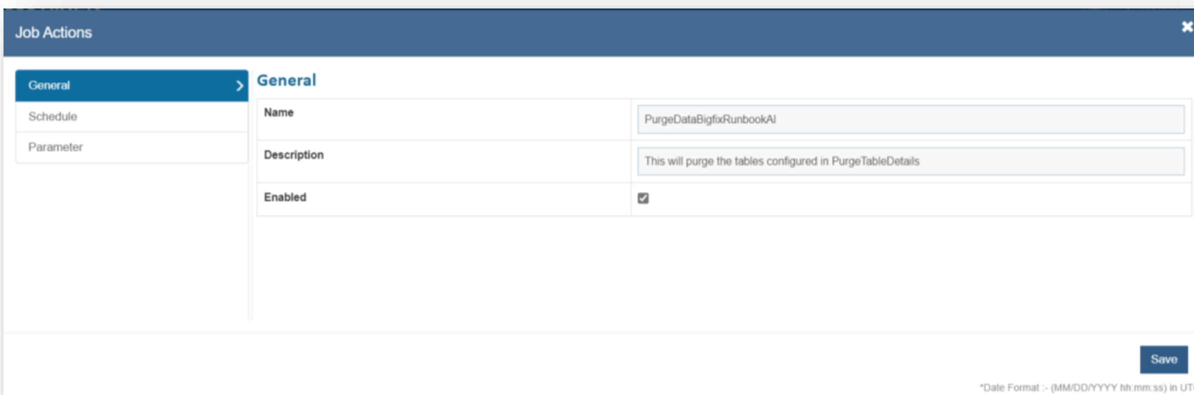


Figure 240- Manage Job Parameters (Cont.)

2. Click General to configure the general details of a parameter by filling in the following attributes.
   a. Type the unique parameter name within the job in the Name field and then type the parameter description in the Description field.
   b. If the user wants to enable the added parameter for execution, select Enabled.

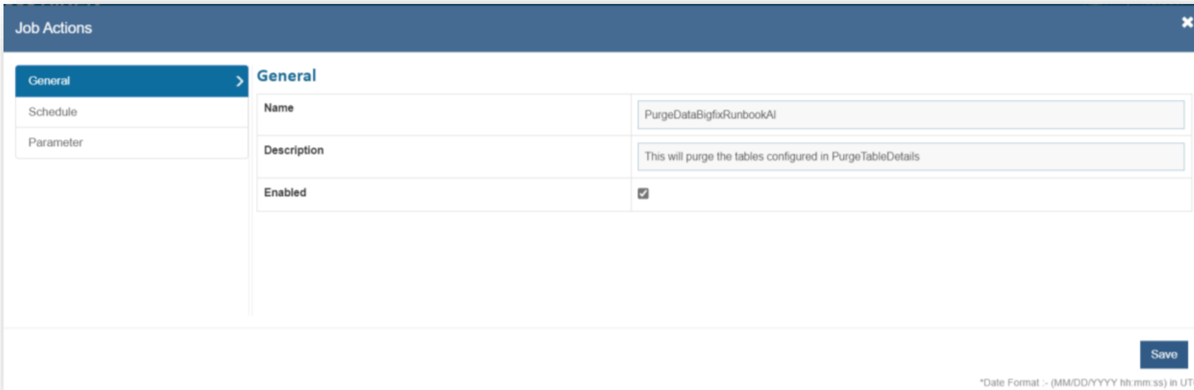


Figure 241- Manage Job Parameters (Cont.)

3. Click **Schedule** to provide parameter details to schedule a job. The user can schedule jobs to automatically run at a particular date or time and/or on a recurring basis.
   - Schedule Type: This allows the user (Organization Admin) to schedule job updates. The drop-down menu lists the following options:
   - Select One Time, if you want to schedule the job update only once, then select the Date and Time to schedule and then click Save to update the schedule.

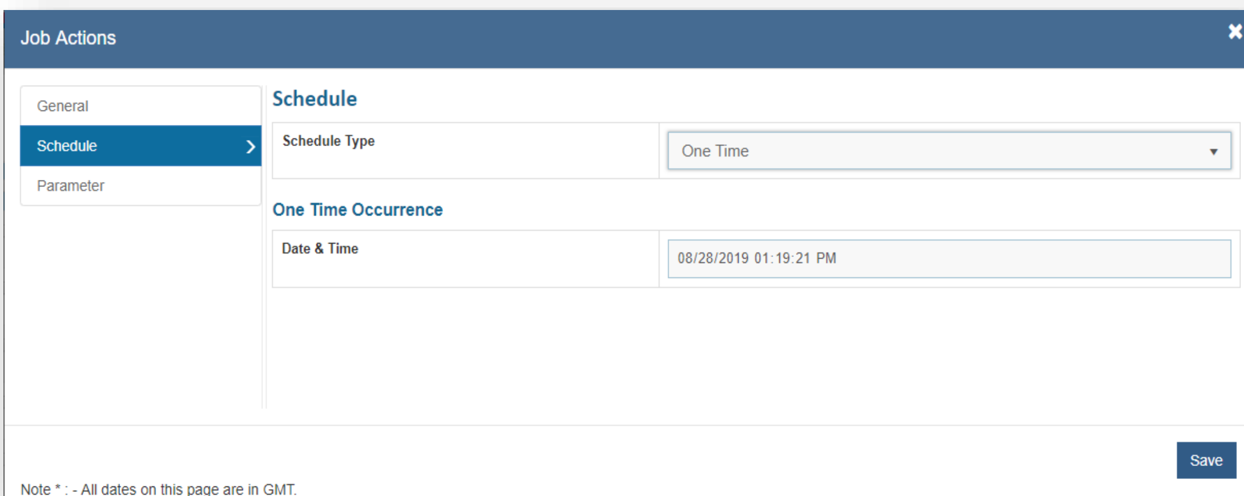


Figure 242- Manage Job Parameters (Cont.)

- Select Recurring, to schedule a recurring job update, then type the numerical value for the schedule next to the Occurrence Every field, and then click the drop-down list to select the duration in seconds, minutes, hours, monthly, or daily.

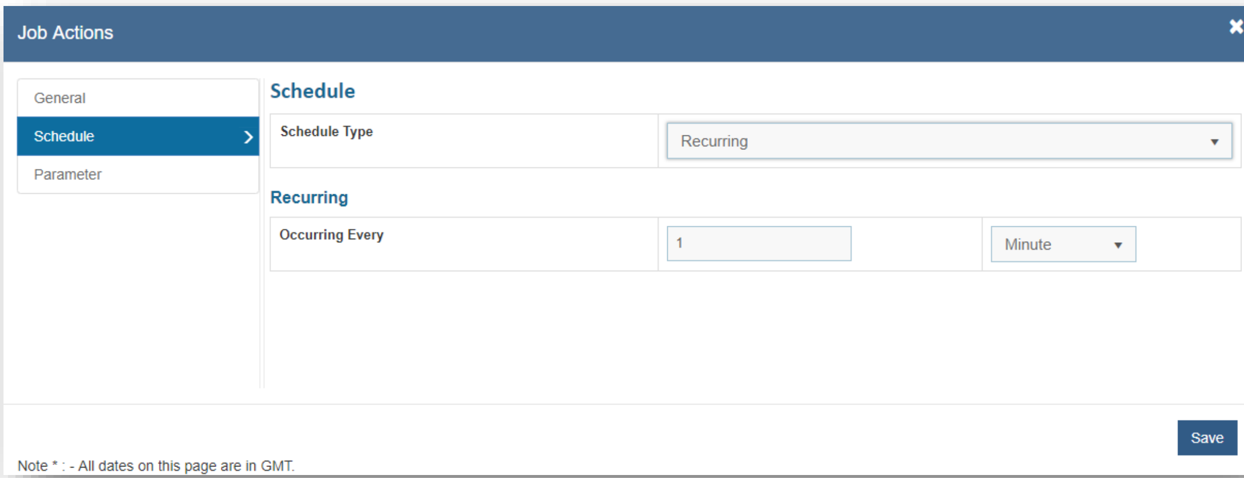


Figure 243- Manage Job Parameters (Cont.)

- For the jobs, that are running daily, there is one more field that can be set under Schedule tab and i.e., User can define the time of the day at which the job should run.

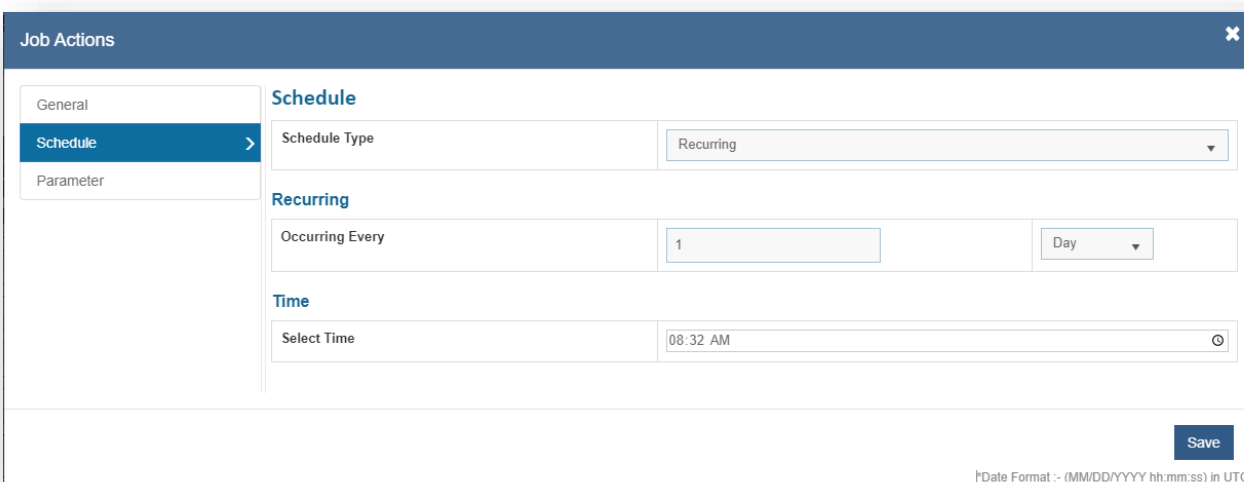


Figure 244- Manage Job Parameters (Cont.)

4. Click **Parameter** to enable the added parameter. Switch the value button to **Enable** the parameter value.

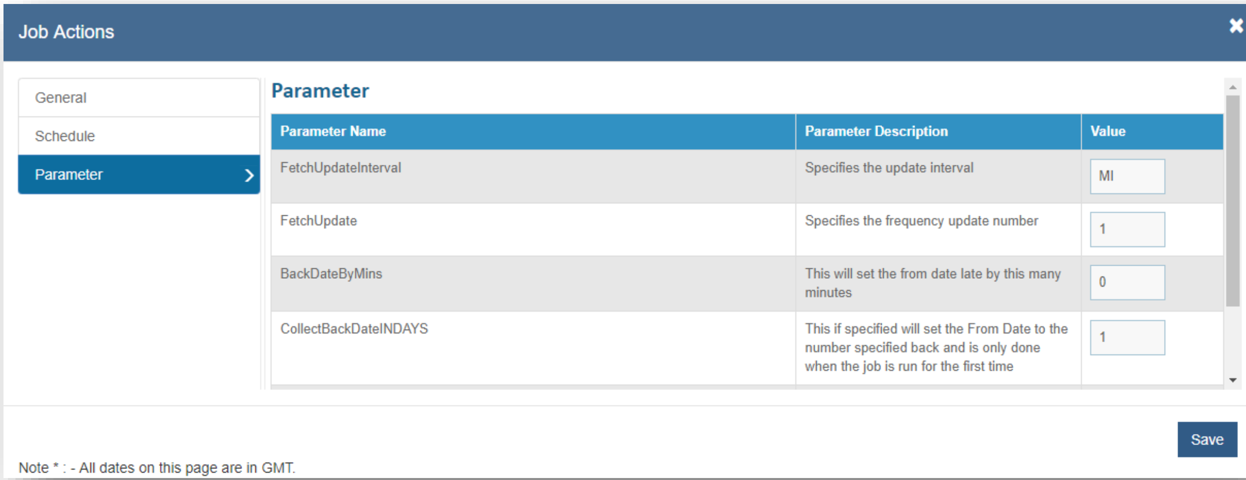


Figure 245- Manage Job Parameters (Cont.)

5. Click **Save**.

User can click Save after updating **General**, **Schedule**, or **Parameter** tabs and save the updates.

A confirmation dialog box appears.

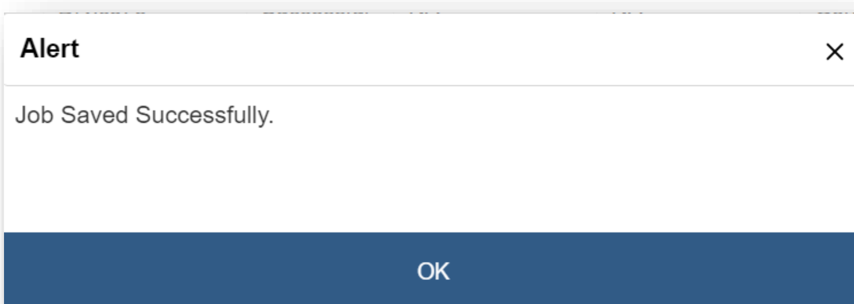


Figure 246- Manage Job Parameters (Cont.)

3.2.3.10.3 Reset Jobs

This section describes how to reset a job definition before an execution or resubmission.

To reset a job, perform the following steps:

1. On the **Manage Jobs** page, click in the **Action** column next to the job user wants to reset.

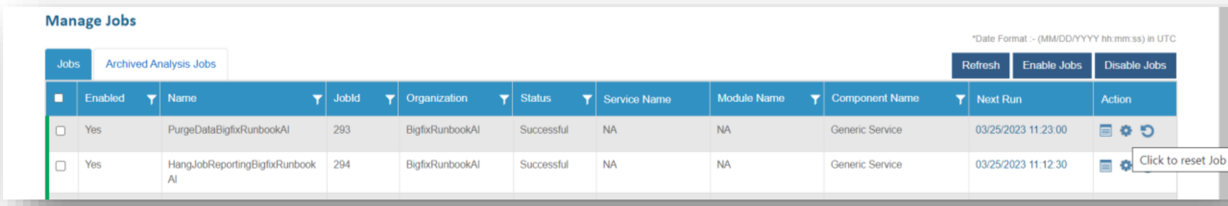


Figure 247- Reset Jobs

2. Click **Yes** to confirm.

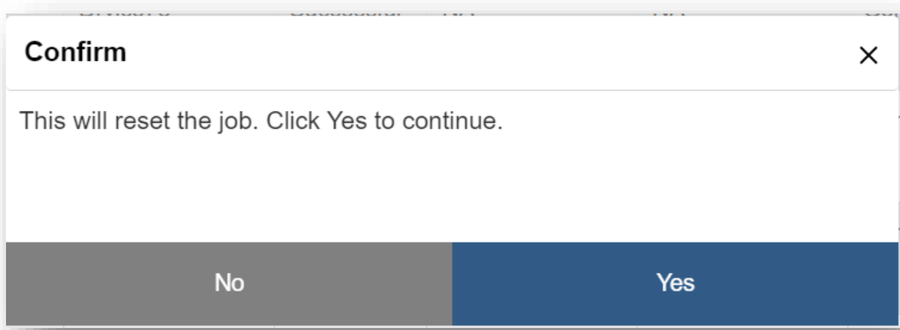


Figure 248- Reset Jobs (Cont.)

The administrator cannot reset successful jobs and jobs with schedule type selected as One Type.

3.2.4 Analysis

Ticket analysis is the process of identifying tickets that can be automated and create additional runbook for non-automated tickets. When a user reports an incident, it creates a corresponding ticket in the system and serves as a token in the Incident Management Process. Similar process is followed for any service request tasks and change request tasks as well.

Depending on the incident, tickets must be routed to the appropriate expert group who will handle the resolution. The goal is to resolve the ticket as quickly as possible to minimize business disruptions and user dissatisfaction.

To analyze a ticket, perform the following steps:

1. On the main menu bar, click **Actions->Analysis**.
2. The following menu appears:

- [Ticket Analysis]
- [Recommendation Analysis]
- [Script Analysis]

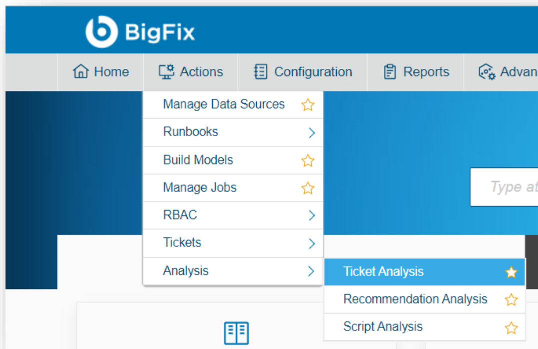


Figure 249- Analysis

Ensure user is logged on as administrator to create and manage analysis and associated parameters.
Analysis is accessible to Organization Admin or Operation Admin user.

3.2.4.1 Ticket Analysis

User can configure settings to analyze tickets and categorize them for auto execution or execution with manual intervention.

To manage ticket analysis, perform the following steps:

1. On the main menu bar, click **Actions->Analysis**.
2. Click **Ticket Analysis**. The **Ticket Analysis** page appears.

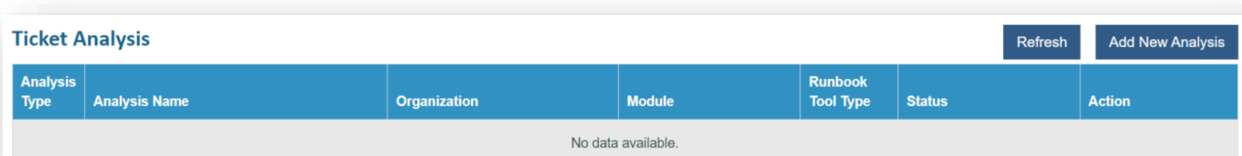


Figure 250 - Ticket Analysis

This lists the available analysis types in a tabular view and allows user to configure new analyses using the **Add New Analysis** button, and view, build and approve, merge, or delete the existing analysis.

Ticket analysis can be performed in two ways:

- **To CSV Ticket Analysis**- In this case, user can use existing organization data for ticket analysis. You can analyze that data and create a runbook of frequently occurring tickets. It imports the same runbook into the database for further use.
- For Environment Specific Ticket Analysis- In this case, the ticket analysis is performed on a continuous basis on the ticket data. Use can configure the frequency to daily, monthly, yearly, etc. under Manage Job section. It can be configured on a daily, monthly, or yearly basis.

3.2.4.1.1 Add New Ticket Analysis by Uploading CSV File

User can add a new analysis for an organization by performing the following steps:

1. On the **Analysis** screen, click **Add New Analysis**.

   The **Upload Data** page is displayed. It lets the user define the general attributes for a new analysis. User must set attributes marked with an asterisk (*) to appropriate values for your environment before you can start analysis.

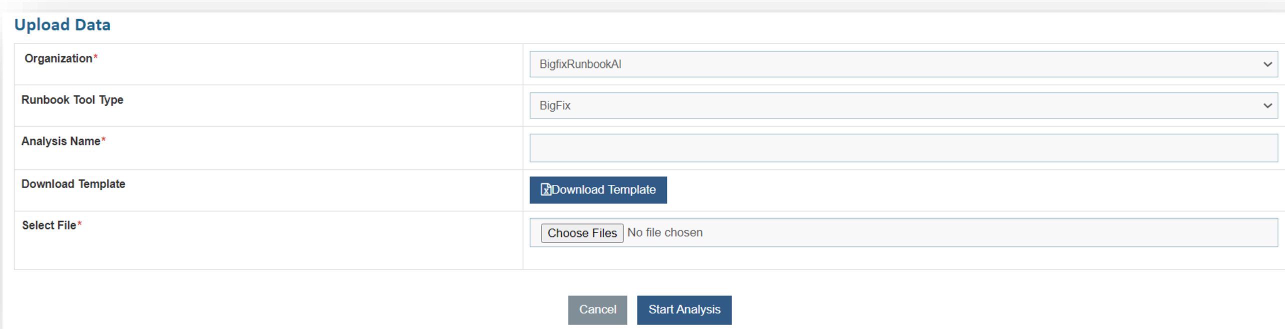


Figure 251- Add New Analysis

2. Select the organization from the list of available
3. Select the **Runbook Tool Type** on which analysis needs to be run.
4. In the Analysis Name field, type the unique name for the analysis to be created.
5. Click Download Template to download the CSV template for uploading analysis details.
6. Fill the details in the downloaded template and click Choose Files to upload the updated CSV template.

7. To start ticket analysis, click **Start Analysis**.

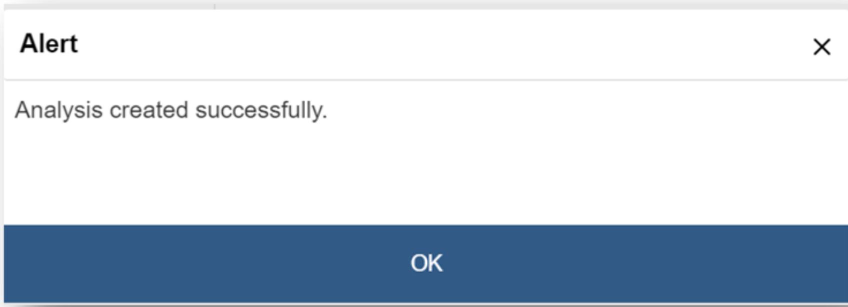
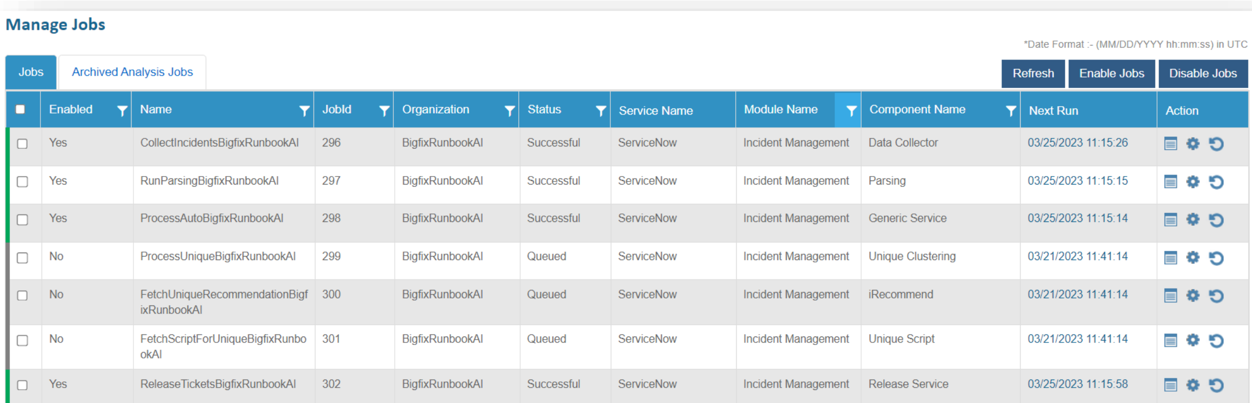


Figure 252- Add New Analysis (Cont.)

On clicking Start Analysis, three new jobs are created. These are Unique Clustering, Unique Script, and Recommendation. The newly added analyses are listed in the Manage Jobs page.

8. To enable the job to view analysis, go to the Manage Jobs page.



Enabled	Name	JobId	Organization	Status	Service Name	Module Name	Component Name	Next Run	Action
Yes	CollectIncidentsBigfixRunbookAI	296	BigfixRunbookAI	Successful	ServiceNow	Incident Management	Data Collector	03/25/2023 11:15:26	
Yes	RunParsingBigfixRunbookAI	297	BigfixRunbookAI	Successful	ServiceNow	Incident Management	Parsing	03/25/2023 11:15:15	
Yes	ProcessAutoBigfixRunbookAI	298	BigfixRunbookAI	Successful	ServiceNow	Incident Management	Generic Service	03/25/2023 11:15:14	
No	ProcessUniqueBigfixRunbookAI	299	BigfixRunbookAI	Queued	ServiceNow	Incident Management	Unique Clustering	03/21/2023 11:41:14	
No	FetchUniqueRecommendationBigfixRunbookAI	300	BigfixRunbookAI	Queued	ServiceNow	Incident Management	iRecommend	03/21/2023 11:41:14	
No	FetchScriptForUniqueBigfixRunbookAI	301	BigfixRunbookAI	Queued	ServiceNow	Incident Management	Unique Script	03/21/2023 11:41:14	
Yes	ReleaseTicketsBigfixRunbookAI	302	BigfixRunbookAI	Successful	ServiceNow	Incident Management	Release Service	03/25/2023 11:15:58	

Figure 253- Add New Analysis (Cont.)

9. Select the newly added job for analysis with the status as **Queued** and then click **Enable Jobs**. The confirmation dialog box appears.

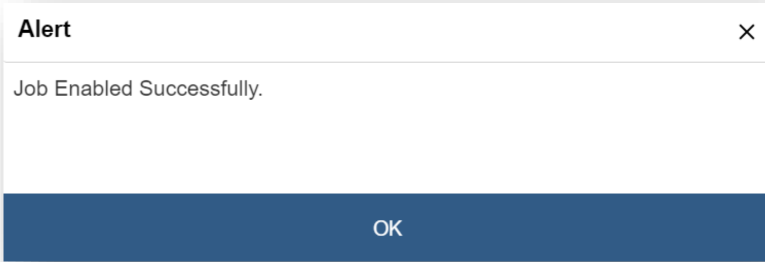


Figure 254- Add New Analysis (Cont.)

10. This adds the analysis and lists it in a grid with the status as **Queued**.

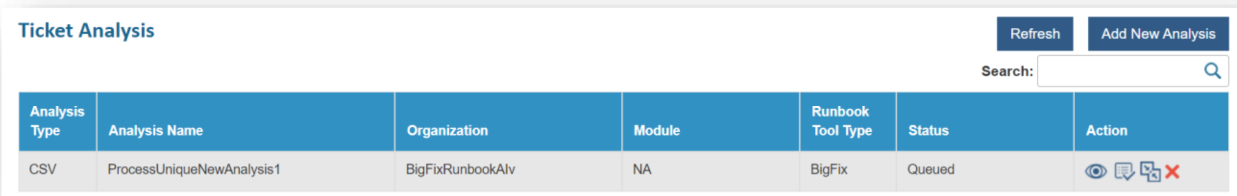


Figure 255- Add New Analysis (Cont.)

Once the unique service starts processing the analysis, the status changes from **Queued** to **Pending Verification**.

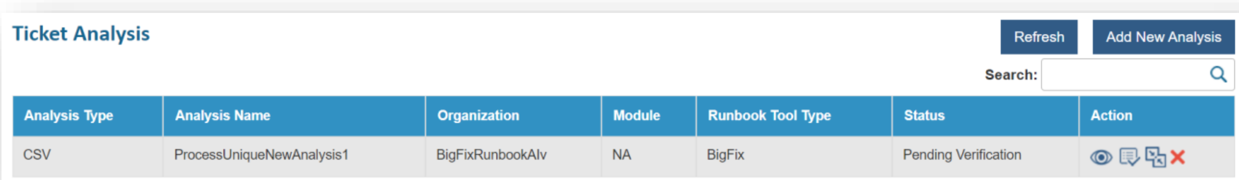


Figure 256- Add New Analysis (Cont.)

An administrator user can delete any analysis from the list of ticket analysis by clicking next to the analysis type.

User can only delete the CSV specific ticket analysis displaying a **Successful** status.

3.2.4.1.2 View Ticket Analysis

User can view the information about an analysis that has already been defined.

To view ticket analysis, perform the following steps:

1. On the **Ticket Analysis** page, click for the analysis you want to view.

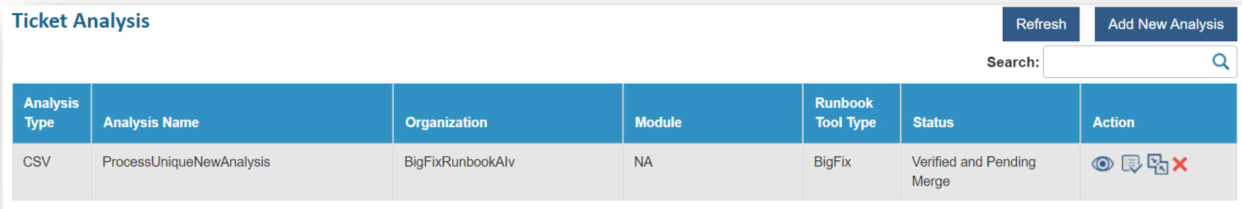


Figure 257- View Ticket Analysis

2. The **Ticket Details** page appears where user can view the total number of tickets, the number of unique tickets, and the number of unprocessed tickets.

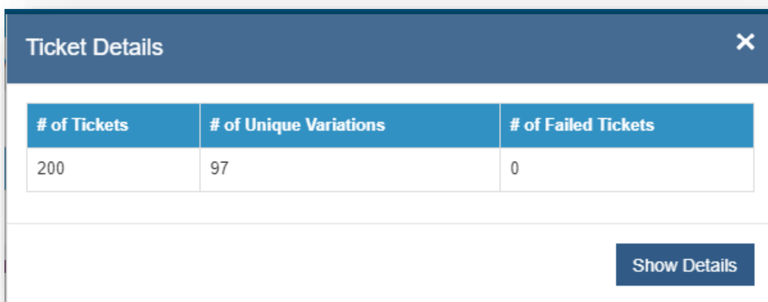


Figure 258- View Ticket Analysis (Cont.)

3. Click **Show Details** and it prompts a window that shows the **Similarity Score** and the **Canonical Summary** for the selected ticket.

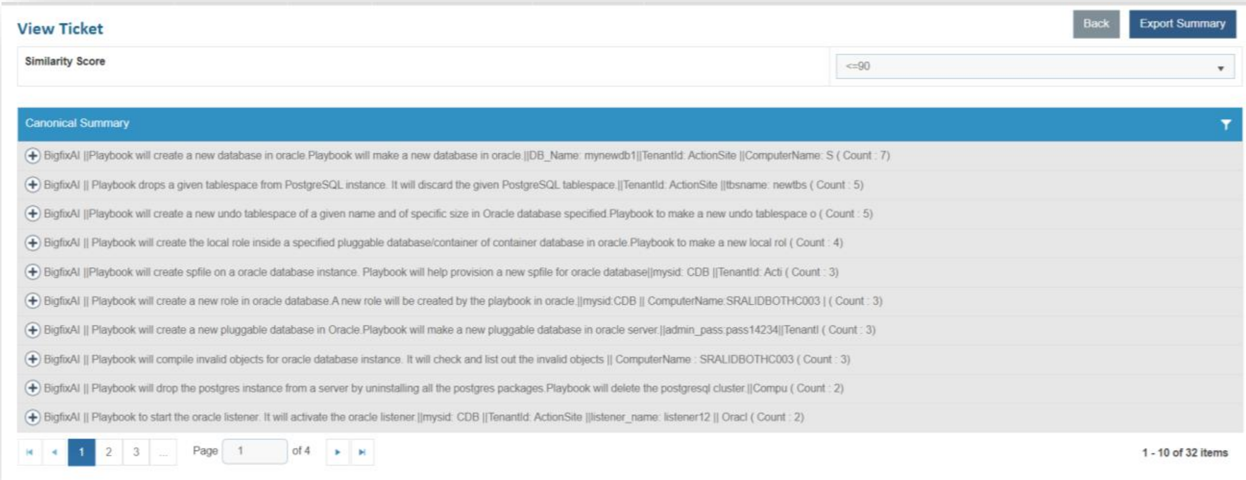


Figure 259- View Ticket Analysis (Cont.)

Use **Export Summary** to export the canonical summary of the ticket to your folder or click Back to go back to the previous screen.

3.2.4.1.3 Build and Approve Ticket Analysis

To ensure the correct categorization of tickets into the right buckets, Build Ticket Analysis needs to be done. It helps in validating the ticket categorization.

To build/approve analysis, perform the following steps:

1. On the **Ticket Analysis** page, click next to the analysis you want to build/approve.

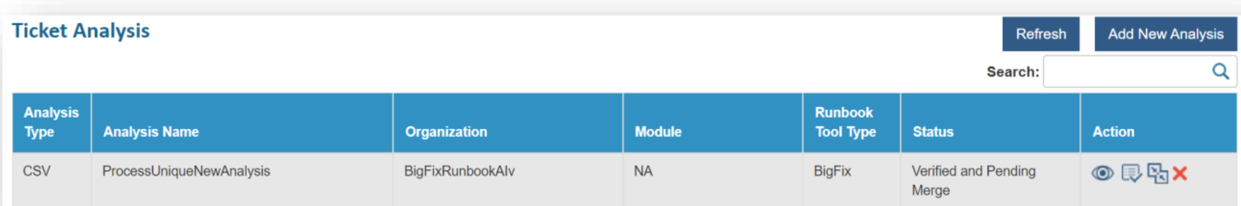


Figure 260- Build/Approve Ticket Analysis

2. On the **View Ticket** page, analysis appear in a tabular view under the **Canonical Summary** column, based on the selection of similarity score.
3. Expand the selected **Canonical Summary** to see the tickets under the selected summary.

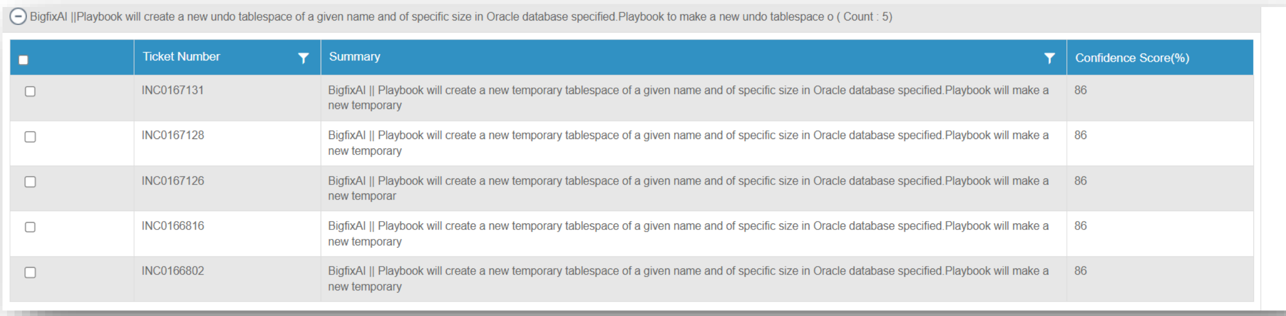


Figure 261- Build/ Approve Single Analysis (Cont.)

4. To remove a ticket from the canonical summary, select a ticket or multiple tickets and then click **Remove** based on the discriminator.
5. This prompts user to select the **Existing discriminator**, then type at least two comma separated **discriminator**s to verify the uniqueness of the selected tickets, and then click **Save**.

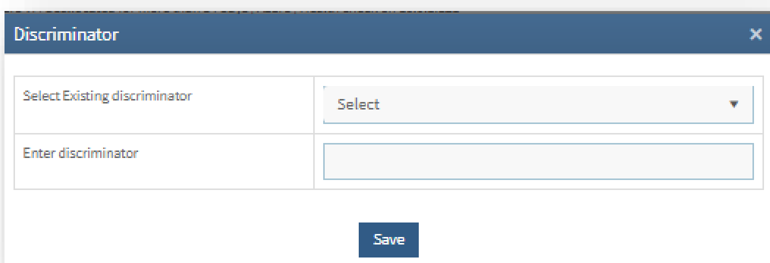


Figure 262- Build/ Approve Single Analysis (Cont.)

This adds the new discriminator and lists it under the **Discriminator** column.

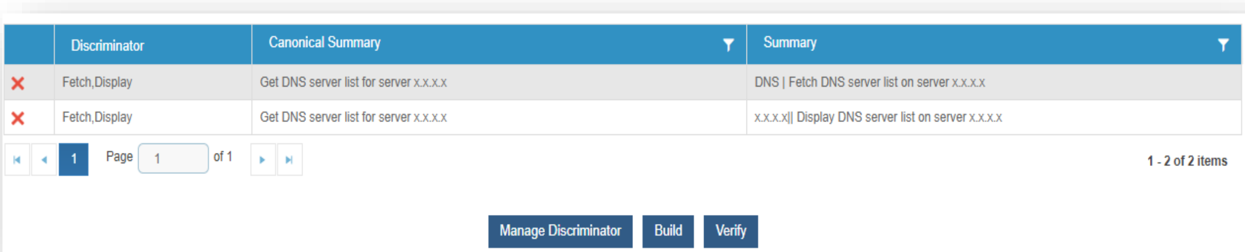


Figure 263- Build/ Approve Single Analysis (Cont.)

6. To manage the added discriminator for analysis, select **Manage Discriminator**.

The **Manage discriminator** page appears and enables user to delete the discriminator by clicking × .

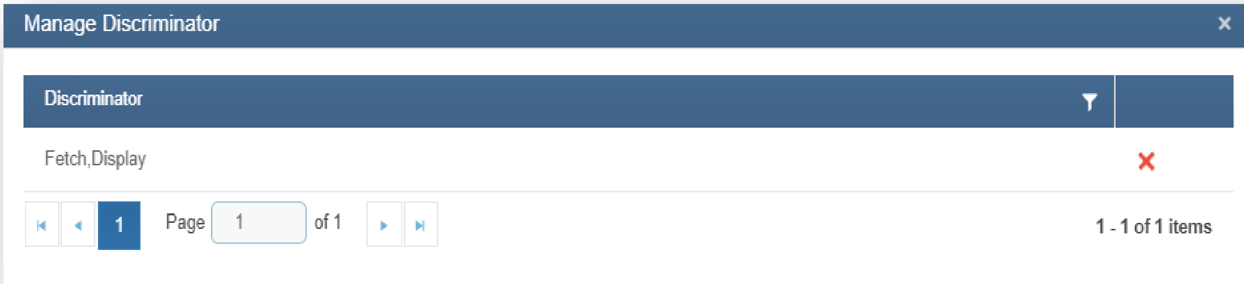


Figure 264 - Build/ Approve Single Analysis (Cont.)

User can also specify the discriminator for required tickets simultaneously by uploading the CSV file.

7. To upload a discriminator, perform the following steps:
   a. Click **Export Summary** to download the CSV file, which contains the canonical summary name, actual summary, ticket no., confidence score, ticket ID, bucket ID, and the discriminator.

Table 5 - CSV File Template to Upload Discriminator

Canonical Summary	Actual Summary	Number	Confidence Score	Ticket ID	Bucket ID	Discriminator
CPU Utilization Issue	CPU Utilization Issue	INC0054414	1	1	1	Test1, Test 2

   b. Update the required details and then click Import and Build Analysis button.
   c. Click Choose file to upload the CSV file and then click OK

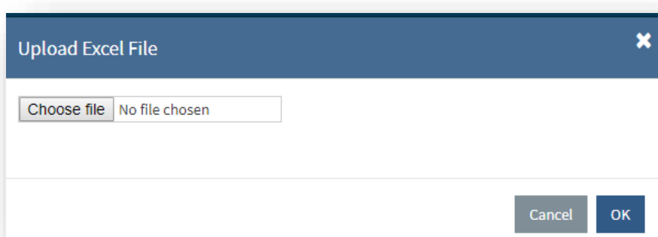


Figure 265- Build/ Approve Single Analysis (Cont.)

d. A **Build Started** message appears for the selected canonical summary.

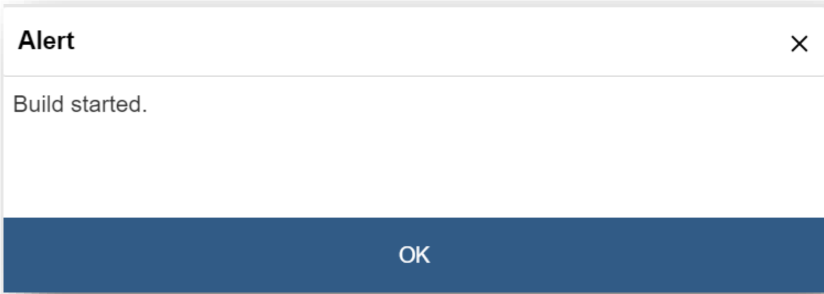
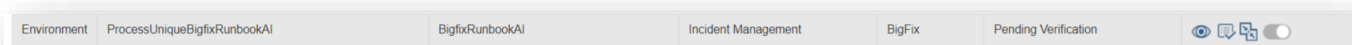


Figure 266- Build/ Approve Single Analysis (Cont.)

8. After the discriminators are configured, click **Build** to restart the ticket analysis of the selected tickets cluster based on the newly added discriminator. This displays the **Ticket Analysis** screen where the ticket analysis status changes to **Queued (Build Initiated).**



Environment	ProcessUniqueBigfixRunbookAI	BigfixRunbookAI	Incident Management	BigFix	Pending Verification	

Figure 267- Build/ Approve Single Analysis (Cont.)

After the analysis is complete, the status automatically changes to **Pending Verification**.

Analysis Type	Analysis Name	Organization	Module	Runbook Tool Type	Status	Action
CSV	ProcessUniqueBigfixRunbookAI	BigfixRunbookAI	Incident Management	ITPAM	Successful	
Environment	ProcessUnique	BigFixRunbookAI	Incident Management	BigFix	Pending Verification	

Figure 268- Build/ Approve Single Analysis (Cont.)

9. To verify the pending verification, click again next to the analysis you want to verify, and it will redirect you to the **Discriminator** page.

Whenever a discriminator is added to an analysis, it is mandatory to rebuild the analysis.

10. Click **Verify** to approve the analysis.

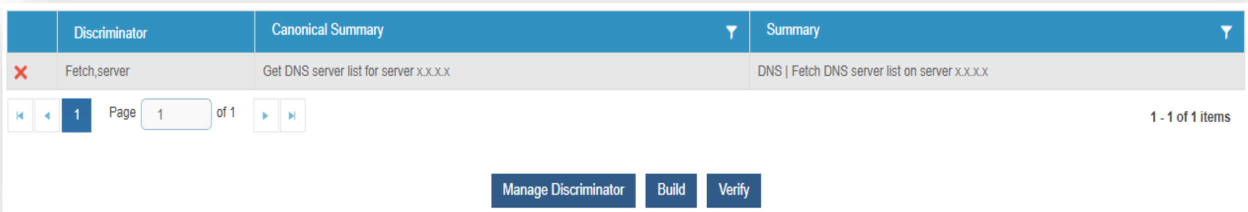


Figure 269- Build/ Approve Single Analysis (Cont.)

The analysis status changes to **Verified and Pending Merge**.

Figure 270- Build/ Approve Single Analysis (Cont.)

User cannot add a discriminator to tickets for analysis after verification of the ticket analysis.

The **View Ticket** screen displays and enables user to build/approve the ticket analysis by selecting a single ticket or using the **Export to CSV** option from the bucket.

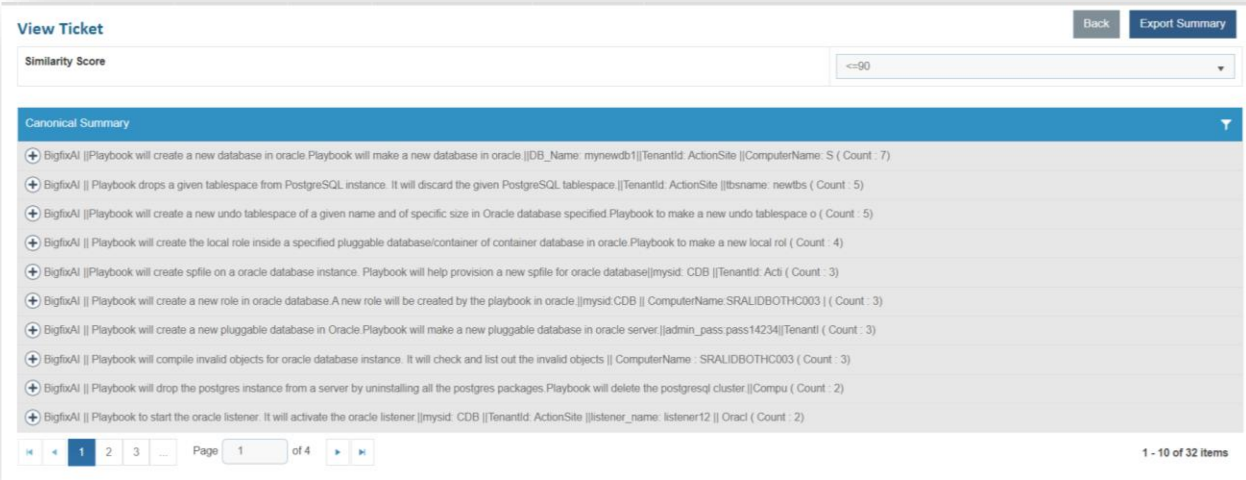


Figure 271 - View Ticket Screen

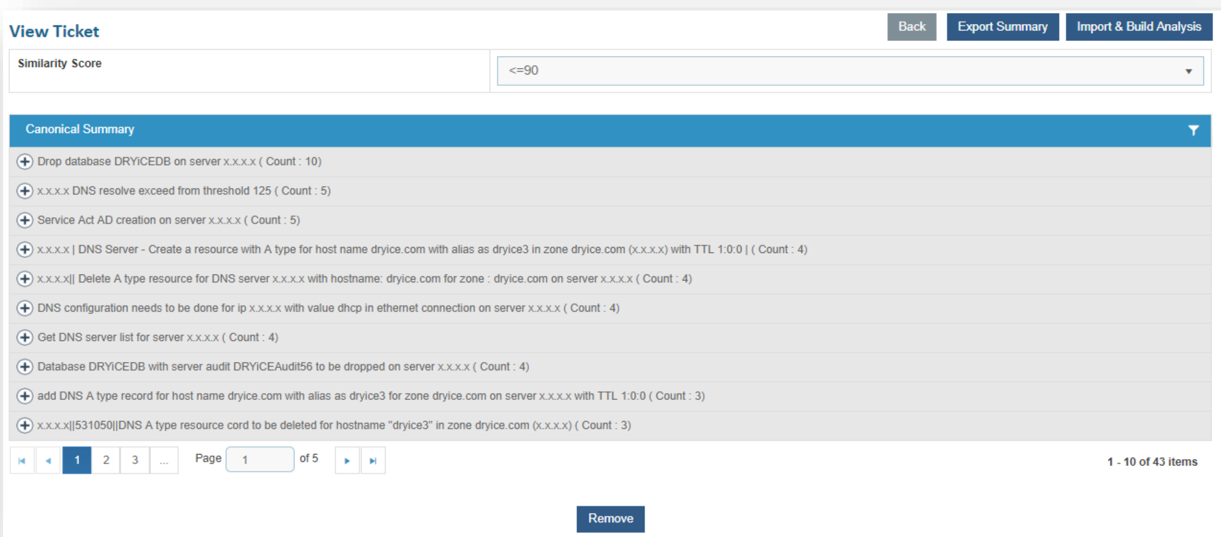


Figure 272- Build/Approve Ticket Analysis (Cont.)

User cannot add a discriminator to tickets for analysis after verification of the ticket analysis.

3.2.4.1.4 Merge Analysis

Whenever user adds or removes ticket from the ticket cluster, new unique variations must be merged with the existing unique variations.

To merge an analysis, perform the following steps:

1. On the **Ticket Analysis** page, click next to the analysis you want to merge.

Figure 273- Merge Analysis

Only tickets with Pending Merge status can be merged using this option.

The **Merge Analysis** page lists all the configured variations in a tabular view.

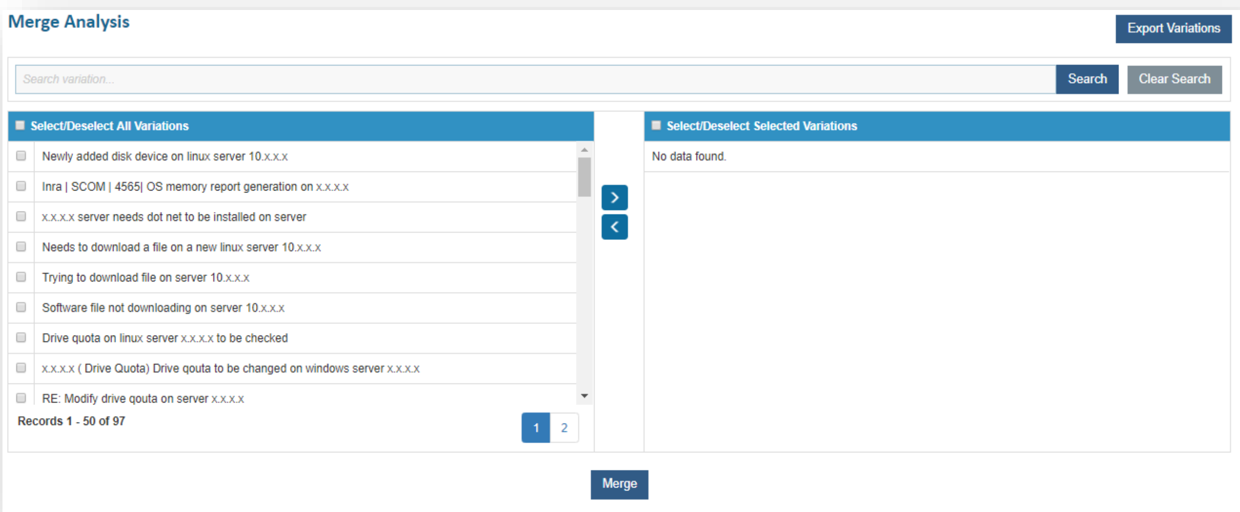


Figure 274- Merge Analysis (Cont.)

2. Select the variations from the left grid. Click to move the selected variations to the right grid and vice versa to remove selected variations.

User can select a single variation or multiple variations to merge.

3. To merge the selected variations, click **Merge**, and then click **Save**.

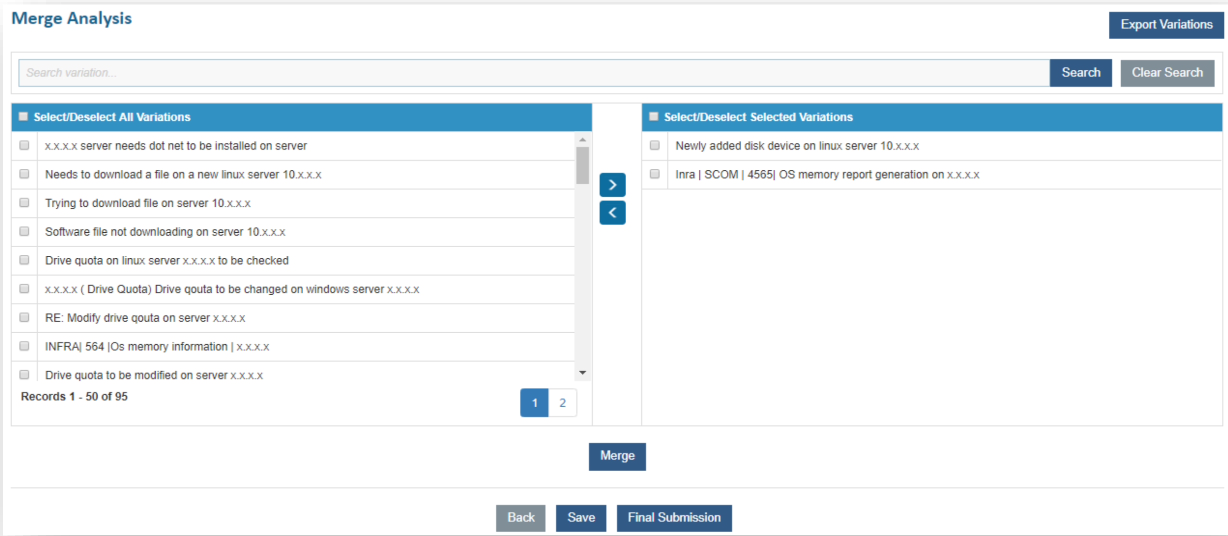


Figure 275- Merge Analysis (Cont.)

4. To proceed with the analysis, click **Final Submission** to submit the merged variations.

Click **Export Variations** to export the selected variations.

BigFix Runbook AI provides you with search capabilities to access required variations from the list of variations based on certain keywords or set of characters. Type a value in the **Search** box and then select **Search** to get the preferred results.

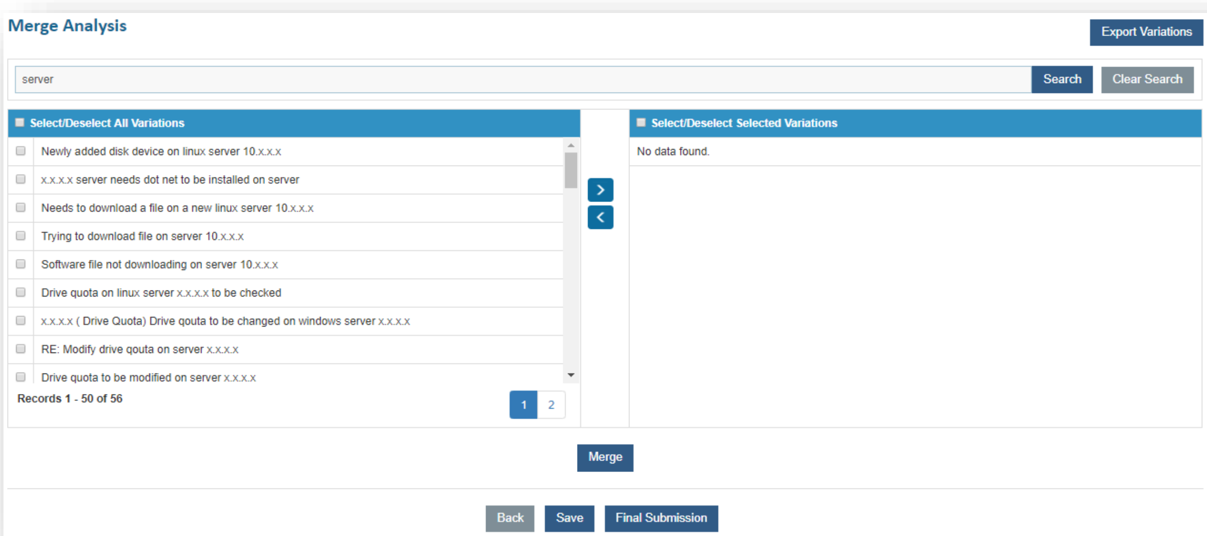


Figure 276- Merge Analysis (Cont.)

Click **Clear Search** to cancel the search.

3.2.4.1.5 Auto Switch Mode for Analysis

User can automatically validate newly identified unique tickets.

1. On the **Ticket Analysis** screen, enable the toggle button next to the analysis to enable the **Auto Switch** mode.

Analysis Type	Analysis Name	Organization	Module	Runbook Tool Type	Status	Action
CSV	ProcessUniqueBigfixRunbookAI	BigfixRunbookAI	Incident Management	ITPAM	Successful	
Environment	ProcessUnique	BigFixRunbookAI	Incident Management	BigFix	Pending Verification	

Figure 277- Auto Switch Mode for Analysis

A confirmation dialogue box appears.

The auto switch mode works only for environment analysis.

3.2.4.1.6 Delete Analysis

An analysis can be deleted after successful completion if it is no more required.

To delete an analysis, perform the following steps:

1. Click to delete the analysis.

Analysis Type	Analysis Name	Organization	Module	Runbook Tool Type	Status	Action
CSV	ProcessUniqueBigfixRunbookAI	BigfixRunbookAI	Incident Management	ITPAM	Successful	
Environment	ProcessUnique	BigFixRunbookAI	Incident Management	BigFix	Pending Verification	

Figure 278- Delete Analysis

2. Select the appropriate option visible in the confirmation dialog box, if you would like to make the jobs inactive or delete the data along with it.

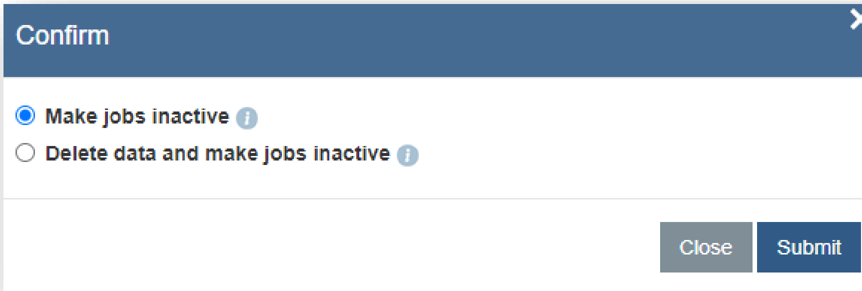


Figure 279- Delete Analysis (cont.)

3. A confirmation message appears.

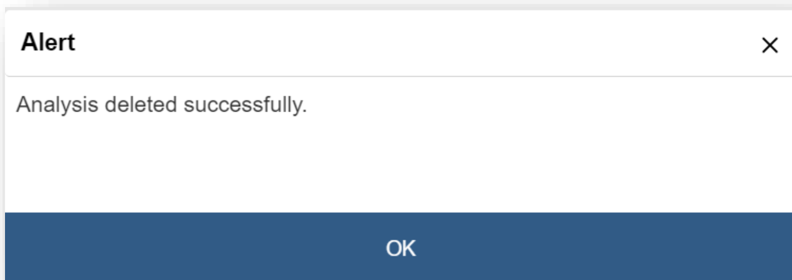


Figure 280- Delete Analysis (cont.)

3.2.4.2 Recommendation Analysis

Recommendation analysis identifies relevant runbooks for unique ticket categories, followed by SME feedback for approval.

To manage the recommendation analysis, perform the following steps:

1. On the main menu bar, click **Actions->Analysis**.
2. Click **Recommendation Analysis**. The **Recommendation Analysis** page appears.

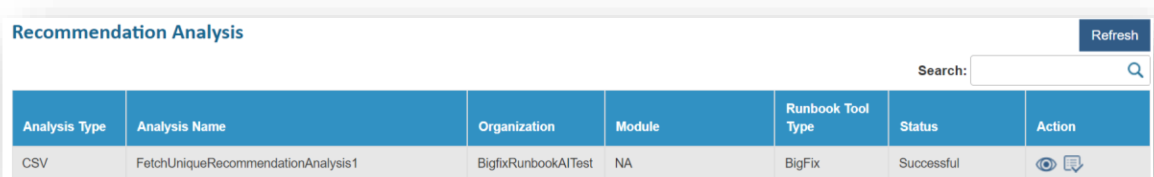


Figure 281- Recommendation Analysis

This displays the available analysis types in a tabular view and enables user to view or approve them.

3.2.4.2.1 Approve Analysis

User can approve the recommendation analysis, which includes the runbook details and a description of the associated ticket category that has been already defined.

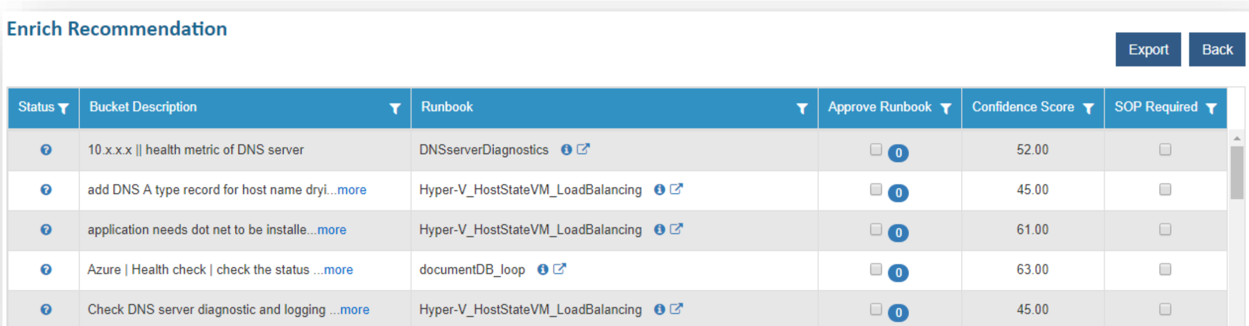
To approve the recommendation analysis, perform the following steps:

1. On the **Recommendation Analysis** page, click next to the analysis type user wants to approve.

Analysis Type	Analysis Name	Organization	Module	Runbook Tool Type	Status	Action
CSV	FetchUniqueRecommendationAnalysis1	BigfixRunbookAITest	NA	BigFix	Successful	
Environment	FetchUniqueRecommendationBigfixRunbookAITest	BigfixRunbookAITest	Incident Management	BigFix	Successful	

Figure 282- Approve Analysis

The **Recommendation Analysis** page displays the variation's status in the **Status** column, bucket description in **Bucket Description** column, associated runbooks in the **Runbook** column, runbooks available for approval in **Approve Runbook** column, confidence score of the runbook in the **Confidence Score** column, and the SOP required for the selected variation in the **SOP Required** column.



Status	Bucket Description	Runbook	Approve Runbook	Confidence Score	SOP Required
	10.x.x.x || health metric of DNS server	DNSserverDiagnostics	0	52.00	
	add DNS A type record for host name dryi...more	Hyper-V_HostStateVM_LoadBalancing	0	45.00	
	application needs dot net to be installe...more	Hyper-V_HostStateVM_LoadBalancing	0	61.00	
	Azure | Health check | check the status ...more	documentDB_loop	0	63.00	
	Check DNS server diagnostic and logging ...more	Hyper-V_HostStateVM_LoadBalancing	0	45.00	

Figure 283- Approve Analysis (Cont.)

2. Click to view the runbook details.

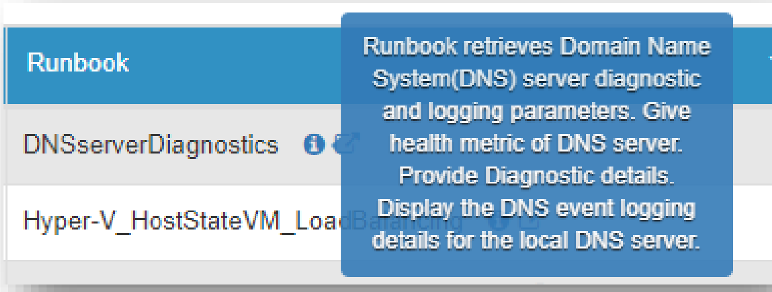


Figure 284- Approve Analysis (Cont.)

3. Click to view the complete list of runbooks available under the bucket description along with their confidence score.
4. The **Runbook** page lists the recommended runbooks available for approval.

Figure 285- Approve Analysis (Cont.)

5. To approve a runbook, select the checkbox next to the runbook in the **Approve Runbook** column. A confirmation dialog box appears.

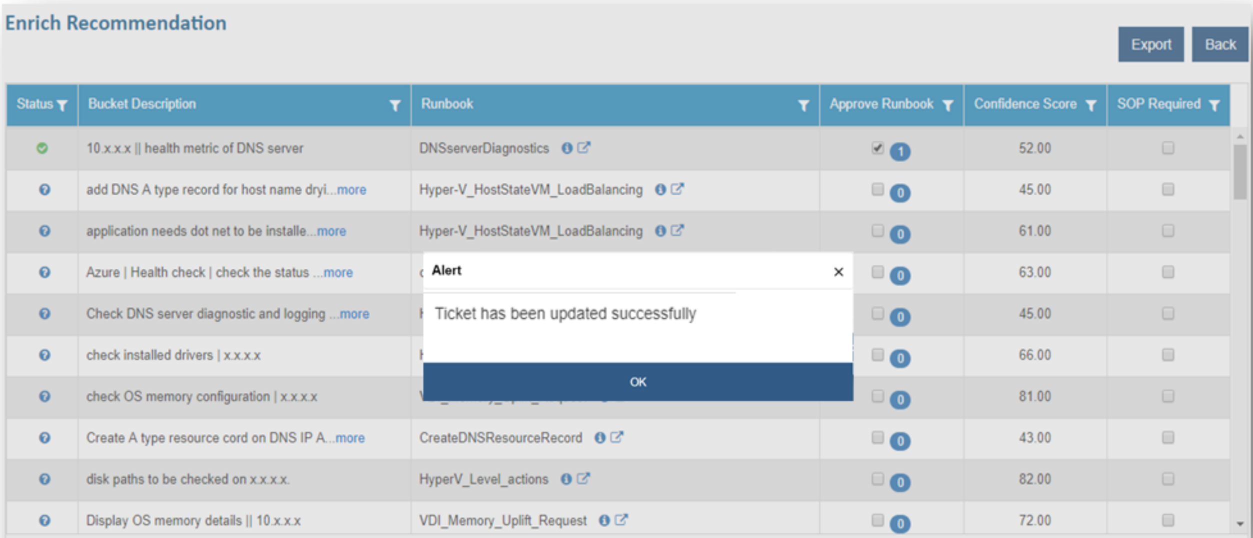


Figure 286- Approve Analysis (Cont.)

User can view the list of all runbooks from the repository by clicking **View All** and, if required, you can approve a runbook from the repository.

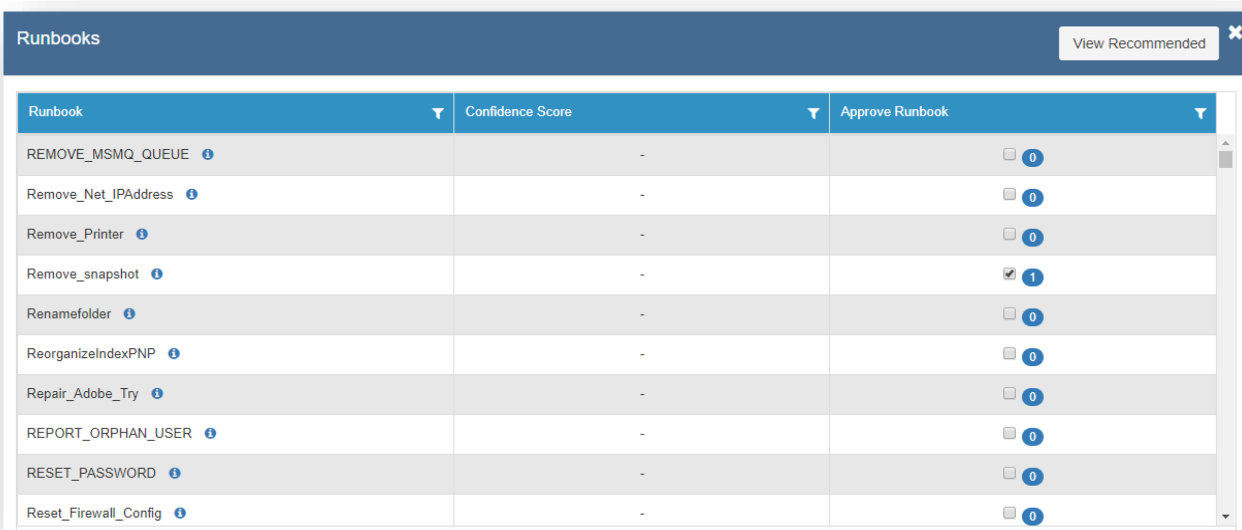
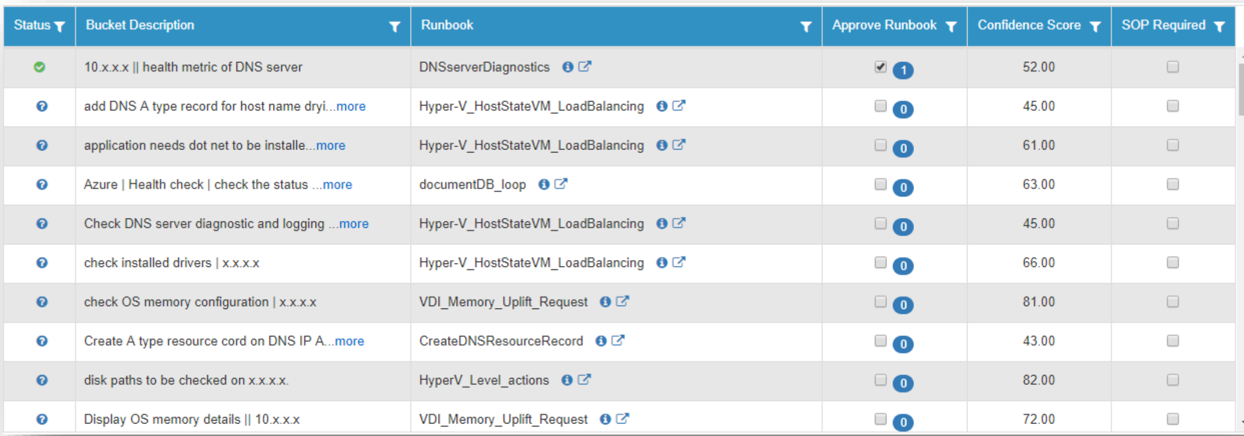


Figure 287 - Approve Analysis (Cont.)

6. To go back to the runbooks recommended for a bucket, click **View Recommended**.
7. Click **Export** to export all the recommended runbooks to Excel spreadsheet.



Status	Bucket Description	Runbook	Approve Runbook	Confidence Score	SOP Required
	10.x.x.x || health metric of DNS server	DNSserverDiagnostics	1	52.00	
	add DNS A type record for host name dryi...more	Hyper-V_HostStateVM_LoadBalancing	0	45.00	
	application needs dot net to be installe...more	Hyper-V_HostStateVM_LoadBalancing	0	61.00	
	Azure | Health check | check the status ...more	documentDB_loop	0	63.00	
	Check DNS server diagnostic and logging ...more	Hyper-V_HostStateVM_LoadBalancing	0	45.00	
	check installed drivers | x.x.x.x	Hyper-V_HostStateVM_LoadBalancing	0	66.00	
	check OS memory configuration | x.x.x.x	VDI_Memory_Uplift_Request	0	81.00	
	Create A type resource cord on DNS IP A...more	CreateDNSResourceRecord	0	43.00	
	disk paths to be checked on x.x.x.x.	HyperV_Level_actions	0	82.00	
	Display OS memory details || 10.x.x.x	VDI_Memory_Uplift_Request	0	72.00	

Figure 288 - Approve Analysis (Cont.)

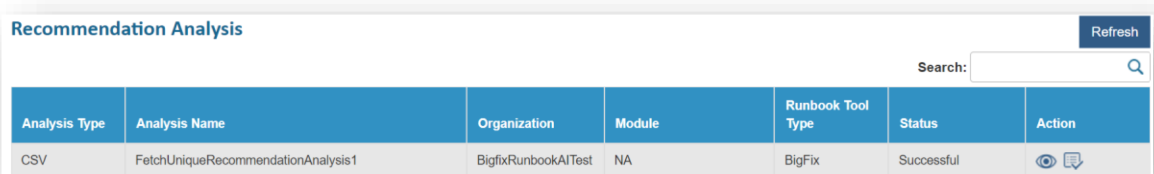
8. If the SOP is required for a bucket, then select the **SOP Required** check box.

3.2.4.2.2 View Analysis

User can view the information for an already defined analysis, including the runbook details and the associated bucket's description.

To view analysis, perform the following steps:

1. On the **Recommendation Analysis** page, click corresponding to the analysis type you want to view.



Analysis Type	Analysis Name	Organization	Module	Runbook Tool Type	Status	Action
CSV	FetchUniqueRecommendationAnalysis1	BigfixRunbookAITest	NA	BigFix	Successful	

Figure 289 - View Analysis

The **Recommendation Details** page appears, displaying the number of unique variations and the number of variations with runbooks above the threshold.

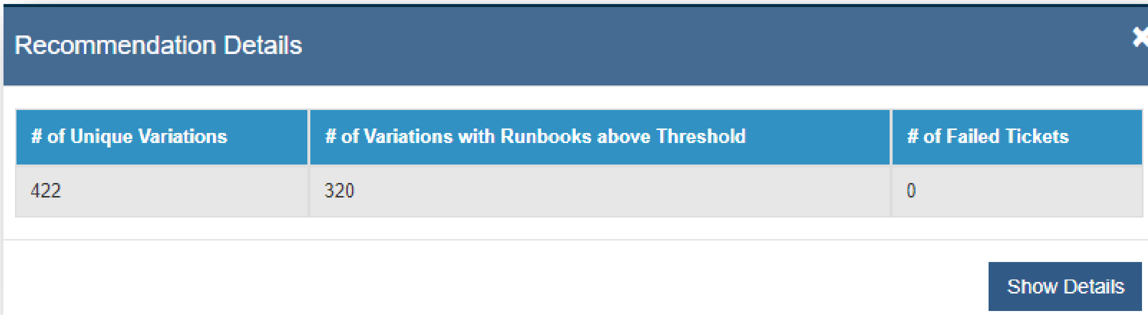


Figure 290 - View Analysis (Cont.)

2. Click **Show Details** to view all the details of the recommendation analysis.

Every action button remains disabled for View Analysis, since this is a read-only view.

3.2.4.3 Script Analysis

In case of unavailable runbooks for a certain set of ticket categories, BigFix Runbook AI helps the users by automatically downloading relevant scripts from internal and external data sources. Users can view, validate, and customize those scripts for future use.

To configure a script analysis, perform the following steps:

1. On the main menu bar, click **Actions->Analysis**.
2. Click **Script Analysis**. The **Script Analysis** page appears.

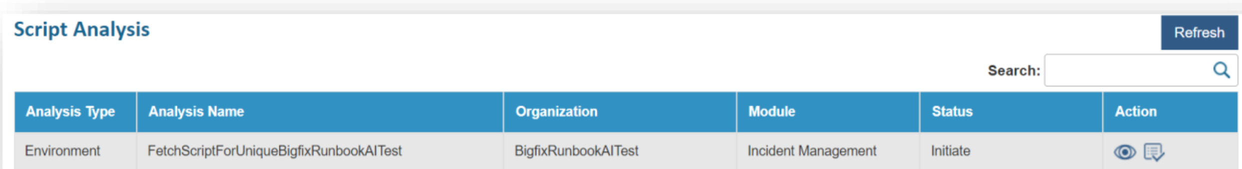


Figure 291- Script Analysis

This lists the available analysis types in a tabular view and enables user to view and build or approve analysis.

3.2.4.3.1 View Analysis

User can view information for an already defined analysis type.

To view the script analysis, perform the following steps:

1. On the **Script Analysis** screen, click corresponding to the analysis you want to view.

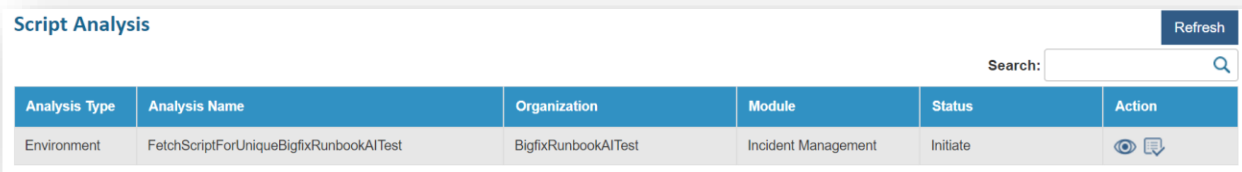


Figure 292- View Analysis

The Ticket Variation Details page appears that includes the count of ticket variations in the categories - **No Runbook Available**, **Script Downloaded**, and **Script Approved**.

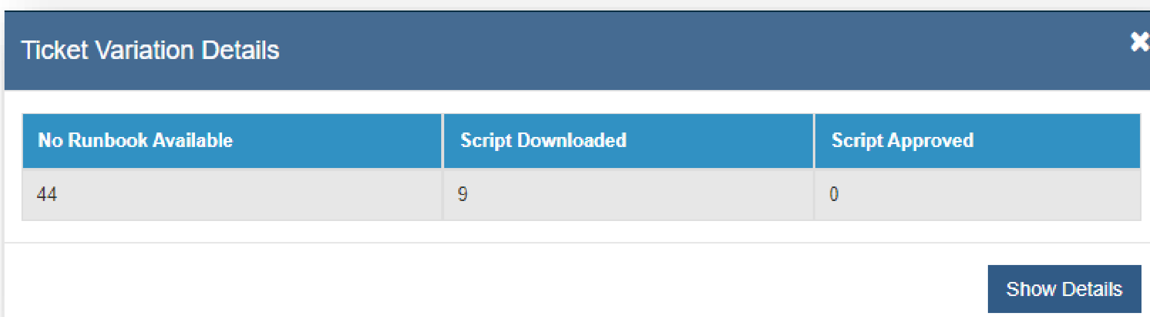


Figure 293- View Analysis (Cont.)

2. Click **Show Details** to view the details including the count of ticket variations for which No Runbook Available, Script Downloaded but not Approved, Script Available, Script Downloaded and Approved, and Script in Progress.

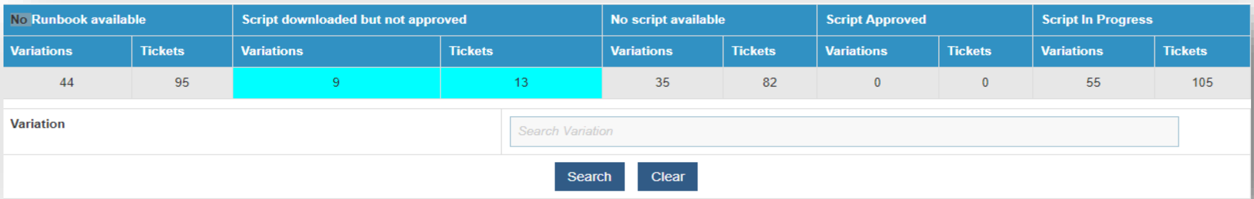


Figure 294- View Analysis (Cont.)

3. To scale down the search for variations, type the keywords in a search box next to the **Variation** field and click **Search**.

3.2.4.3.2 Build/Approve Analysis

User can build or approve script analysis by performing the following steps.

1. On the **Script Analysis** page, click next to the analysis type you want to approve.

   The **Manage Scripts** page appears and lists the available variations in a tabular view.

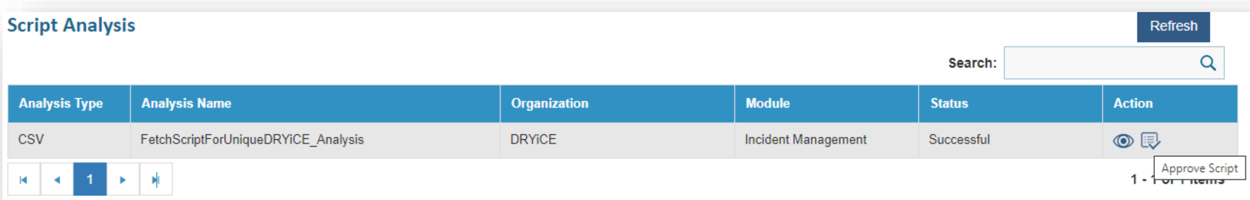


Figure 295- Build/Approve Analysis

2. BigFix Runbook AI provides easy search capabilities to access required scripts from the list of scripts based on certain keywords. Type a value in the **Search** box and then click **Search**.

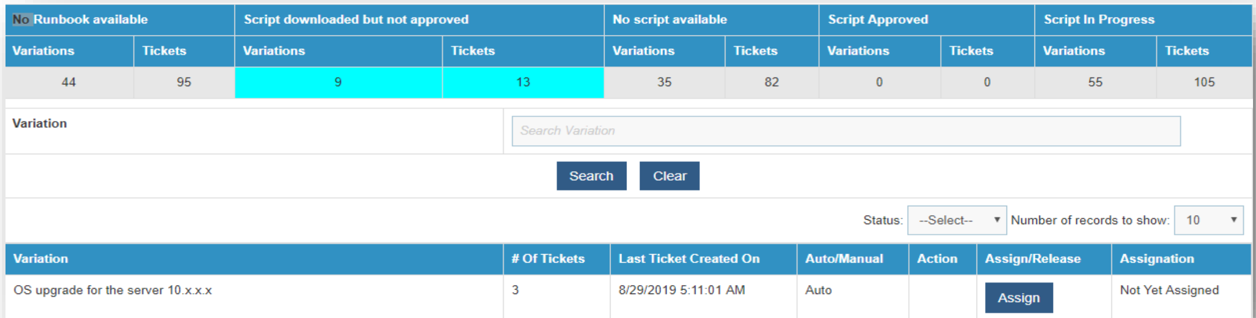


Figure 296- Build/Approve Analysis (Cont.)

Choose **Clear** to cancel the search.

3. To allow the variation to be used for script analysis, click **Assign** and the variation will be assigned to the logged in user.

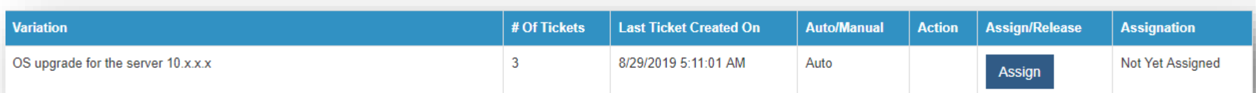


Figure 297- Build/Approve Analysis (Cont.)

After the variation is assigned, the variation status changes to **Release** and the **Assignation** column displays the name of the assignee.

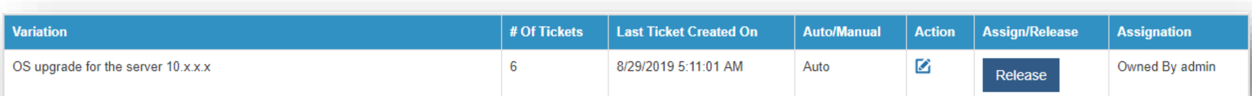


Figure 298- Build/Approve Analysis (Cont.)

If user clicks **Release**, then the variation status will again change to Assign and will become available for assignment to another user.

4. In the **Action** column, click next to the variation to approve the associated scripts of the variation.

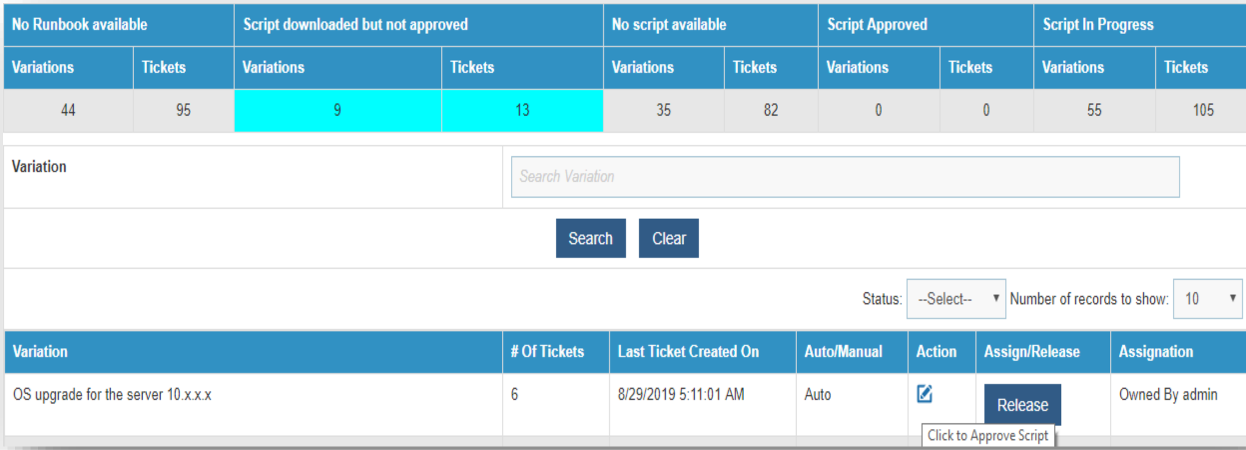


Figure 299- Build/Approve Analysis (Cont.)

5. A list of scripts for the selected variation appears in a tabular view that enables you to download the scripts in script text by clicking **Retrieve** appearing next to the scripts.

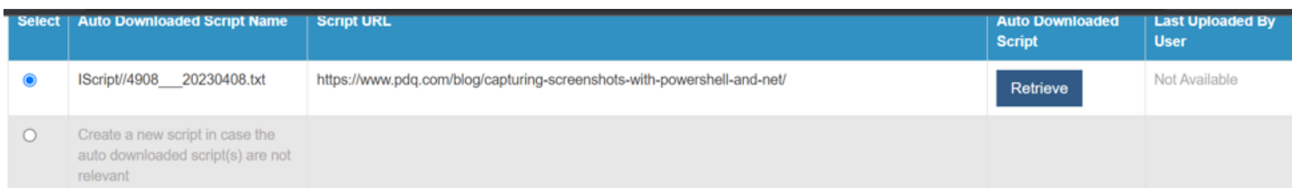


Figure 300- Build/Approve Analysis (Cont.)

User can add multiple scripts simultaneously using the **Export to Excel** function or add a single script by clicking **Create a New Script** from the grid below.

User can download the available scripts and use them to create more scripts. To download a script, select the radio button of the script and click **Download**.

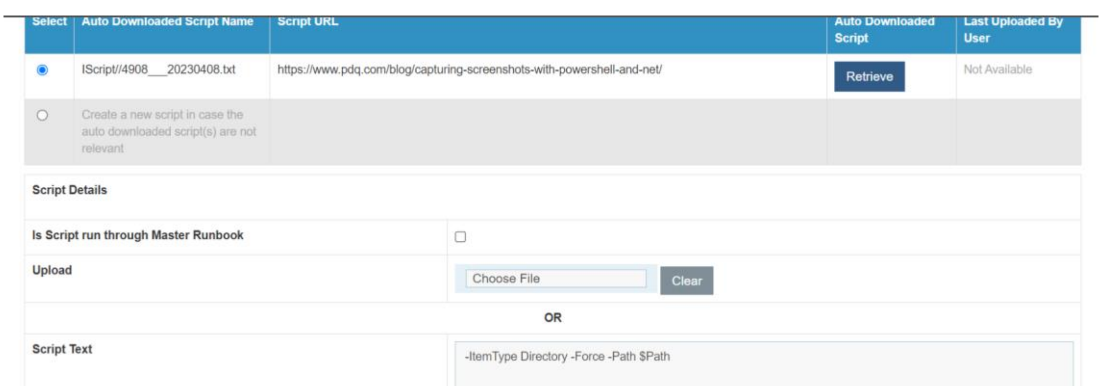


Figure 301- Build/Approve Analysis (Cont.)

3.2.4.3.2.1 Upload an Excel to Configure Multiple Scripts

User can create multiple scripts simultaneously using the **Export to Excel** function.

To create multiple scripts, perform the following steps:

1. On the **Manage Script** page, select **Create a New Script** at the bottom of the grid.

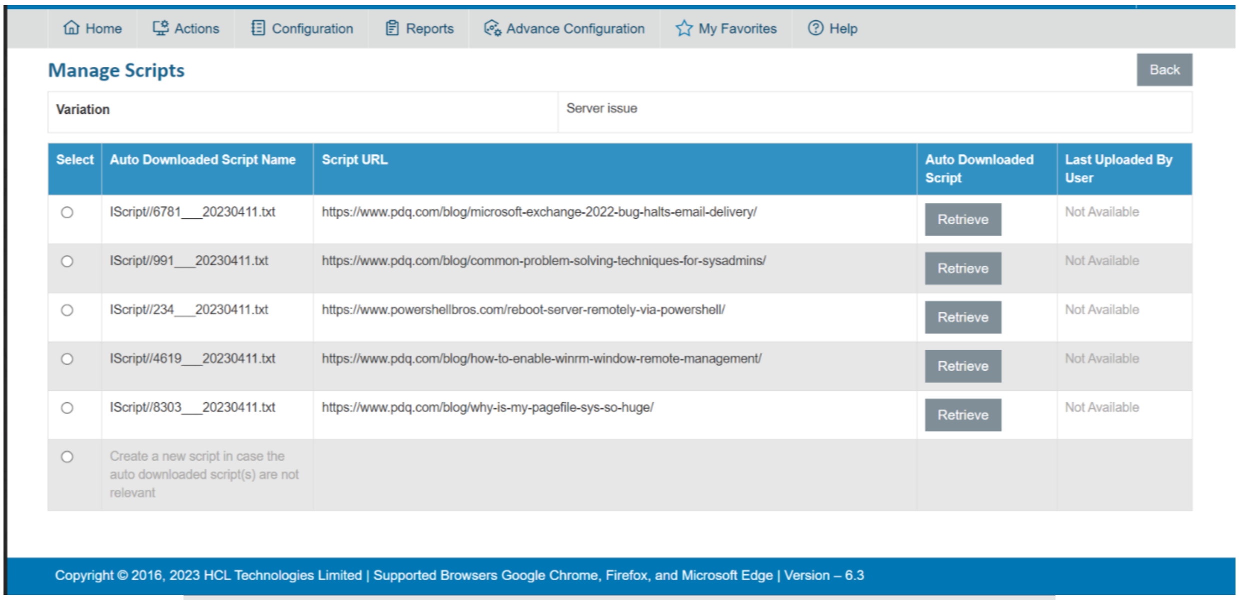


Figure 302- Build/Approve Analysis (Cont.)

This auto fills the **Upload** field.

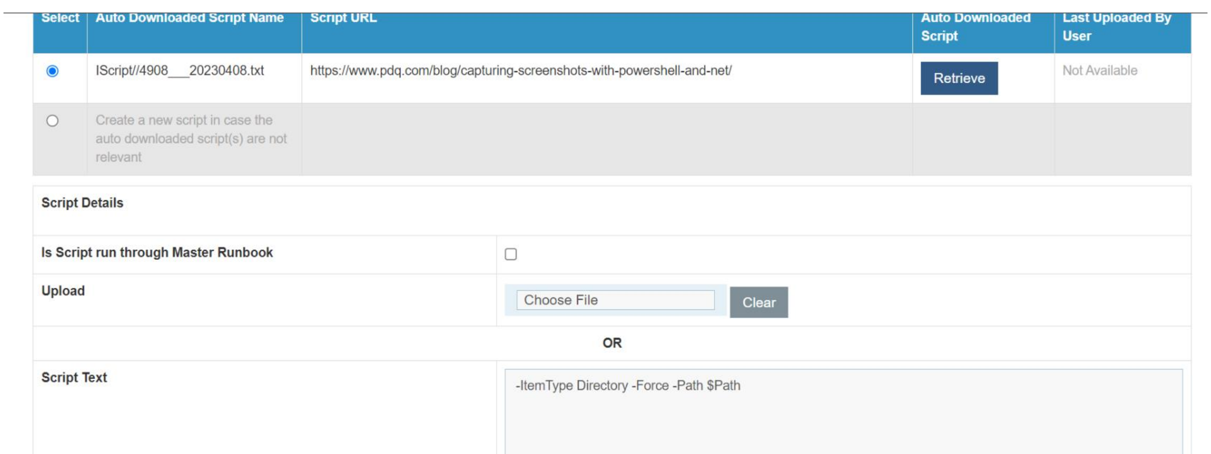


Figure 303- Build/Approve Analysis (Cont.)

2. Click **Choose File** to upload multiple scripts at the same time. This adds the new scripts and appears in a list.

3.2.4.3.2.2 Create Single Script

User can create a single script for analysis by using the following steps:

1. On the **Manage Script** page, select Create a New Script at the bottom of the grid.

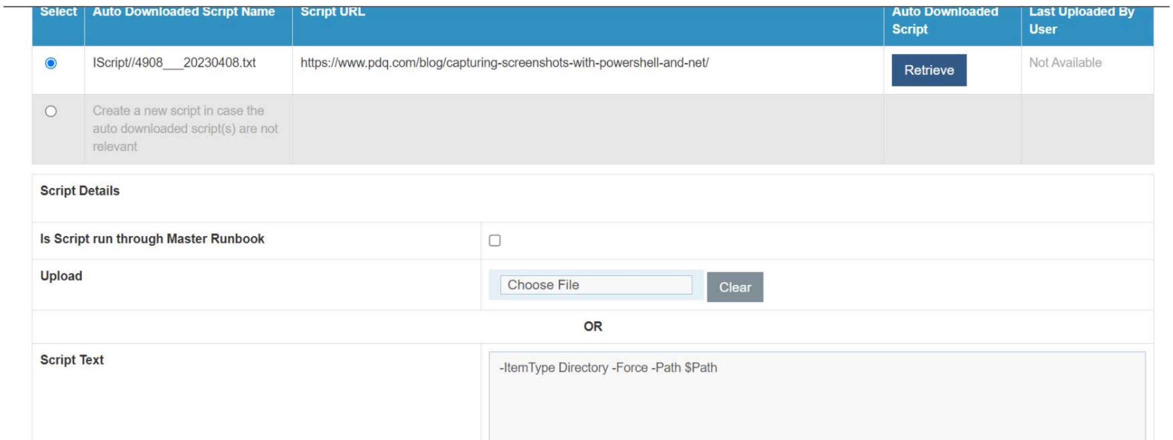


Figure 304 Build/Approve Analysis (Cont.)

It auto-fills the following fields below the **Upload** option.

2. To create a single script, fill in the details below.
   a. Type the **Script Name**, the **Script Description**, and then type the **URL** from where user downloaded the script.

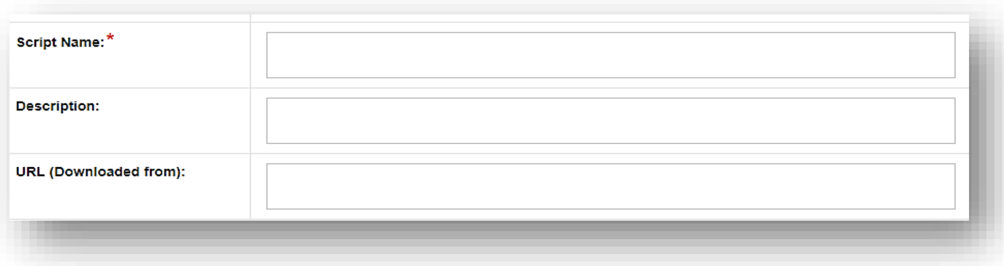


Figure 305- Build/Approve Analysis (Cont.)

b. Type the **Category** of script, then the **Sub-Category** of the script.

c. Select the checkbox, if you want to **Add Bucket Description To Recommendation**.

d. Type the **Recommendation Description**, then the **Runbook Tags**.

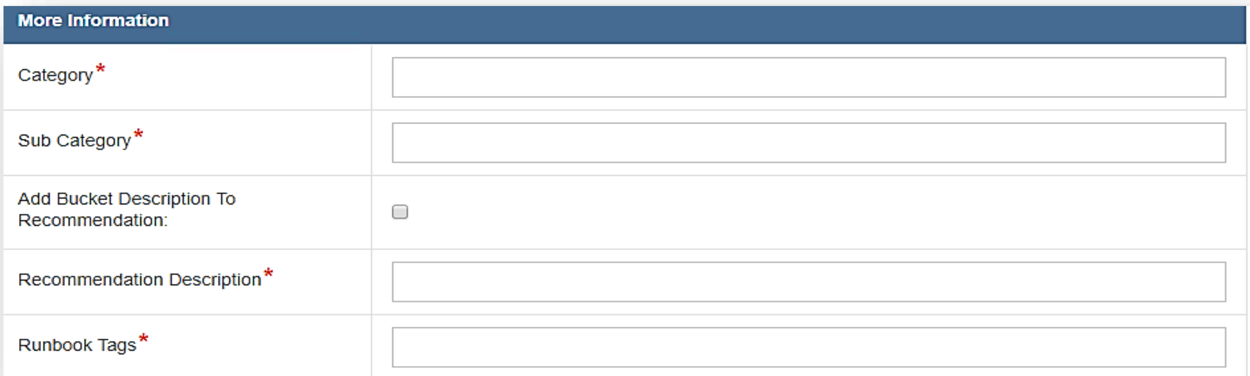


Figure 306- Build/Approve Analysis (Cont.)

e. After user has added the values, provide the following parameters to create a script:

- **Parameter Name**- Specifies a name for the parameter to be used in the script for analysis.
- **Field Type**: Specifies that field type is text
- **Is Mandatory**- Select True or False if the parameter details added are mandatory or not.
- **Parameter Description**- Describes the parameter.
- **Parameter Label**- Specifies a unique user-friendly name for the parameter to be added.
- **Default Parameter Value**- Specifies the default value for the parameter.
- **Parameter type**- Specifies the method for script parsing.
- **IsScript Parameter**- To specify that parameter is script parameter.
- **Is CIBased Parameter**- To specify that parameter is CI Based
- **Is ReadOnly parameter**- To specify that the parameter is read only parameter
- **Action**- Enables user to edit or delete the existing parameter by clicking Edit or Delete.
- **Add**- Adds a new row to add another parameter.

f. Click **Save Changes** to add the new script.

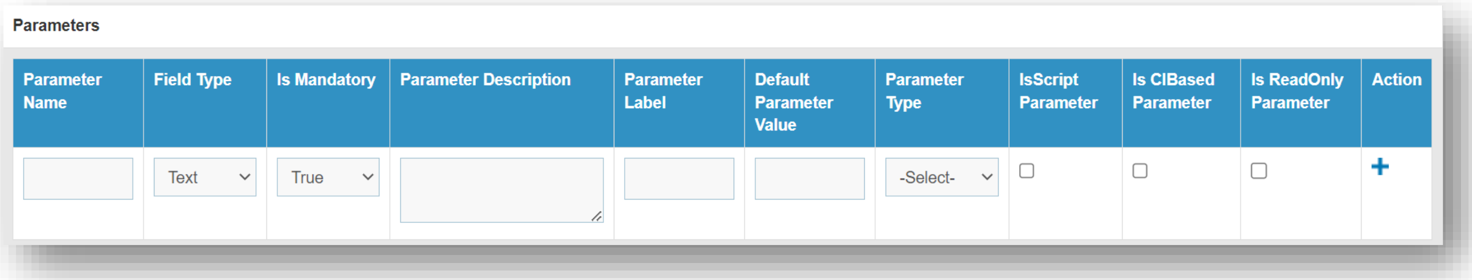


Figure 307- Build/Approve Analysis (Cont.)

User cannot edit a script after the analysis is approved.

3.2.5 Configuration

To manage configuration, perform the following steps:

On the main menu bar, click **Configuration**.

The drop-down lists the menu below for Super Admin:

- Manage SMTP
- Manage Proxy

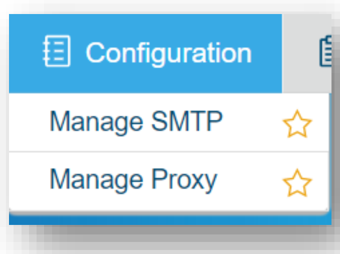


Figure 308-Manage Environment (Super Admin)

Ensure user is logged into BigFix Runbook AI as Super Administrator to create and manage the environment.

The drop-down lists the following menu for the Organization Admin:

- Manage Configuration
- Manage SMTP
- Manage Proxy

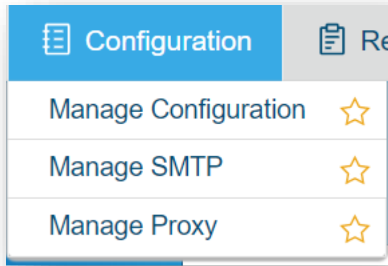


Figure 309- Manage Environment (Organization Admin)

3.2.5.1 Manage Proxy

If the organization makes use of security measures such as a firewall or a proxy server, then there may be ports and protocols that need to be opened for configuring BigFix Runbook AI. Provide the proxy server information for your site, along with a user account that has access to the local area network through which the server is connecting.

To manage a proxy server, perform the following steps:

1. On the main menu bar, click **Configuration** and then click **Manage Proxy**. The **Manage Proxy** page appears.

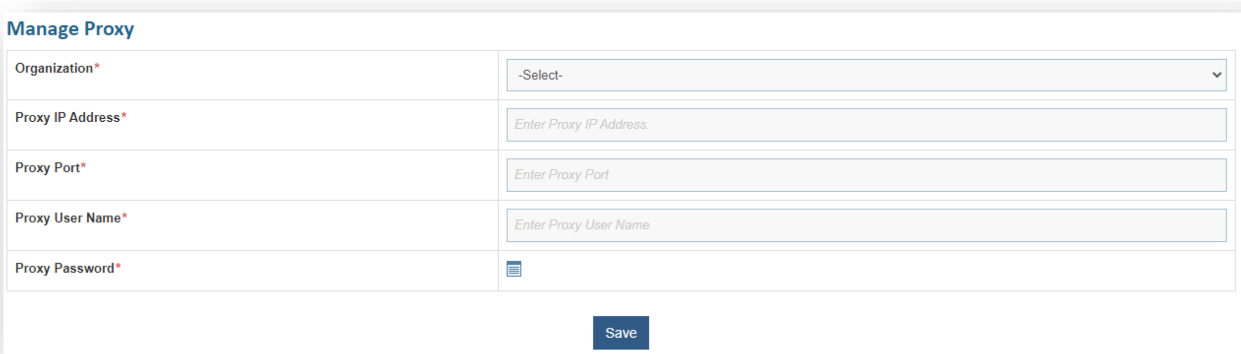


Figure 310- Manage Proxy

2. Select the organization from the **Organization** dropdown.
3. In the **Proxy IP Address** field, type the proxy URL.
4. In the **Proxy Port** field, type the proxy port.

5. In the **Proxy UserName** and **Proxy Password** fields, type the username and password to access the proxy server.
6. For password, click on icon next to it. If the password is available in plaintext, then select Input type as Input Text and enter the password in Value field. Else if it is available in any Key Vault such as CyberArk or Secret Manager then select Input Type as CyberArk or Secret Manager respectively and then select any of the configured details from the value field.

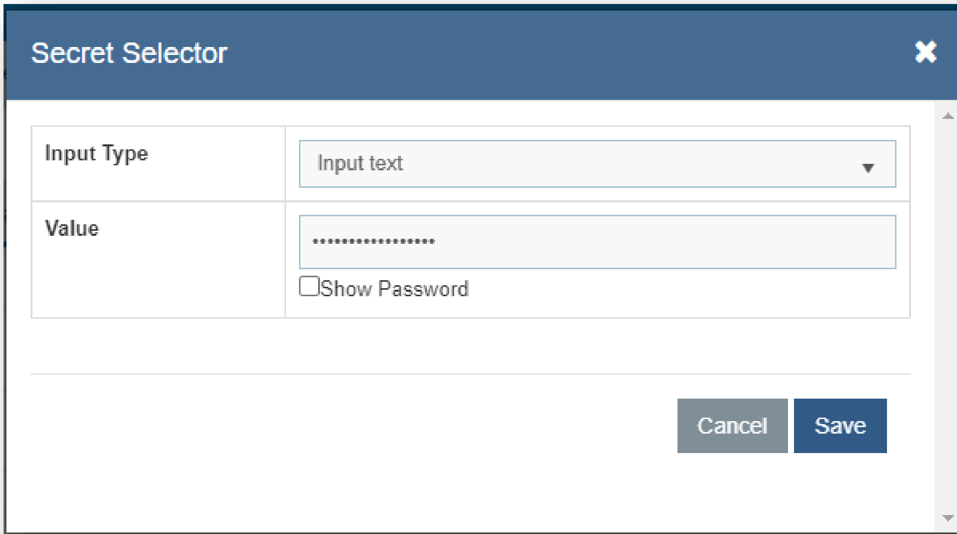


Figure 311 - Password in plaintext

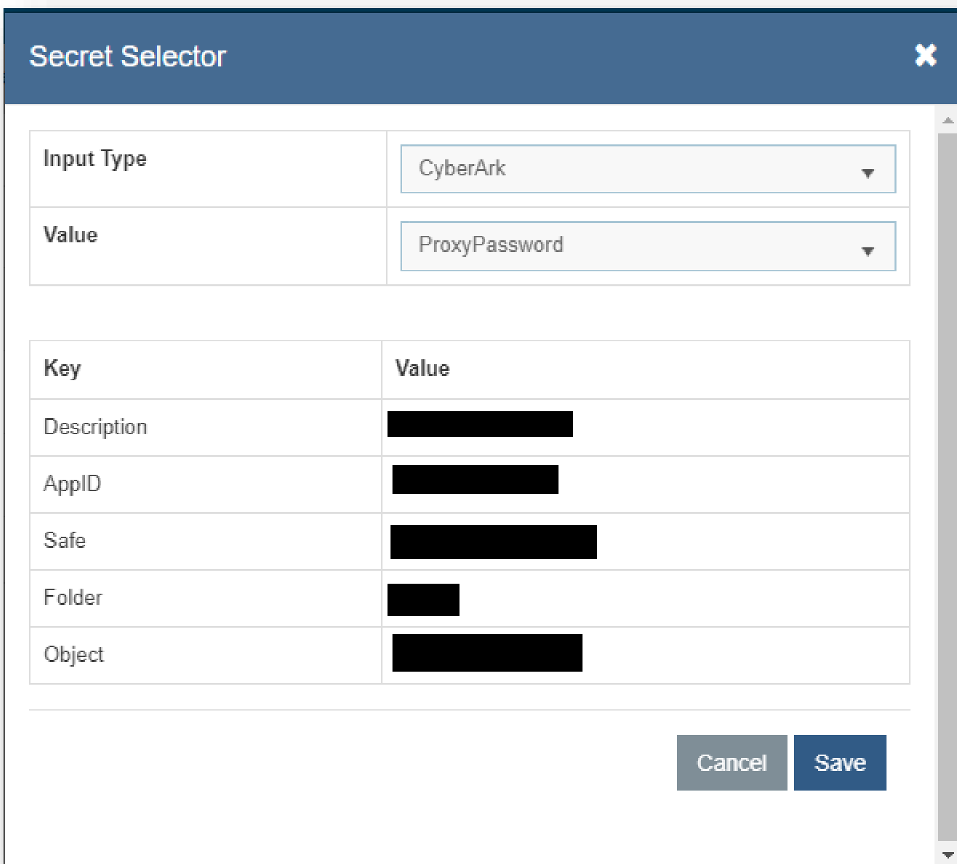


Figure 312 - Password from Key Vault (CyberArk)

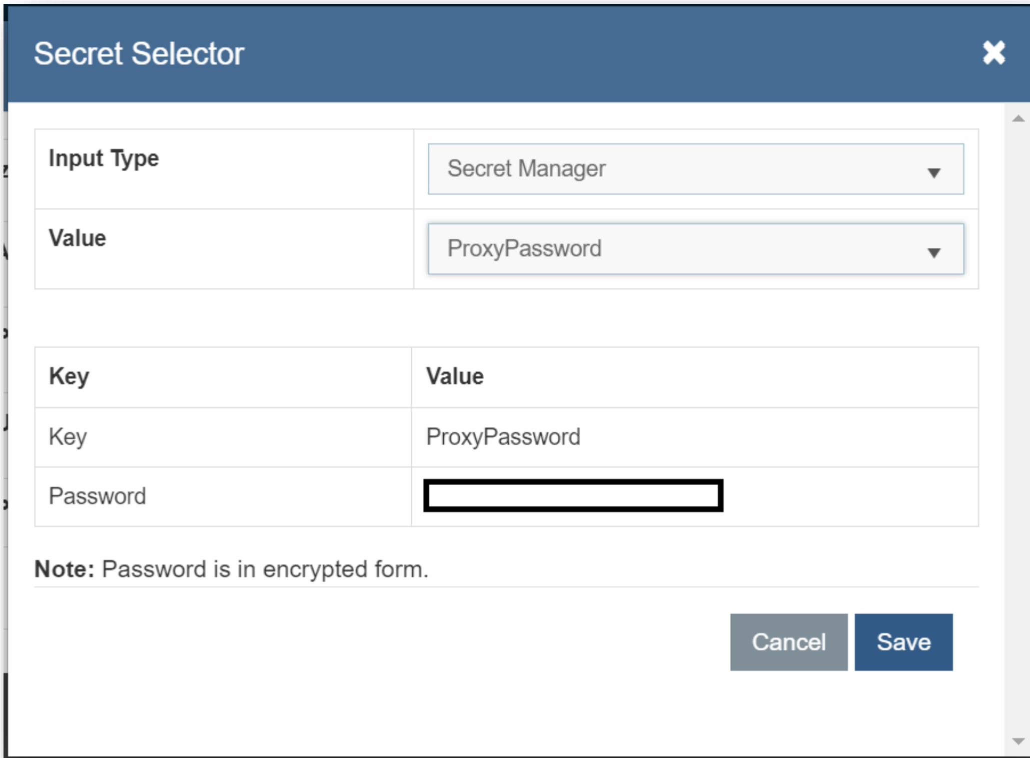


Figure 313 Password from Secret Manager

7. Click **Save**.

All fields marked with an asterisk (*) are mandatory.

3.2.5.2 Manage SMTP

If the organization chooses to make use of mail-based notifications, SMTP specific configurations will be required.

To configure the SMTP details, perform the following steps:

1. On the main menu bar, click **Configuration** and then click **Manage SMTP**.

   The **Manage SMTP** page appears.

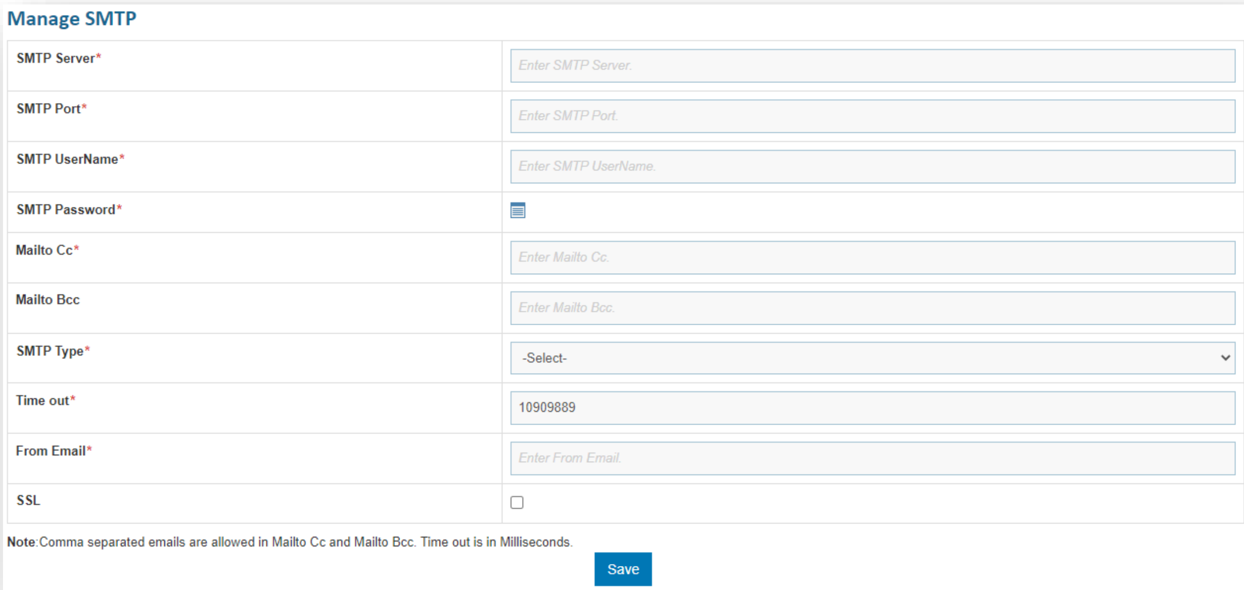


Figure 314- Manage SMTP

2. In the **SMTP Server** field, type the SMTP Server.
3. In the **SMTP Port** field, type the SMTP port.
4. In the **SMTP UserName** and **SMTP Password** fields, type the username and password to access the SMTP server.
5. For password, click on icon next to it. If the password is available in plaintext, then select Input type as Input Text and enter the password in Value field. Else if it is available in any Key Vault such as CyberArk or Secret manager then select Input Type as CyberArk or Secret manager respectively and then select any of the configured details from the value field.

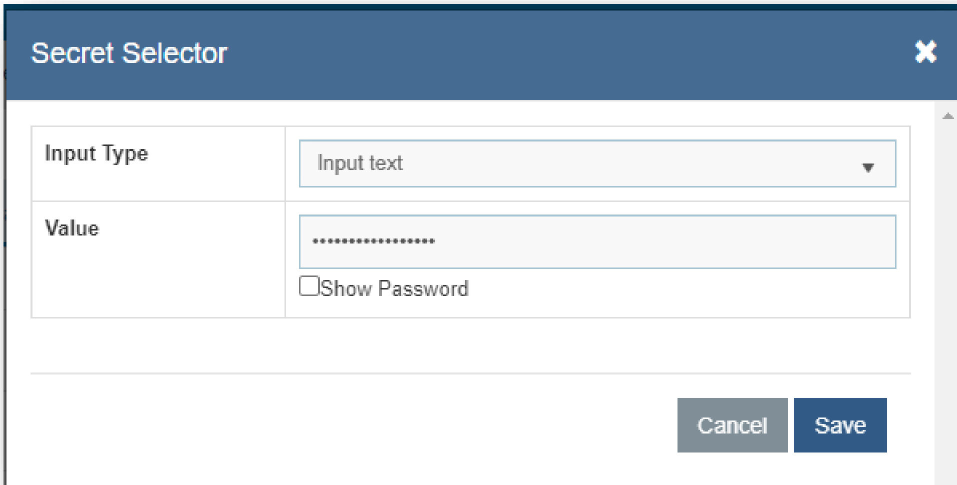


Figure 315 - Password in plaintext

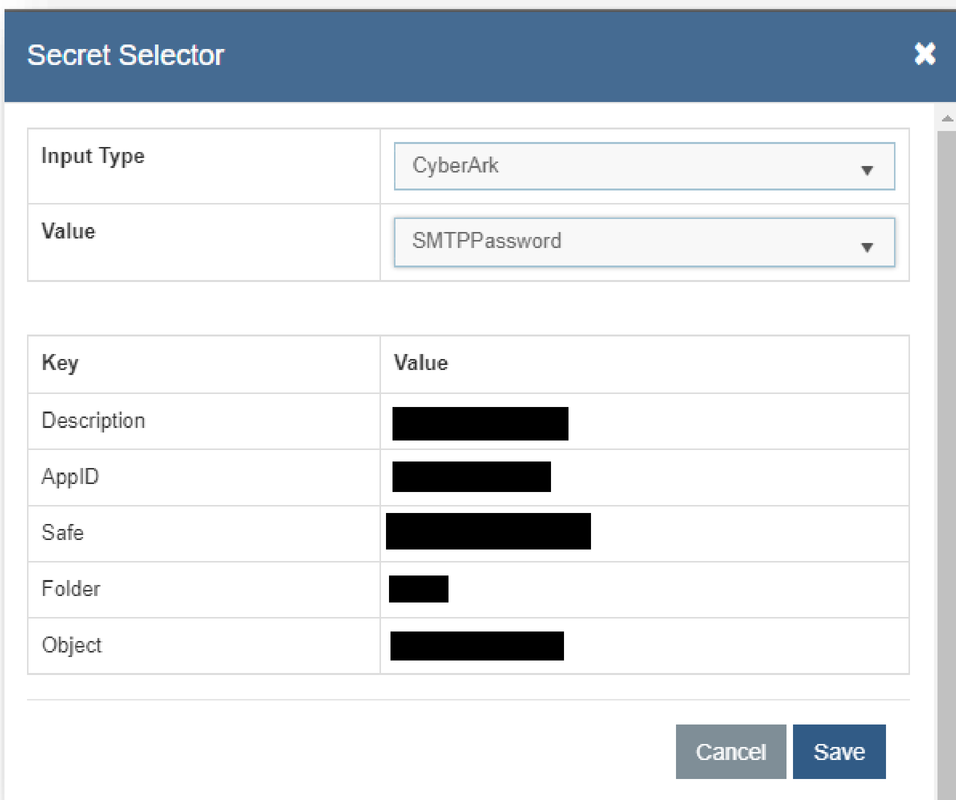


Figure 316 - Password from Key Vault (CyberArk)

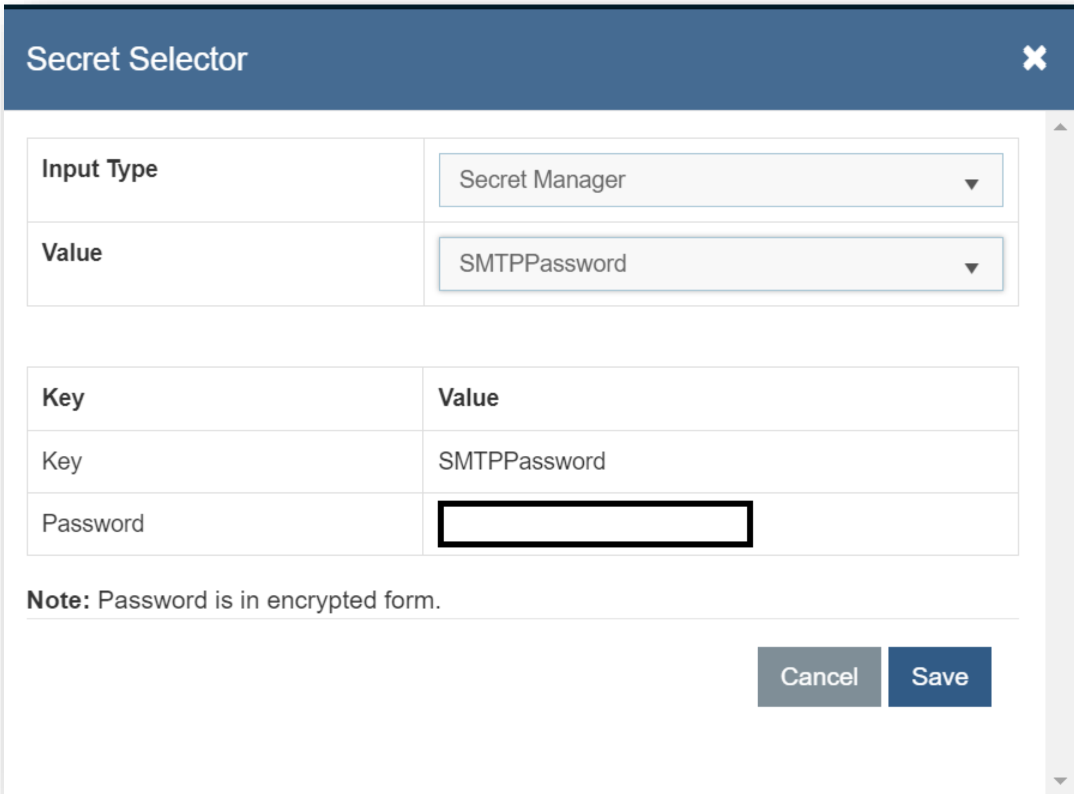


Figure 317 Password from Secret Manager

6. In the **Mailto Cc** field, type the email of user, as applicable.
7. In the **Mailto Bcc** field, type the email of user, as applicable.
8. Select **SMTP Type** from the dropdown**.**
9. In the **From Email** field, type the email id of the user which will be used to send out the mail notification.
10. Click **Save**.

3.2.5.3 Manage Configuration

If user wants to configure the entire setup and customize the default configuration, the user will need to perform the following additional configuration tasks:

To manage advanced configuration, perform the following steps:

1. On the main menu bar, click **Configuration**, and then click **Manage Configuration**. The **Manage Configuration** page appears.

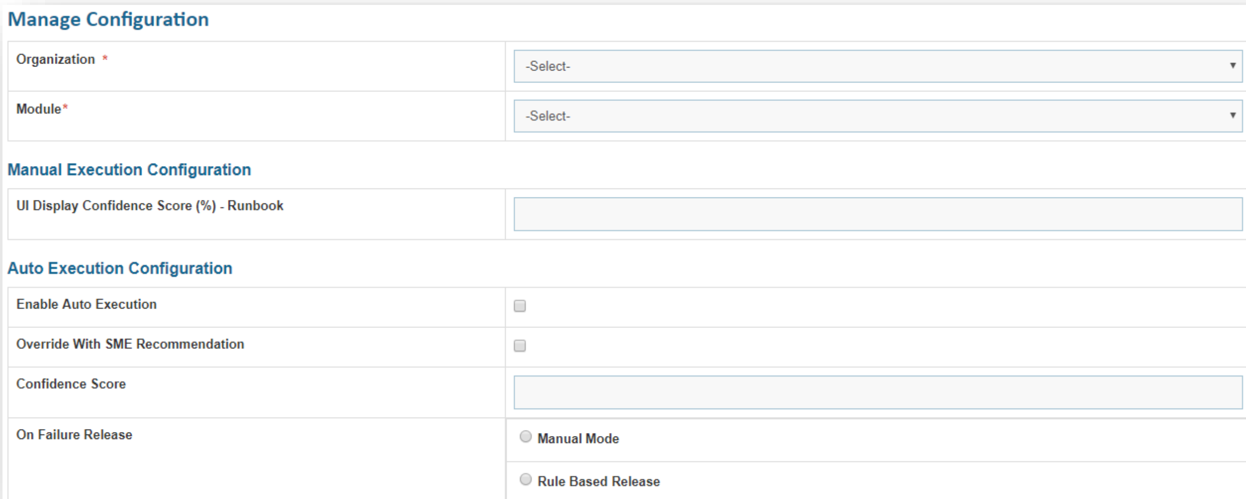


Figure 318- Manage Configuration

2. Select the organization for which user created a data source from the **Organization** field.

The organizations listed in the drop-down are created through Create Organization.

3. Select the module where the organization fetches the data from the data source in BigFix Runbook AI in the **Module** field.

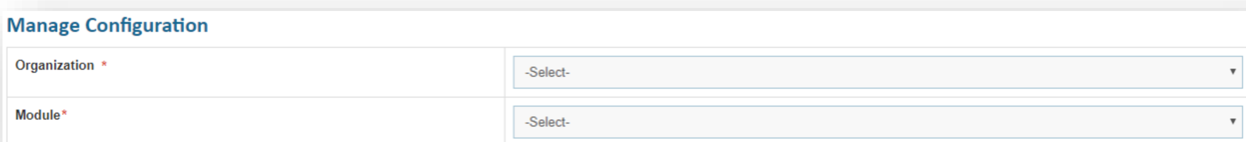


Figure 319- Manage Configuration (Cont.)

BigFix Runbook AI receives the recommended runbook as output based on the confidence score. It suggests which runbook needs to be executed against a ticket. However, the execution of the runbook can be done in two modes:

- **Manual Execution**- The user selects the most appropriate runbook from the list of runbooks suggested by the BigFix Runbook AI.
- **Auto Execution**- BigFix Runbook AI executes the runbook from the solution without any human intervention.

Manual Execution Configuration

To configure manual execution for tickets, perform the following steps:

a. Type the threshold value next to the **UI Display Runbook Threshold Value** field.

   It filters the list of relevant runbooks based on the threshold value. If the runbook’s confidence score is greater than the threshold value, it is made available to the user for manual execution based on their knowledge.

Confidence score is a value which is dynamically updated for a runbook based on the ticket description and the outcomes of the past ticket resolutions.

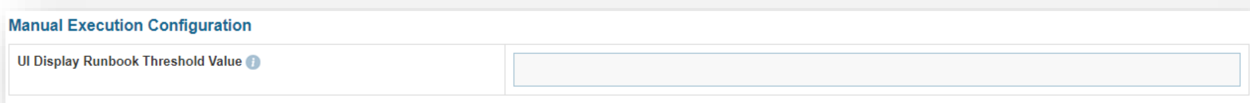


Figure 320- Manage Configuration (Cont.)

Auto Execution Configuration:

To configure auto execution of tickets, perform the following steps:

a. To auto execute runbook based on the recommended solution, select **Enable Auto Execution**.
b. To auto re-execute the runbook after every execution failure or whenever the user changes the confidence score for auto execution, select **Re-Execute**.

You cannot re-execute a ticket in manual mode after the failure of release.

c. To execute with the SME recommendations irrespective of the confidence score, select **Override with SME recommendation**. The application will ignore all the above selections and will execute runbooks recommended by the SME.
d. Type the **Threshold Value** manually for runbook auto execution.
e. Select **On Failure Release** if a ticket does not get a solution and does not execute. The ticket may show the **Failure Status** for the following reasons:
   - A ticket does not get a recommendation.
   - A ticket gets a recommendation but is not parsed.

- A ticket gets a recommendation and is also parsed, but runbook execution fails. In such a case, BigFix Runbook AI enables user to proceed with the following actions:
  - Select **Manual Mode** if user wants to release failed ticket from auto execution mode to manual intervention mode for execution.
  - Select **Rule-Based Release** if user wants to release the failed tickets from auto execution mode to the respective group for execution and moves ticket out of BigFix Runbook AI. These rules are specified in Add Rules.

If a user opts for manual mode, then the failed ticket moves for manual intervention and cannot be released based on release rules.

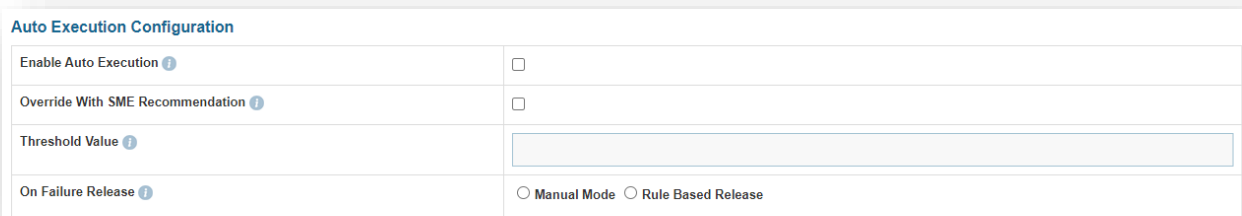


Figure 321- Manage Configuration (Cont.)

Initiation Failed RBA Configuration

User can define the solution for a sleeping or paused runbook. If the API is unreachable and the runbook has reached the maximum number of unsuccessful execution attempts, it goes to the sleep/pause mode.

If a runbook does not execute in both the conditions, then provide the details to perform the below-mentioned activities:

- **Retry After (In Minutes)** - Specifies the wait time to retry the runbook execution after execution failure.
- **Retry Count**- Specifies the count to retry runbook execution according to the scheduled frequency.
- **Release using Rule**- If the attempts for manual release of the runbook have failed multiple times (as defined in the Retry Count parameter) , then select Release using Rule to auto-execute the runbook after the retry count over.

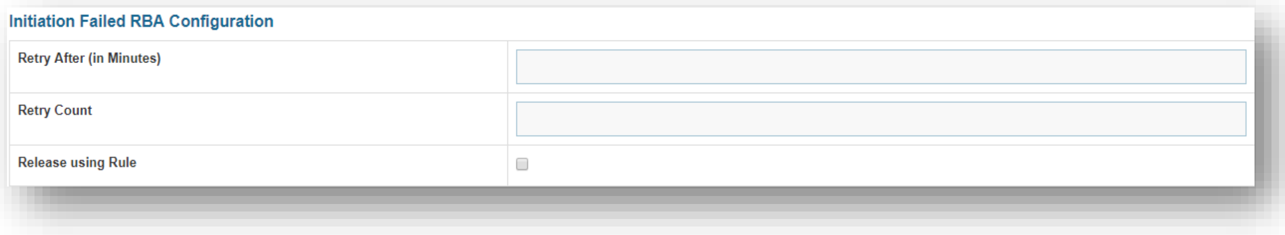


Figure 322- Manage Configuration (Cont.)

Manual Release

In case of a failed ticket, user can immediately move a ticket out of the BigFix Runbook AI queue from the manual and auto execution mode.

- Select **Release Using Rule** to manually release a ticket from BigFix Runbook AI. These rules are specified in Add Rules_MANAGE_RULES section.

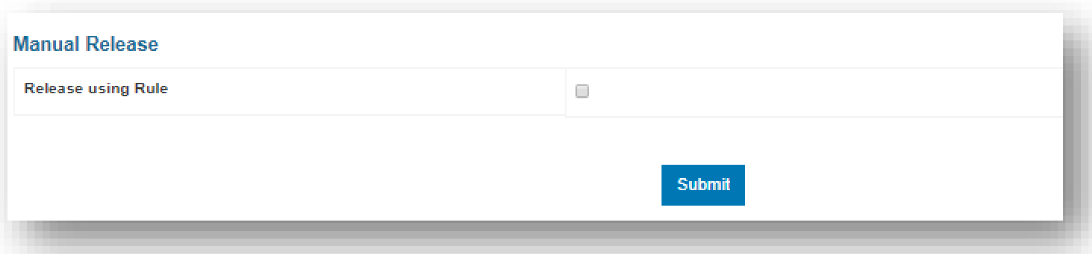


Figure 323- Manage Configuration (Cont.)

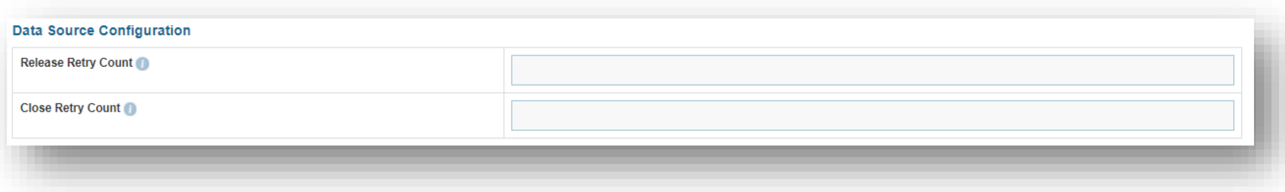


Figure 324 - Manage Configuration (Cont.)

- In **Data Source Configuration** field, enter the **Release Retry Count**. This indicates the maximum number of retry attempts for releasing the ticket.

4. Click **Submit** to save the configuration. A confirmation dialog box appears.

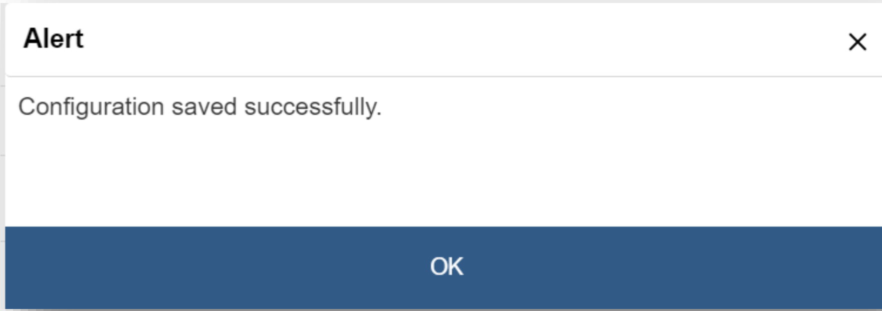


Figure 325- Manage Configuration (Cont.)

The details updated in this section will be displayed in the main UI either in manual mode or auto mode of runbook execution.

3.2.6 Advance Configuration

3.2.6.1 Manage Parameter Master

This section describes how to configure a regular expression for use in the parameter type. A regular expression is a special text string to describe a search pattern during ticket parsing.

Manage Parameter Master is accessible to super admin user only.

To manage parameter master, perform the following steps:

1. On the menu bar, click **Advance Configuration -> Parameter** and then click **Manage Parameter Master**.

The **Manage Parameter Master** page appears.

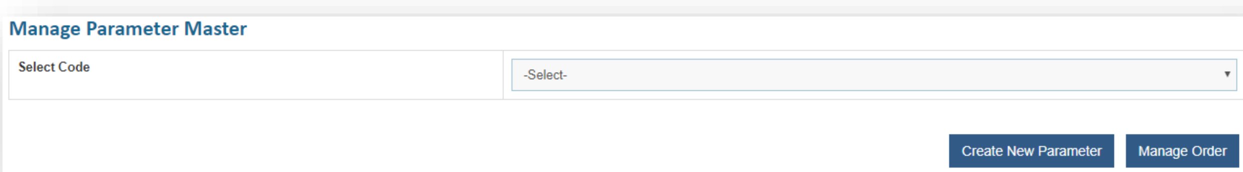


Figure 326- Manage Parameter Master

2. Select a code by clicking the drop-down next to the **Select Code** field.

If there are any available parameter values under the selected code, they are listed in a tabular view that allows the user to add a new parameter, edit or delete existing parameters, and manage the order of existing parameters.

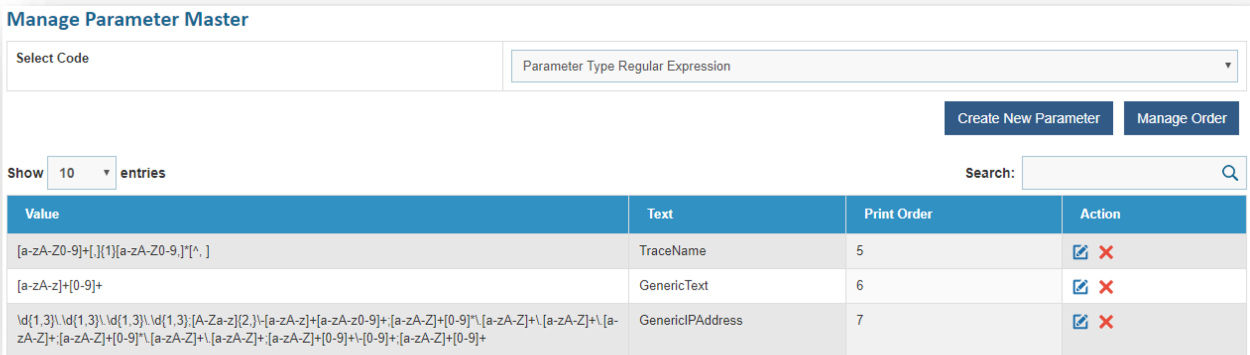


Figure 327- Manage Parameter Master (Cont.)

The user can change the list of values shown as a result of selected code by selecting a number under the Show tab. The user can refine the search by typing the Parameter Value keywords in the Search field.

3.2.6.1.1 Add Parameter

User can add a new parameter type by performing the following steps:

1. On the menu bar, click **Advance Configuration Menu -> Parameter** and then click **Manage Parameter Master**.
2. On the **Manage Parameter Master** page, select a code by clicking the drop-down next to the **Select Code** field. This enables the **Create New Parameter** button.

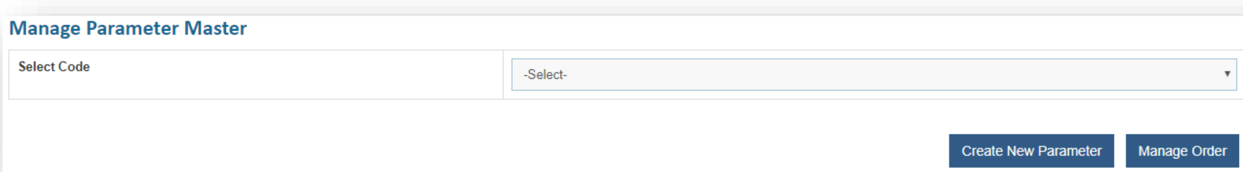


Figure 328- Add Parameter

3. To create a new parameter, click **Create New Parameter**.
4. The **Manage Parameter** page appears and prompts user to specify the following attributes.

- **Parameter Text**: This is used to identify a new parameter.
- **Parameter Value**: This describes the regular expression for a parameter under the selected code.

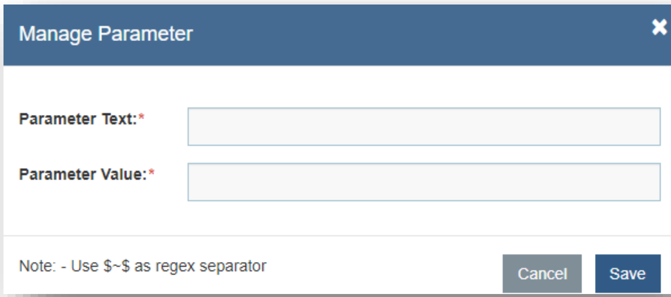


Figure 329- Create Parameter (Cont.)

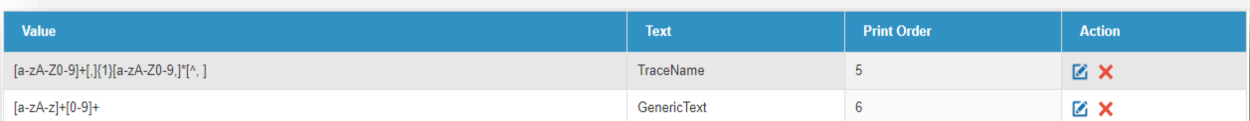
5. Click **Save**.

This adds the new parameter and lists it in the parameters.

3.2.6.1.2 Edit Parameter Value

User can open a parameter value, review the available information, and change the parameter's details by performing the following steps:

1. On the **Manage Parameter Master** page, click next to the parameter value you want to edit.



Value	Text	Print Order	Action
[a-zA-Z0-9]+[,]{1}[a-zA-Z0-9,]*[^,]	TraceName	5	
[a-zA-z]+[0-9]+	GenericText	6	

Figure 330- Edit Parameter Value

The **Manage Parameter** page appears.

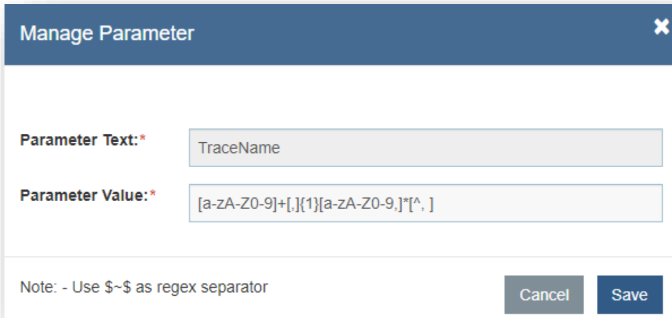


Figure 331- Edit Parameter Value (cont.)

2. Edit the required details of the parameter.
3. Click **Save** to save changes or click **Close** to discard all changes.

A confirmation dialog box appears.

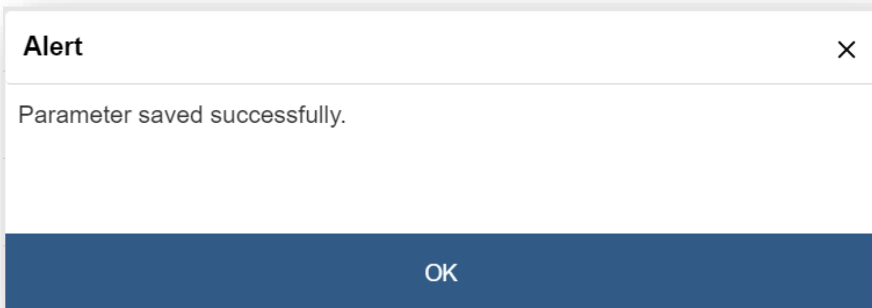


Figure 332- Edit Parameter Value (cont.)

3.2.6.1.3 Delete Parameter Value

BigFix Runbook AI allows user to view parameter values and delete them, if not required.

To delete the parameter value, perform the following steps:

1. On the **Manage Parameter Master** page, click ❌ next to the parameter value user wants to delete.

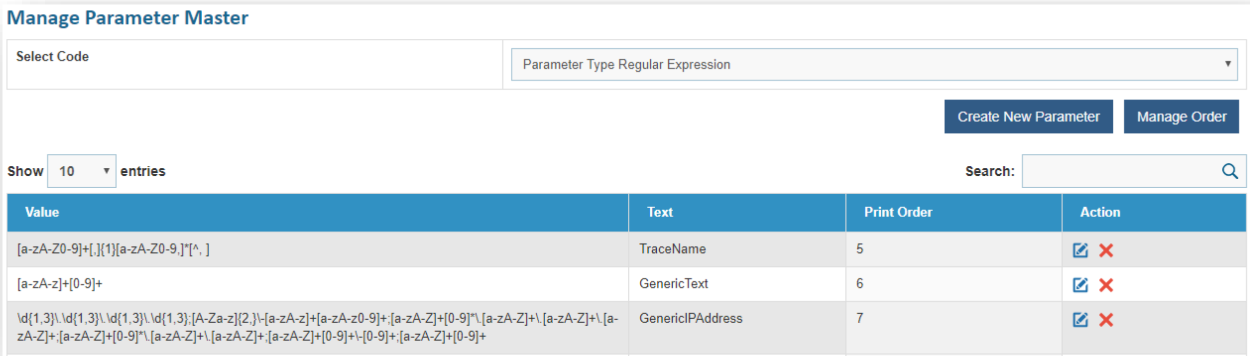


Figure 333- Delete Parameter Value

2. Click **OK** to confirm.

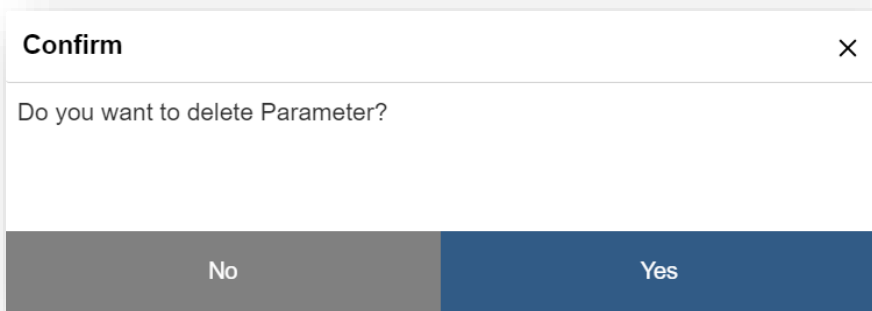


Figure 334- Delete Parameter Value (Cont.)

A confirmation dialog box appears.

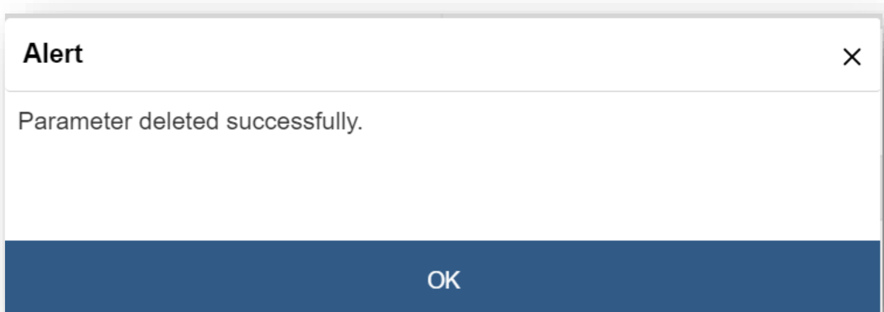


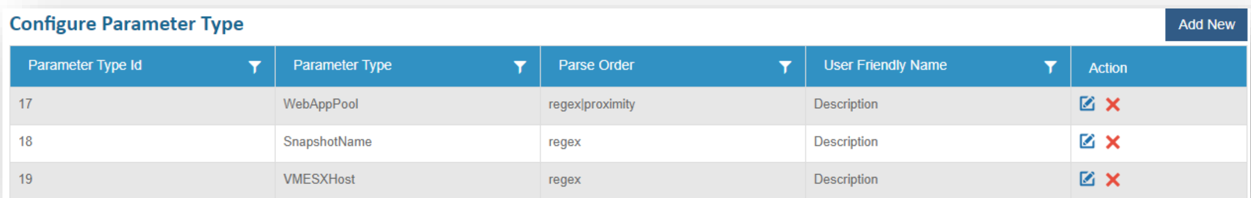
Figure 335- Delete Parameter Value (Cont.)

3.2.6.2 Configure Parameter Type

To enhance the BigFix Runbook AI workflow, user can include customer specific parameter types for parsing tickets.

To configure a customer specific parameter type, perform the following steps:

1. On the main menu bar, click **Advance Configuration->Parameter**.
2. Click **Configure Parameter Type**. The **Configure Parameter Type** page appears.



Configure Parameter Type   Add New

Parameter Type Id	Parameter Type	Parse Order	User Friendly Name	Action
17	WebAppPool	regex|proximity	Description	
18	SnapshotName	regex	Description	
19	VMESXHost	regex	Description	

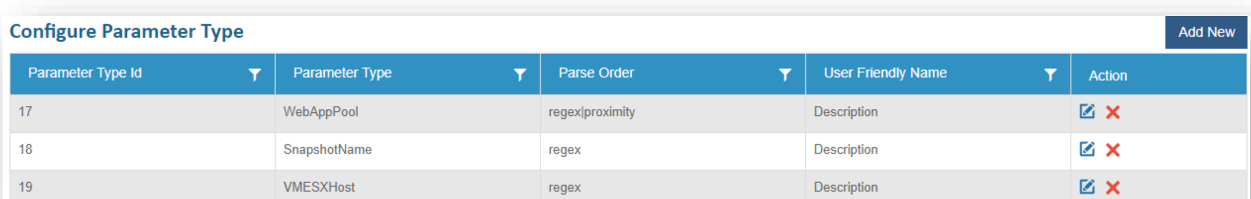
Figure 336- Configure Parameter Type

This lists the **Parameter Type ID**, **Parameter Type**, **Parse Order**, and **User-Friendly Name** in a tabular view which enables user to add a new parameter type and edit or delete existing parameter types.

3.2.6.2.1 Add Parameter Type

User can add a customer specific parameter type in BigFix Runbook AI by performing the following steps:

1. On the **Configure Parameter Type** page, click **Add New**.



Configure Parameter Type   Add New

Parameter Type Id	Parameter Type	Parse Order	User Friendly Name	Action
17	WebAppPool	regex|proximity	Description	
18	SnapshotName	regex	Description	
19	VMESXHost	regex	Description	

Figure 337- Add Parameter Type

2. The **Configure Parameter Type** page prompts users to manually fill the following fields:

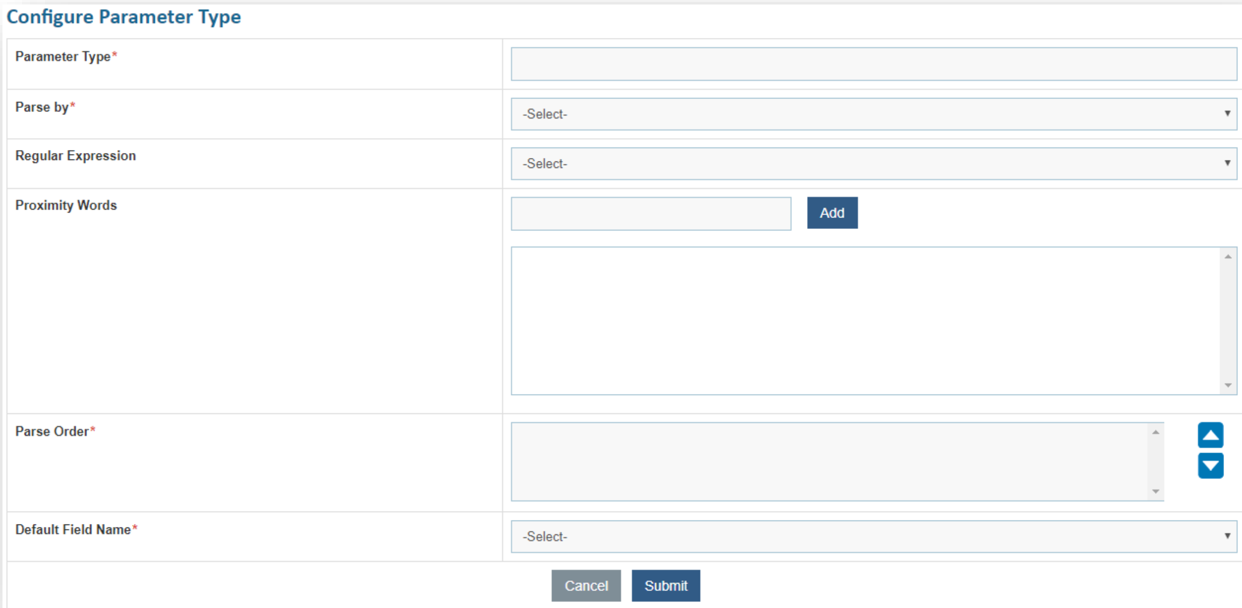


Figure 338- Add Parameter Type (Cont.)

a. Type the parameter type identifier in the **Parameter Type** field.

b. Select the ticket parsing method from the **Parse by** drop-down list**.**

- **Regex and Proximity**: In this method, both Regex and Proximity features are used for parsing.
- **Only Regex**: In this method, tickets are parsed using the default values added in Regex.
- **Only Proximity**: In this method, tickets are parsed using the proximity words that were added in the Proximity field.
- **Equal search**: In this method, you can manually type single or multiple words which will be used for performing a direct match for ticket parsing.

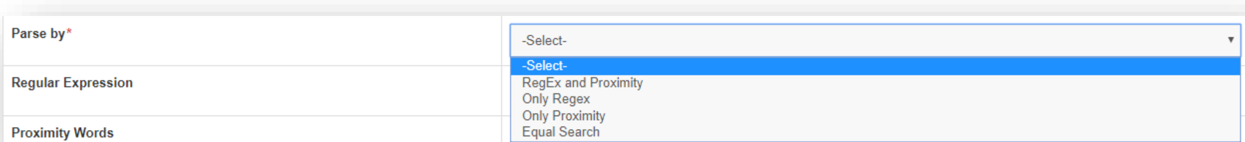


Figure 339- Add Parameter Type (Cont.)

c. Select **Regular Expression** for the parameter type added.

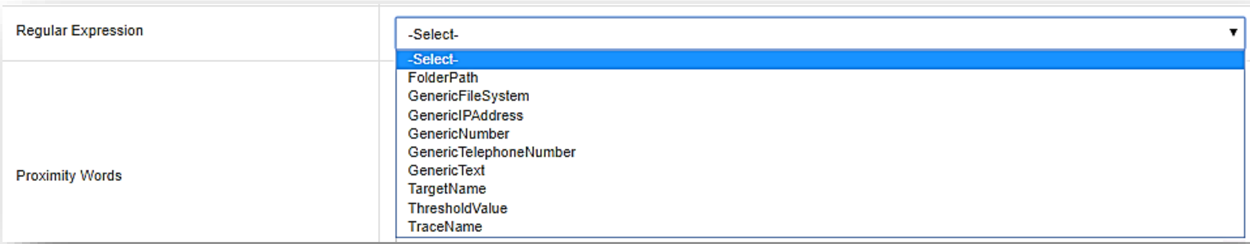


Figure 340- Add Parameter Type (Cont.)

d. Type the **Proximity Word** that should be in proximity to the parameter type and will be used for parsing. To add a proximity word for the selected parameter type, click **Add**. The added proximity word appears in the field below the **Proximity Words**. To delete the proximity word, click on the cross over the word.

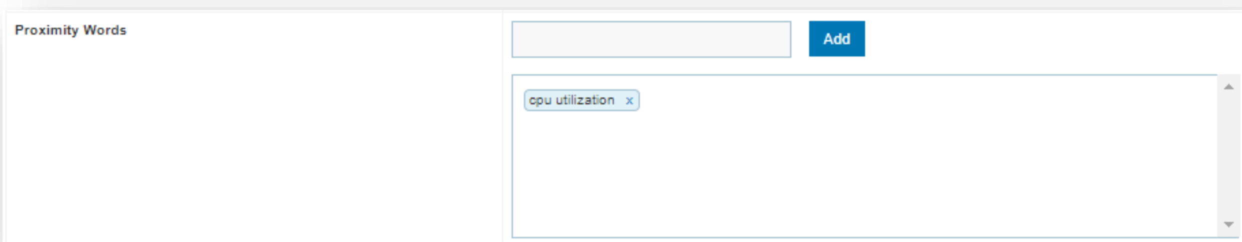


Figure 341- Add Parameter Type (Cont.)

e. Select the **Parse Order** to prioritize the parsing methods in case multiple parsing methods are available.

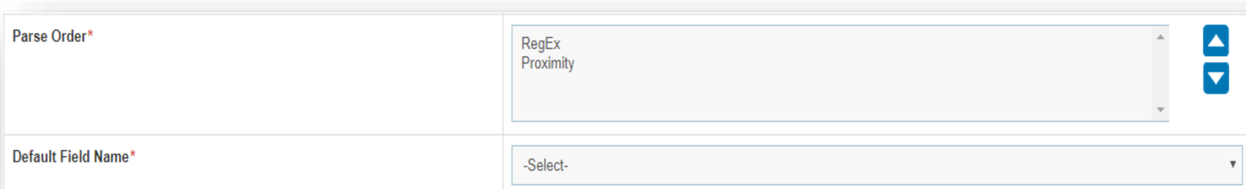


Figure 342- Add Parameter Type (Cont.)

f. Type the default field name in the **Default Field Name** field to fetch the data for parsing.

3. Click **Submit** to configure a new parameter type or click **Back** to cancel the parameter configuration.

   The new parameter type is added and listed in a tabular view.

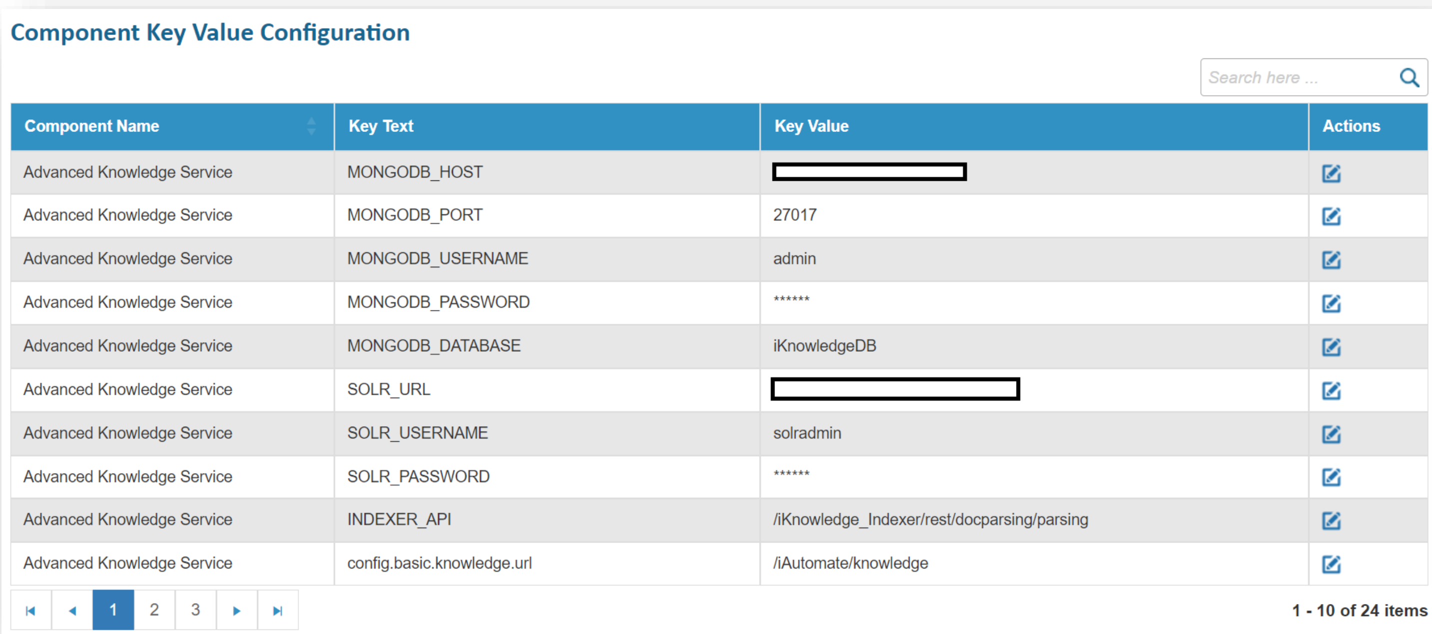
All fields marked with an asterisk (*) are mandatory or click Back if user wants to cancel the parameter configuration.

3.2.6.3 Component Key Value Configuration

User can use BigFix Runbook AI components to manage application features. Each configuration component contains one or more component keys, each of which identifies a configurable property of the component. This section describes how to manage these key values for the components.

To configure the component key values, perform the following steps:

1. On the main menu bar, click **Advance Configuration->Connectivity** and then click **Component Key Value Configuration**. The **Component Key Value Configuration** page appears.


Component Key Value Configuration

Search here ...

Component Name	Key Text	Key Value	Actions
Advanced Knowledge Service	MONGODB_HOST		
Advanced Knowledge Service	MONGODB_PORT	27017	
Advanced Knowledge Service	MONGODB_USERNAME	admin	
Advanced Knowledge Service	MONGODB_PASSWORD	******	
Advanced Knowledge Service	MONGODB_DATABASE	iKnowledgeDB	
Advanced Knowledge Service	SOLR_URL		
Advanced Knowledge Service	SOLR_USERNAME	solradmin	
Advanced Knowledge Service	SOLR_PASSWORD	******	
Advanced Knowledge Service	INDEXER_API	/iKnowledge_Indexer/rest/docparsing/parsing	
Advanced Knowledge Service	config.basic.knowledge.url	/iAutomate/knowledge	

1 2 3 — 1 - 10 of 24 items

Figure 343- Component Key Value Configuration

2. To edit existing values, click next to the value user wants to edit. It displays a popup with auto-filled details.

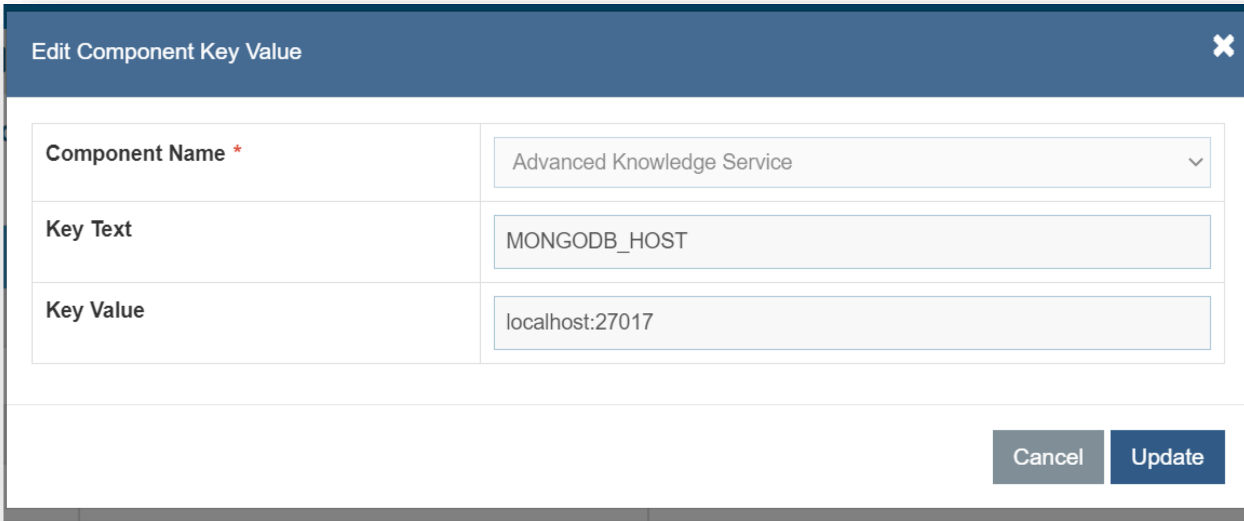


Figure 344- Component Key Value Configuration (Cont.)

3. Edit the required details and click **Update**.

Incorrect changes to key values can severely degrade system performance.

4. Click **Clear** to cancel any modifications.

BigFix Runbook AI provides easy search capabilities to access required key values from the list of key values for certain words or set of characters. Type a value in the **Key Text** or **Key Value** fields and click **Search** to get the desired outcome.

3.2.6.4 Product Configurations

This section describes how to perform component configurations and control the behavior of each individual component within BigFix Runbook AI.

To configure the components, perform the following steps:

1. On the main menu bar, click **Advance Configuration**, and then click **Product Configuration**. The **BigFix Runbook AI Configuration** page appears.
2. **Toil Value (For Manual Execution)** is the maximum manual execution time of runbook (in minutes). By default, it is set to 60 which users can change.
3. **Toil Value (For Auto Execution)** is the maximum auto execution time of runbook (in minutes). By default, it is set to blank which users can change.

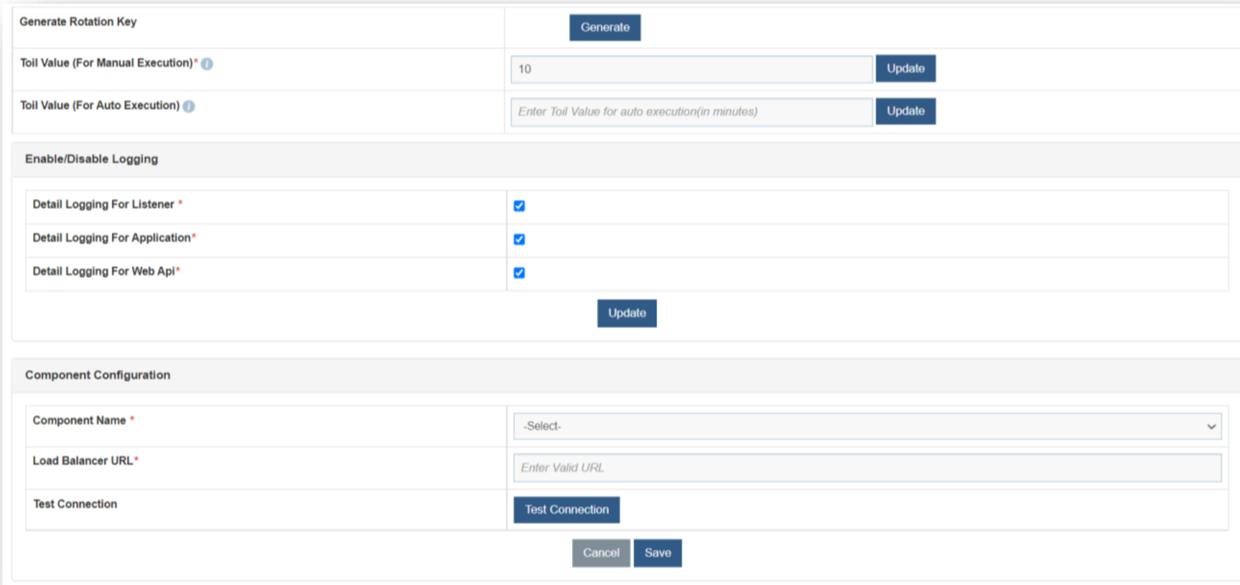


Figure 345- BigFix Runbook AI Configurations

For a list of components installed on BigFix Runbook AI, refer to '**Pre-requisite for BigFix Runbook AI Component**' in the BigFix Runbook AI Pre-Requisite Guide.

4. Make selection in **Enable/Disable Logging** field:
    - To enable status logging for the Listener, select **Detail Logging For Listener** under **Enable/ Disable Logging** for Listener.
    - To enable status logging for Application, select **Detail Logging For Application** under **Enable/ Disable Logging** for Application.
    - To enable status logging for Web API, select **Detail Logging For Web API** under **Enable/ Disable Logging** for Web API.
5. Click **Update** to save settings.
6. Select a component from the drop-down list next to the **Component Name** field.

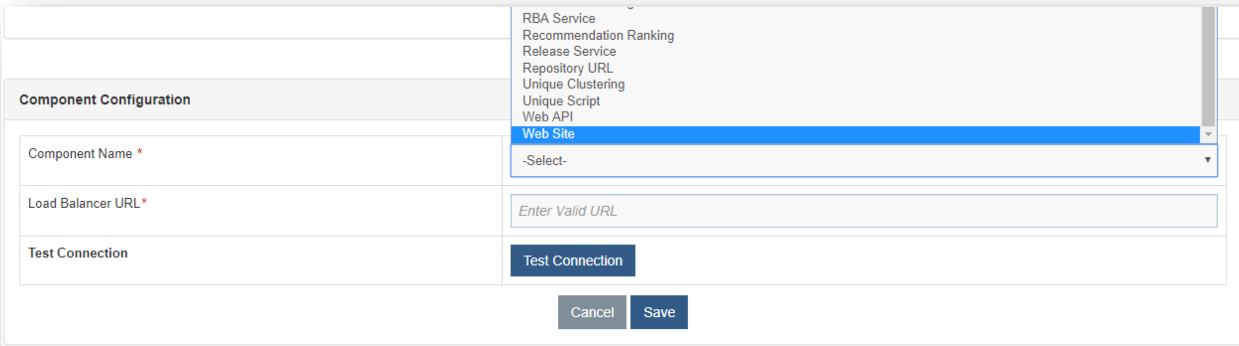


Figure 346- BigFix Runbook AI Configurations (Cont.)

7. Type the **Load Balancer URL** for the selected component to evenly distribute the workload among multiple instances, increasing system throughput.
8. Click on **Test Connection** to check accessibility of provided URL from service.
9. Select **Recommendation** or **Entity** as a component. This will prompt you to provide the folder location to create the recommendation or an entity model in the **Recommendation** or **Entity Model Location** field.

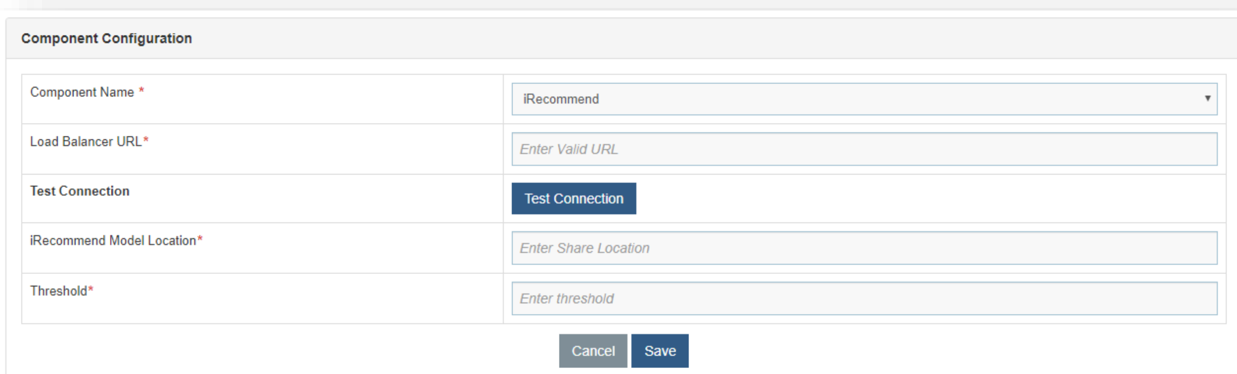


Figure 347- BigFix Runbook AI Configurations (Cont.)

10. Click **Save**.

3.2.6.5 iScrape API Details

User can configure the API details such as the Google custom search API key, API URL, and so on. User can use these details to fetch scripts using the Google search API.

To manage the iScrape API details, perform the following steps:

1. On the main menu bar, click **Advance Configuration->Connectivity**, and then click **iScrape API Details**.

The **iScrape API Details** page appears.

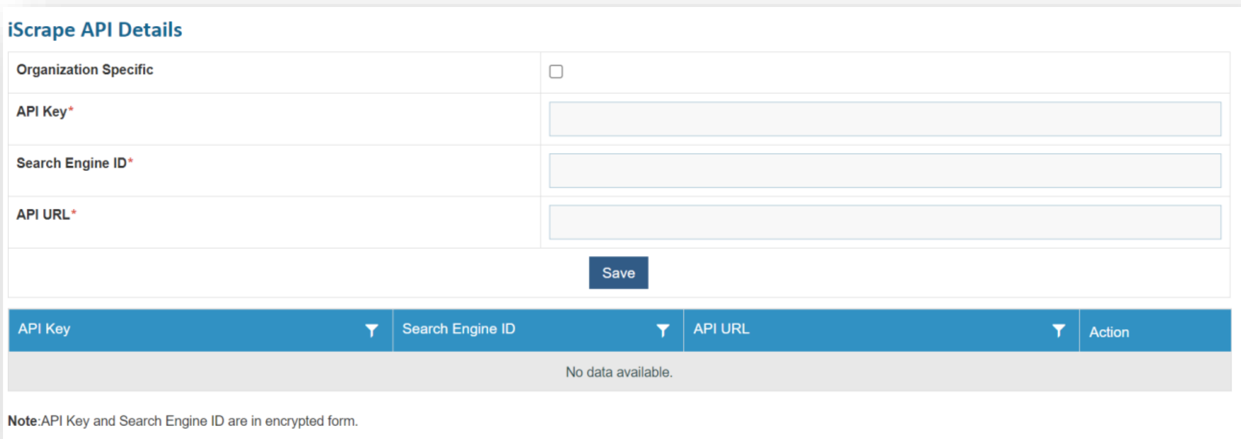


Figure 348- BigFix Runbook AI Configurations (Cont.)

It lists the existing API keys in a tabular view and enables user to edit or delete the keys.

2. Check the **Organization Specific** checkbox if the APIs are to be used for any particular organization else the saved APIs will only correspond to Super Admin and will not be applicable for any organization.
3. Type the google custom search API key, to identify the user to the website, in the **API Key** field.
4. Type the search engine ID to search for information on the internet in the **Search Engine ID** field.
5. Type the API url in the **API URL** field.
6. Click **Save**.

A confirmation dialog box appears.

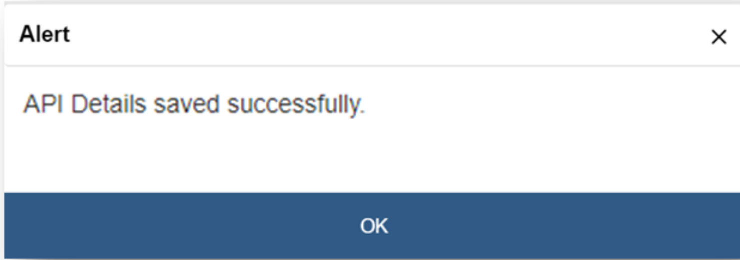


Figure 349- BigFix Runbook AI Configurations (Cont.)

This adds the new API URL and lists it in a tabular view. The API key and Search Engine ID is saved and displayed in encrypted form.

3.2.6.5.1 Edit or Delete iScrape Details

User can review the existing iScrape APIs, edit their details, or delete existing API keys by performing the following steps:

1. On the **iScrape API Details** page, click  next to the API that user wants to edit.

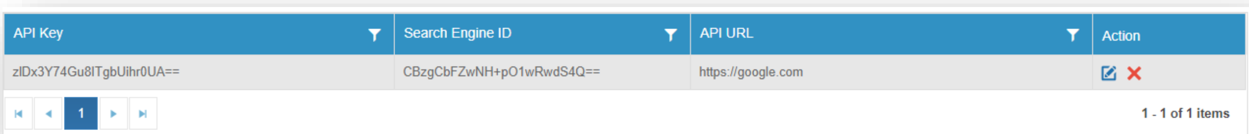


Figure 350- BigFix Runbook AI Configurations (Cont.)

It displays the selected **API Key details**.

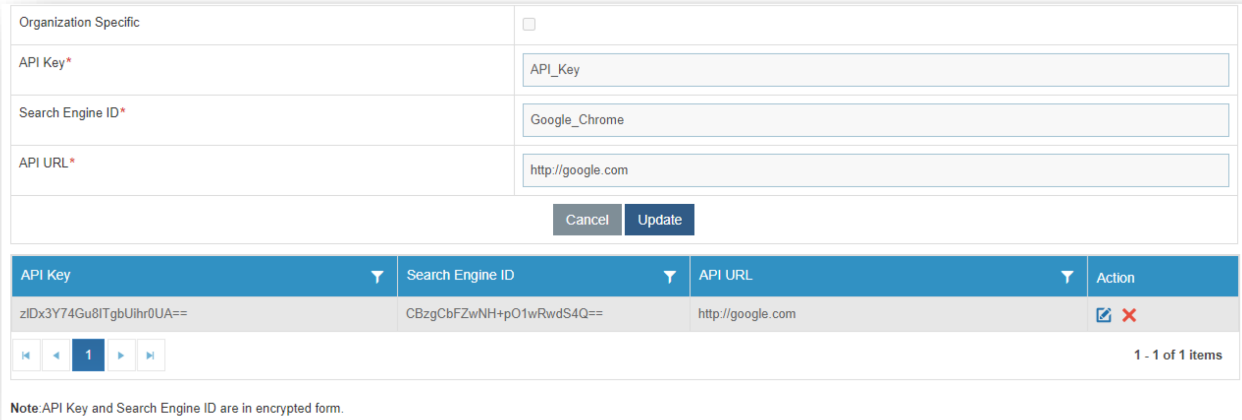


Figure 351- BigFix Runbook AI Configurations (Cont.)

2. Edit the required details and click **Update**. A confirmation dialog box appears.

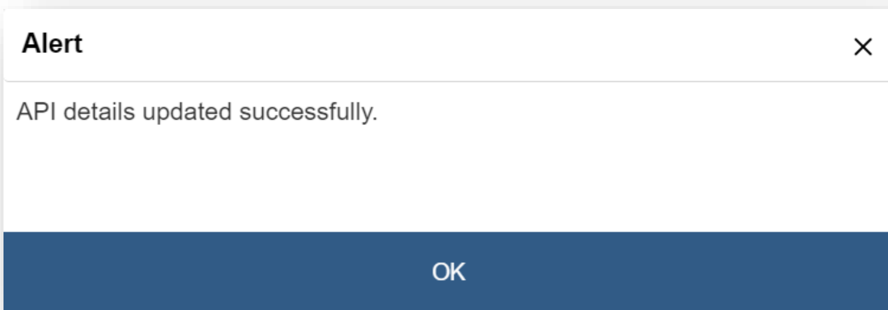


Figure 352- BigFix Runbook AI Configurations (Cont.)

3. To delete an **API Key**, click  next to the organization you want to delete. A confirmation dialog box appears.

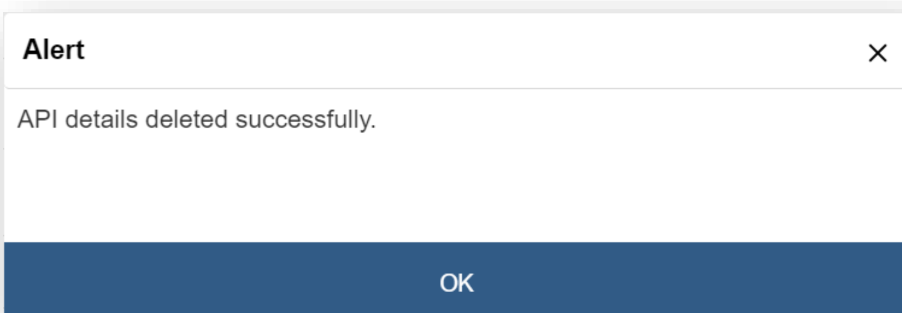


Figure 353- BigFix Runbook AI Configurations (Cont.)

3.2.6.6 Connection Details

User can Manage the connection details from this menu.

To manage the connection details, perform the following steps:

1. On the main menu bar, click **Advance Configuration->Connectivity**, and then click **Connection Details**.

   The **Connection Details** page appears.

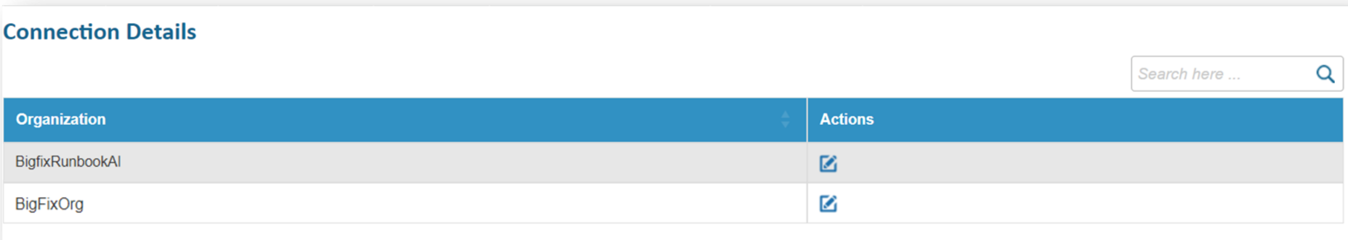


Figure 354- Connection Details

   It lists the existing Organization.

2. Click the Edit icon under the **Action** tab to edit the details.

On the click of edit, the connection string will only be visible in the textbox if the below key is set to 'Y' in BaseUI's web.config. If its value is 'N', then the Connection String textbox will be empty.

```
<add key="isDecryptConnection" value="Y" />
```

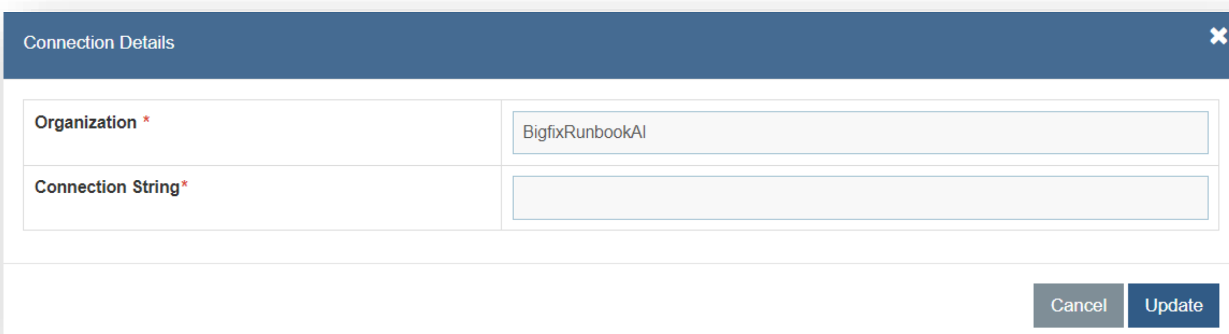


Figure 355- Connection Details (Cont.)

3. Type the updated connection string. Click **Update** to make the changes. A confirmation dialog box appears.

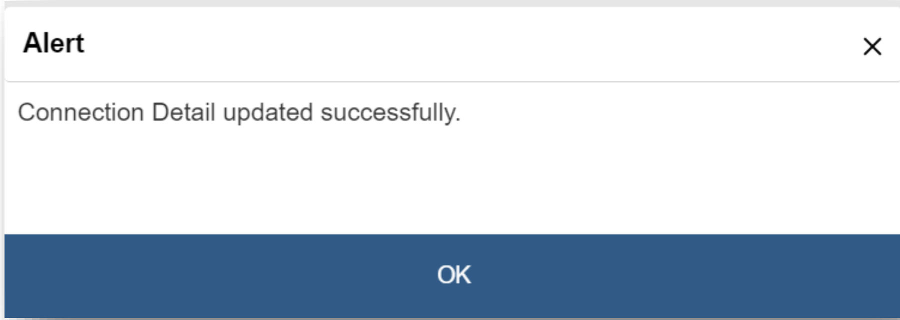


Figure 356- Connection Details (Cont.)

3.2.6.7 Manage Custom Script

User can create the custom scripts in Python/PowerShell that can be executed from BigFix Runbook AI through the API.

To execute Python scripts, it is required that Python is installed on the web server and its Environment Variable is set with name ‘PYTHON_HOME’ and its value will be the path where python.exe is present.

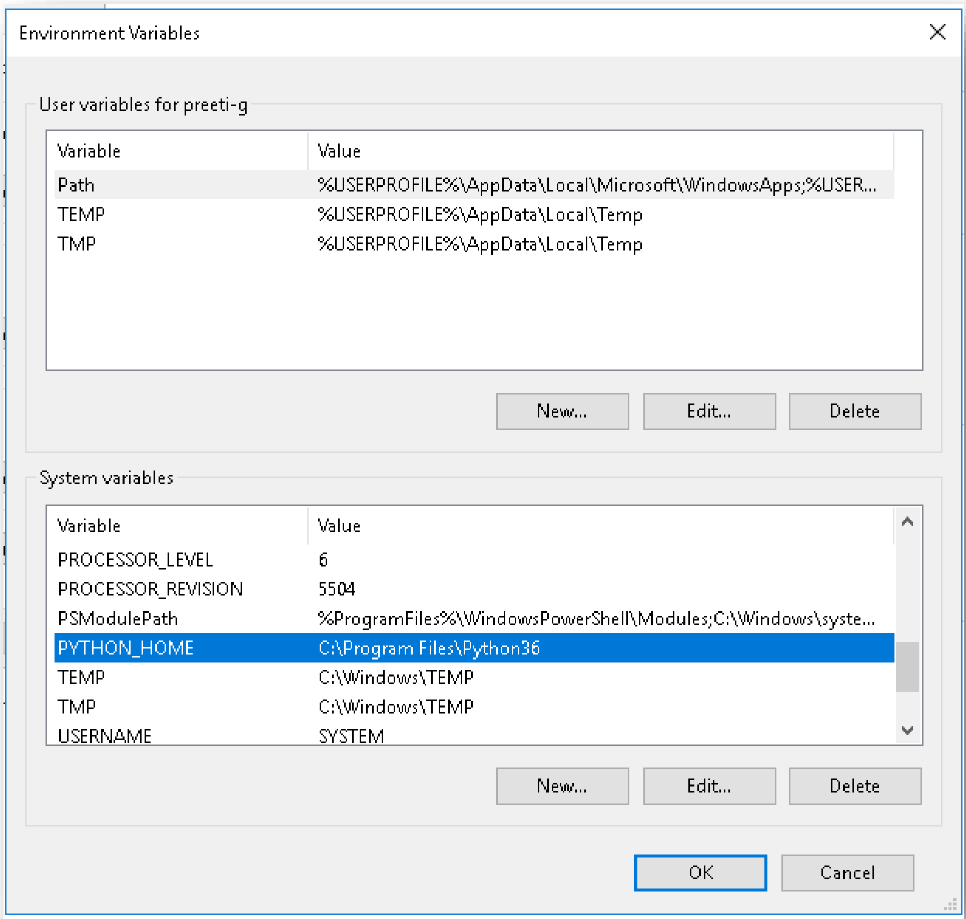


Figure 357 - Environment variables

1. To create/manage custom scripts, click on **Advance Configuration->Script Menu** and then click on **Manage Custom Script**. The following page will appear:

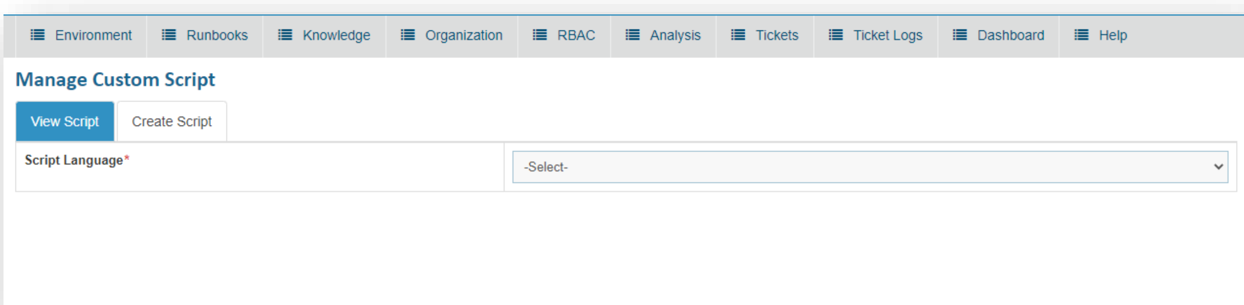


Figure 358- Manage Custom Script

The page has two tabs:

a. View Script

b. Create Script.

2. Click on **View Script** tab. The dropdown of **Script Language** contains 2 items:
   - Python,
   - PowerShell.
3. Select the **Script Language** from the dropdown. The following table appears:

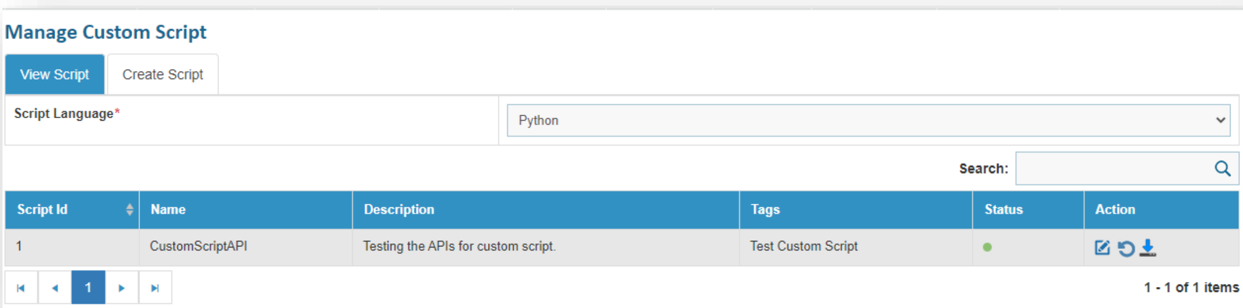


Figure 359- MANAGE CUSTOM SCRIPT (cont.)

The table shows the **Script Id** of that script saved in the database, **Name** of the script, **Description** given for the script, the **Tags** defined while script creation, the **Status** of the script whether active or inactive and some **Action** buttons.

To edit any script, click on icon:

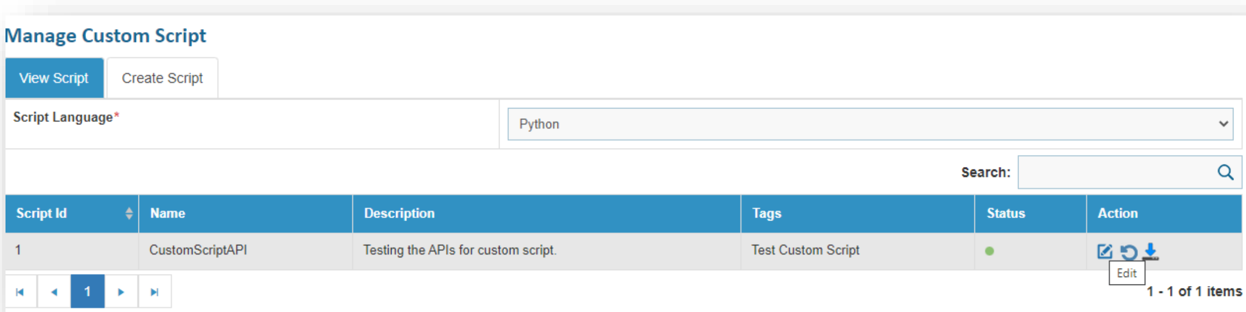


Figure 360- Manage Custom Script (Cont.)

The **Create Script** tab will be active with all the details of the script filled in the fields of this page:

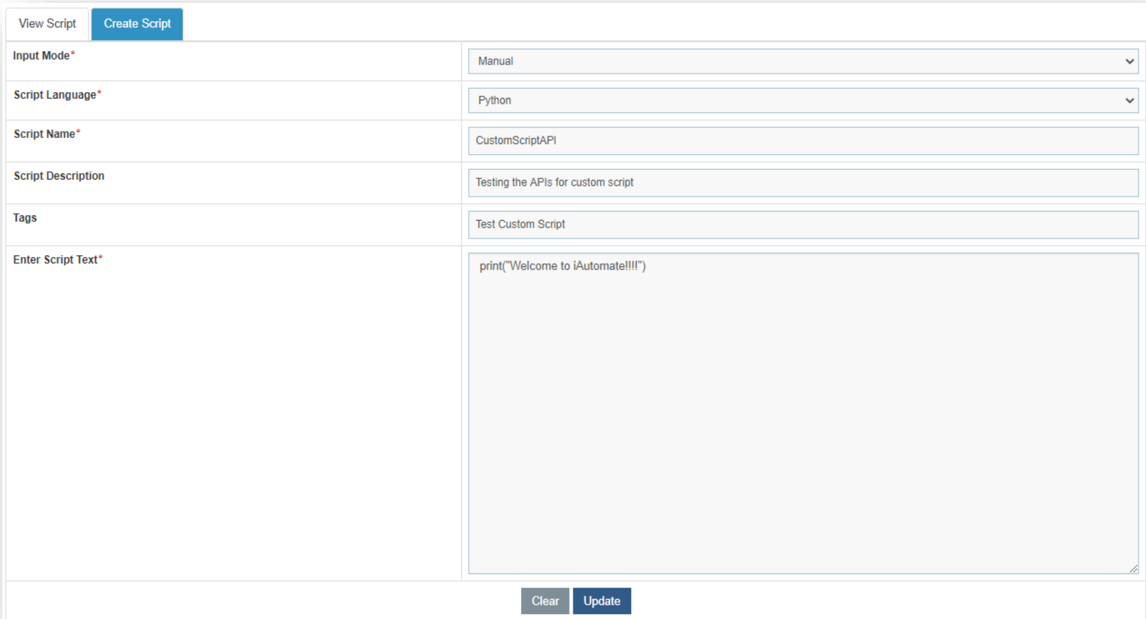


Figure 361- Manage Custom Script (Cont.)

4. Edit the script as per the requirement and click **Update**. A confirmation box will appear as below:

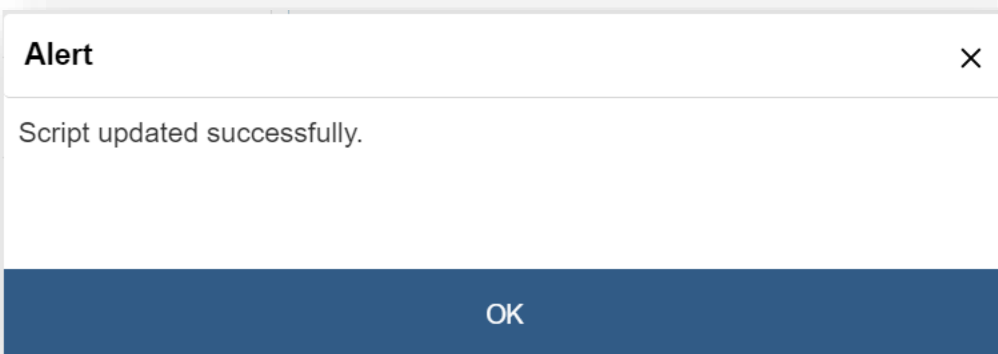


Figure 362- Manage Custom Script (Cont.)

5. To change the status of any script, click on  icon:

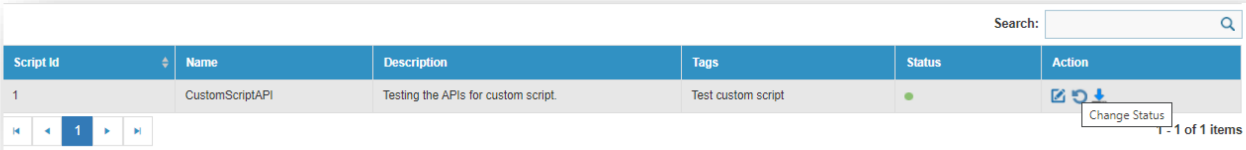


Figure 363- Manage Custom Script (Cont.)

A dialog box will appear to confirm whether user wants to change the status of the script:

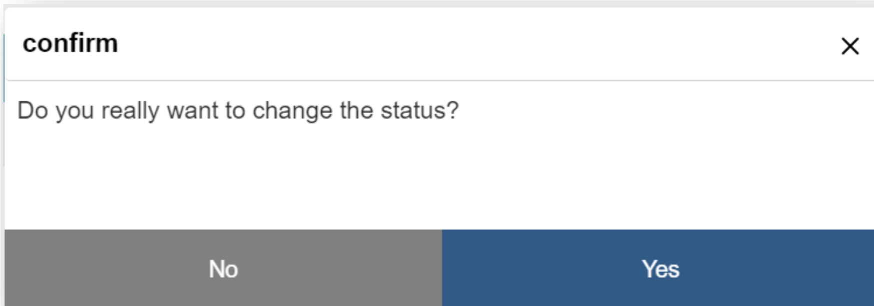


Figure 364- Manage Custom Script (Cont.)

If yes, then the confirmation dialog box appears as below:

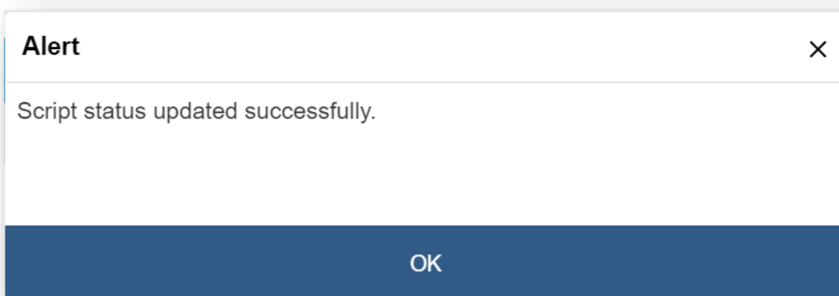


Figure 365 - Manage Custom Script (Cont.)

6. To download the script data in a json file, click on icon:

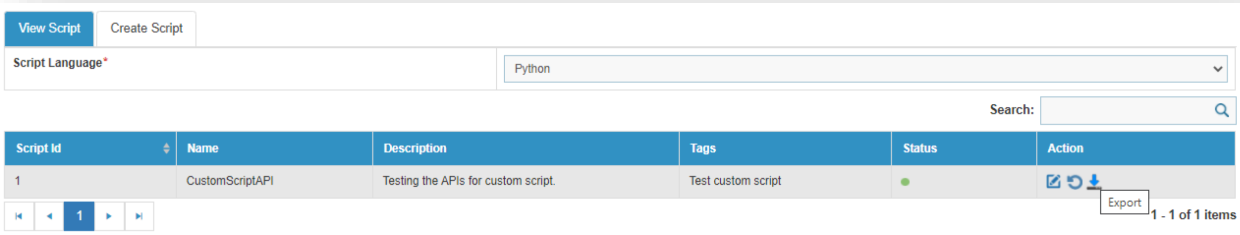


Figure 366- Manage Custom Script (Cont.)

It downloads the script data in json file that contains below information:


```
[
  {
    "ScriptLanguage": "PYTHON",
    "ScriptName": "CustomScriptAPI",
    "ScriptDescription": "Testing the APIs for custom script.",
    "Tags": "Test custom script",
    "Script": "0bzUXYSTG4/JeuvqsOqYq0DB0gO50T9ZM/JQ9tzlZkc="
  }
]
```


Figure 367- Manage Custom Script (Cont.)

Script value is in encrypted form.

7. Click on **Create script** tab and the below page appears:

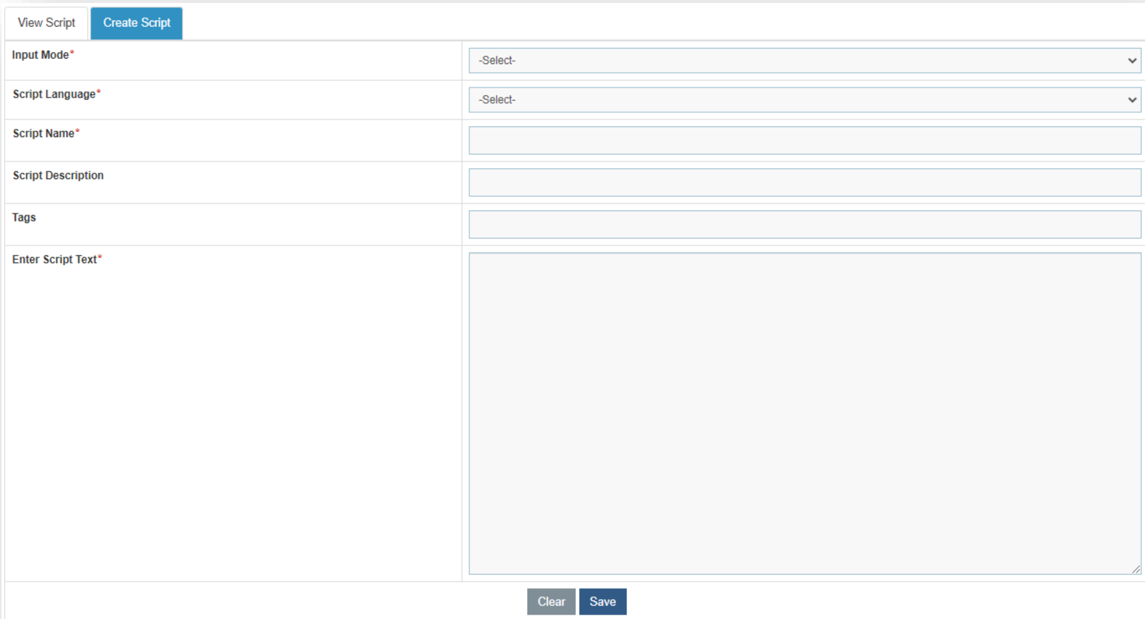


Figure 368- Manage Custom Script (Cont.)

8. The **Input Mode** dropdown has two following options:
    a. **Manual:** user can fill all the details on this page manually
    b. **Json** : User can import a valid json file to fill all the details through that file only.

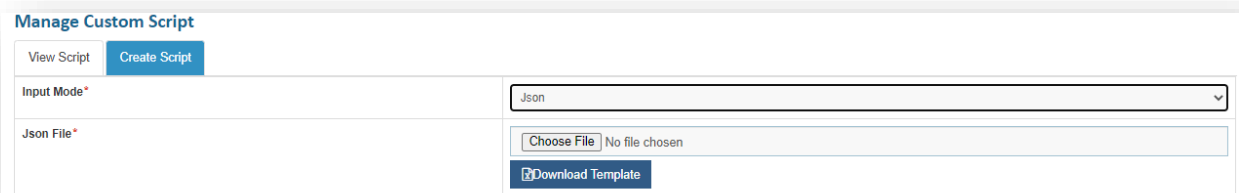


Figure 369- Manage Custom Script (Cont.)

Click on Download Template button to get the template for a valid Json file.

9. The **Script Language** dropdown has two following options:
    a. **Python:** To create a script in Python language
    b. **Power Shell:** To create a script in Power Shell language.

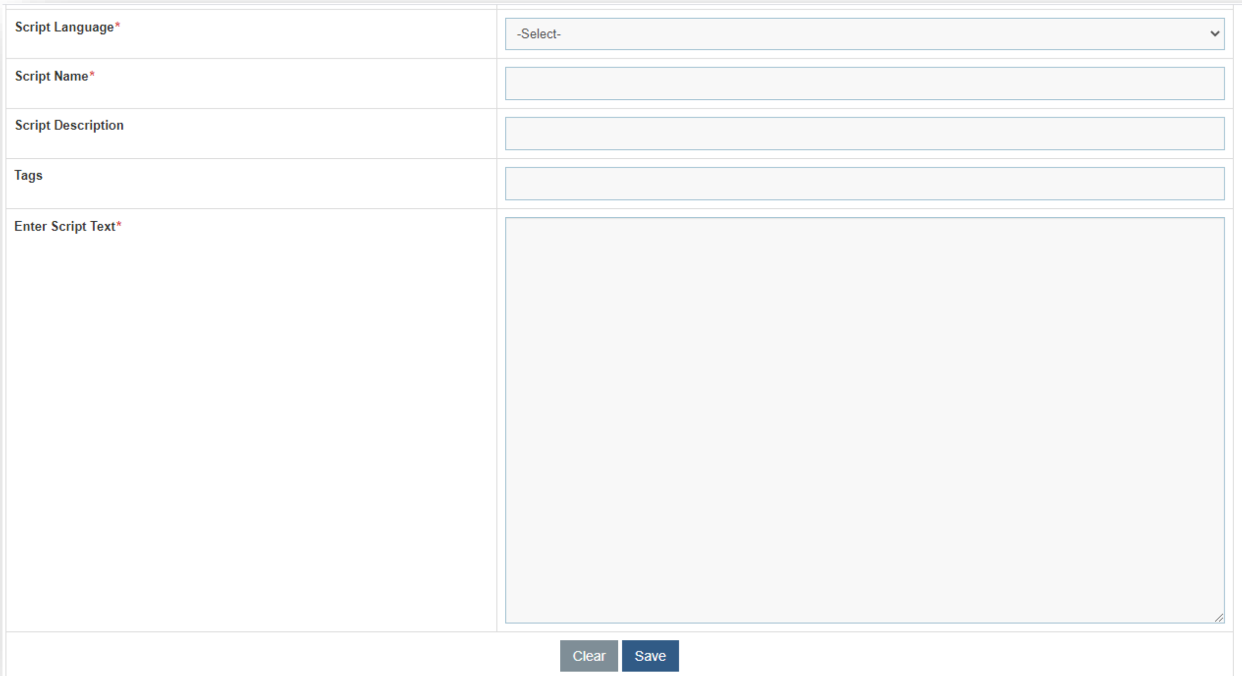


Figure 370- Manage Custom Script (Cont.)

10. Enter the script name in the **Script Name** text box.
11. Enter the suitable script description corresponding to **Script Description** text box.
12. Enter the tags for better filtering of scripts.
13. Enter the script text as per the language chosen in **Script Language** dropdown.
14. Once all entries are filled, click **Save**. A confirmation dialog box will appear.

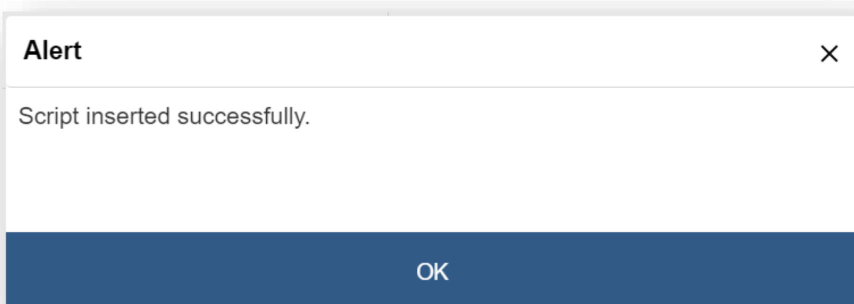


Figure 371- Manage Custom Script (Cont.)

This feature can be used to support complex third-party system integration where the script can be simply created for the complex logic and this script can be used via API wherever needed.

3.2.6.8 Configure Key Vault

This section describes how to configure the passwords stored in Key Vault eg: CyberArk so that it can be used on screens to fetch password directly from Key Vault.

To configure key vault, perform the following steps:

1. On the main menu bar, Click on **Advance Configuration**. A dropdown appears. Click on **Configure Key Vault**. The following screen appears:

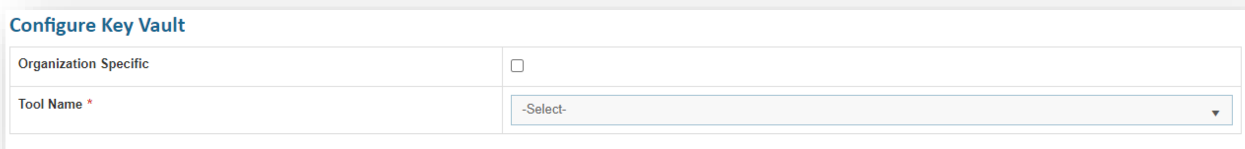


Figure 372 - Configure Key Vault for Super Admin

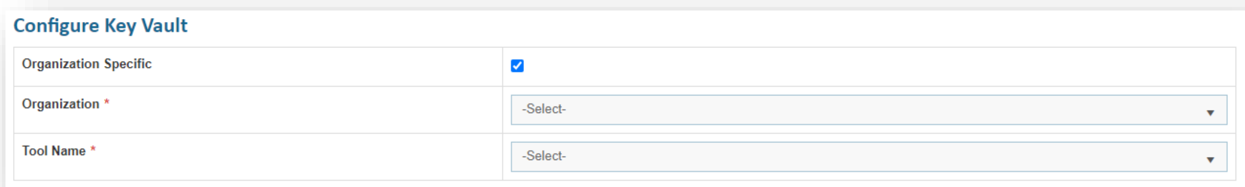


Figure 373 - Configure Key Vault for Super Admin for Organization Specific

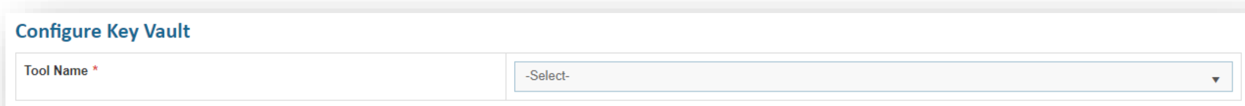


Figure 374 - Configure Key Vault for Organization Admin

The configurations saved without **Organization Specific** checkbox being checked will be used at admin level. And the configurations saved corresponding to any Organization will be used for that organization only.

2. Select **Organization** from dropdown.
3. Select **Tool Name** from dropdown. (For Admin level configurations, skip step 2 and directly select Tool Name).

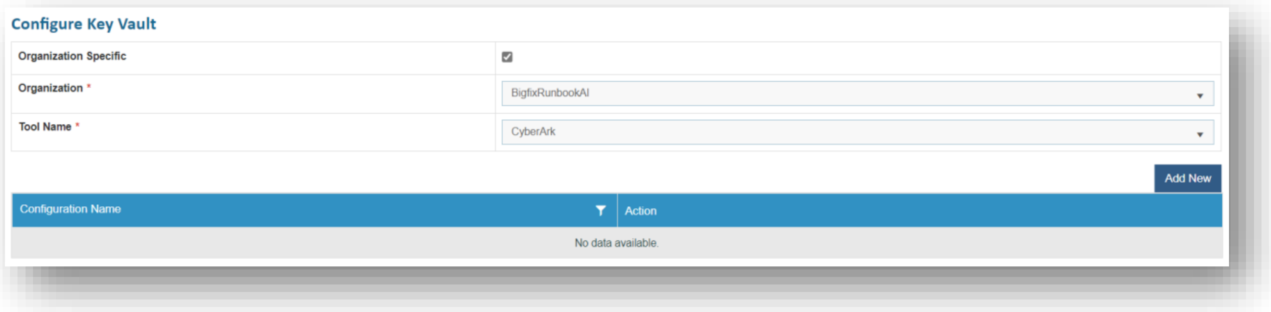


Figure 375 - Configure Key vault

4. For tool name **CyberArk**, below popup is opened:

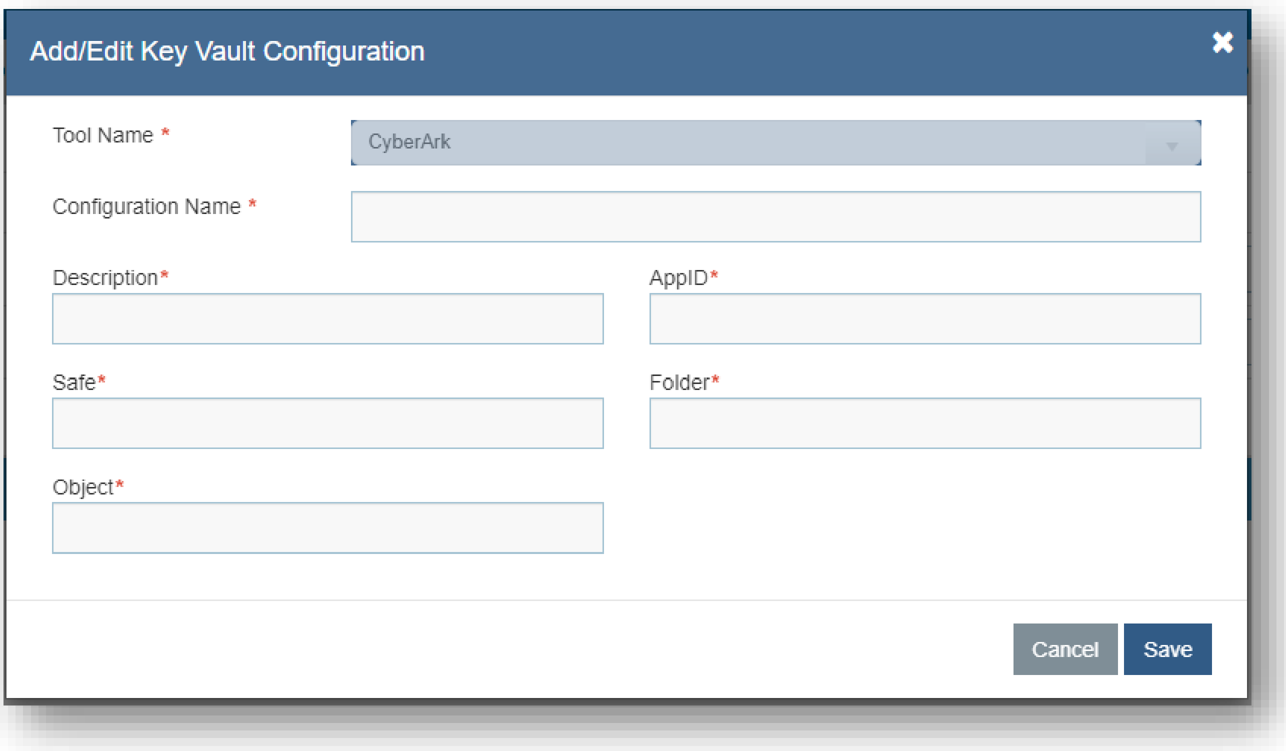


Figure 376 - Key vault Configuration (Cont.)

   a. Enter the **Configuration Name** and its **Description**.
   b. Enter the **AppID**, **Safe**, **Folder** and **Object** for the password stored in Key Vault.

5. For tool name as **Internal Secret Manager**, the below popup opens when clicked on 'Add New' button.

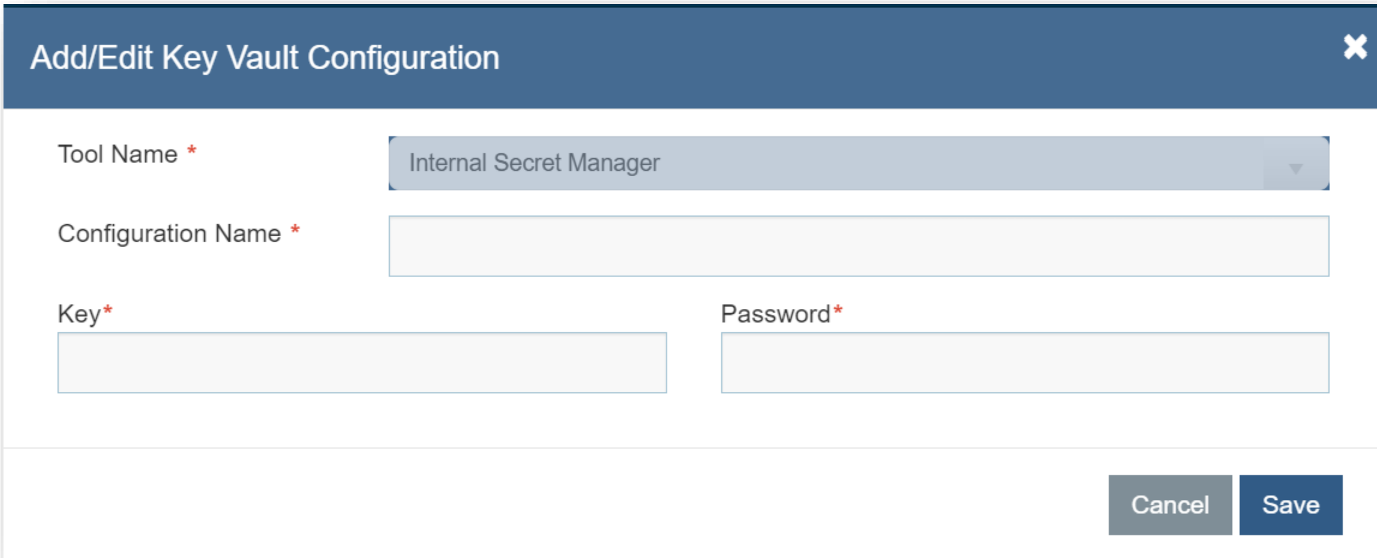


Figure 377 - Key Vault Configuration

a. Enter the Configuration name.

b. Enter the key value such as SNOWPassword in case of password for SNOW.

c. Enter the password value in Password field.

6. Click on **Save**. The following confirmation message appears.

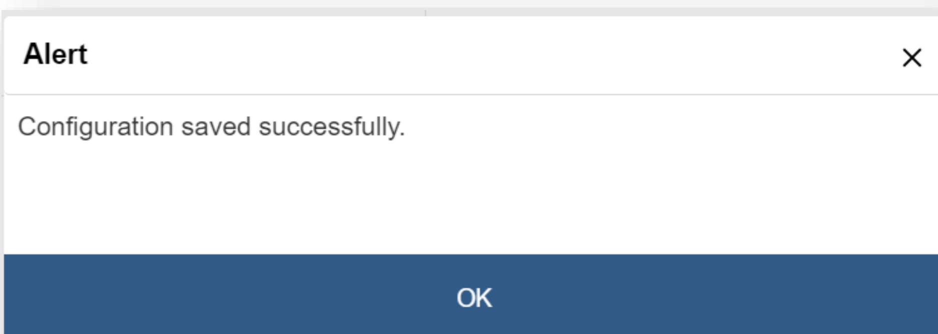


Figure 378 - Key vault Configuration (Cont.)

7. The saved configuration starts appearing in the grid:

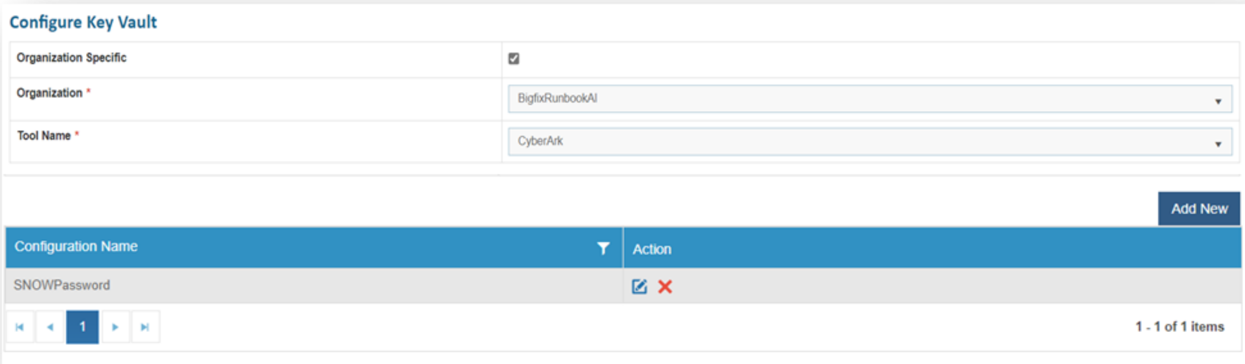


Figure 379 - Key vault Configuration (Cont.)

8. To edit any configuration, click on the icon corresponding to the configuration to be edited. The Edit wizard appears. Edit the details and click on **Save**.

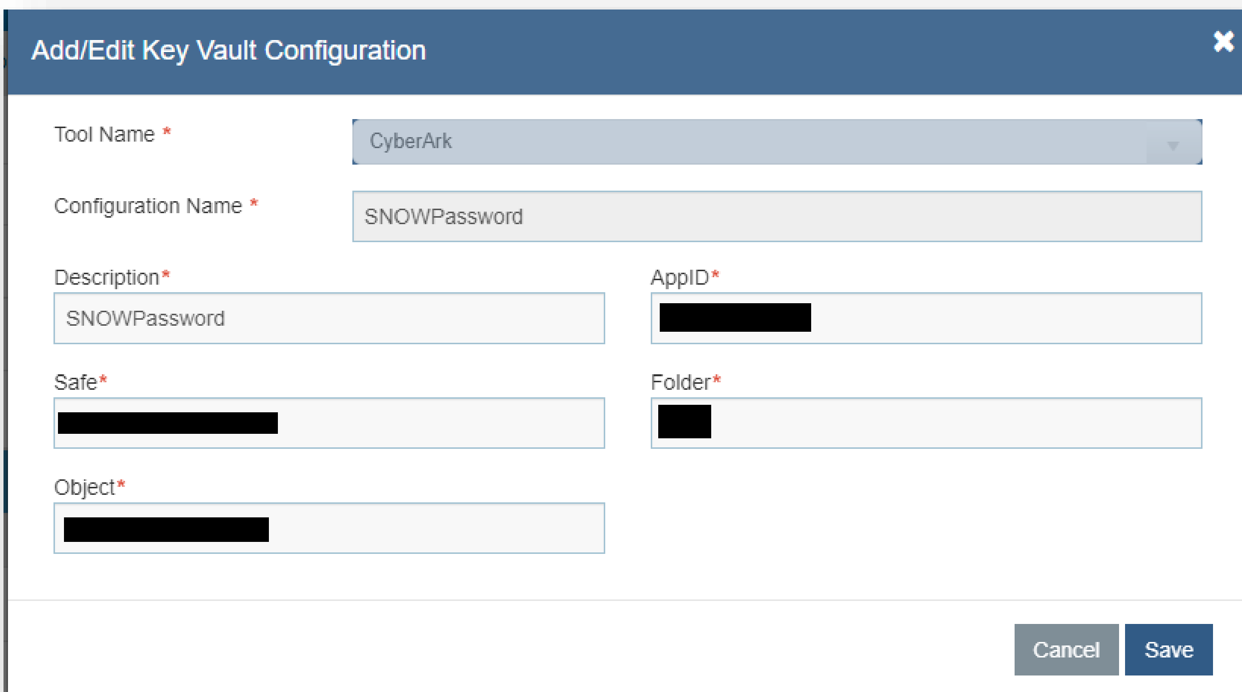


Figure 380 - Key vault Configuration (Cont.)(Cyberark)

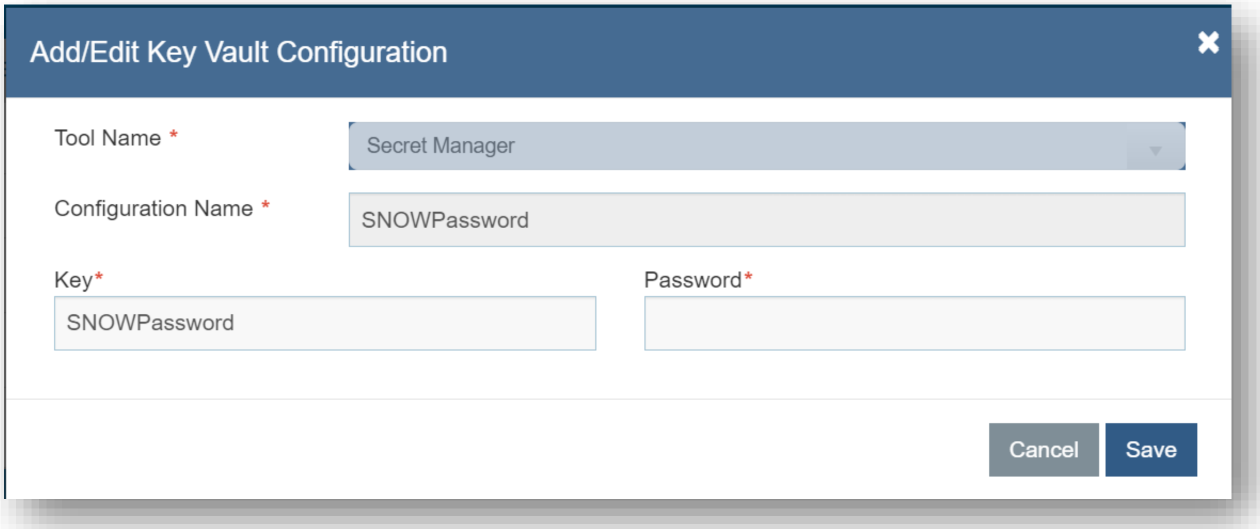


Figure 381 - Key vault Configuration (Cont.)(Secret Manager)

The following confirmation message appears:

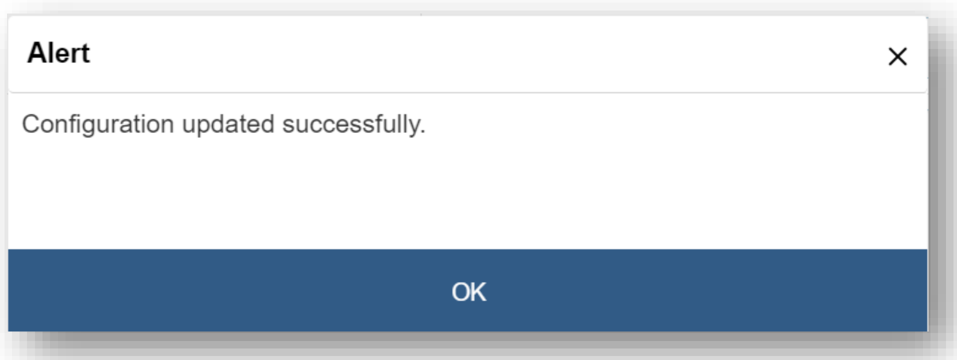


Figure 382 - Key vault Configuration (Cont.)

9. To delete any configuration, click on icon  corresponding to the configuration to be deleted. The following confirmation message appears:

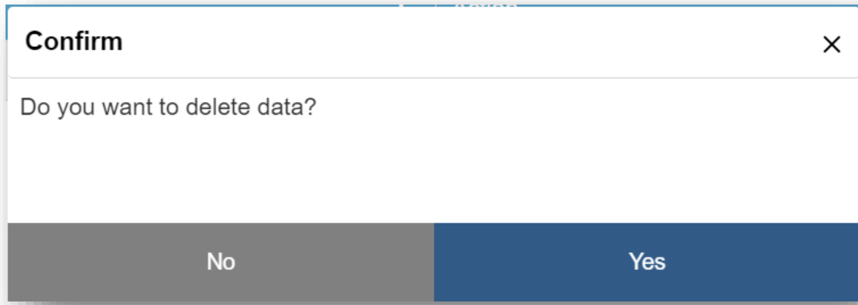


Figure 383 - Key vault Configuration (Cont.)

10. Click **Yes.** The following success message appears:

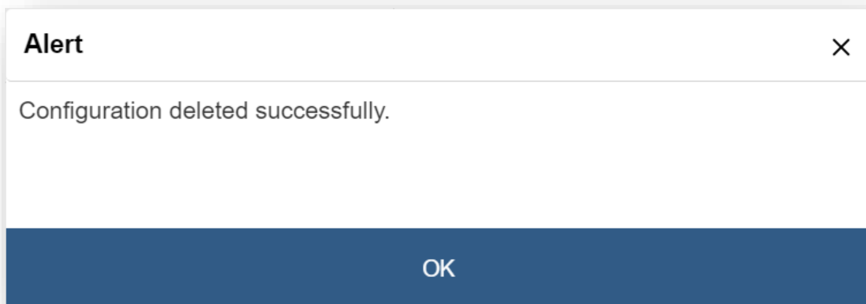


Figure 384 - Key vault Configuration (Cont.)

3.2.7 Knowledge

This section describes how to configure the knowledge, including domains, collections, knowledge search, and knowledge analysis for the environment.

To configure knowledge, perform the following steps:

1. On the main menu bar, click **Advance Configuration->Knowledge**. The drop-down displays the menu below:

   – Manage Collections
   – Map Generic Collections
   – Manage API/Domains (Basic)
   – Knowledge Search
   – Knowledge Analysis

– Knowledge Assistant

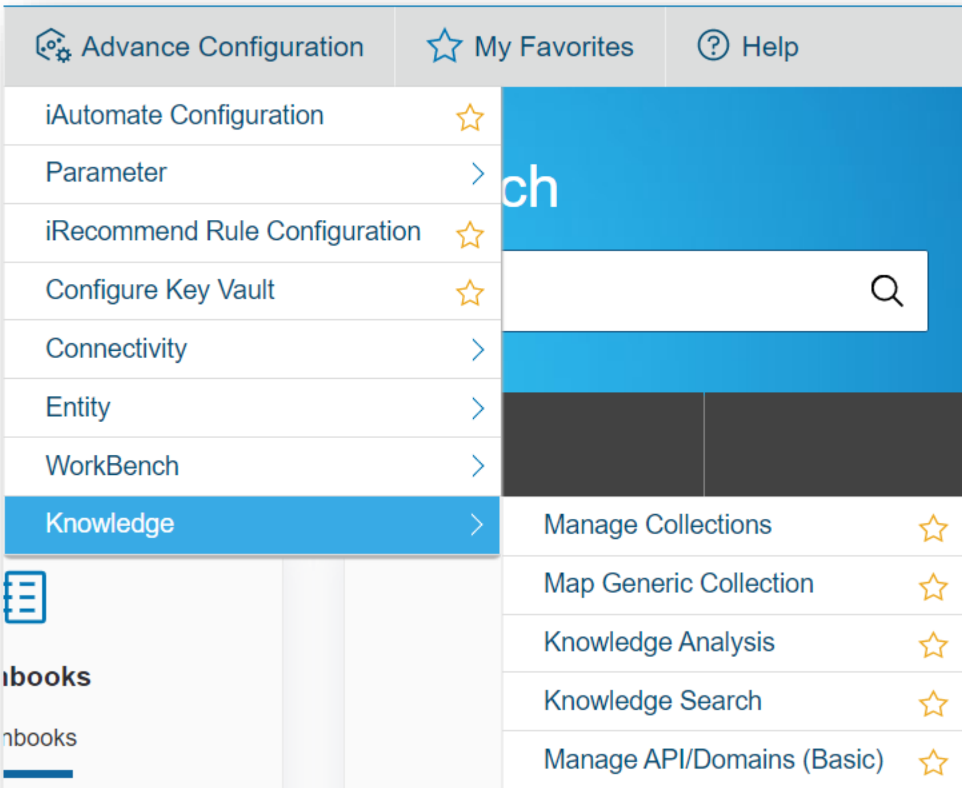


Figure 385- Knowledge view(super admin)

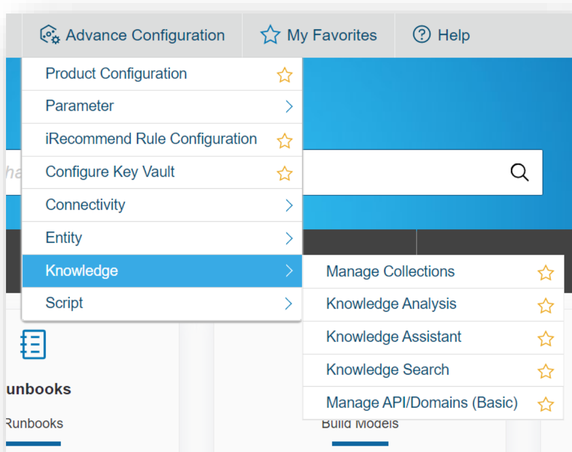


Figure 386 Knowledge view (Organization admin)

Ensure user is logged in as administrator to create and manage Knowledge and associated parameters.

3.2.5.9.1. Manage Collections

User can manage collections, which are a logical grouping of document repositories, and configure multiple repositories.

To manage collections, perform the following steps:

1. On the main menu bar, click **Advance Configuration->Knowledge** and then click **Manage Collections**.

   The **Manage Collections** page appears.

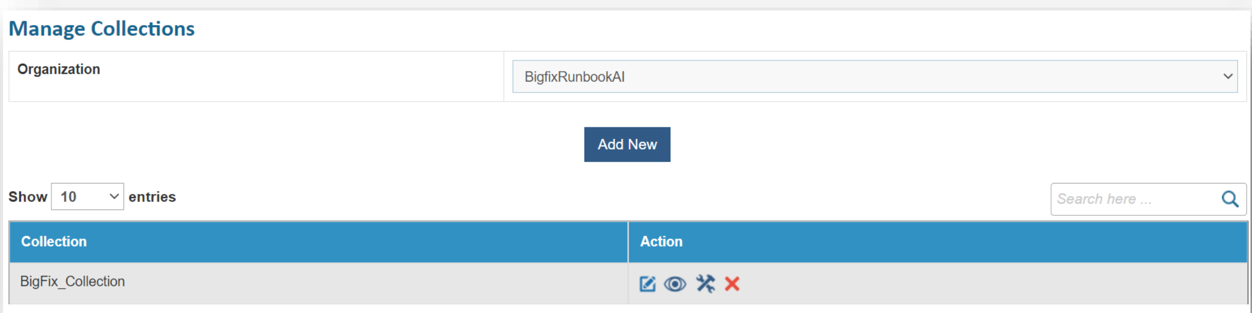


Figure 387- Manage Collections

2. Select a type of collection from the **Collection Type** field. The collections may be of the following types:
   - Generic- Available for all organizations and contains the default collection configuration.
   - Custom- Customized for organizations and contains the customer specific collection configuration.

Figure 388- Manage Collections

Selecting the **Collection Type** lists the available collections in a tabular view and enables you to add a new collection type, edit or delete an existing collection type, and manage repositories in the existing collections.

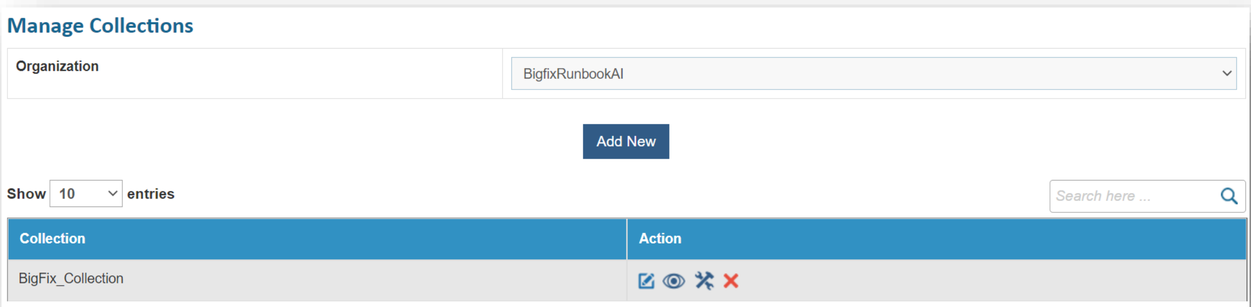


Figure 389- Manage Collections (Cont.)

3.2.5.9.1.1. Add Generic Collections

User can configure generic collections that have the default collection configuration.

To manage generic collections, perform the following steps:

1. On the **Manage Collections** page, select 'Generic' from the drop-down list in the **Collection Type** field.

This enables the **Add New** button and lists the existing generic collection in a tabular view.

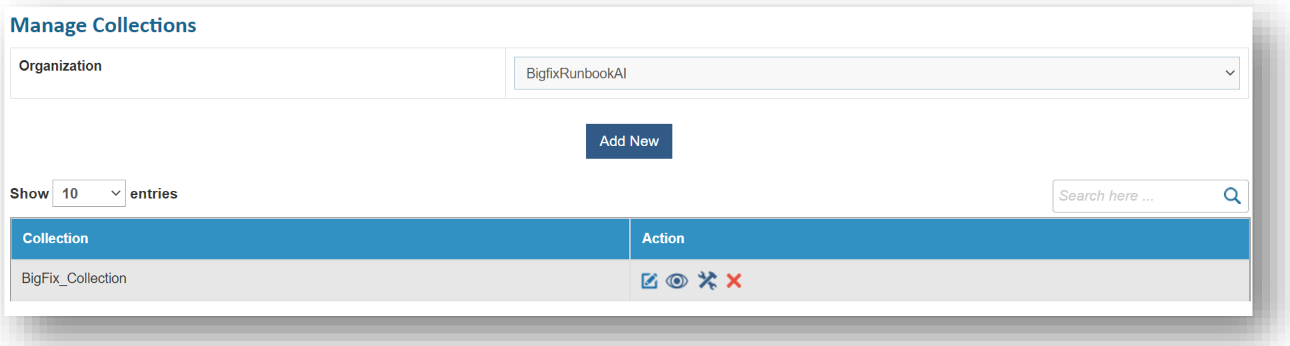


Figure 390- Add Generic Collections

2. Click **Add New**. The **Add/Edit Collection** page appears.

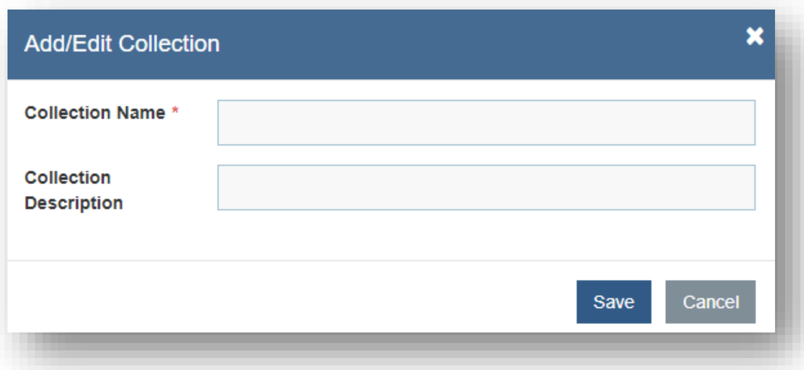


Figure 391- Add Generic Collections (Cont.)

3. Type the name of the collection to be created in the **Collection Name** field.
4. Type the description of the collection in the **Collection Description** field.
5. Click **Save**.

All fields marked with an asterisk (*) are mandatory.

This creates a new collection type that appears in the list of collections.

3.2.5.9.1.2. Add Custom Collections

User can configure custom collections containing organization specific collection configuration and create multiple repositories in them.

To manage custom collections, perform the following steps:

1. On the **Manage Collections** page, select **Custom** from the options available in the **Collection Type** field, and then select the **Organization** for which you want to configure the collections.

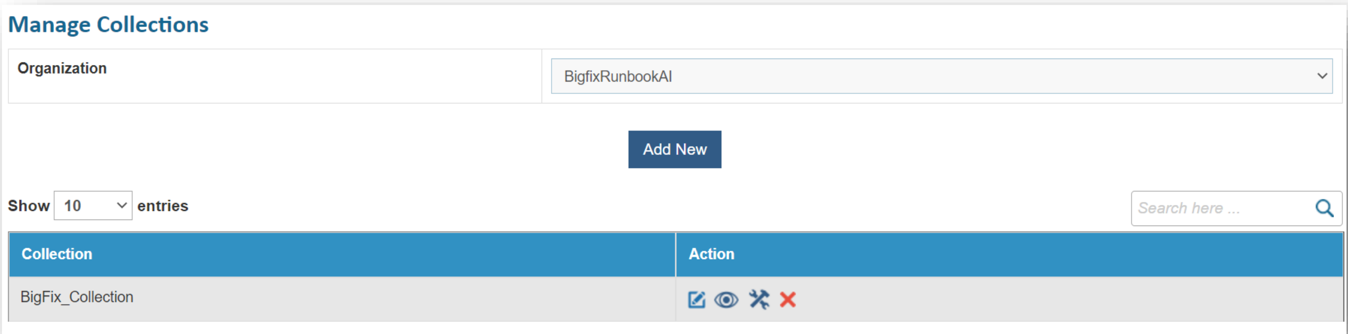


Figure 392- Add Custom Collections

This enables the **Add New** button and lists all the available collection types in a tabular view.

2. Click **Add New**. The **Add/Edit Collections** page appears.

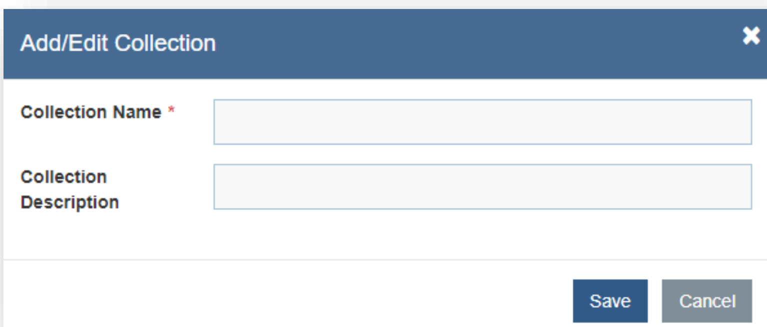


Figure 393- Add Custom Collections (Cont.)

3. Type the name of the collection to be created in the **Collection Name** field.
4. Type the description of the collection in the **Collection Description** field.
5. Click **Save**.

All fields marked with an asterisk (*) are mandatory.

This adds the new collection type that appears in the list of collections.

3.2.5.9.1.3. Manage Repositories in Collections

User can define the repository configuration based on the type of repositories, such as **Web URL**, **ServiceNow**, **File Folder**, **Satori** that will be deployed in the environment.

To manage repositories, perform the following steps:

1. On the **Manage Collections** page, click next to the collection for which user wants to manage the repository.

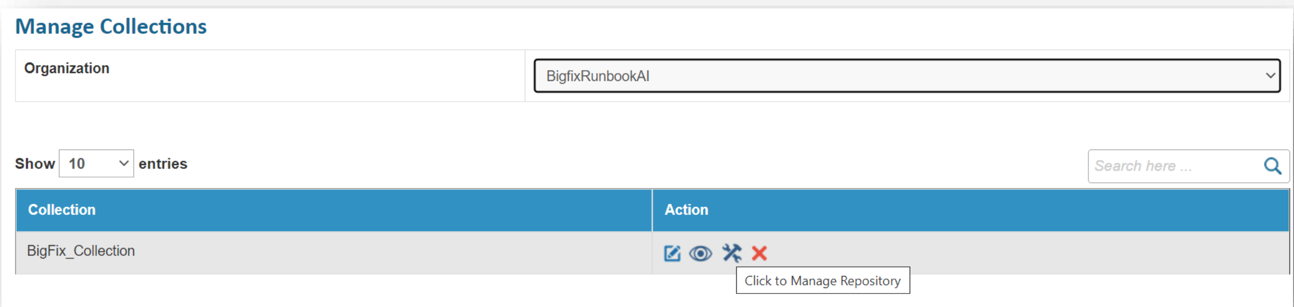


Figure 394- Manage Repository

This lists the existing repositories under the selected collection and enables user to view the status, edit or delete existing repositories, and add repositories.

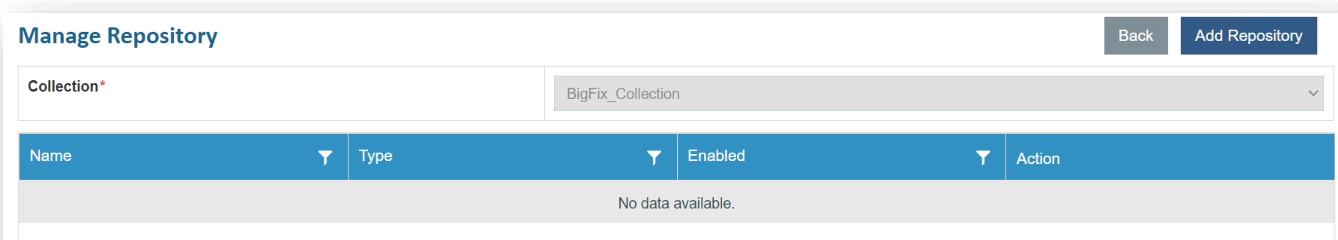


Figure 395- Manage Repository (Cont.)

2. To view the documents associated with a repository, click next to the repository.

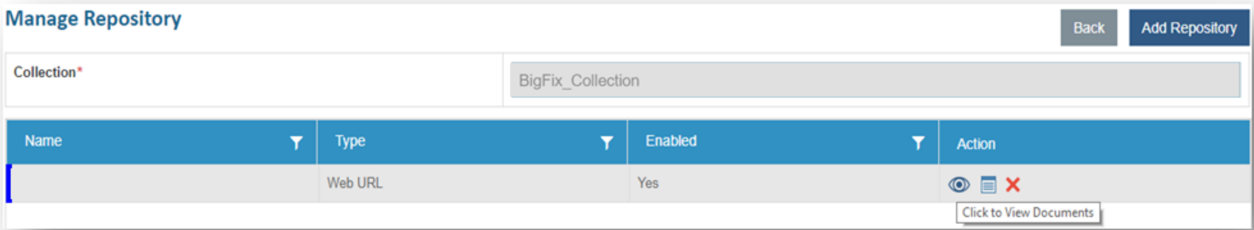


Figure 396- Manage Repository (Cont.)

The **Document Summary** page appears, displaying the Total Documents and Total Processed Documents in a tabular view.

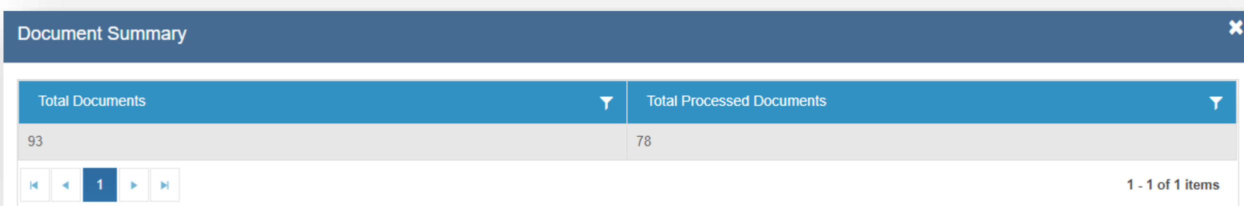


Figure 397- Manage Repository (Cont.)

3. To view the repository status, click next to the repository.

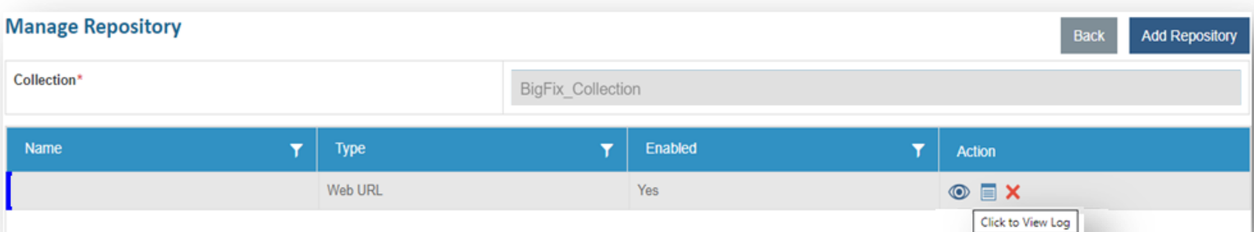


Figure 398- Manage Repository (Cont.)

The **Repository Status Log** page appears and displays the status summary for each concurrent repository.

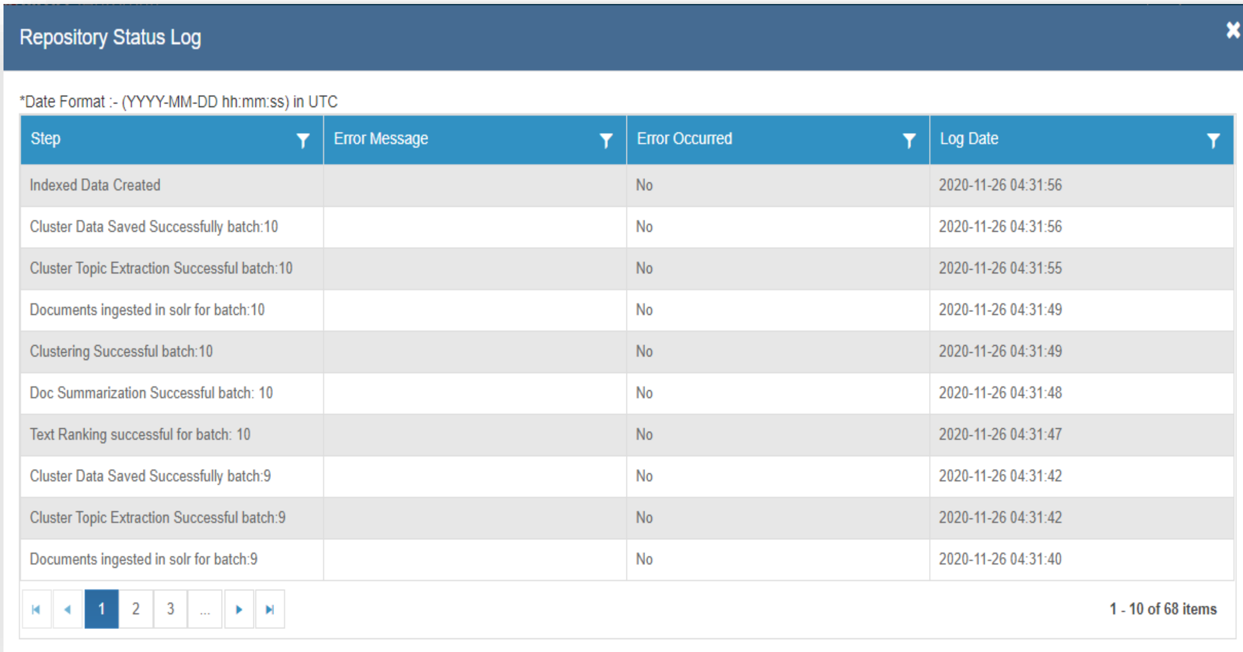


Figure 399- Manage Repository (Cont.)

3.2.5.9.1.4. Add Repository

User can configure a repository in the collection by using the following steps:

1. On the **Manage Repository** page, click **Add Repository**.

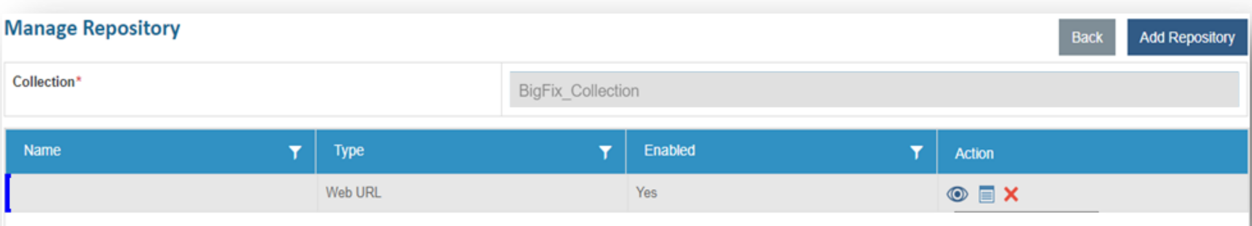


Figure 400- Add Repository

2. It displays the following fields to fill in the appropriate details:
   - The collection type is auto filled in the **Collection** field.
   - Type the repository name in the **Name** field. This must be unique for each repository.
   - Type the repository description in the **Description** field.
   - Select **Enable** to enable repository auto update.

- Select **Schedule Type**.

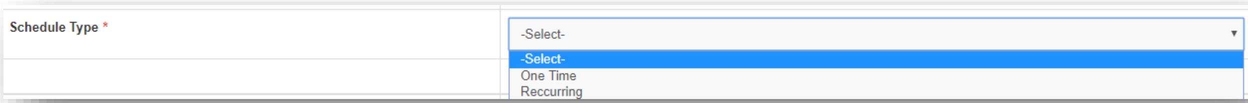


Figure 401- Add Repository (Cont.)

- To schedule the recurring update of repository, select the frequency interval in **Second**, **Minute**, **Hour**, **Day,** or **Month** and type the duration next to the **Occurring Every** field.

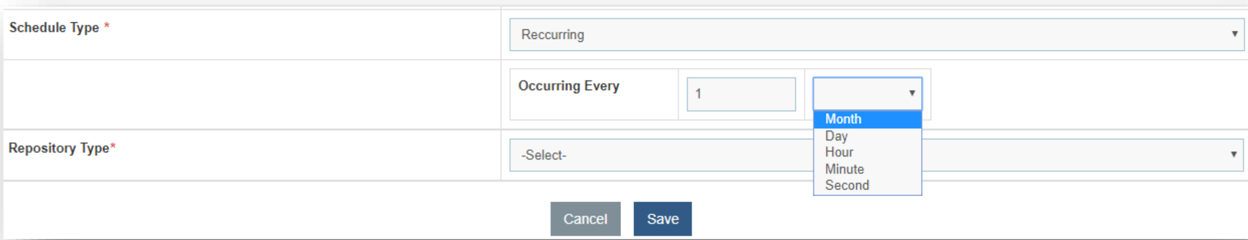


Figure 402- Add Repository (Cont.)

- Select the **Repository Type** to store data. The following types of repositories are available to store data:
  - Web URL
  - File Folder
  - Satori
  - ServiceNow

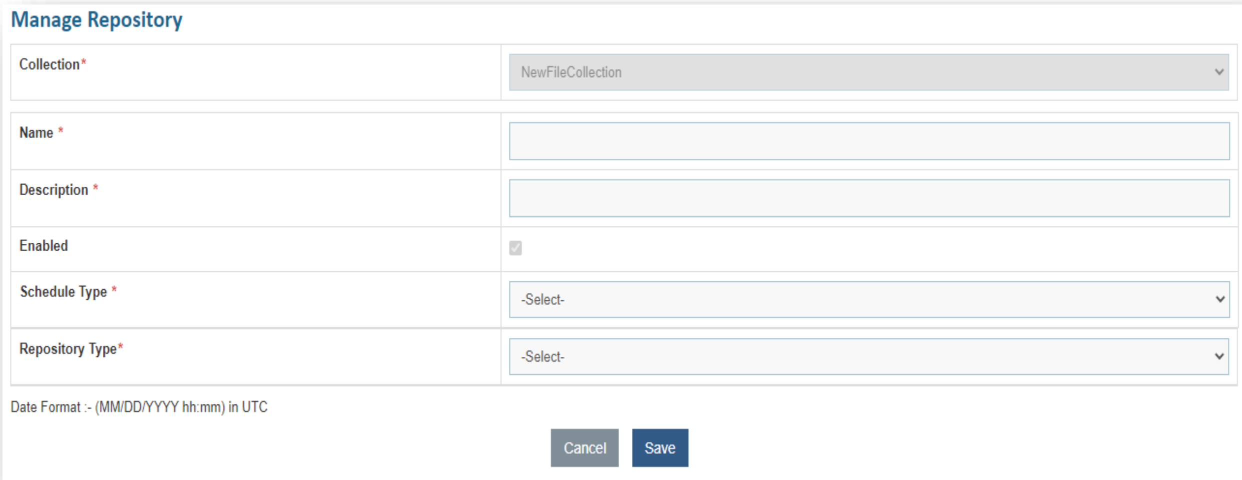


Figure 403- Add Repository (Cont.)

- Selecting the repository type displays the following fields.
- In case of **Web URL** repository type:
    - Type the root URL for the website to be crawled in the **URL** field**.**
    - Specify the level to which the documents are to be crawled in the **Depth Level** field.
    - Select **Restrict Domain** checkbox to filter for documents of the same domain as mentioned in the URL.

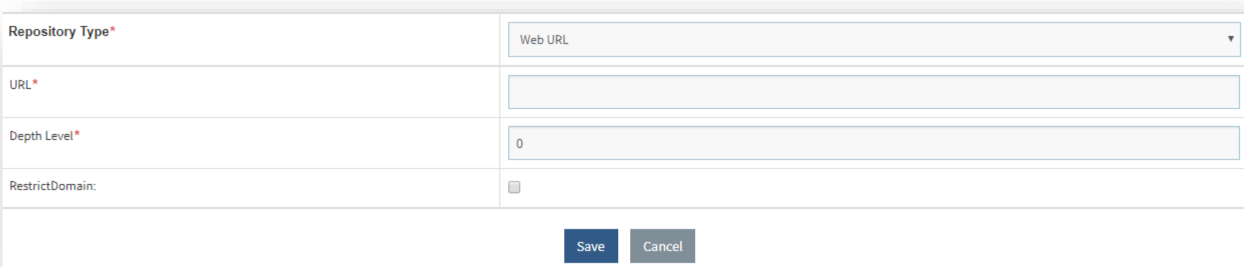


Figure 404- Add Repository (Cont.)

- In case of **Folder Path** repository type:
    - Specify a path in the local drive where the documents have been stored in the **Folder Path** field.

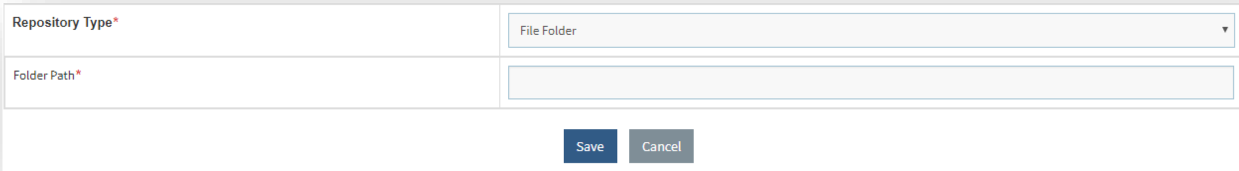


Figure 405- Add Repository (Cont.)

- In case of **Satori** repository type:
    - Type the URL of the selected repository in the **Repository URL** field.
    - Type the username and password (encrypted form) of the domain user with access to the repository in the **UserName** and **Password** field.
    - Type the domain name in the **Organization Domain** field.
    - Type the user ID in the **UserId** field.
    - Type the base URL of Satori in the **Satori URL** field.

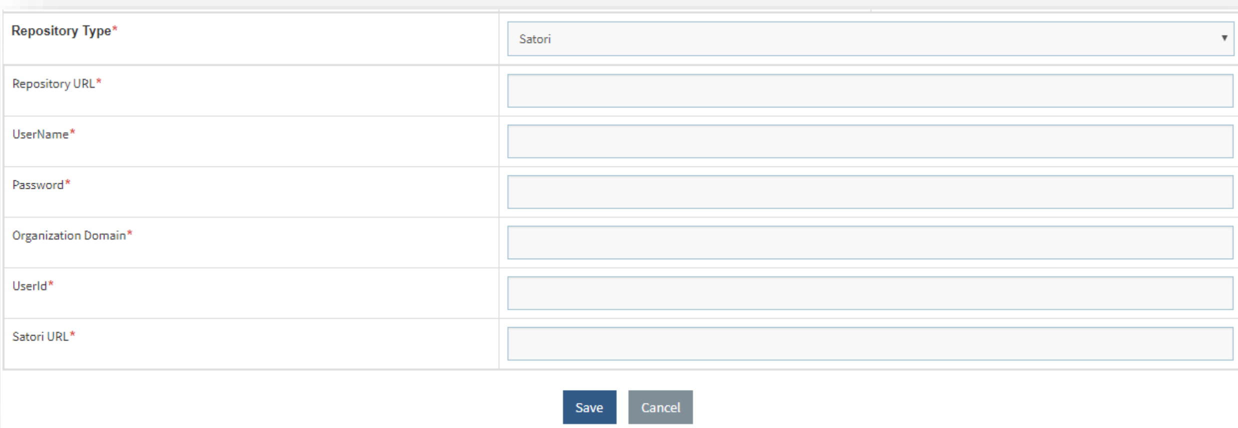


Figure 406- Add Repository (Cont.)

- In case of **ServiceNow** repository type:
    - Type the URL of the selected repository in the **URL** field.
    - Type the username and password (encrypted form) of the **ServiceNow** user with access to the repository in the **UserName** and **Password** fields.

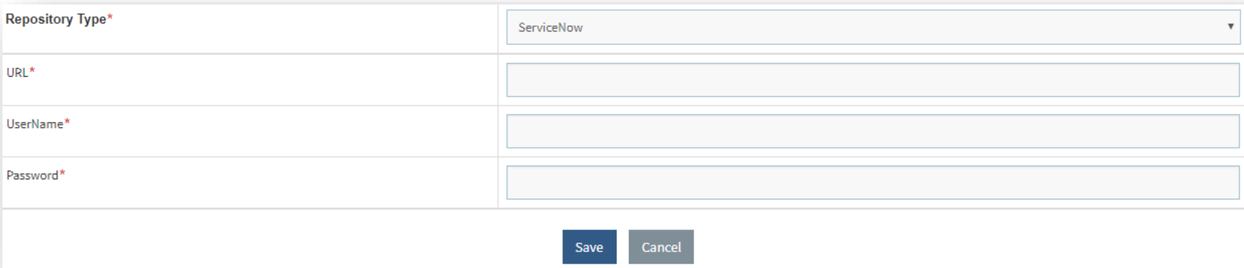


Figure 407- Add Repository (Cont.)

3. Click **Save**.

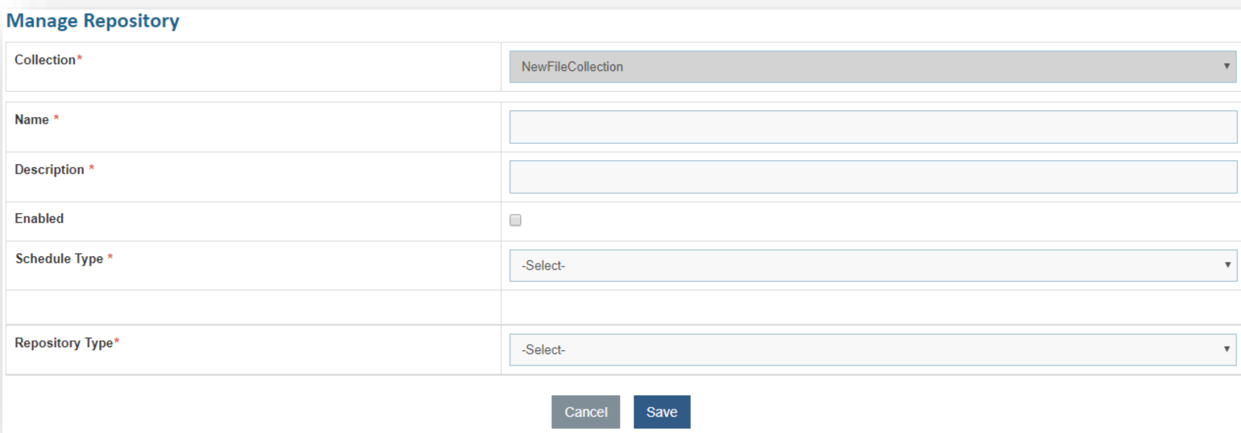


Figure 408- Add Repository (Cont.)

A confirmation dialog box appears.

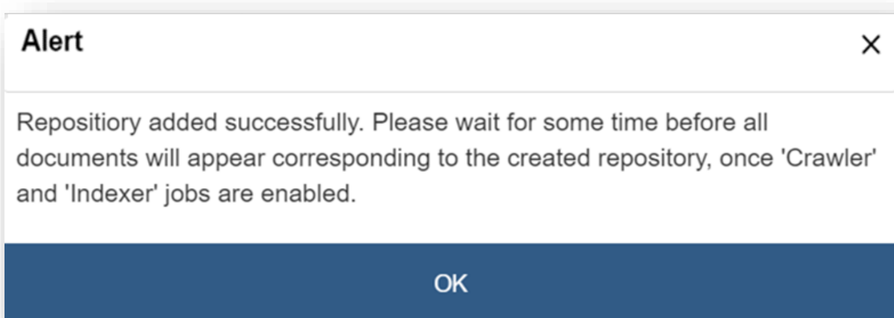


Figure 409- Add Repository (Cont.)

This adds the new repository and lists it in a tabular view.

3.2.5.9.1.5. Delete Repository

If user no longer wants a specific repository in the collection, it can be deleted from the repository.

To delete a repository from a collection by performing the following steps:

1. On the **Manage Repository** screen, click corresponding to the repository that you want to delete.

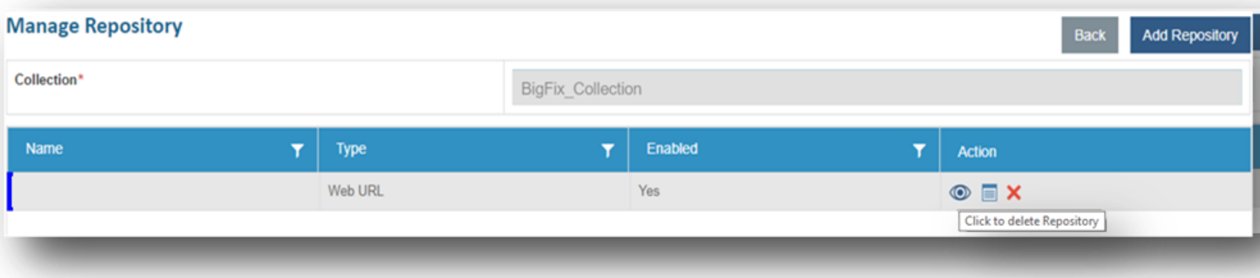


Figure 410- Delete Repository

2. Click **OK** to confirm deletion of the selected repository.

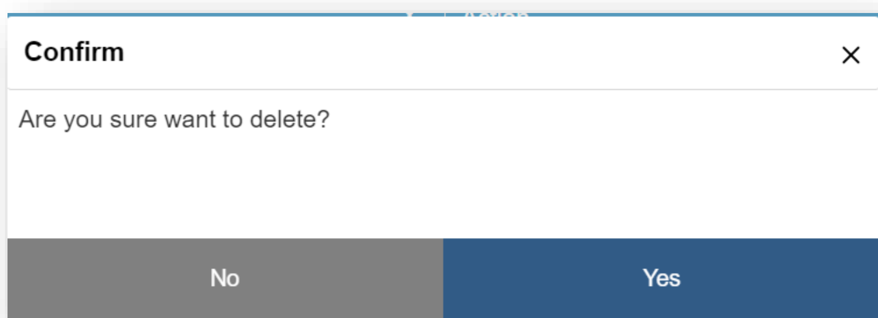


Figure 411- Delete Repository (Cont.)

A confirmation dialog box appears.

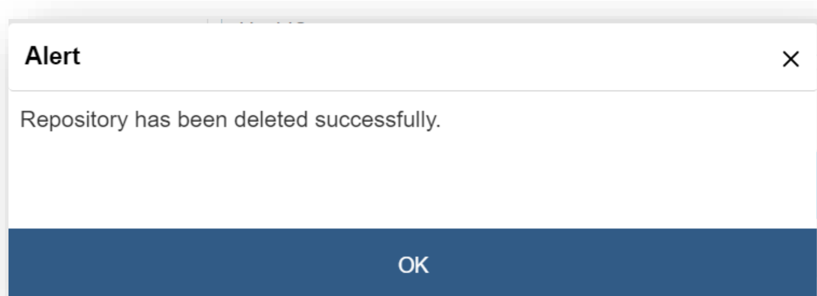


Figure 412- Delete Repository (Cont.)

3.2.5.9.2. Map Generic Collection

After configuring the collections and repositories, user can map the generic collections to the organization.

To map generic collections, perform the following steps:

1. On the main menu bar, click **Advance Configuration->Knowledge** and then click **Map Generic Collection**.

   The **Map Generic Collections** page appears.

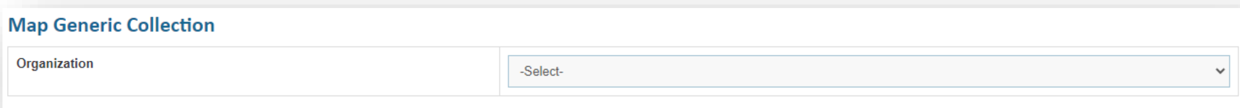


Figure 413- Map Generic Collection

2. Select an organization from the list next to the **Organization** field. It lists the available collections in a tabular view.

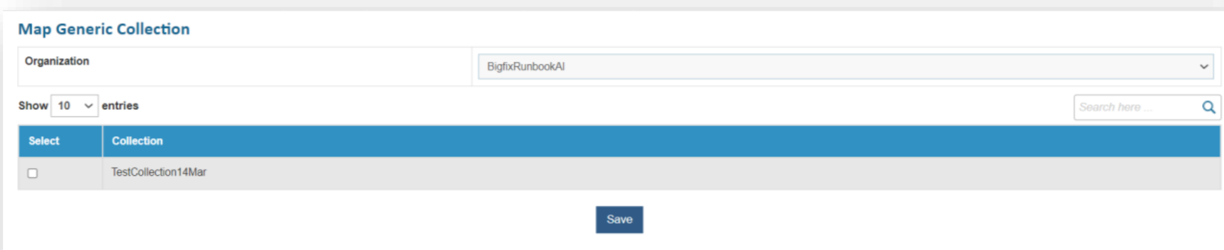


Figure 414- Map Generic Collection (Cont.)

3. Select the collections user wants to map with the selected organization. A confirmation dialog box appears.

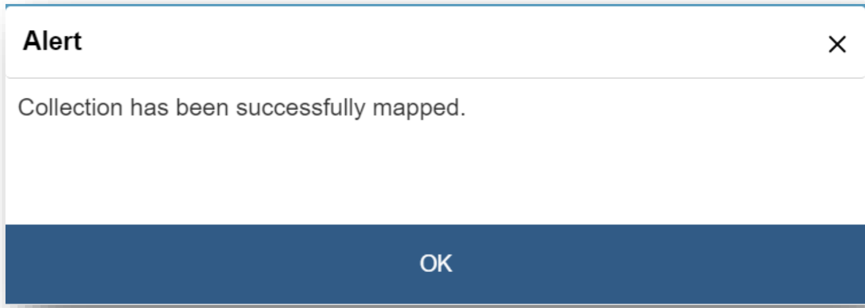


Figure 415- Map Generic Collection (Cont.)

4. To save the settings, click **Save**.

3.2.5.9.3. Manage API/Domains (Basic)

Users with valid administrator credentials can manually create and manage domains using the BigFix Runbook AI admin console.

To manage domains, perform the following steps:

1. On the main menu bar, click **Advance Configuration->Knowledge**.
2. Click **Manage API/Domains (Basic)**. The **Manage API/Domains (Basic)** page appears.

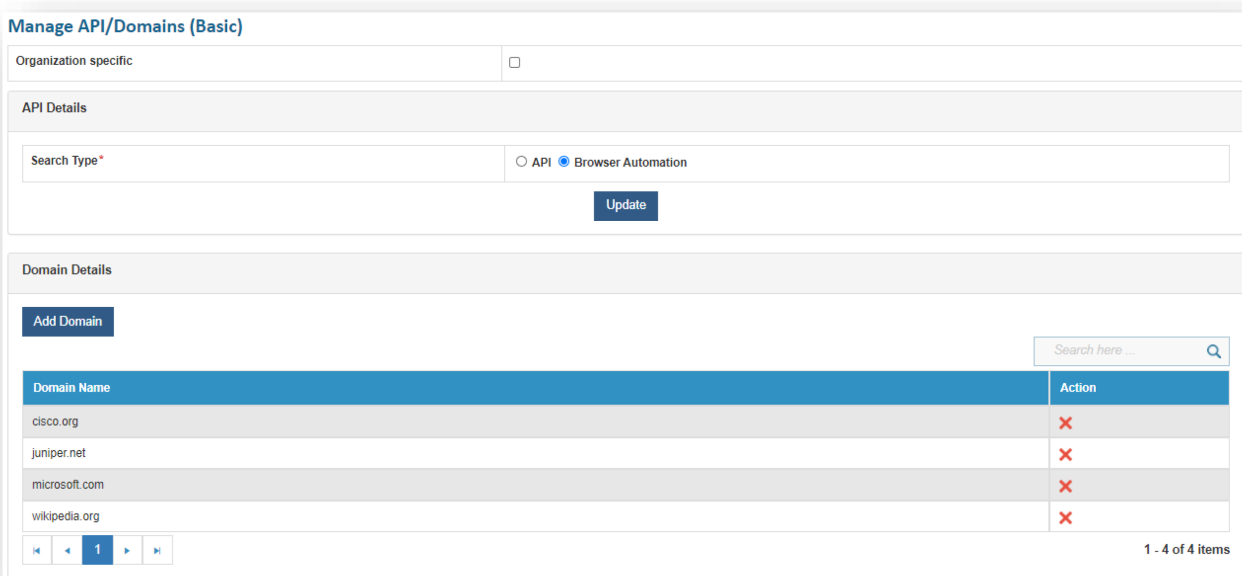


Figure 416- Manage Domains

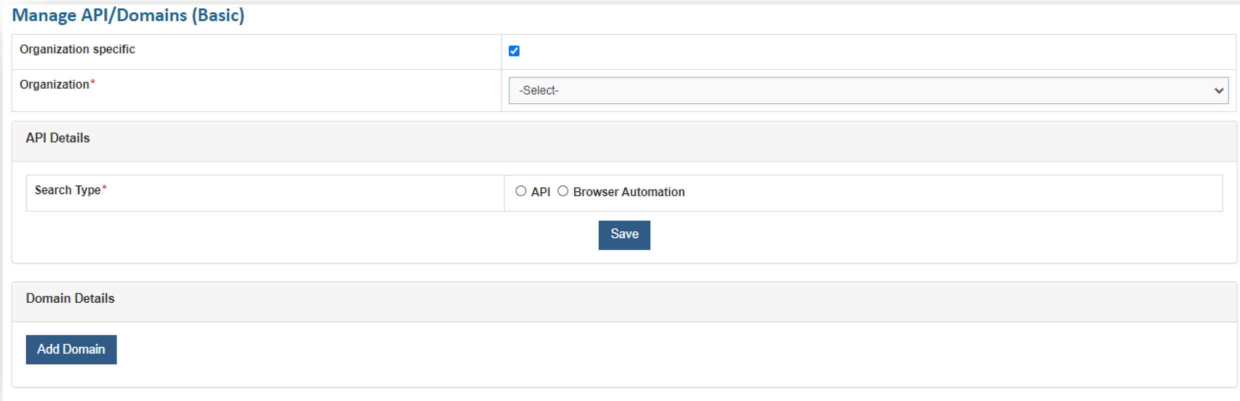


Figure 417- Manage Domains (Cont.)

Based on whether Organization Specific checkbox is checked or not, the selected details will be considered accordingly i.e., if checked then the entered details will be considered for that selected organization only else it will only apply to super admin and not to any organization.

Here user can select whether knowledge articles will be fetched based on API being entered or browser automation. If **browser automation** is selected, then the lists of the available domains in a tabular view will be considered. It also enables user to add a new domain using the **Add New** button and delete existing domains.

If **API** is selected, then it asks to enter the API key and search engine ID that will be used to fetch the data.

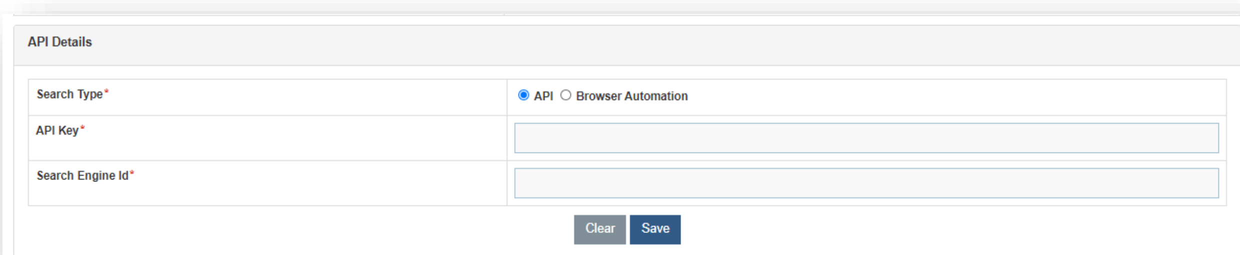


Figure 418-Manage Domains (Cont.)

3.2.5.9.3.1. Add New Domain

User can add a domain in an environment by performing the following steps:

1. On the **Manage API/Domains** page, click on **Add Domain** button.

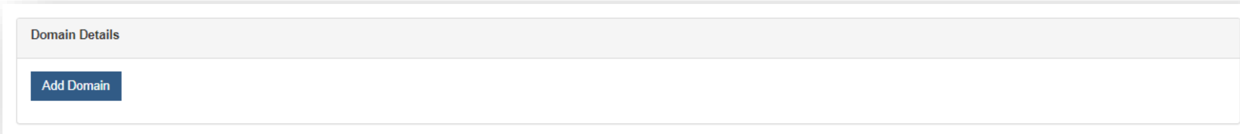


Figure 419- Add New Domain

A popup appears.

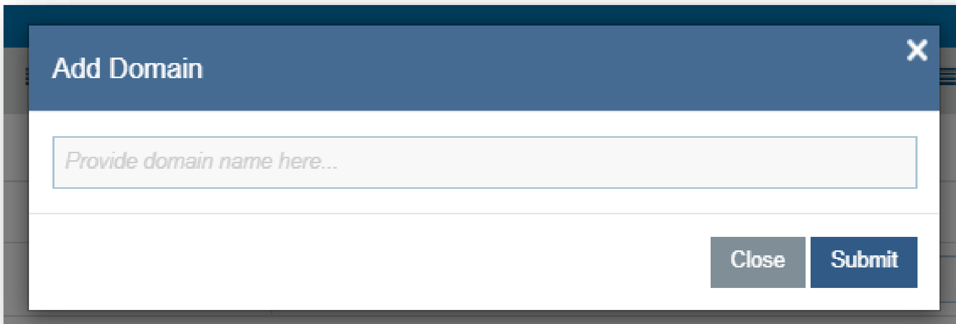


Figure 420-Add New Domain (Cont.)

2. Enter domain name and click on **Submit**. A dialog box will appear.

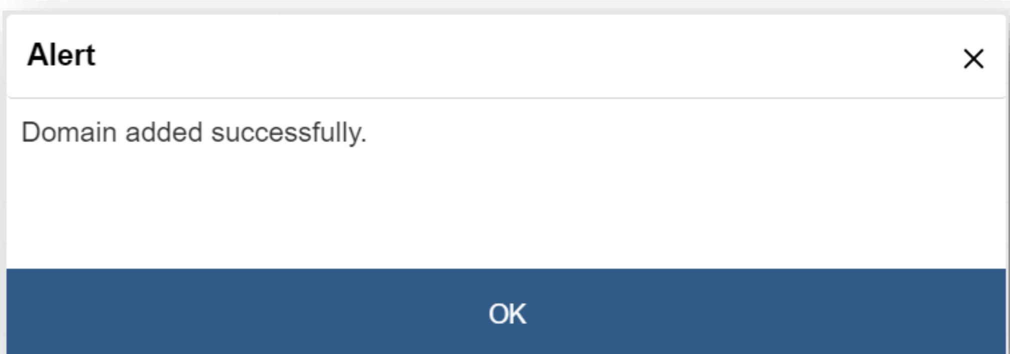


Figure 421- Add New Domain (Cont.)

The added domain will appear in the grid as below.

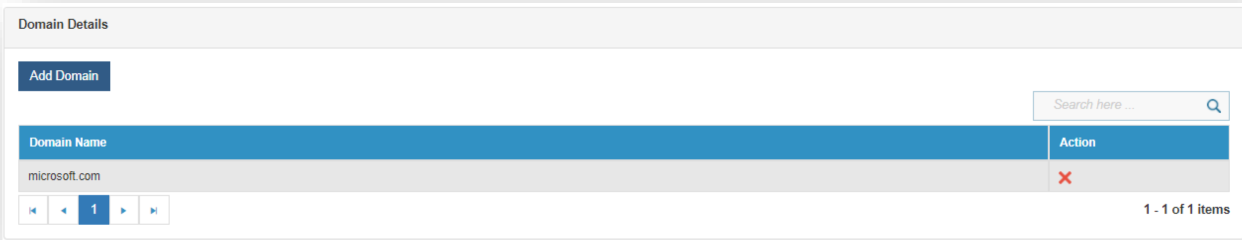


Figure 422 - Add New Domain (Cont.)

If a domain not needed in the environment, click ✖ corresponding to the domain to delete it.

3.2.5.9.4. Knowledge Analysis

This section provides the user with an analytical view of the document repository. This includes:

- **Cluster View** – provides a clustered view of the documents. Categorizes the documents into clusters based on context.
- **Document Similarity View** – recommends similar documents based on the currently viewed document for user's reference.
- **Topic/Concept view** – provides a categorization of documents based on the topics identified from within the documents

To manage knowledge analysis, perform the following steps:

1. On the main menu bar, click **Advance Configuration->Knowledge** and then click **Knowledge Analysis**.

   The **Knowledge Analysis** page appears.

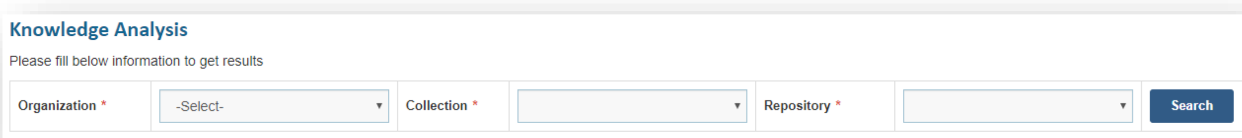


Figure 423- Knowledge Analysis

2. Select the **Organization** for which you want to visualize the data and then select the **Collection** from where you want to fetch the data.
3. Select the corresponding **Repository** from the drop-down list.

4. Click **Search**.

This displays a clustered view of the selected document repository. The left pane displays the cluster, and the cluster topic is displayed as a legend in the right pane. The numbers appearing on each cluster represent the number of documents listed in the selected cluster.

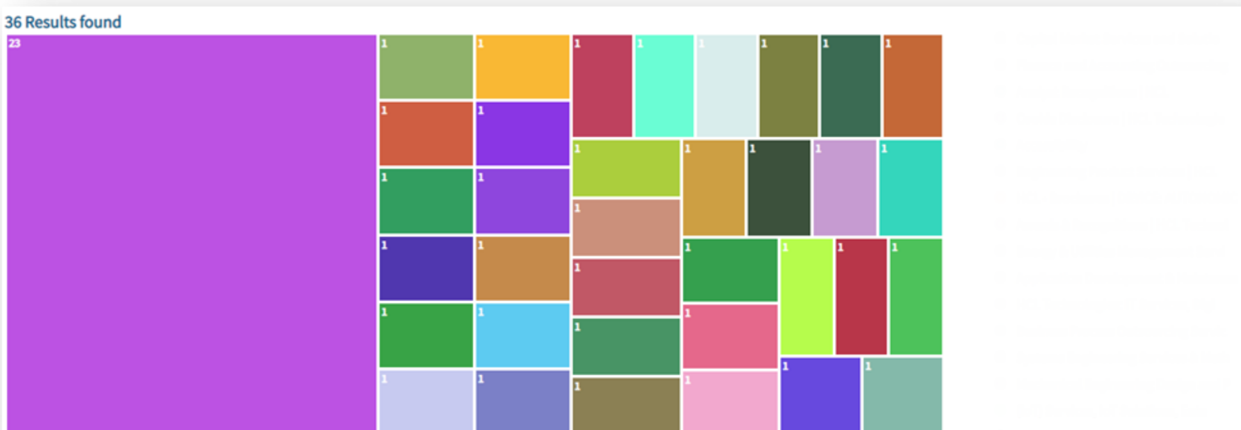


Figure 424- Knowledge Analysis (cont.)

Selecting a cluster lists the documents associated with the selected cluster, including the **Document Title**, **Source URL of the documents**, and the **Document Summary**.

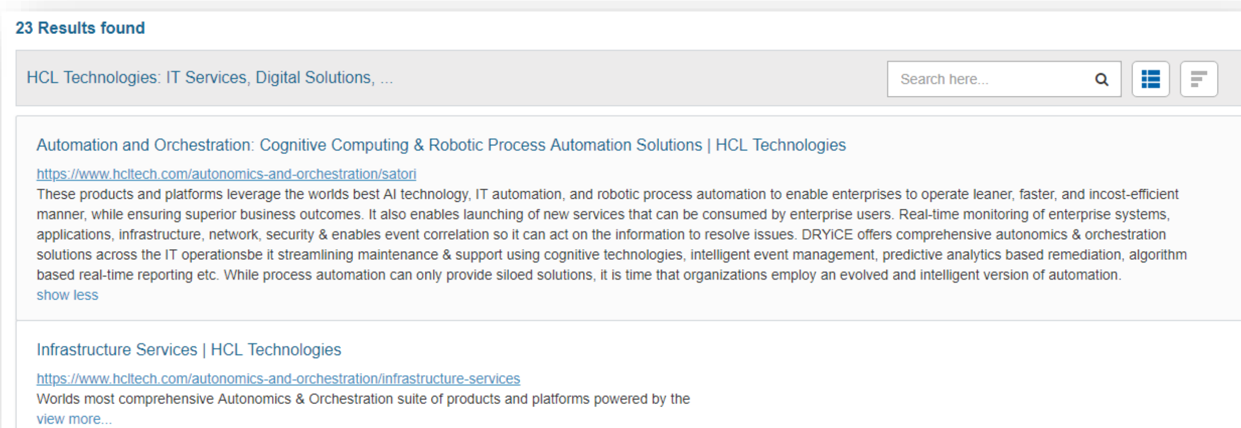


Figure 425- Knowledge Analysis (cont.)

Selecting a document title displays the document information including relevant Topics and Tags, Summary, and the List of all similar documents along with their similarity percentage.

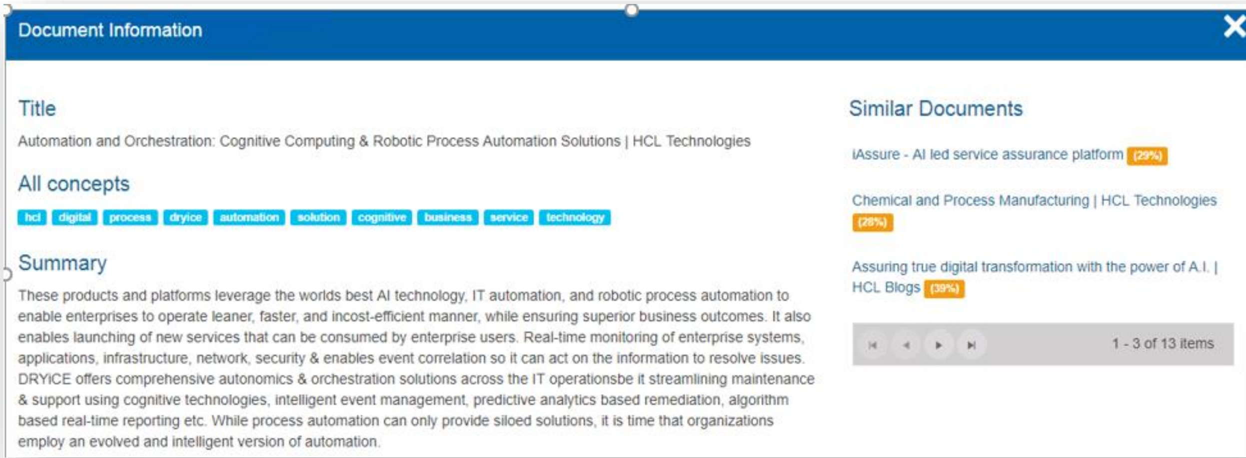


Figure 426- Knowledge Analysis (cont.)

You can also get the topic view for all documents for the selected cluster by clicking on the search result bar.

This view represents relevant **Topics** or in **Terms of Cluster** arranged by relevance. This also allows you to find documents for a particular topic.

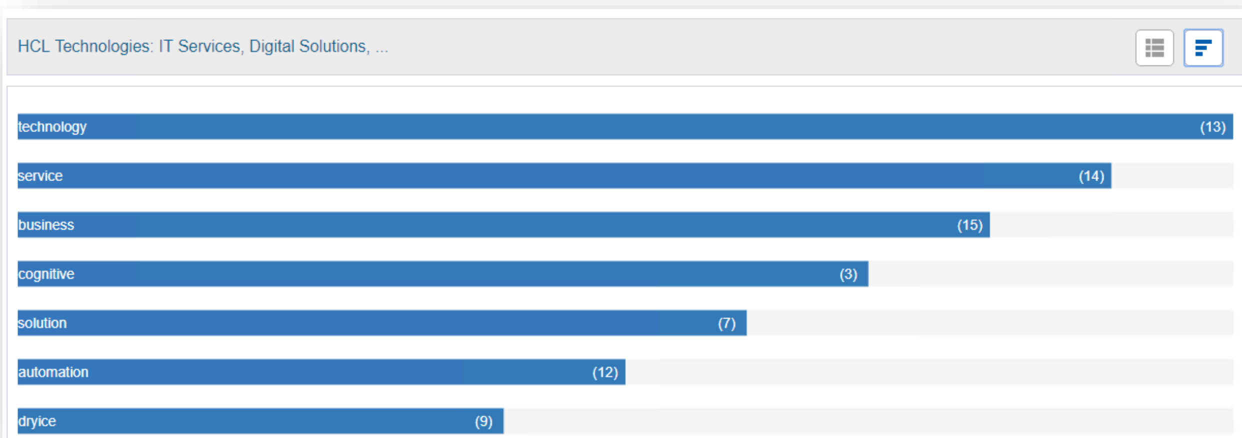


Figure 427- Knowledge Analysis (cont.)

The numerical value of each term represents the frequency of occurrence of a particular term or topic in a cluster.

Selecting **Term** lists all the available documents containing the selected term.

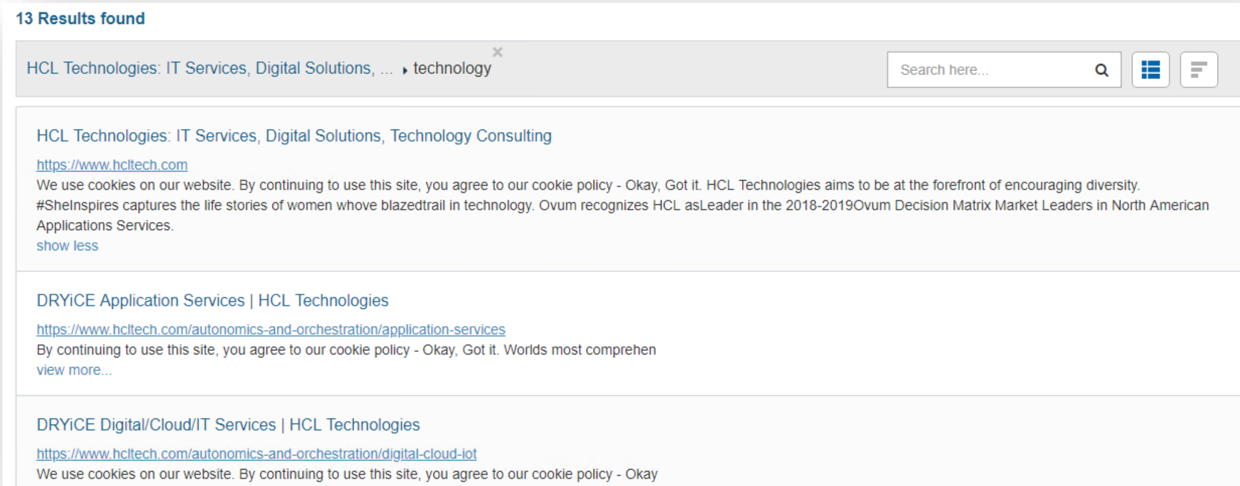


Figure 428- Knowledge Analysis (cont.)

All fields marked with an asterisk (*) are mandatory. .

3.2.5.9.5. Knowledge Search

This section provides the user with the documents fetched for any description.

To use knowledge search, use following steps:

1. On the **Advance Configuration->Knowledge** menu, click on **Knowledge Search**. Below screen appears:

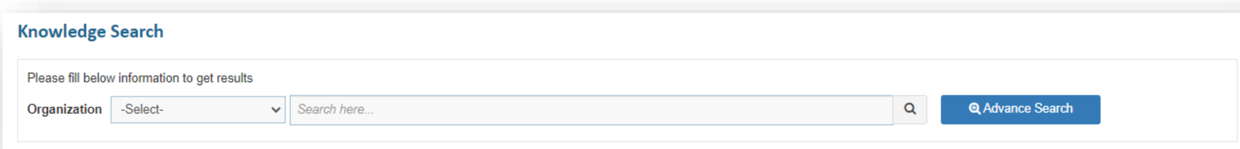


Figure 429- Knowledge Search

2. Select the organization and then enter the desired description and click on Search icon.
3. The relevant data would appear as below:

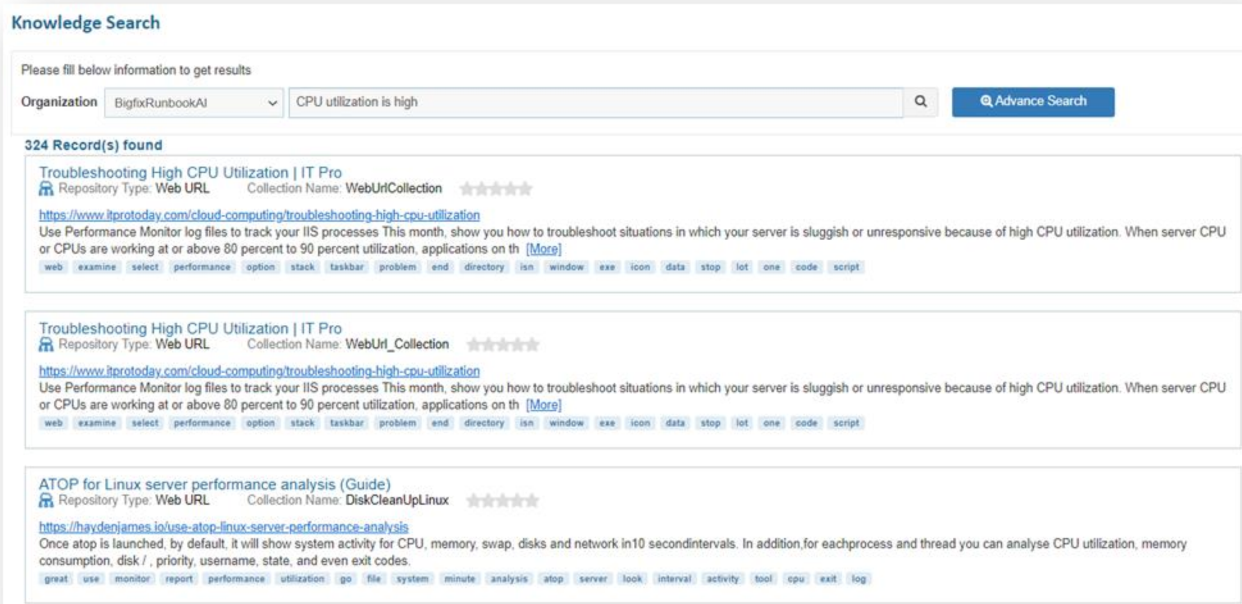


Figure 430- Knowledge Search (Cont.)

4. User can apply additional filters for the search. For that, click on **Advance Search**. A popup will be opened.

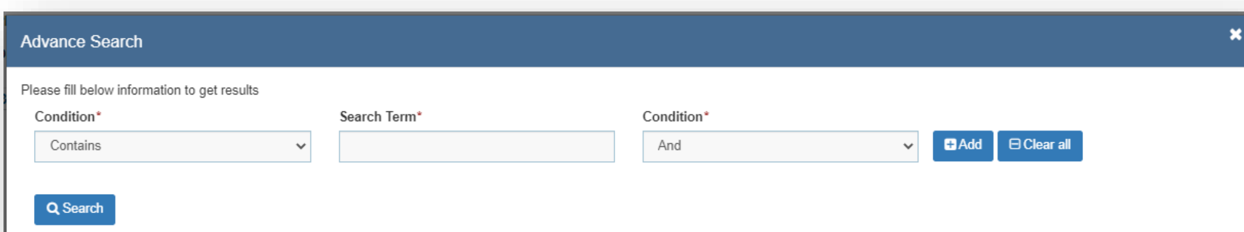


Figure 431-Knowledge Search (Cont.)

5. From the condition dropdown, select any of the conditions:

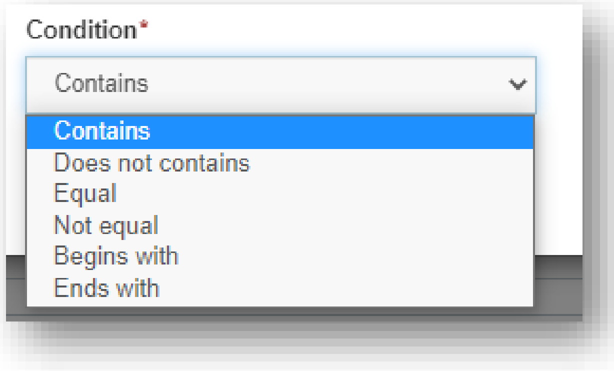


Figure 432-Knowledge Search (Cont.)

6. Enter **Search Term** and select condition as **AND** or **OR**.

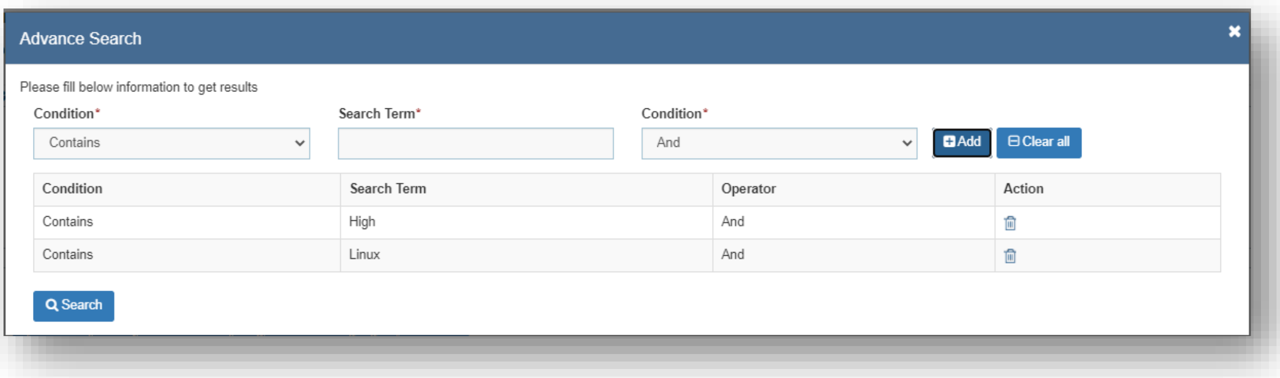


Figure 433 - Knowledge Search (Cont.)

7. Add all the conditions and click **Search**. Now the data will be filtered as per the advance search conditions.

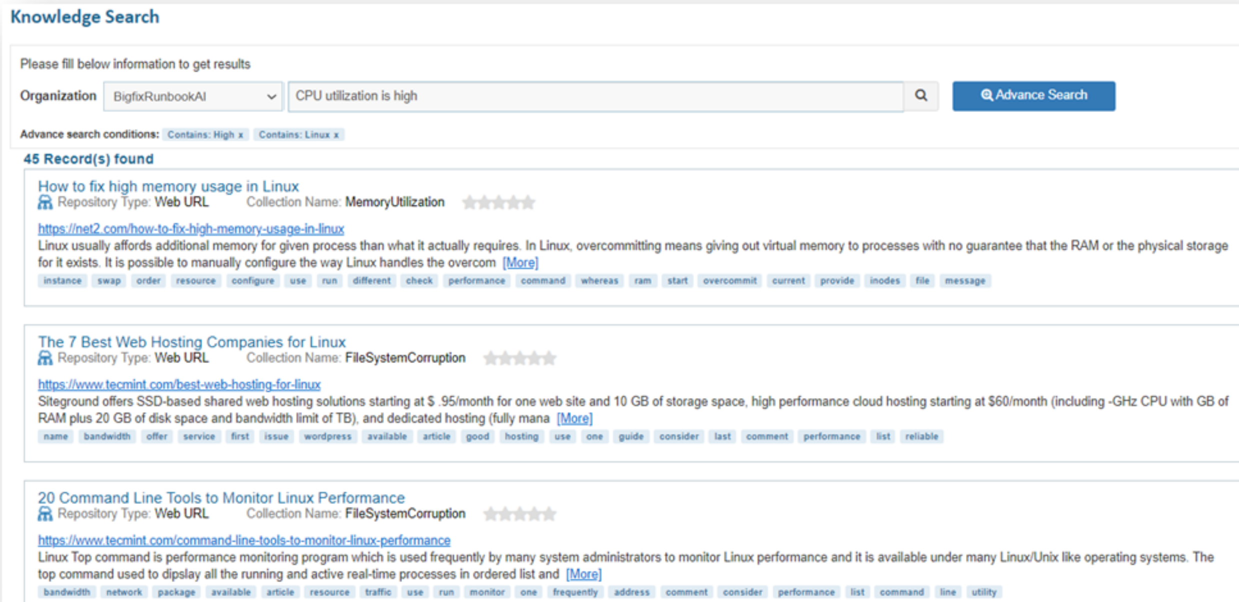


Figure 434-Knowledge Search (Cont.)

8. User can click on any of the links to get the detailed information.
9. User can also give rating to any of the fetched links whatever suits him the right.

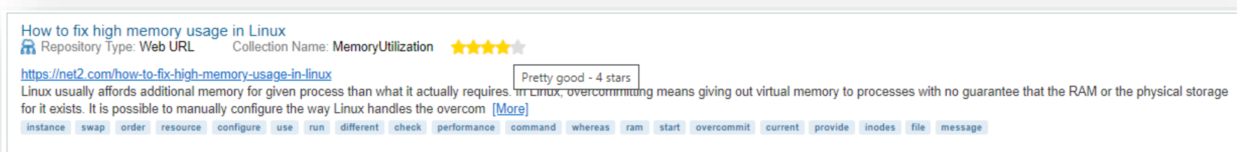


Figure 435-Knowledge Search (Cont.)

A confirmation dialog box opens.

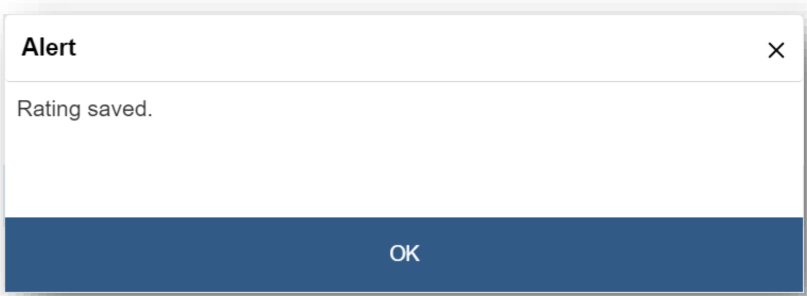


Figure 436-Knowledge Search (Cont.)

3.2.5.9.6. Knowledge Assistant

This section provides the user with the relevant knowledge recommendations based on the ticket descriptions. This includes:

- **Related Tickets**– This section provides information about all the similar tickets, created / resolved in the past and related details.
- **Related Articles**– This section provides all the relevant knowledge articles from multiple sources, based on the ticket description, to the user. The data sources from where this information will be retrieved, depends on the configuration in your environment.

To use Knowledge Assistant, perform the following steps:

1. On the main menu bar, click **Advance Configuration->Knowledge.** Click on the **Knowledge Assistant** menu.
2. Select the **Organization** for which you want to visualize the data and then select the **Module** from where you want to fetch the data.

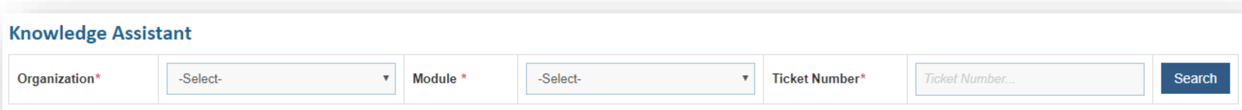


Figure 437- Knowledge Assistant

3. Enter the **Ticket Number**.
4. Click **Search**.

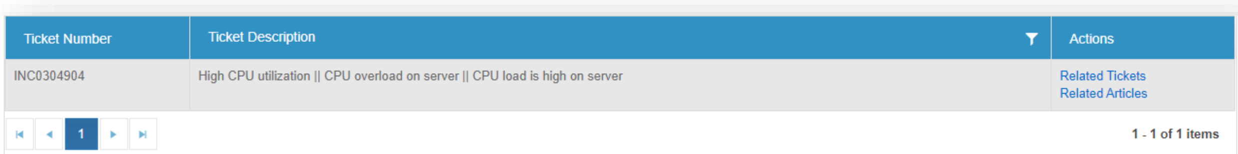


Figure 438- Knowledge Assistant (cont.)

5. Click on **Related Tickets**.

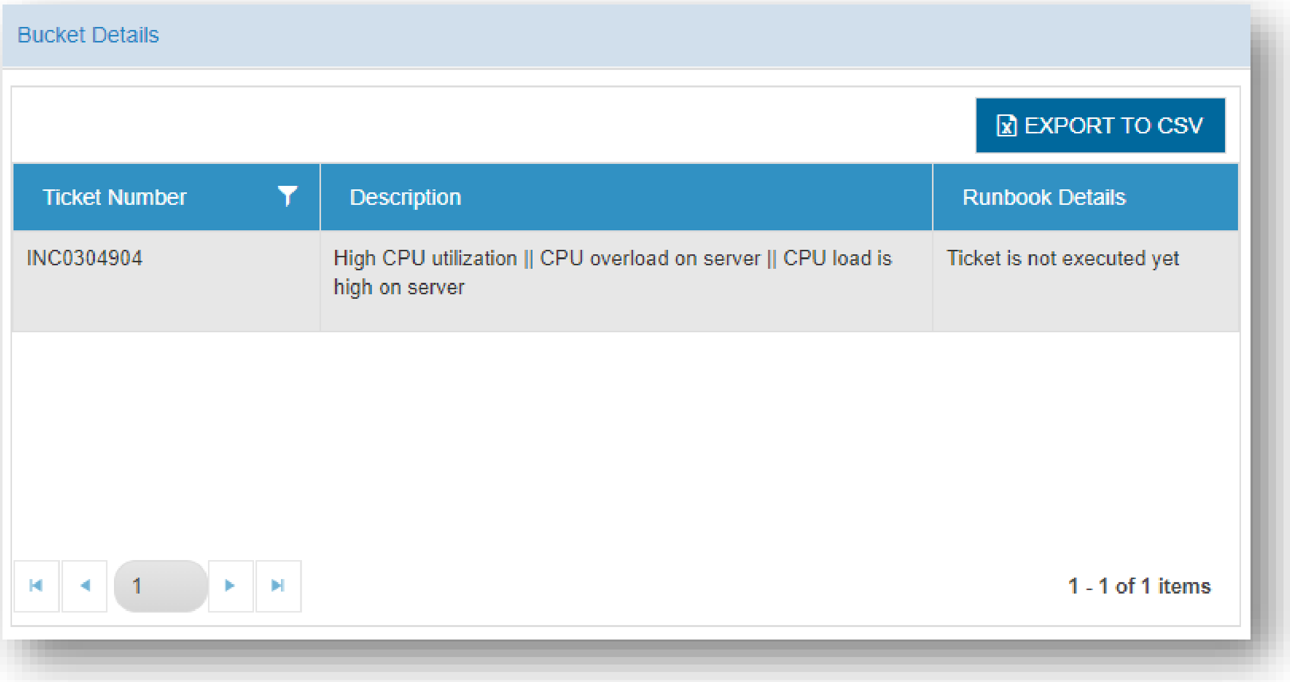


Figure 439- Knowledge Assistant (cont.)

6. Click on **Related Articles**.

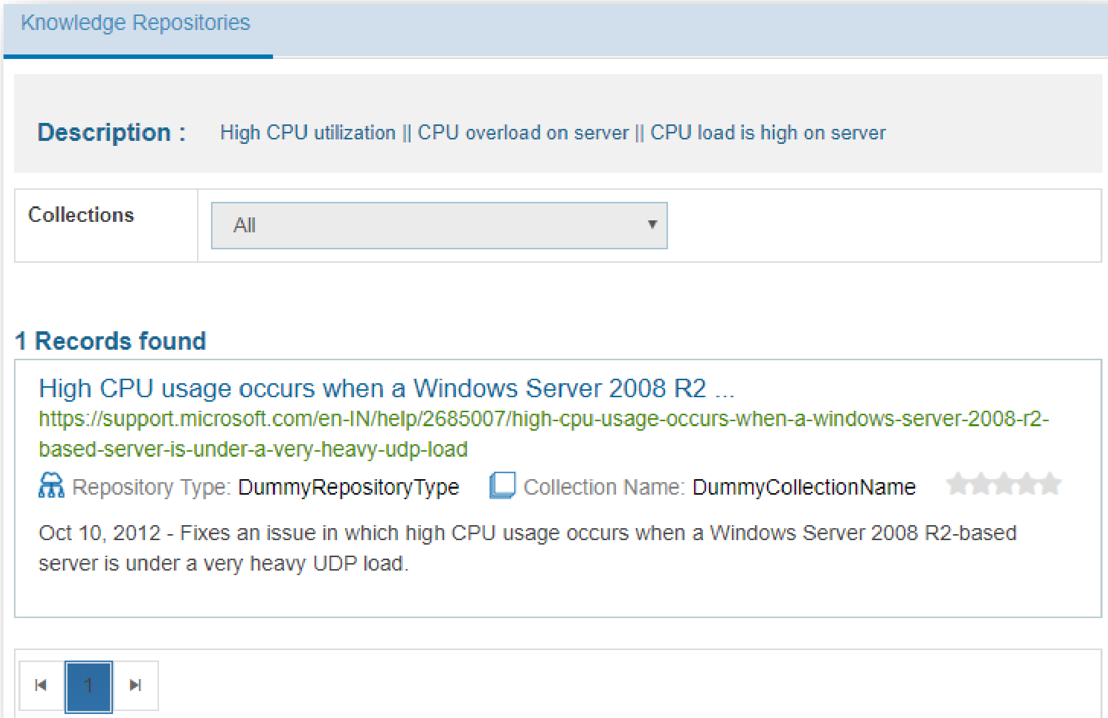


Figure 440- Knowledge Assistant (cont.)

3.2.8 WorkBench

WorkBench analysis allows user to build different versions of the recommendation and unique models for an organization. WorkBench provides a UI to capture SME feedback for results received for these models. If the SME considers a particular version of the model is about 80% to 90% accurate, then user can deploy the same model in a production environment. User can use the deployed model for future clustering of tickets and recommendations.

To run and build different versions of the same model (for ticket clustering and Runbook Recommendation), the SME defines the configurations, also called as hyperparameters for each version. SMEs can use these models to test the current unique and recommendation models anytime and update them as required.

It is recommended to perform the workbench analysis before deploying a unique and recommendation model in the production environment.

1. To manage workbench analysis, on the main menu bar, click **Advance Configuration-> WorkBench**. The drop-down lists the following options:

   – Unique Analysis

   – Recommendation Analysis

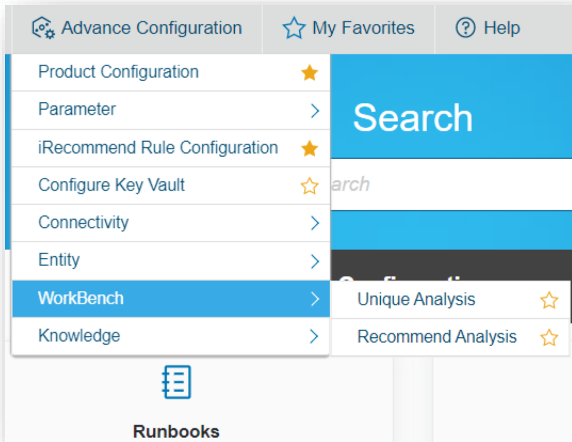


Figure 441- Workbench

3.2.5.7.1. Unique Analysis

Unique analysis modifies the hyperparameters (or configuration) of the **iUnique** module to increase accuracy in the customer specific environment.

1. To manage workbench unique analysis, on the main menu bar, click **Advance Configuration-> WorkBench** and then click **Unique Analysis**. The **Unique Analysis** page appears.

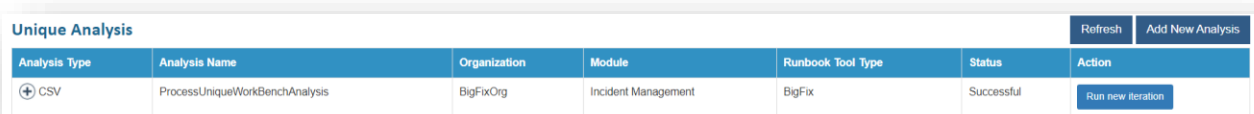


Figure 442- Workbench Unique Analysis

This lists the available unique analysis types in a tabular view which enables user to add new iterations to the existing analysis, add new unique analysis, and view, edit, or publish the existing unique analysis.

User can only perform one unique analysis for a single organization at one time. However, you can run multiple analyses for different organizations simultaneously.

3.2.5.7.2. Add New Iteration

If the existing configuration (or hyperparameters template) of unique analysis do not provide the expected results, you can add multiple configurations (or hyperparameters template) to get better results.

To add a new iteration, perform the following steps.

1. On the **Unique Analysis** page, click **Run New Iteration**.

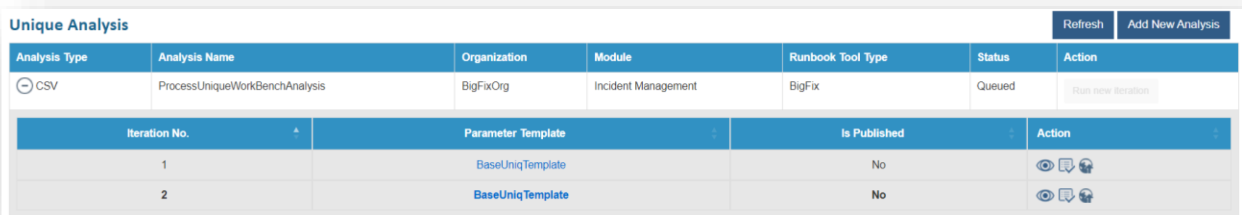


Figure 443- Workbench Unique Analysis

2. On the **Iteration** page, select **Hyperparameter Template** from the drop-down menu, and then click **Run**.

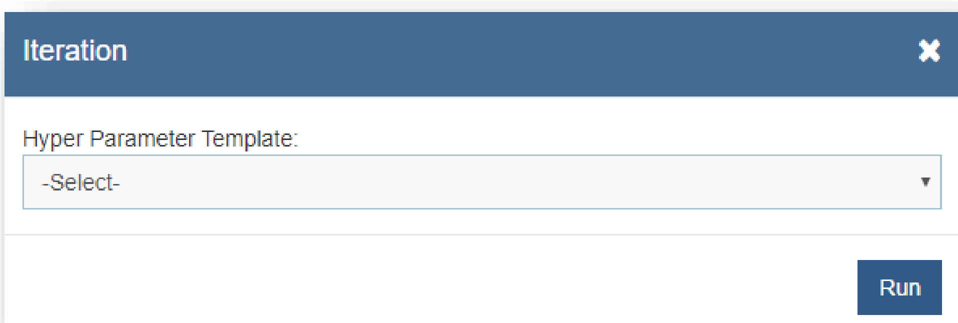


Figure 444- Workbench Unique Analysis

To create a new hyperparameters template, see Hyperparameter Configuration.

The confirmation dialog box appears.

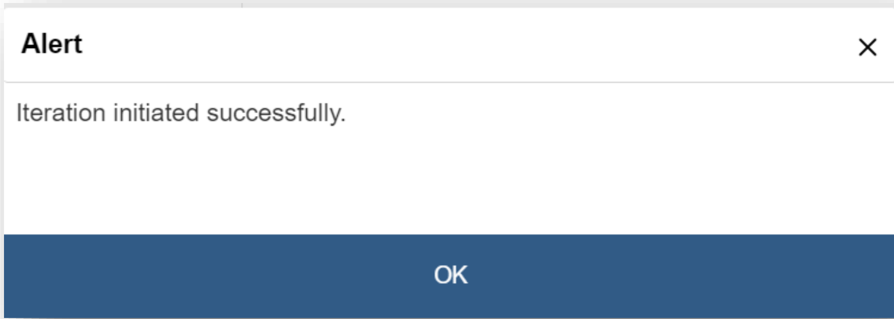


Figure 445- Workbench Unique Analysis

This adds the iteration and appears at the bottom of the list in a grid below.

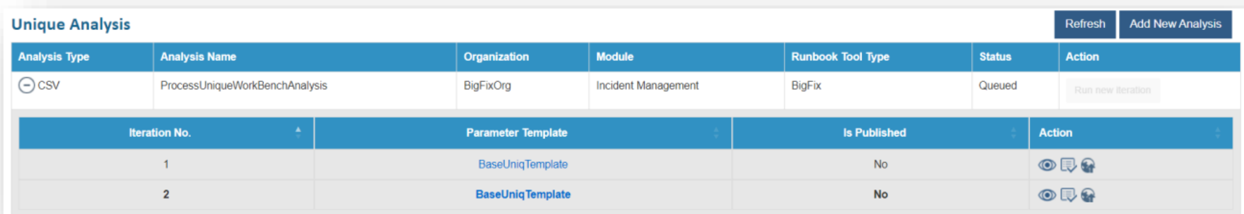


Figure 446- Workbench Unique Analysis

3.2.5.7.3. Add New Unique Analysis Type

User can add a new workbench unique analysis type for an organization by performing the following steps.

1. On the **Unique Analysis** screen, click **Add New Analysis**.

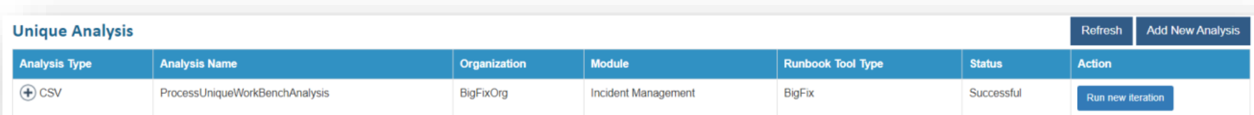


Figure 447- Add New Unique Analysis

The **Upload WorkBench Data** page appears. User can define general attributes for the new analysis on this page. Attributes must be set for fields marked with an asterisk (*) to appropriate values for environment before creating an analysis.

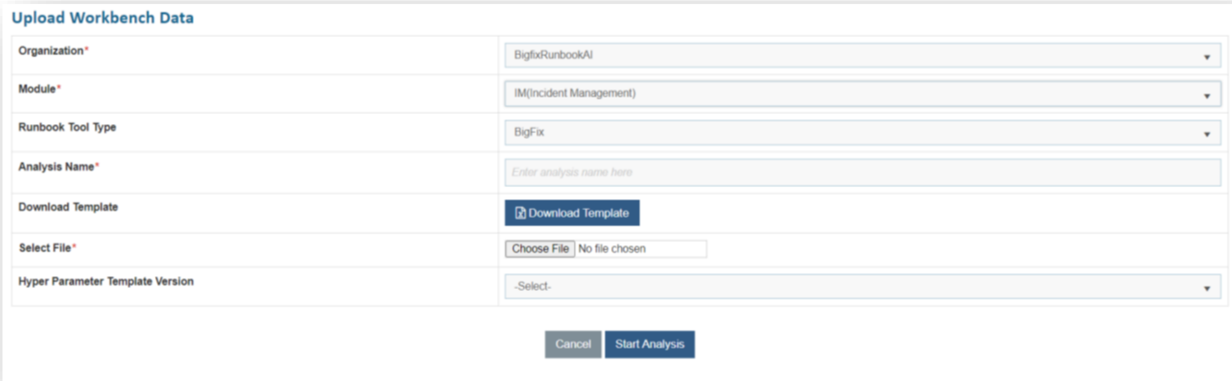


Figure 448- Add New Unique Analysis (Cont.)

User can create a dummy organization using **Add Mock Organization**.

2. Select the organization from the list of organizations available in **Organization** field. You can also create a mock organization using the following steps:
   a. Select **Add Mock Organization** from the drop-down list of the organizations, and it will prompt you to type the **Mock Organization** name.

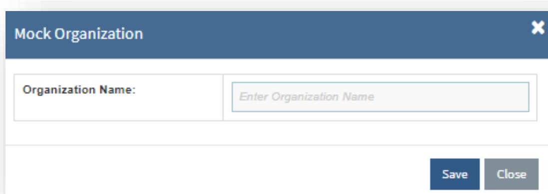


Figure 449- Add New Unique Analysis (Cont.)

   b. Click **Save**. This adds the new mock organization and appears in the **Organization** drop-down list.
3. Select a module from the list of modules available in the **Modules** field.
4. Select **Runbook Tool Type** from the list of available tool types in dropdown.
5. In the **Analysis Name** field, type the unique name for the analysis to be created.
6. Click **Download Template** to download the CSV template to upload analysis details.
7. Fill the details in the downloaded template and click **Choose File** to upload the updated CSV template.

8. Select the hyperparameter template version from the templates available in the **Hyperparameter Template Version** field.

It lists all the **Hyperparameter Templates** added in Add New Template.

9. To start a unique analysis, click **Start Analysis**.

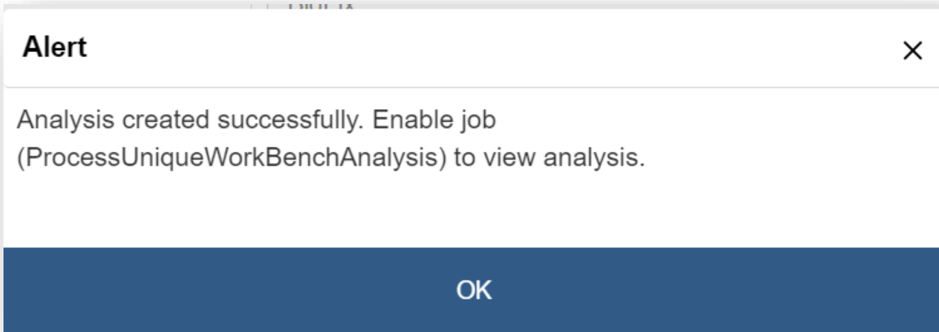


Figure 450- Add New Unique Analysis (Cont.)

On clicking **Start Analysis**, one job is created for **Unique Analysis** and another for Recommendation Analysis. Newly added analyses are listed on the Manage Jobs page.

10. To enable a job to view analysis, go to Manage Jobs.

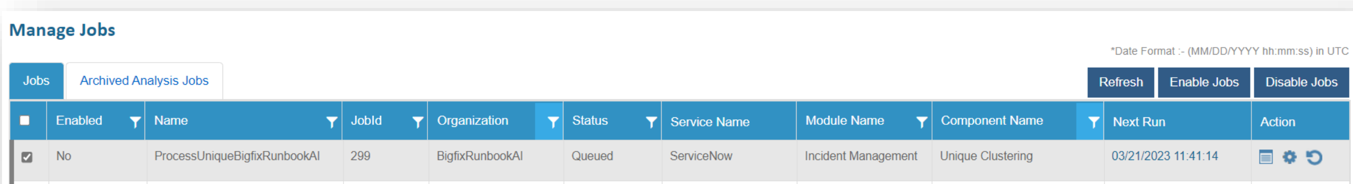


Figure 451- Add New Unique Analysis (Cont.)

11. Select the newly added job for unique analysis with the status as **Queued** and then click **Enable Jobs**. A confirmation dialog box appears.

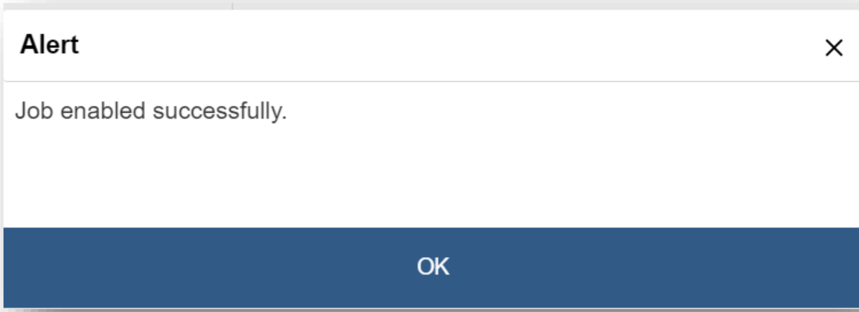


Figure 452- Add New Unique Analysis (Cont.)

This adds the analysis and lists it in on the **Unique Analysis** page with an **In-Progress** status.

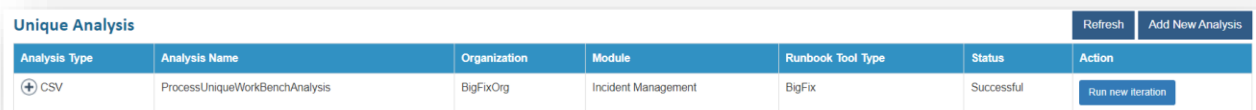


Figure 453- Add New Unique Analysis (Cont.)

After the unique analysis is completed, the status changes to **Pending Verification**. The SMEs can now validate the results.

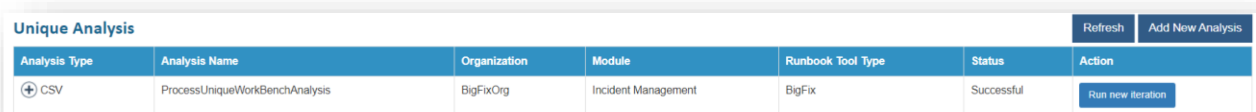


Figure 454- Add New Unique Analysis (Cont.)

To analyze the added unique analysis data, click ⊕ next to the analysis to be verified.

This auto fills the data available in the template of the selected analysis and allows user to view, edit, or publish the analysis.

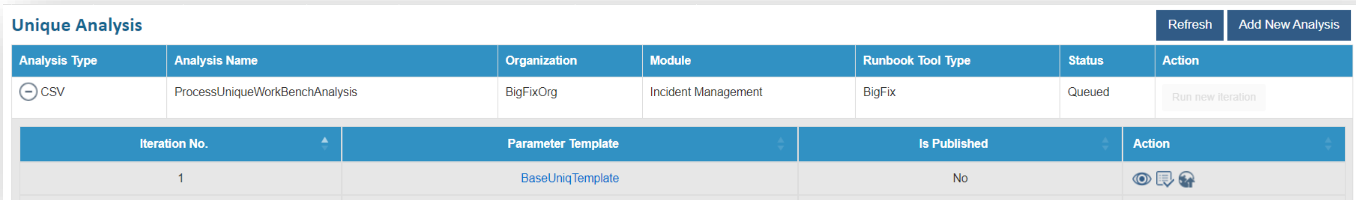


Figure 455- Add New Unique Analysis (Cont.)

3.2.5.7.3.1. View Unique Analysis

User can view the information about an analysis that has already been defined in the workbench.

To view a unique analysis, perform the following steps:

1. On the **Unique Analysis** page, click next to the analysis user wants to view.

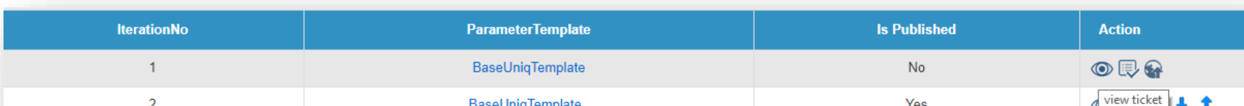


Figure 456- View Unique Analysis

The **WorkbenchVerifyTicket** page appears where user can edit the required **Similarity Score** to view the canonical summary of the analysis.

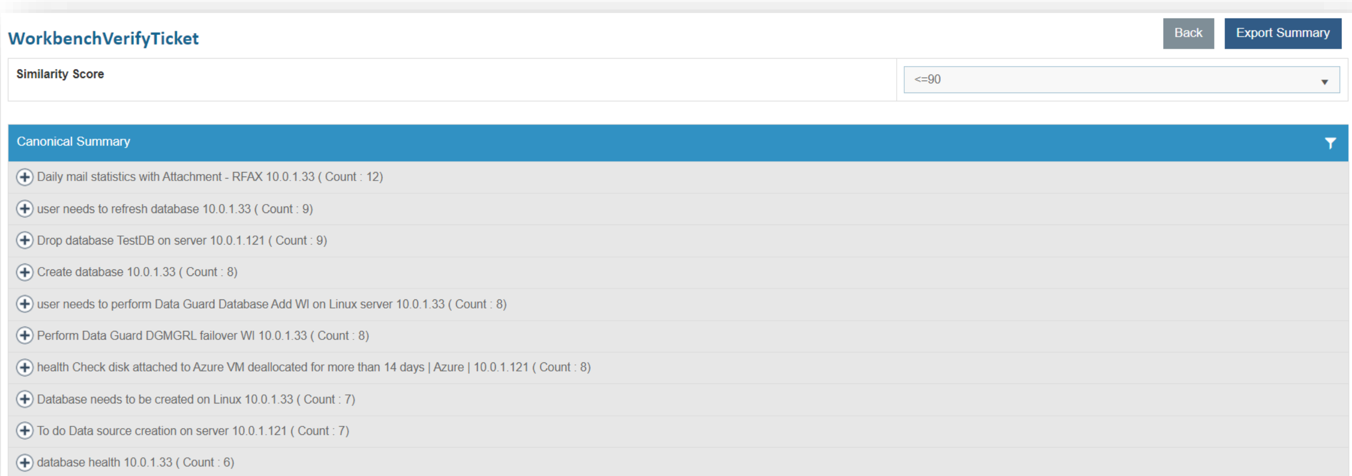


Figure 457- View Unique Analysis (Cont.)

Click **Export Summary** to export the canonical summary of the analysis to your folder or click Back to go back to the previous screen.

3.2.5.7.3.2. Edit Unique Analysis

User can open an existing analysis, review the available information, and change the analysis details by performing the following steps:

1. On the **Unique Analysis** page, click next to the analysis you want to edit.

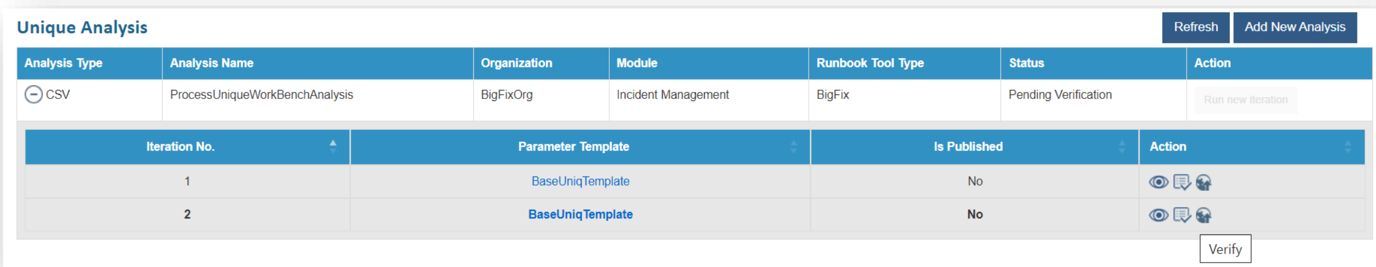


Figure 458- Edit Unique Analysis

The **Canonical Summary page** appears where user can edit the required **Similarity Score** to see the canonical summary of the analysis.

Figure 459- Edit Unique Analysis (Cont.)

2. Expand the selected **Canonical Summary** and all the available tickets under the summary appear in a tabular view.

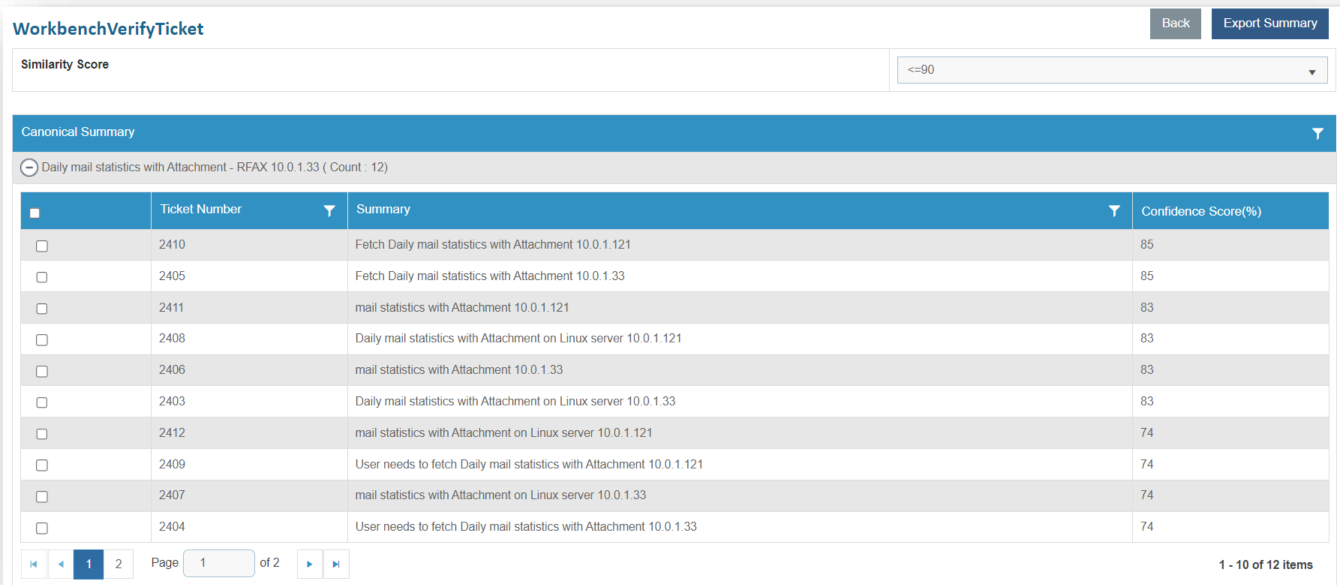


Figure 460- Edit Unique Analysis (Cont.)

3. To delete tickets from the selected analysis, select tickets under the canonical summary and click **Remove**.
4. The **Discriminator** page appears that allows user to select the **Existing Discriminator**.
5. Type a new (at least two comma-separated values) discriminator to verify the uniqueness of the selected tickets and click **Save**.

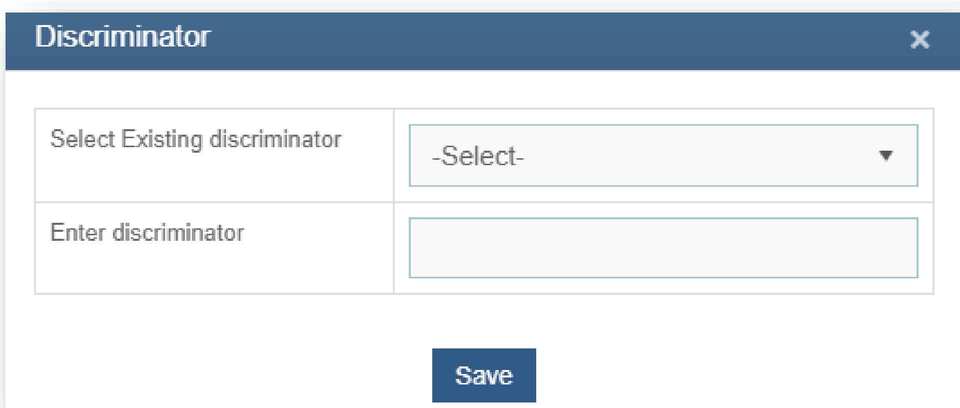


Figure 461- Edit Unique Analysis (Cont.)

The new discriminator is added and listed in the grid below.

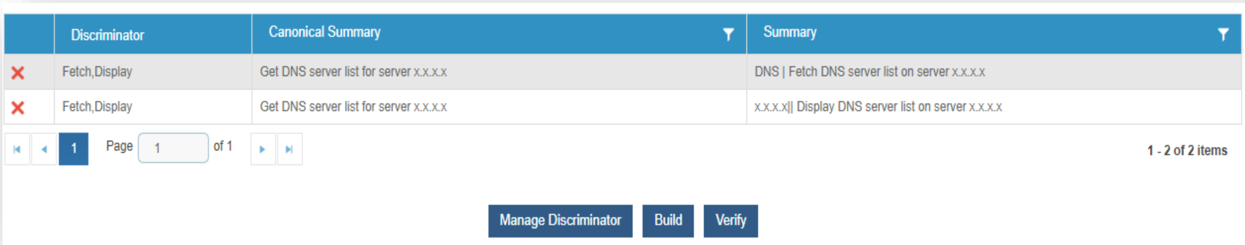


Figure 462- Edit Unique Analysis (Cont.)

6. To manage the added discriminator for analysis, select **Manage Discriminator**.
7. The **Manage Discriminator** page appears and allows user to delete the discriminator by clicking ✕.

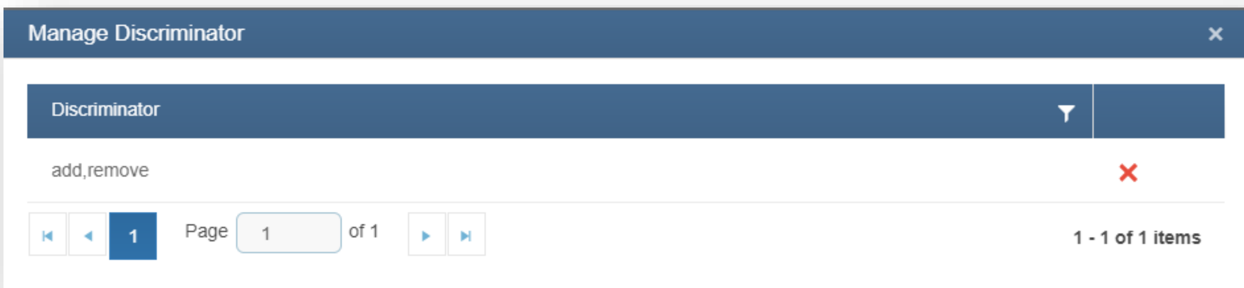


Figure 463- Edit Unique Analysis (Cont.)

8. Click **Yes** to confirm the updates for all discriminators.

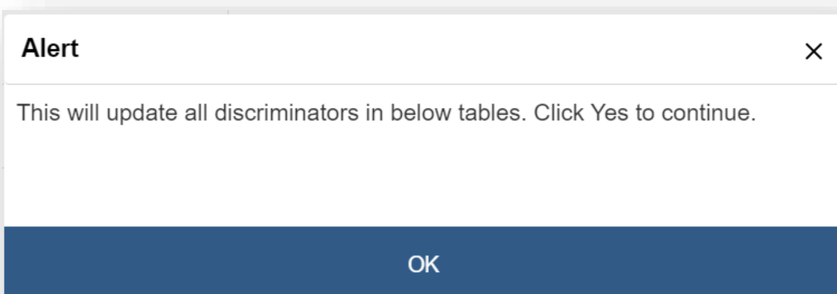


Figure 464- Edit Unique Analysis (Cont.)

9. After the discriminators are configured, click **Build** to reinitiate the unique analysis of selected tickets cluster, based on the newly added discriminator.

This will redirect user to the **Unique Analysis** page where the analysis status changes to **Queued (Build Initiated)**. On successful completion of unique analysis, the status automatically changes to **Pending Verification**.

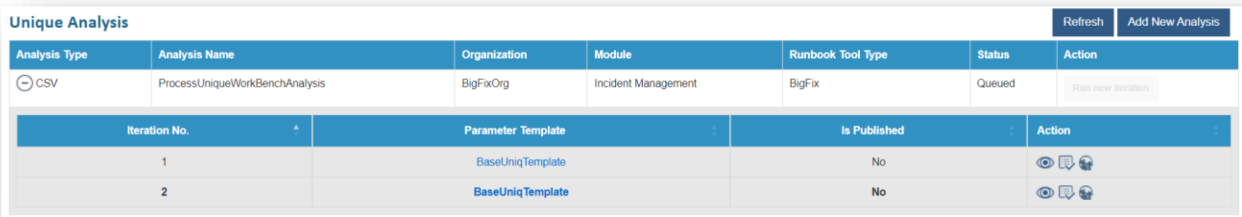


Figure 465- Edit Unique Analysis (Cont.)

10. To verify the pending verification of the analysis, click on next to the analysis you want to verify. This will redirect you to Figure 459- Edit Unique Analysis (Cont.).
11. Click **Verify** to approve analysis. A confirmation dialog box appears.

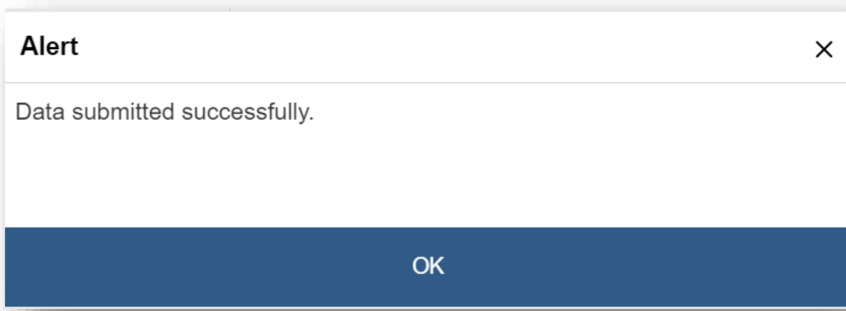


Figure 466- Edit Unique Analysis (Cont.)

The status of the unique analysis changes to **Successful**.

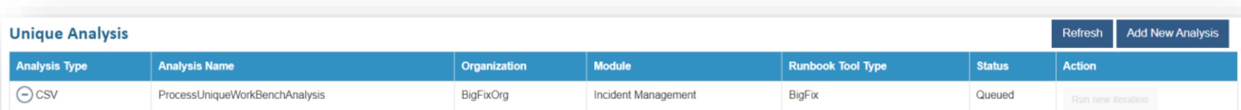


Figure 467- Edit Unique Analysis (Cont.)

User cannot add a discriminator to a ticket for analysis after verification of the unique analysis.

3.2.5.7.3.3. Publish Unique Analysis

After user has verified the configuration of the existing hyperparameter template for an analysis, user can publish the most optimized hyperparameter template by performing the following steps.

1. On the **Unique Analysis** screen, click next to the analysis user want to publish.

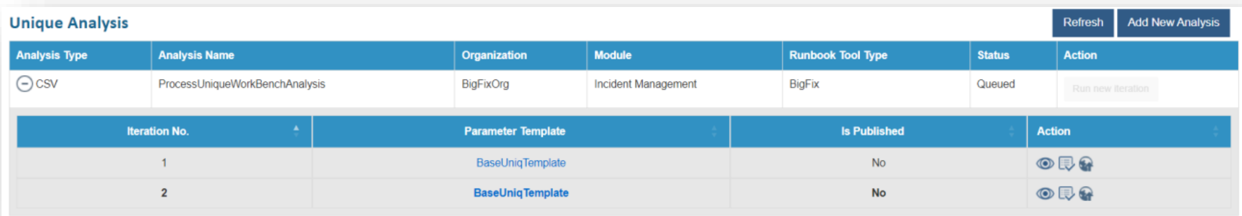


Figure 468- Publish Unique Analysis

User can only publish the successful iterations.

A confirmation dialog box appears.

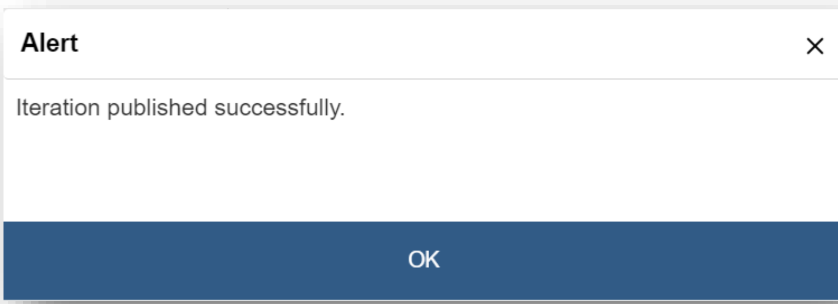


Figure 469- Publish Unique Analysis (Cont.)

Successful publishing of the hyperparameter template enables in the **Action** column.

2. Click to export the parameter template. This can further be used to create a new template for iUnique using the **Add Hyperparameters Details** screen.

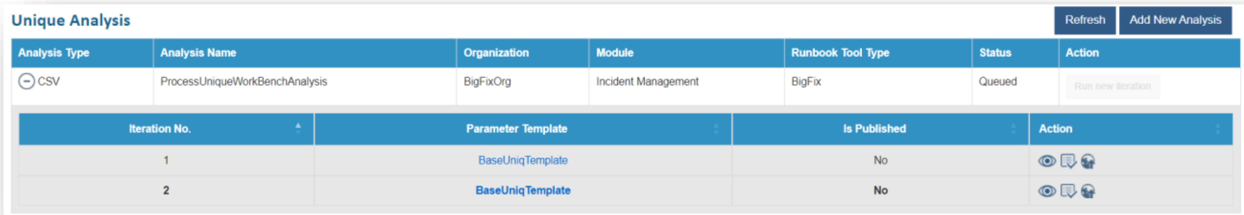


Figure 470- Export Parameter Template

User can also create a new parameter template. Click ↑ in the **Action** column which takes the user to the **Map template with Organization**.

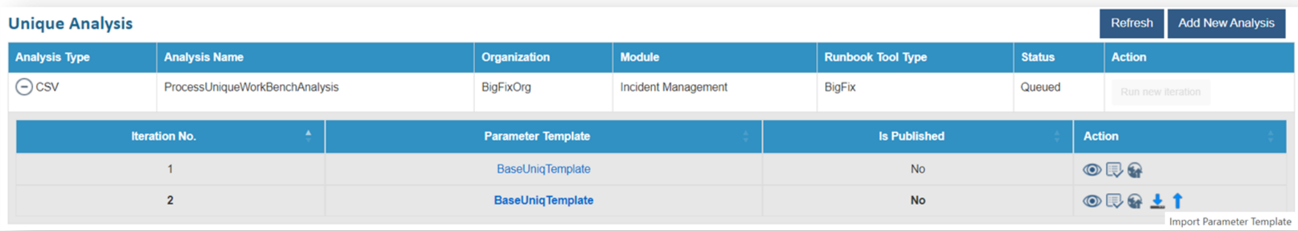


Figure 471 - Import Parameter Template

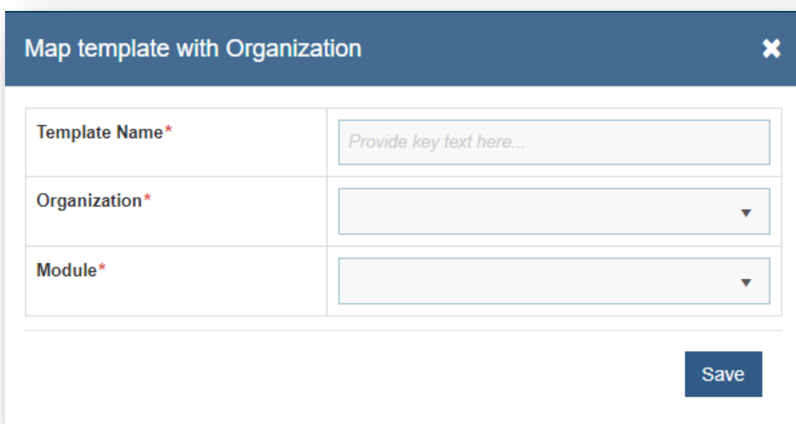


Figure 472 - Map template with Organization

User can refresh the data on the screen by clicking **Refresh**.

3.2.5.7.2. WorkBench Recommendation Analysis

The Workbench Recommendation Analysis optimizes the hyperparameters (or configuration) of the iRecommend module. It identifies hyperparameters values for iRecommend by running multiple iterations of iRecommend and selects the most optimal hyperparameter values. Later on, these hyperparameter values can be used in production environment. These hyperparameter values can be defined in Hyperparameter Configuration.

To manage workbench recommendation analysis, perform the following steps:

1. On the main menu bar, click **Advance Configuration->WorkBench**.
2. Click **Recommend Analysis**. The **Recommend Analysis** screen appears.

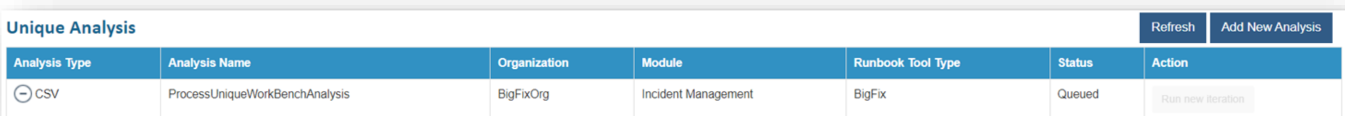


Figure 473- Workbench Recommendation Analysis

It lists the available recommendation analysis types in a tabular view and enables user to add a new recommendation analysis or view, edit, or publish the existing recommendation analysis.

If the published unique analysis is available for an organization, only then user can run the new iteration on recommendation analysis for the same organization.

3.2.5.7.3. Add New Iteration

This section describes how to add a new workbench recommendation analysis for an organization.

1. Before adding a new iteration, ensure that the unique analysis for the organization for which you are adding the new iteration, is published. Then enable the recommendation job from the page.

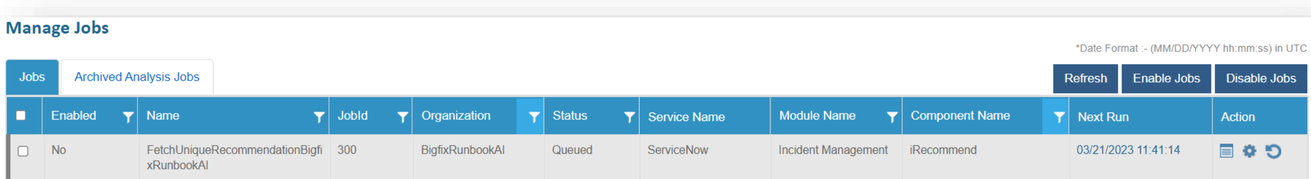


Figure 474- Add New Iteration

2. After the job is enabled, click **Run new iteration to** run a new iteration of recommendation analysis for the same customer.

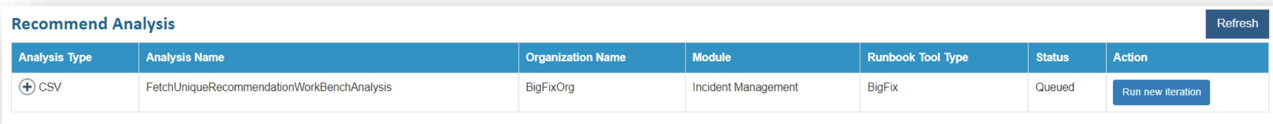


Figure 475- Add New Iteration (Cont.)

If user does not get the expected results from the configured hyperparameter template of the recommendation analysis, then user can add multiple iterations of recommendation analysis corresponding to hyperparameter templates to modify the results.

To add a new iteration, perform the following steps:

1. Go to main menu bar, click on **Advance Configuration->Workbench**. Click on the **Recommend Analysis** page, click **Run New Iteration** for the organization under analysis.

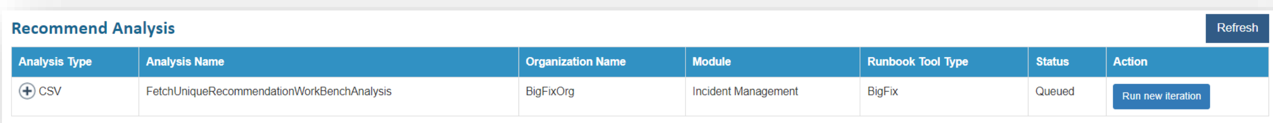


Figure 476- Add New Iteration (Cont.)

The **Template Versions** page appears.

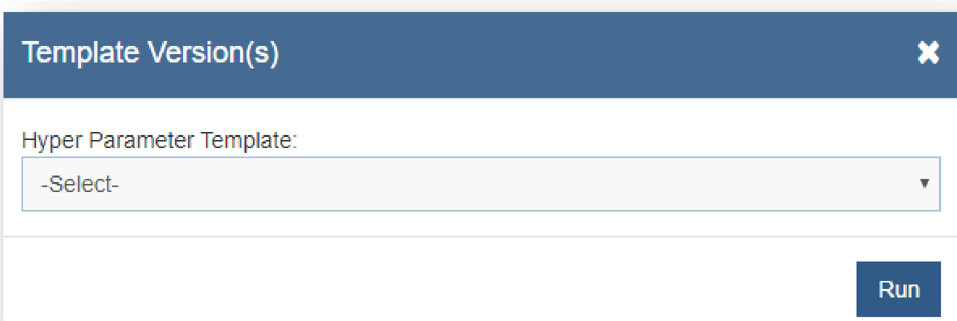


Figure 477- Add New Iteration (Cont.)

2. Select a template from the **Hyperparameter Template** drop-down list.

Figure 478- Add New Iteration (Cont.)

3. Click **Run**.

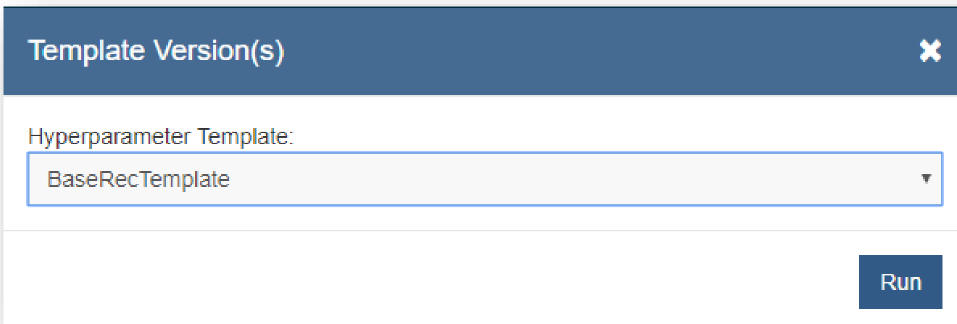


Figure 479- Add New Iteration (Cont.)

A confirmation dialog box appears.

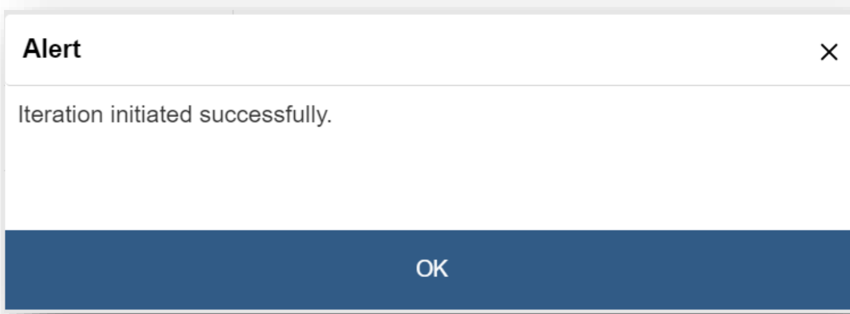


Figure 480- Add New Iteration (Cont.)

The new iteration is added and appears at the bottom of the list in the grid below.

Figure 481- Add New Iteration (Cont.)

3.2.5.7.3.1. View Recommendation Analysis

User can view information about an analysis that has already been configured.

To view recommendation analysis, perform the following steps:

1. On the **Recommendation Analysis** screen, click next to the analysis you want to view.

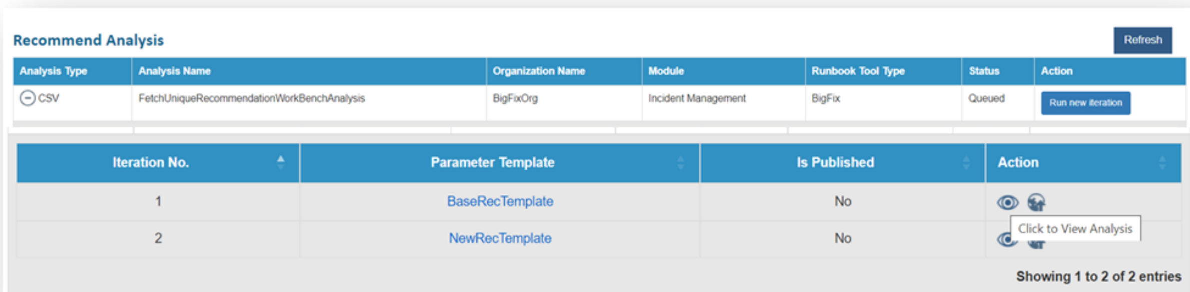


Figure 482- View Recommendation Analysis

For detailed information, see Analysis.

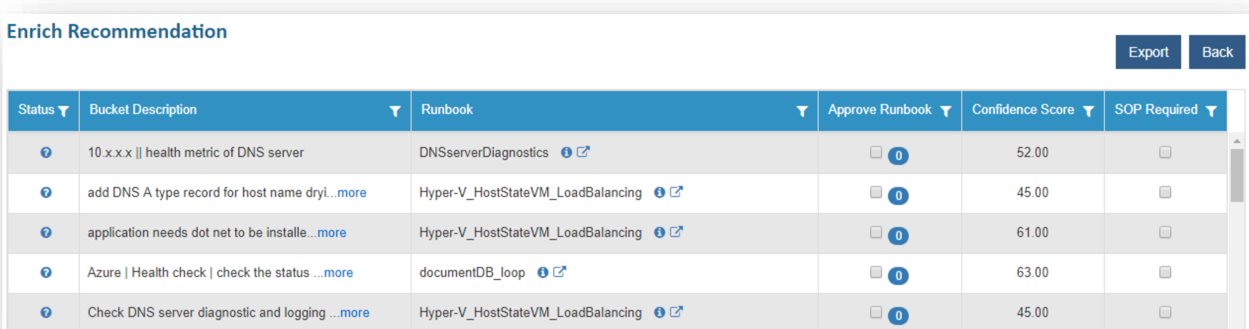


Figure 483- View Recommendation Analysis

Click **Export** to export the summary of the analysis to your folder or click Back to go back to the previous screen.

3.2.5.7.3.2. Publish Recommendation Analysis

After verifying the configuration of the existing hyperparameter template in an analysis, user can publish the most optimized hyperparameter template by performing the following steps.

1. On the **Recommendation Analysis** screen, click next to the analysis user wants to publish.

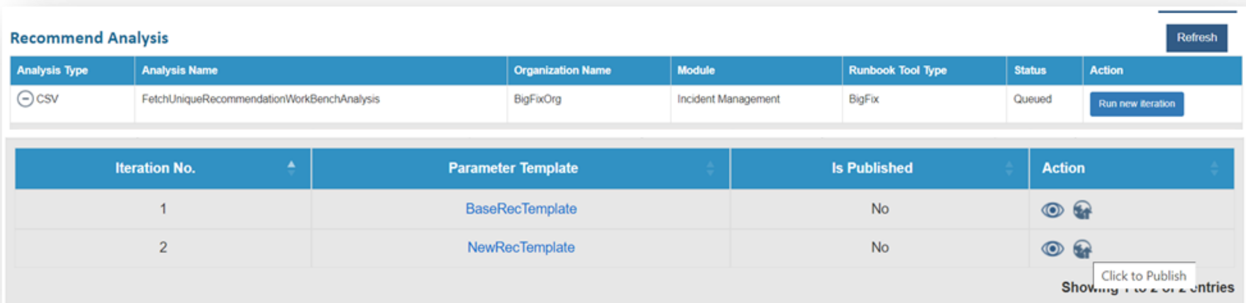


Figure 484- Publish Recommendation Analysis

User can only publish successful iterations.

A confirmation dialog box appears.

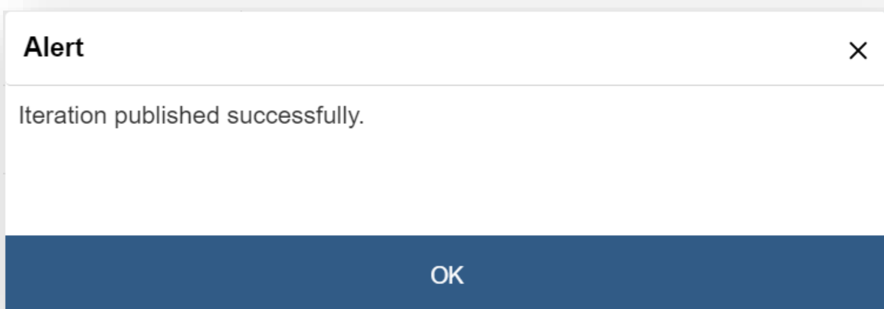


Figure 485- Publish Recommendation Analysis

Successful publishing of the hyperparameter template enables in the **Action** column.

2. Click to export the parameter template. This can further be used to create a new template for iRecommend using the **Add Hyperparameters Details** screen.

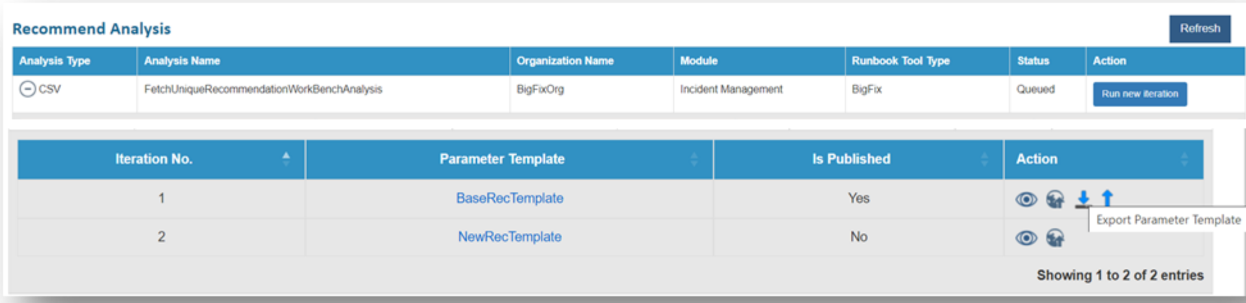


Figure 486 - Export Parameter Template

User can also create a new parameter template. Click ⭡ in the **Action** column which takes the user to the **Map template with Organization**.

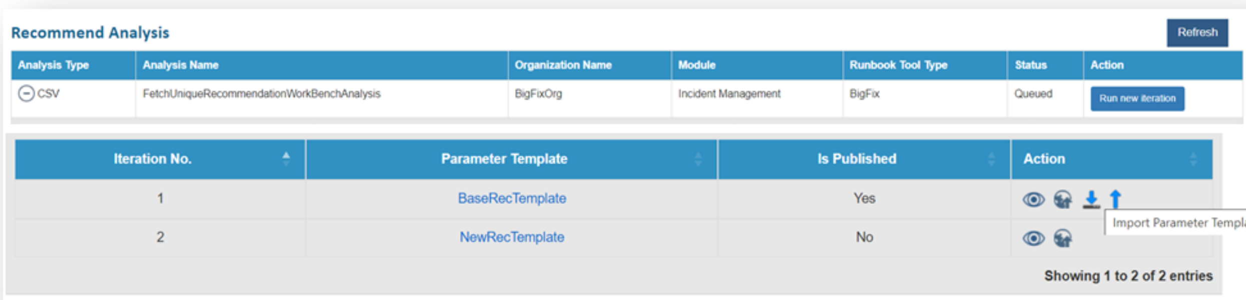


Figure 487 - Import Parameter Template

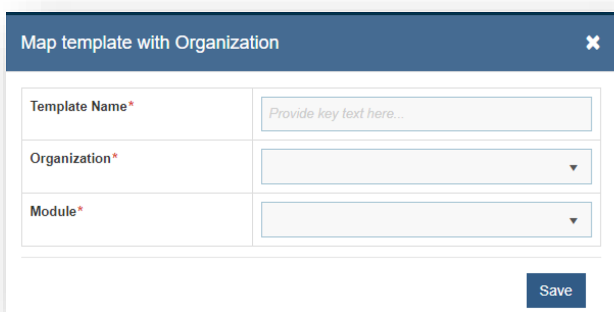


Figure 488 - Map template with Organization

Click **Refresh** to refresh the data being viewed.

3.2.5.8. Manage Parameter Configuration

This section describes how to perform the customer specific advanced parameter configuration for data parsing.

To manage parameter configuration, perform the following steps:

1. On the main menu bar, click **Advance Configuration →Parameter**, and then click **Manage Parameter Configuration**. The **Manage Parameter Configuration** page appears.

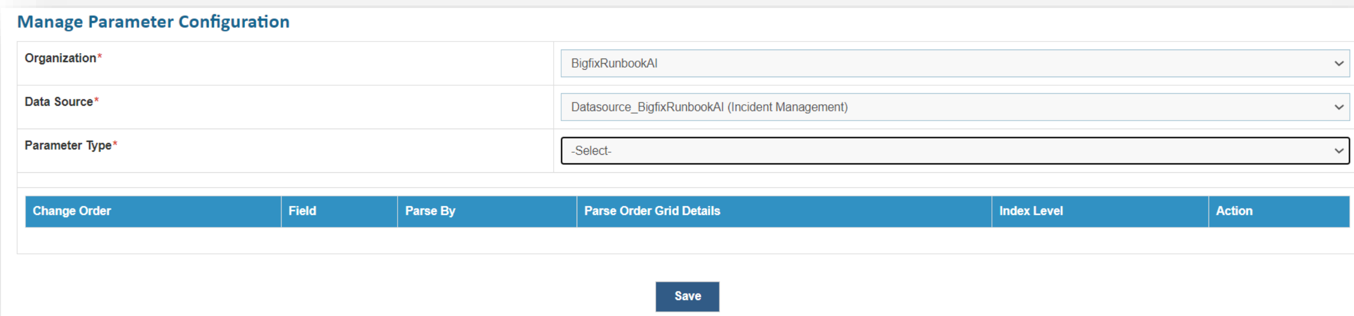


Figure 489- Manage Parameter Configuration

2. Select the organization from the **Organization** field.
3. Select the **Data Source** from where the data will be fetched for parsing.
4. Select the **Parameter Type**, to be used for data parsing. This populates the existing configuration for the selected organization in a grid.

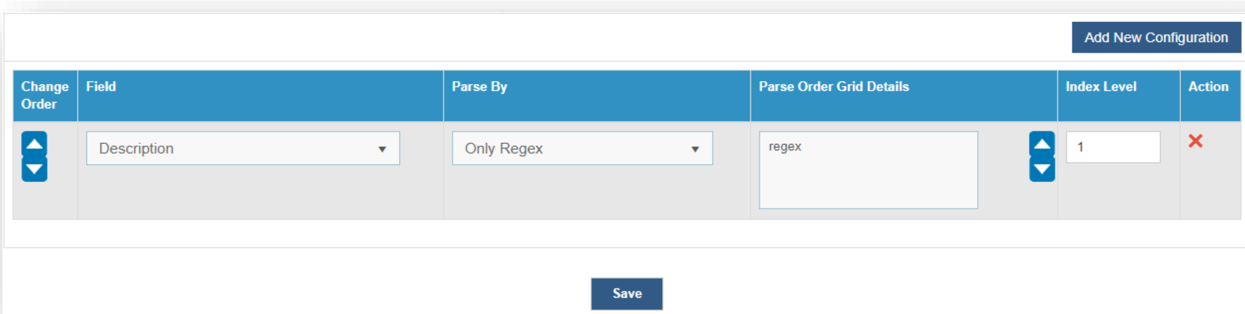


Figure 490 - Manage Parameter Configuration (Cont.)

This allows user to add a new configuration using **Add New Configuration** and edit or delete the existing configuration.

3.2.5.8.2. Add New Parameter Configuration

User can add a new parameter configuration in an organization by using the following steps.

1. On the **Manage Parameter Configuration** page, select **Organization**.
2. Select the **Data Source** from where the data will be fetched.
3. Select the **Parameter Type** to be used for data parsing. This enables the **Add New Configuration** button.
4. Click **Add New Configuration** button.

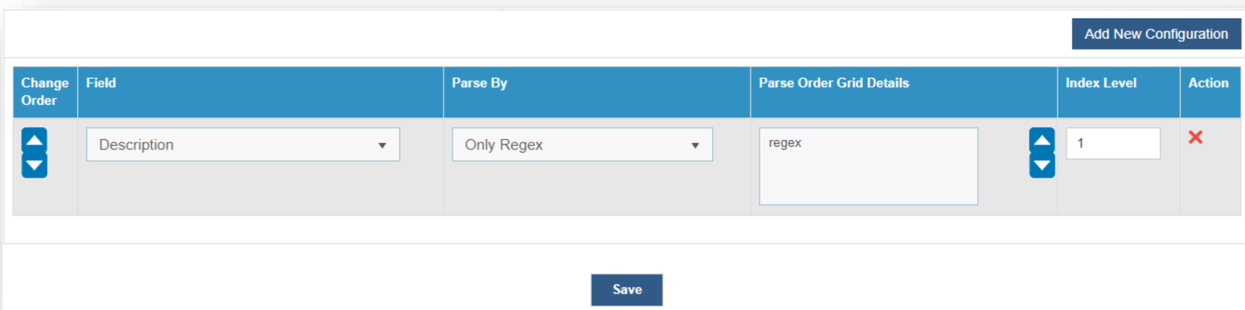


Figure 491 - Add New Parameter Configuration

This adds a new row below the existing parameter configurations.

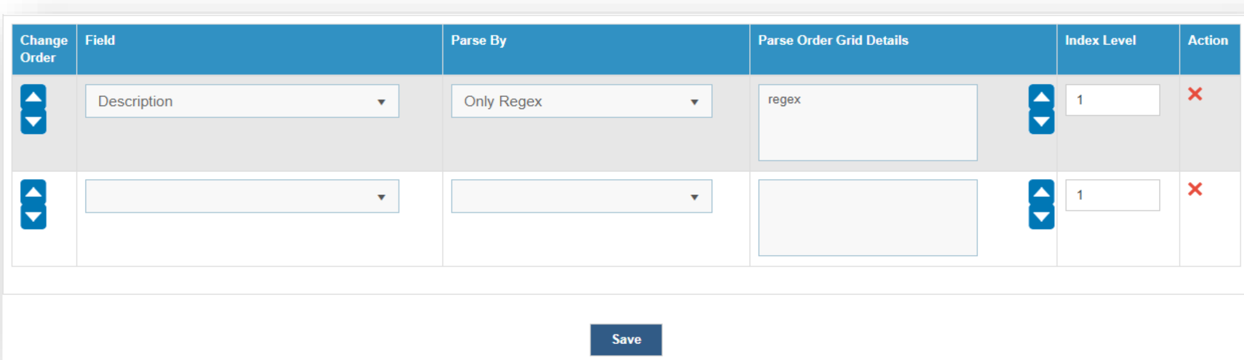


Figure 492 - Add New Parameter Configuration (Cont.)

5. Select a **Field** to define the ticket fields. For e.g. *description, short description, etc*.
6. Select a **Parse By** method. This includes the following parse by methods:
   - **Equal Search**- Specify a value or keyword resembling the words mentioned in the ticket for parsing.

- **Only Regex**- Regex is a special text string for describing a search pattern while ticket parsing and all parameter types have predefined regex. In this method, the parsing is done from ticket fields only.
- **Only Proximity**- It is a parsing method to extract values based on the proximity of words.
- **Regex and Proximity**- It is a parsing method to extract values based on a combination of the proximity of words and regex.

7. The **Parse Order Grid Details** field specifies the parse order in case of selecting Regex and Proximity.
8. If a word is found multiple times using the regex, then a sequence of the word needs to be picked during parsing is defined by **Index Level**.
9. Click **Save** to update the configured parameters.

User can rearrange the order of parameter configuration using Change Order in the left column of the parameter grid.

A confirmation dialog box appears.

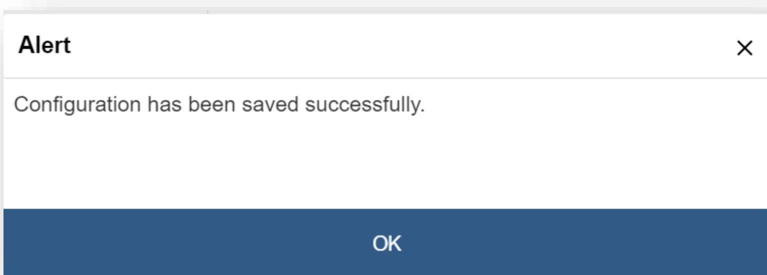


Figure 493 - Add New Parameter Configuration (Cont.)

3.2.5.8.3. Edit or Delete Parameter Configuration

User can open an existing parameter, review the available information, change the parameter configuration, and delete the existing configuration by performing the following steps:

1. On the **Manage Parameter Configuration** page, select **Organization**→ **Data Source**→ **Parameter Type**. A list of the parameters under the selected parameter type appears in a tabular view.

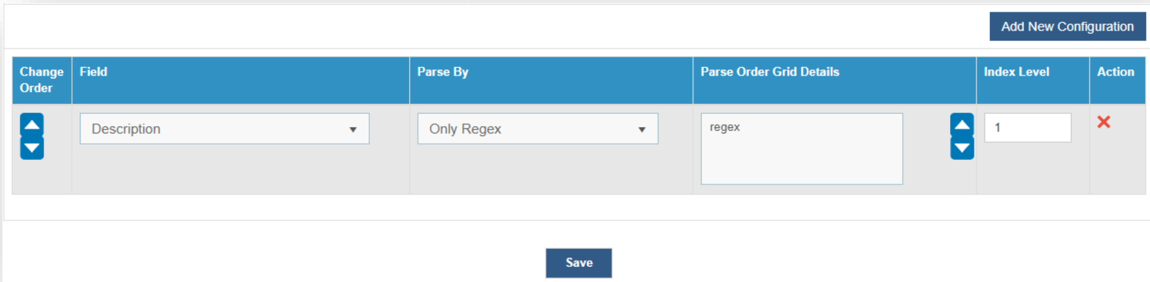


Figure 494- Edit Parameter Configuration

2. Edit the required details and click **Save.** A confirmation dialog box appears.

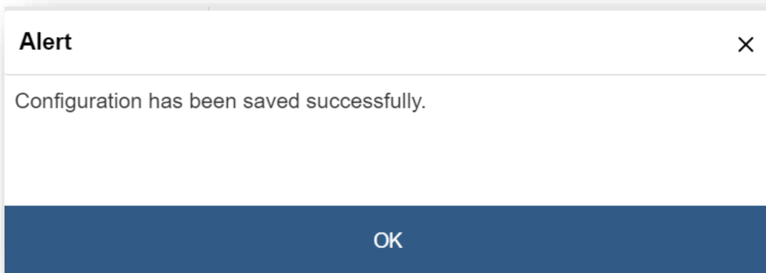


Figure 495 - Edit Parameter Configuration (Cont.)

You can delete a parameter by clicking ❌ for the parameter and clicking Yes to confirm.

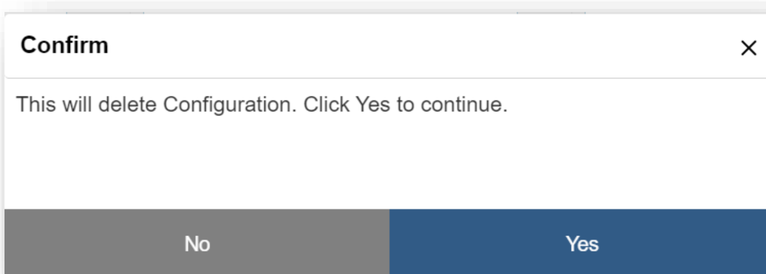


Figure 496- Edit Parameter Configuration (Cont.)

3.2.9 Manage Column

This step describes how to perform the organization specific configurations of ticket data columns, used for ticket parsing and recommendation.

To manage the ticket data column, perform the following steps:

1. On the main menu bar, click **Advance Configuration→Parameter**, and then click **Manage Column**. The **Manage Column** page appears.

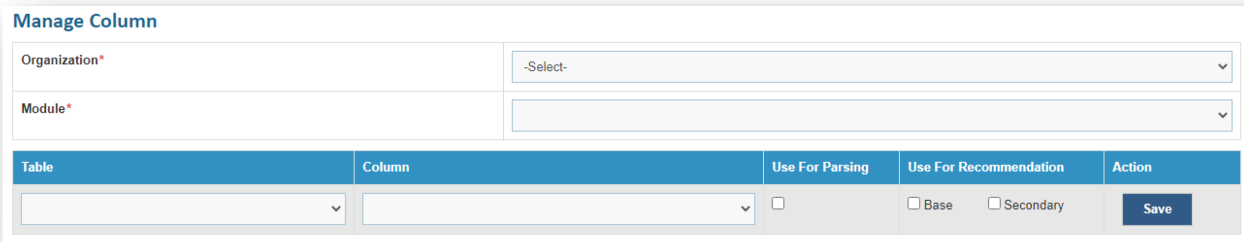


Figure 497- Manage Column

2. Select **Organization**, and then select **Module**.

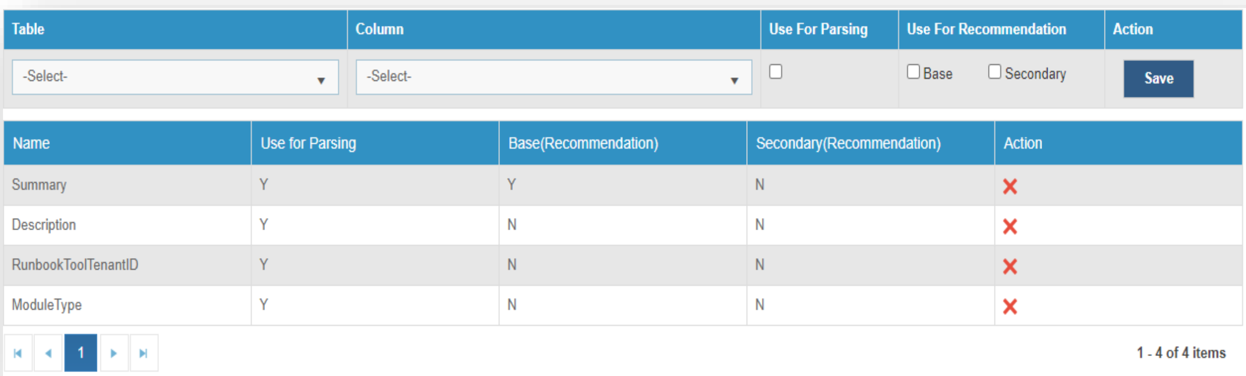


Figure 498- Manage Column (Cont.)

This lists the existing parameters used for parsing and recommendation in a tabular view for the selected organization. User can also add a new configuration or delete the existing configuration.

3.2.5.9.7. Add Configuration

User can add a new configuration in an organization by performing the following steps:

1. On the **Manage Column** page, select the data table from the **Table** list, and then select a **Column** from the selected table.

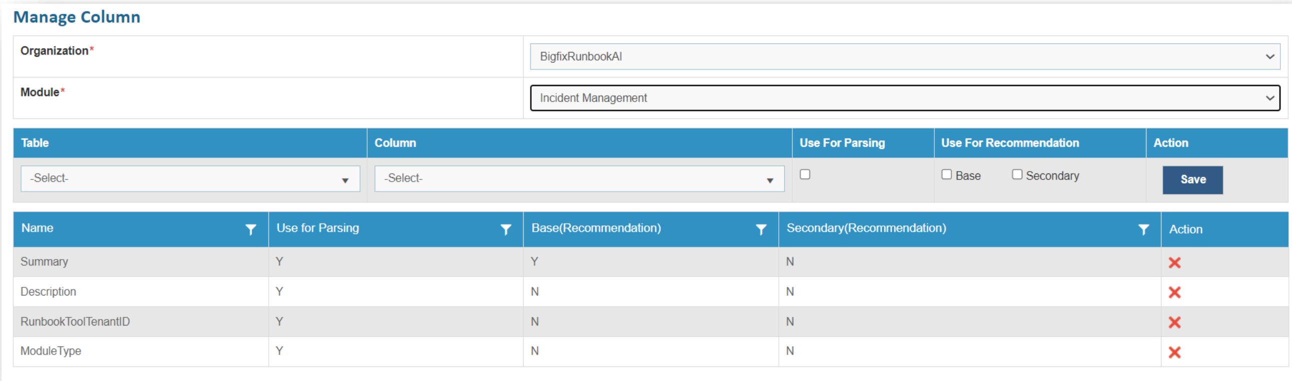


Figure 499- Add Configuration

2. Select **Use for Parsing** for enabling the current column to be used for ticket parsing.
3. Select **Use for Recommendation** for enabling the current column to be used for runbook recommendation.
    - **Base** holds priority over **Secondary** while performing the recommendation.
      While recommendation processing, the columns for which Base is enabled will be considered first, followed by ones marked as Secondary
4. Click **Save** to save settings. A confirmation dialog box appears.

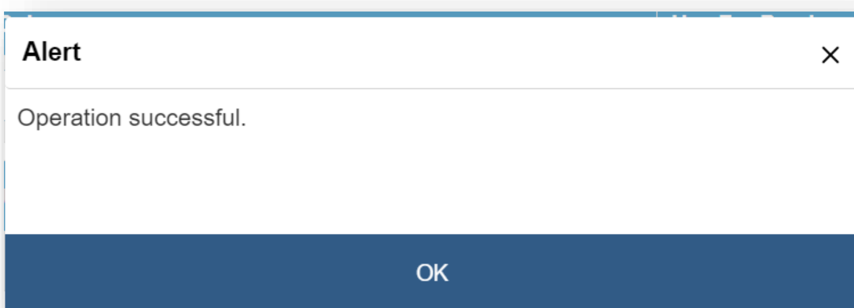


Figure 500- Add Configuration (Cont.)

This adds the new configuration and lists it in a tabular view.

3.2.5.9.8. Delete Configuration

If the user no longer needs a certain configuration in an organization, it can be deleted from the environment.

To delete a configuration, perform the following steps:

1. On the **Manage Column** page, click icon to delete the configuration.

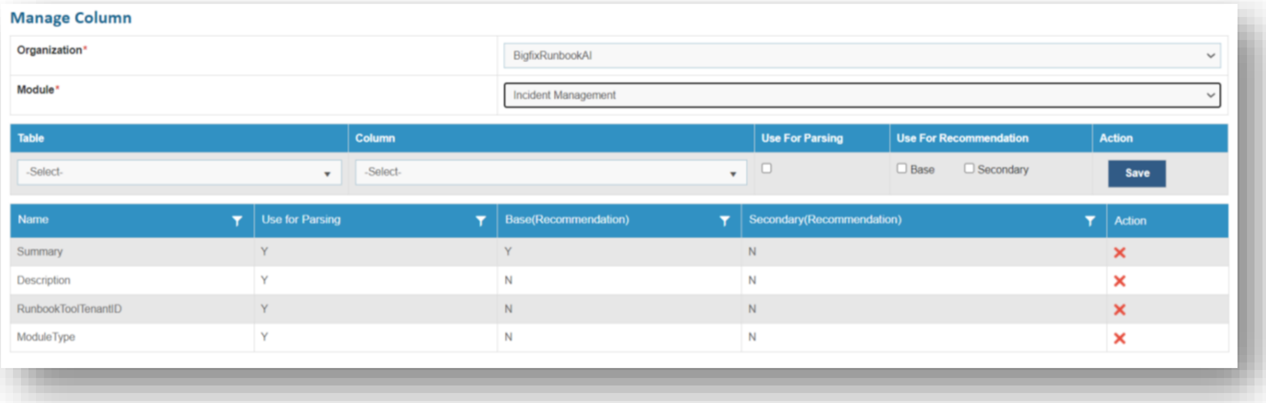


Figure 501- Delete Configuration

2. Click **Yes** to confirm. A confirmation dialog box appears.

Figure 502- Delete Configuration (Cont.)

3. Click **Yes** to confirm the action. A Success message dialog box appears.

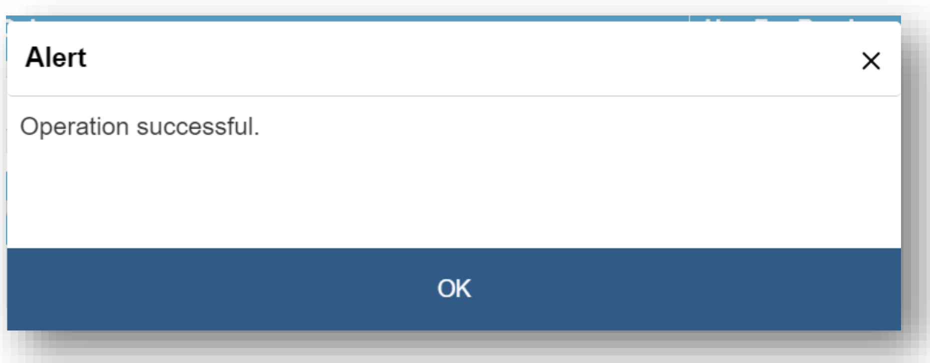


Figure 503- Delete Configuration (Cont.)

3.2.10 Hyperparameter Configuration

Hyperparameters are set of parameters the values of which are identified by analyzing an organization's data. Here, organization data refers to ticket information which needs to be automated. The **Hyperparameter configuration** screen has been designed for the same purpose. These parameters values are used as prior information for training of models Runbook Recommendation (iRecommend) and Ticket Clustering (iUnique).

This section describes how to configure the hyperparameters used in the workbench by performing the following steps:

1. On the main menu bar, click **Advance Configuration →Parameter**, and then click **Hyperparameter Configuration.** The **Manage Hyperparameters** page appears.

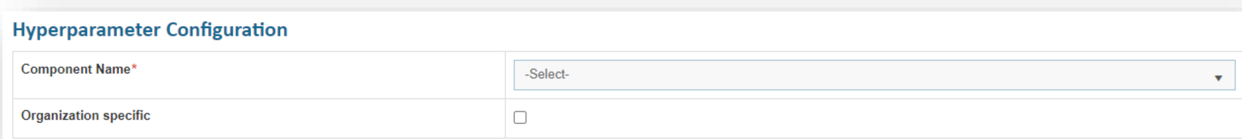


Figure 504- Hyperparameter Configuration

2. Select the **Recommendation** or **Unique Clustering** component from the drop-down list next to the **Component Name** field without selecting the **Organization Specific** checkbox.

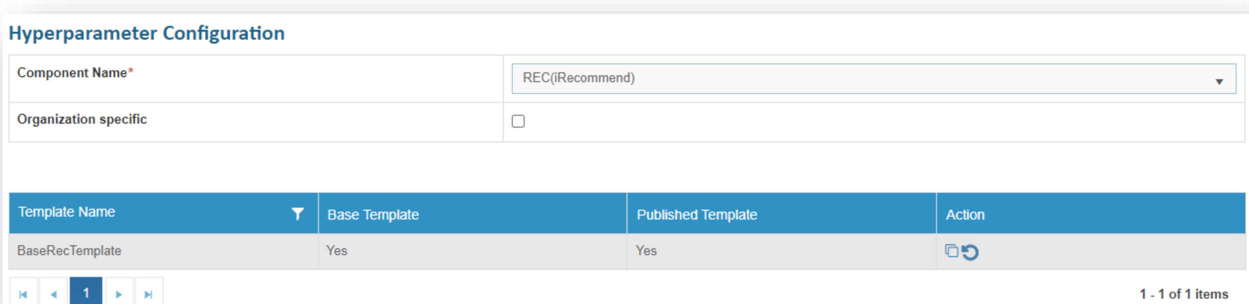


Figure 505- Hyperparameter Configuration (Cont.)

3. Select the Recommendation or Unique Clustering component from the drop-down list next to the **Component Name** field and select the **Organization** and its **Module**. It will list the hyperparameters for that selected organization.

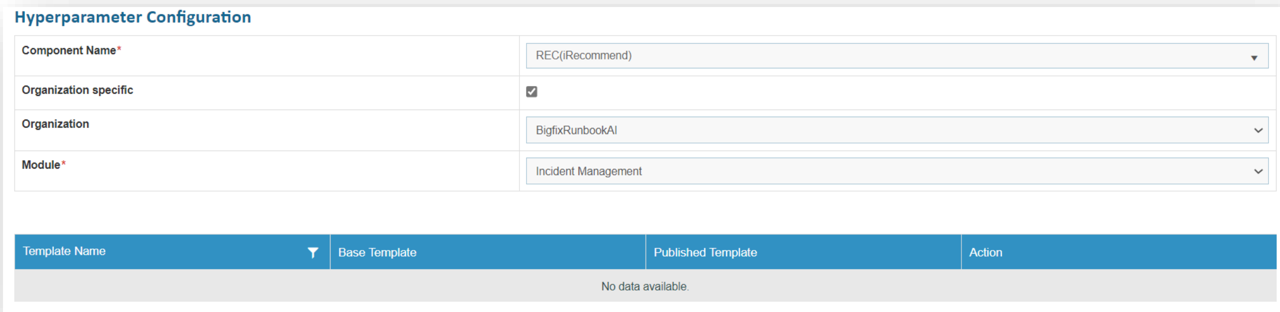


Figure 506 - Hyperparameter Configuration (Cont.)

3.2.10.1 Add New Template

User can add a new template in a component by performing the following steps:

1. Select the **Recommendation** or **Unique Clustering** component from the drop-down list next to the **Component Name** field.

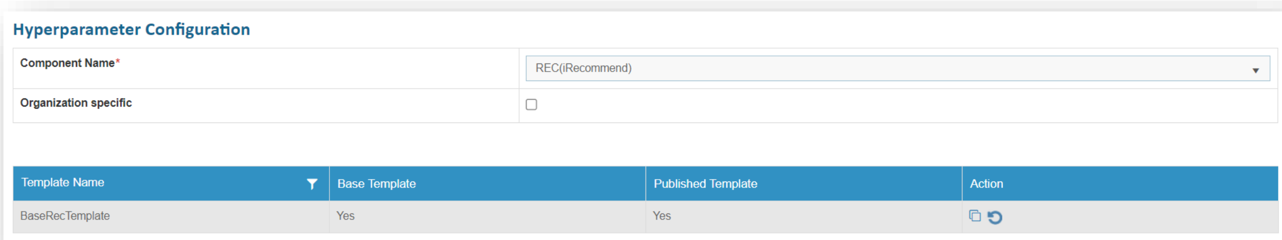


Figure 507- Add New Template

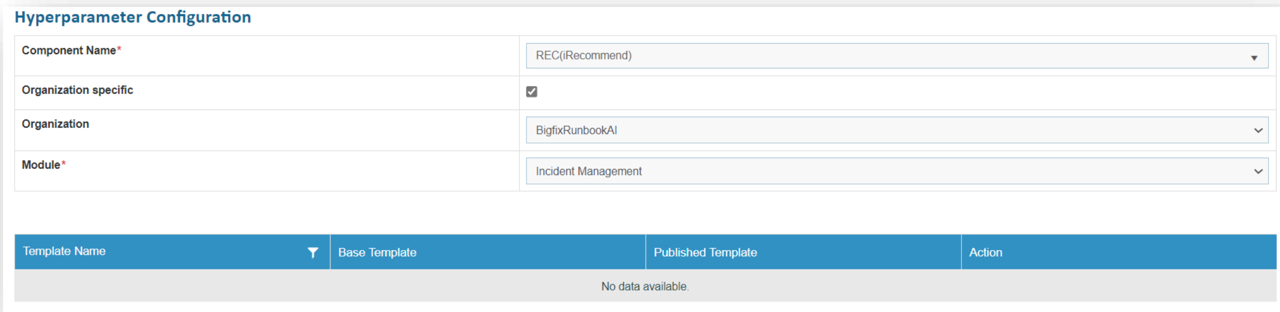


Figure 508 - Hyperparameter Configuration

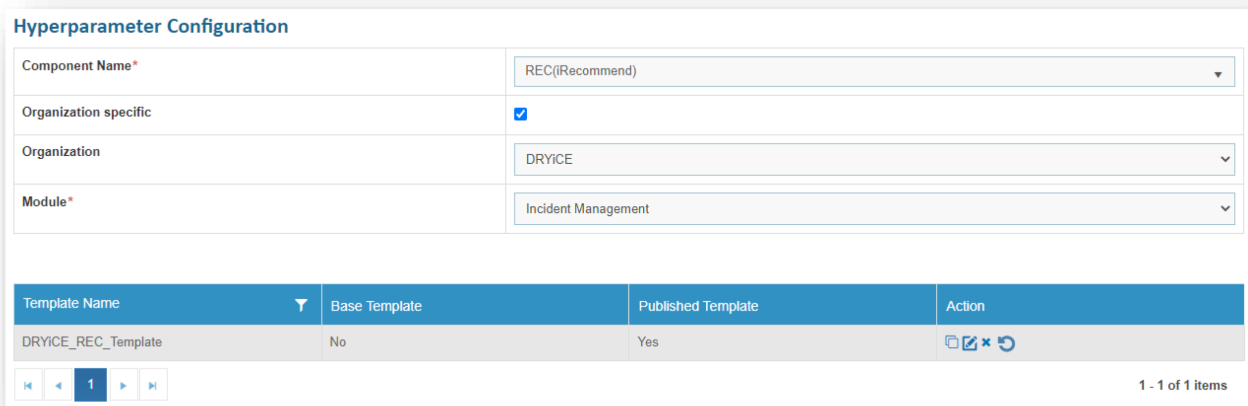


Figure 509 - Add New Template (Organization Specific)

This lists the default base template and existing templates for the selected component if there are any. These templates provide a starting point for users to create a template by replicating or cloning them. It also enables a user to edit or delete the existing templates.

The component selection defines the further configuration.

To create a template for a recommendation, perform the following steps:

a. Click next to the template selected for cloning. The **Clone Configuration** page appears.

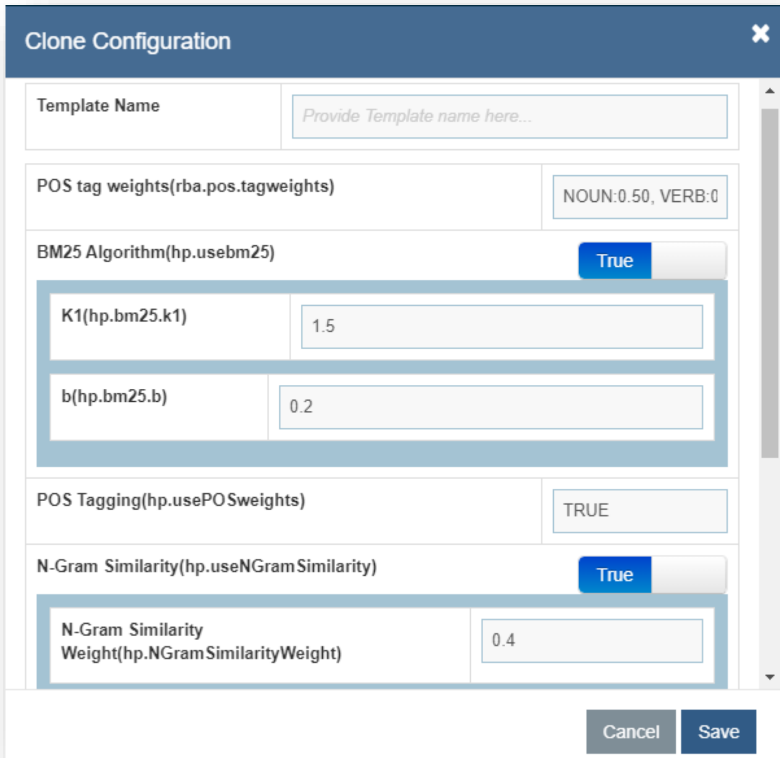


Figure 510- Add New Template (Cont.)

b. To create a template, type the template name in the corresponding **Template Name** field and then define values for each of the following parameters:

For recommendation:

- **rba.pos.tagweights**: It specifies the weightage of tags for given word as part of speech in ticket.

Table 6- Default Tag Values

Tag	Default Value
Noun	0.50
Verb	0.20
Adjective	0.20
Adverb	0.10

The values defined in the table represent the default values and the user can change them based on the requirement. The system provides weights to these parts of speech tags based on values defined during recommendation analysis.

The total sum should of these values must be equal to 1.

- **Usebm25**: It is used to rank runbooks according to their relevance to a ticket summary. Use a toggle button with options such as True or False to enable this parameter. Enabling this parameter prompts you to specify the values following parameters:
    - **K1**: The user can provide any value of less than 2.0. The **Default value** is **1.5**.
    - **B**: The user can provide any value of less than 1.0. The **Default value** is **0.2**.

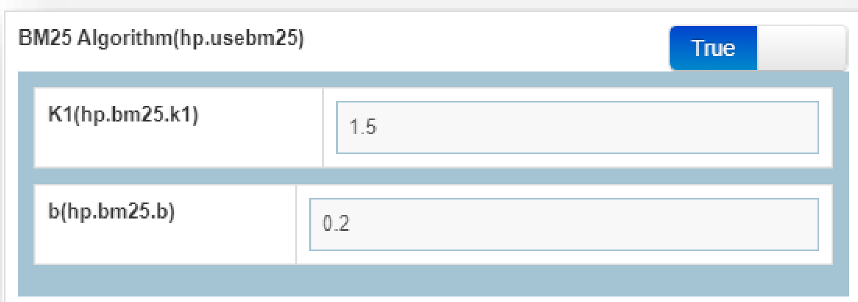


Figure 511- Add New Template (Cont.)

- **usePOSWeights**: Uses true or false values to enable or disable rba.pos.tagweights parameter.
- **NgramSimilarity**: It uses phonemes, phrases, letters, words, or base pairs according to the application from a speech and calculates whether to consider for a recommendation. Administrators can activate or deactivate the functionality with the help of a toggle button in terms of True or False. Selecting True prompts, the following parameters:
    - **SimilarityWeight**: Specifies the value for the combined weightage of **bm25** and **textrank** score. The value should be less than 1.
    - **TextRank.n**: Specifies the number of top words to be considered for recommendation. The number should be equal to or greater than 1.

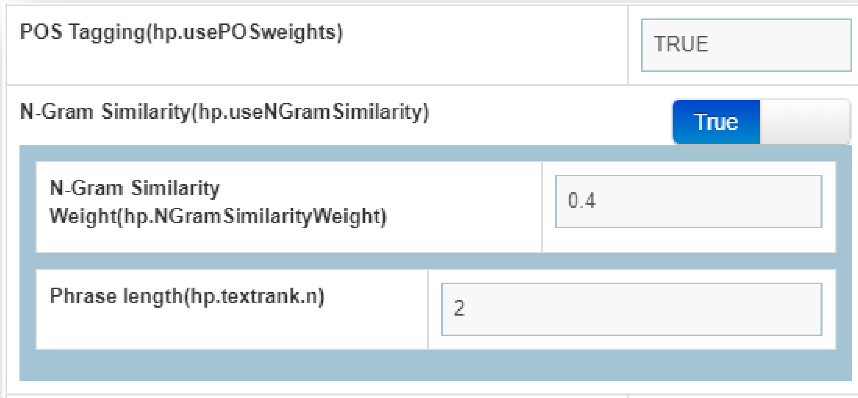


Figure 512- Add New Template (Cont.)

- **EntityModel**: Specifies whether to use the entity model or as True or False conditions for runbook recommendation.
- **KMeasure**: Specifies the weightage given to the entity model and recommendation model for runbook recommendation.
    - 0 indicates that the entity model will be used for runbook recommendation.
    - 1 indicates that the recommendation model will be used for runbook recommendation.
    - Between 0 and 1 indicates that the recommendation model and entity model will be used for runbook recommendation. If the recommendation model weightage is ‘t’, then the entity model weightage will be ‘1-t’.

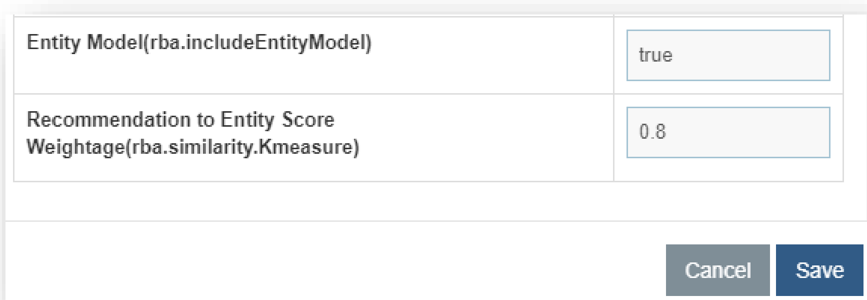


Figure 513- Add New Template (Cont.)

c. Click **Save**.

To create a template for unique cluster, perform the following steps:

a. Click next to the template selected for cloning. The **Clone Configuration** page appears.

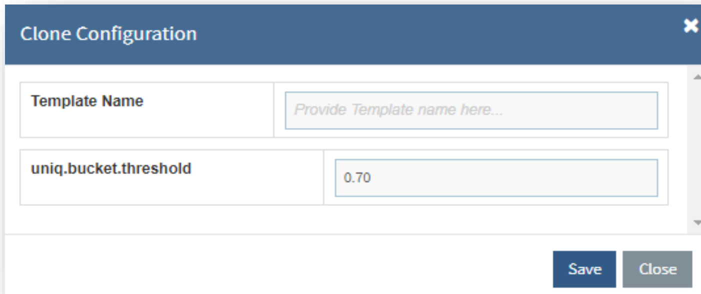


Figure 514- Add New Template (Cont.)

b. To create a template, type the template name in the corresponding **Template Name** field.

c. Type the value in **Uniq.bucket.threshold** field carefully to set up the threshold value of the bucket for ticket clustering.

If a user increases the threshold value, the number of buckets will increase, and user will find more buckets with a similar description. If user decreases the threshold value, the different descriptions may be assigned to a single bucket.

d. Click **Save**.

The new template is added and listed at the bottom of the template list.

The templates created will be used in the **WorkBench**.

3.2.10.2 Edit Template

User can review the existing parameter and change its details by performing the following steps:

1. On the **Manage Hyperparameters** page, select the **Component Name**. The component selection defines n any further configuration.

   To edit a template for recommendation, perform the following steps:

a. Click corresponding to the template that you want to edit.

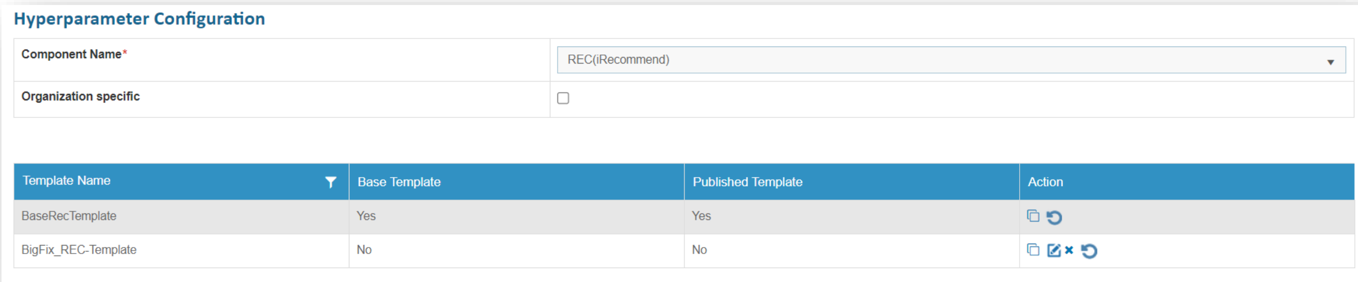


Figure 515- Edit Template

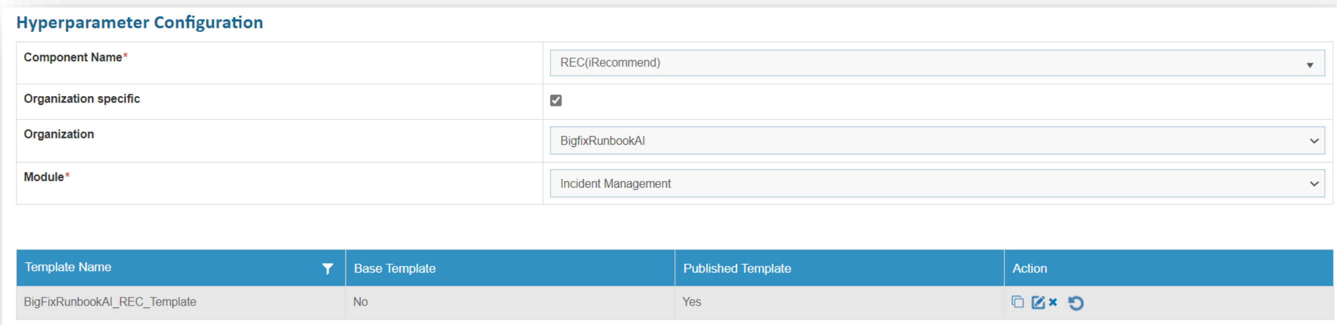


Figure 516 - Edit Template (Organization Specific)

The **Edit Configuration** page appears.

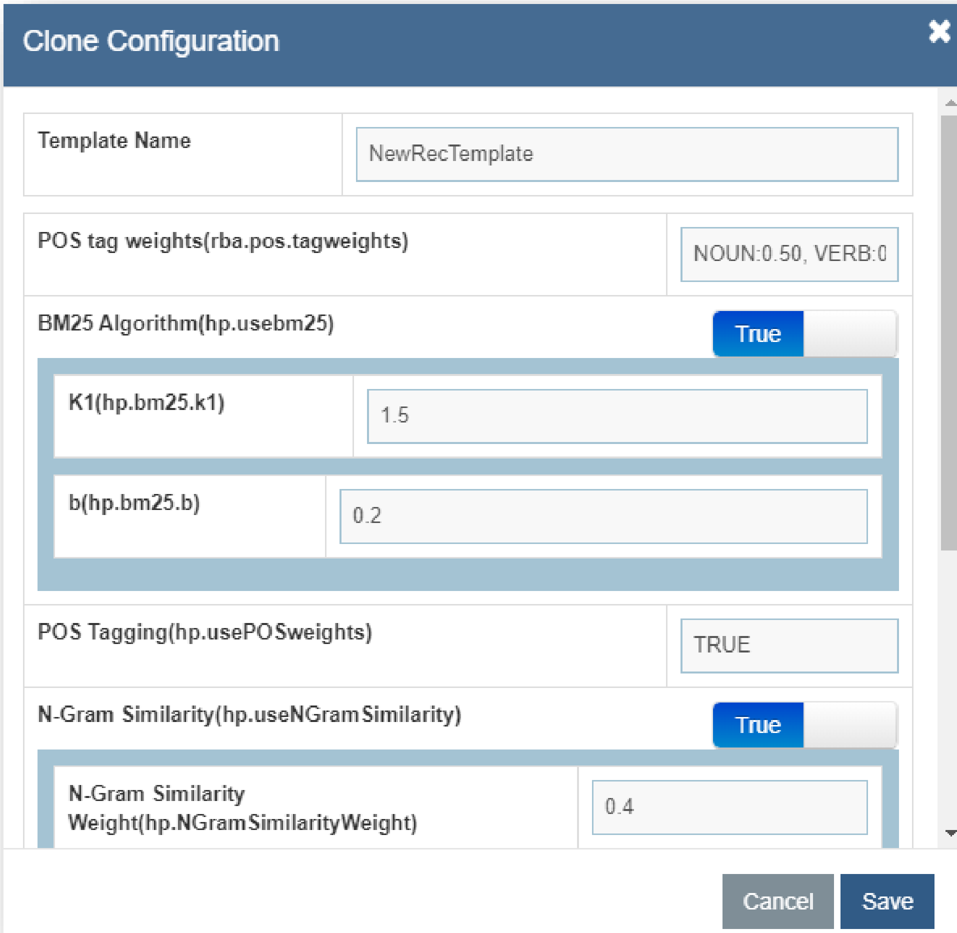


Figure 517- Edit Template (Cont.)

b. Edit the required details and click **Save.** A confirmation dialog box appears.

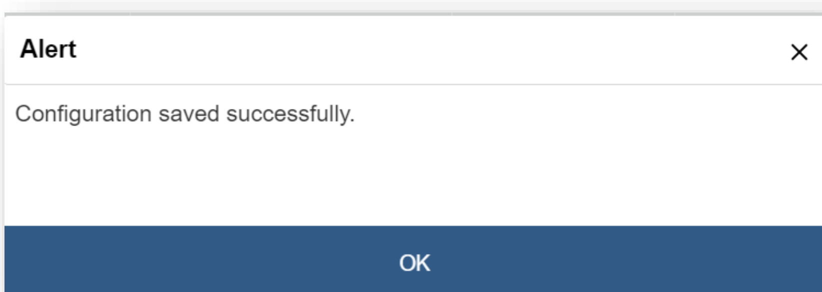


Figure 518- Edit Template (Cont.)

To edit a template for unique cluster, perform the following steps:

a. Click next to the template you want to edit.

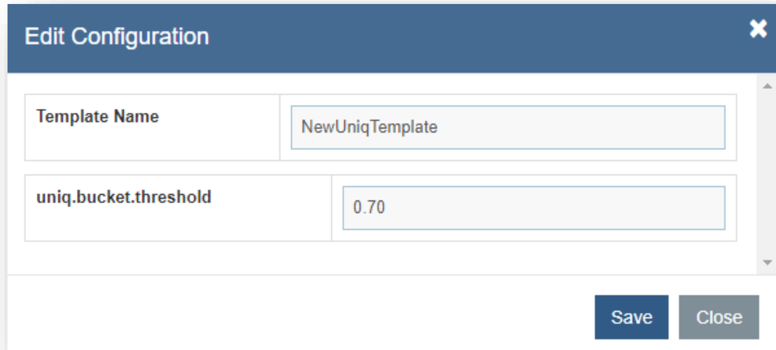


Figure 519- Edit Template (Cont.)

b. Edit the required details and click **Save.** A confirmation dialog box appears.

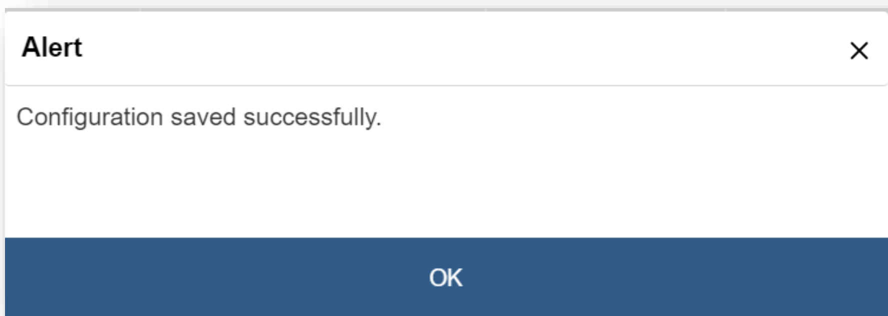


Figure 520- Edit Template (Cont.)

3.2.10.3 Delete Template

If the user no longer needs a certain template, it can be deleted from the component by performing the following steps:

1. To delete a template, click next to the template you want to delete.

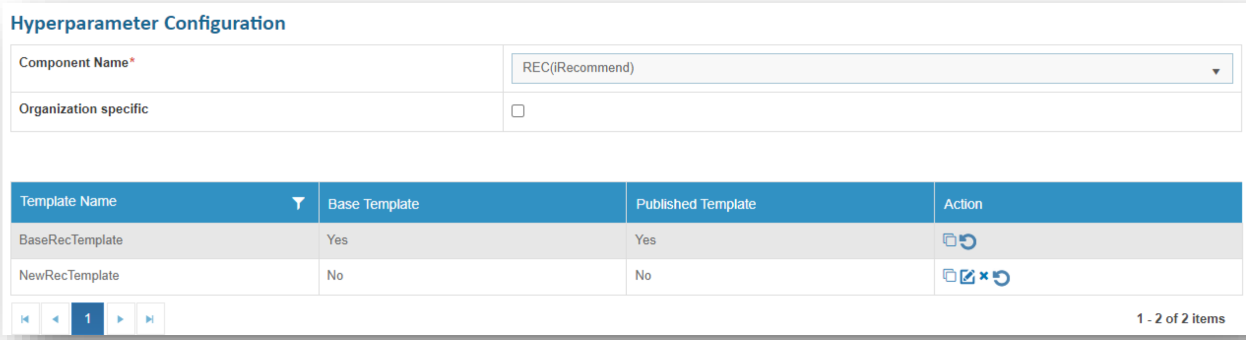


Figure 521- Delete Template

2. Click **Yes** to confirm deletion of the selected template.

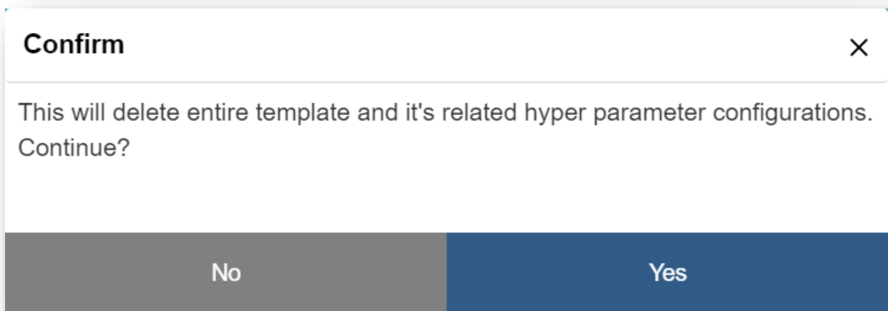


Figure 522- Delete Template (Cont.)

A confirmation dialog box appears.

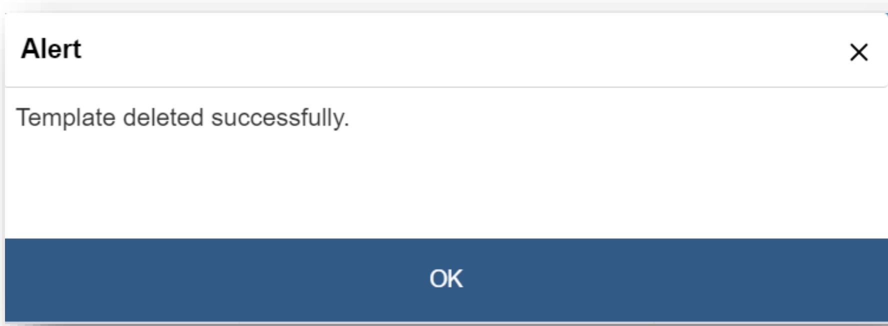


Figure 523- Delete Template (Cont.)

3.2.10.4 Publish Template

If the user wants to publish any template so that the published template gets used wherever needed, it can be done by performing the following steps:

To publish a template,

1. Click next to the template you want to Publish.

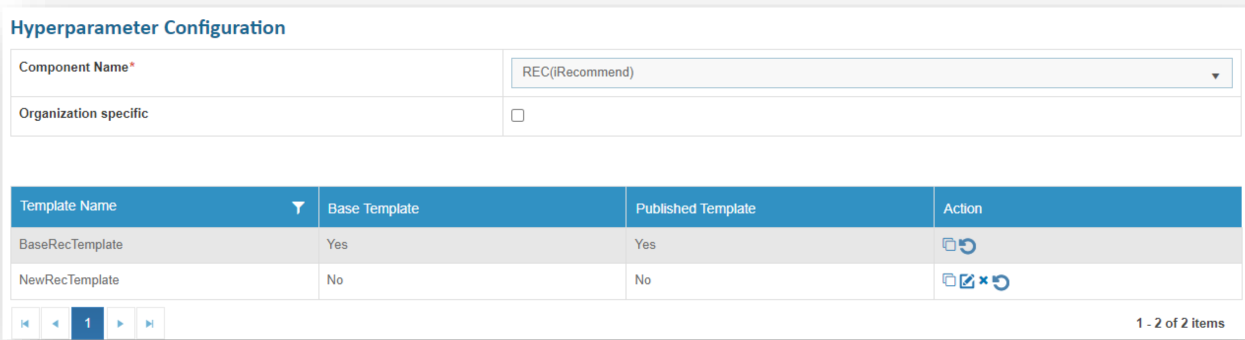


Figure 524 - Publish Template

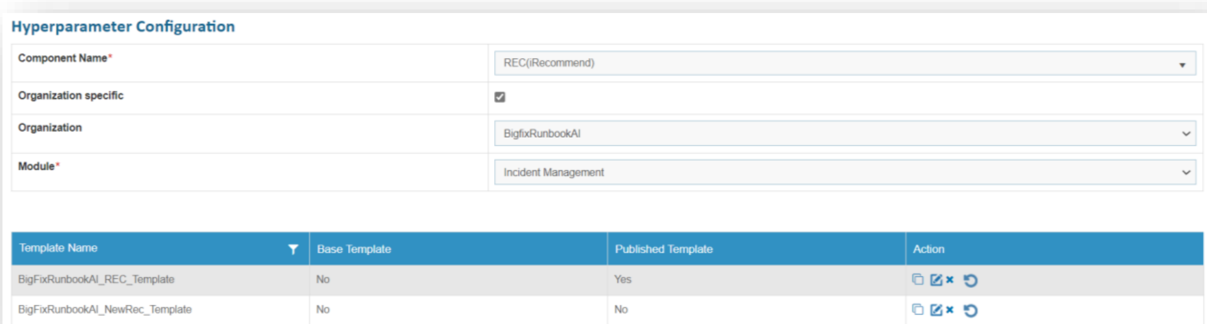


Figure 525 - Publish Template (Organization Specific)

2. Click **Yes** to confirm Publish of the selected template.

Figure 526 - Publish Template (Cont.)

A success message box appears:

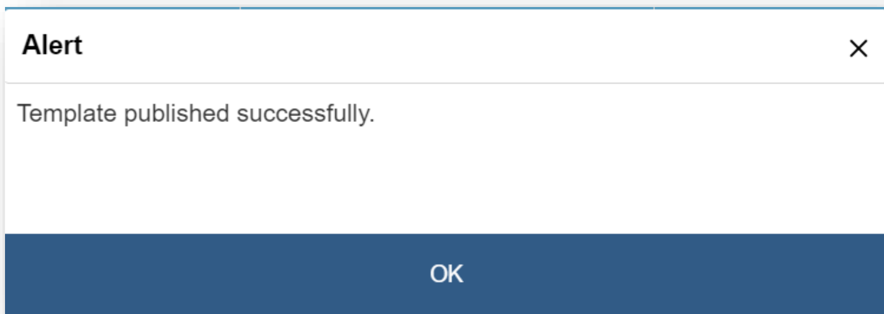


Figure 527 - Publish Template (Cont.)

3.2.11 Component Configuration

This section describes how the administrator can perform configuration specific to components such as Recommendation, Unique Clustering and so on.

To manage component configuration, perform the following steps:

1. On the main menu bar, click **Advance Configuration→ Connectivity**, and then click **Component Configuration.** The **Component Configuration** page appears.

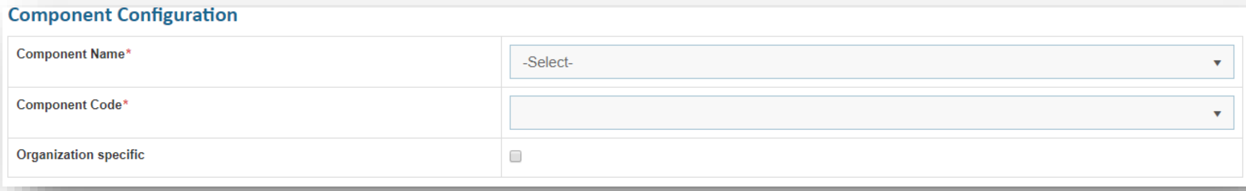


Figure 528- Component Configuration

2. Select a **Component Name**.

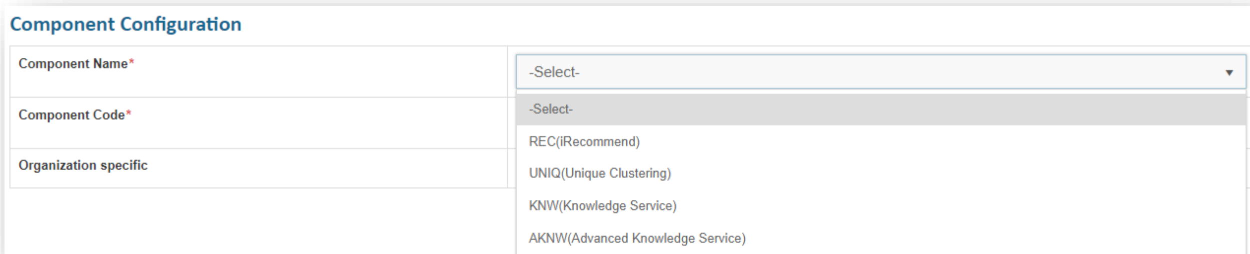


Figure 529- Component Configuration (Cont.)

The component selection defines further configuration.

3. Select a **Component Code** from the drop-down list.
   - In case of *runbook recommendation*, the system has three component codes: Synonyms, Discriminator, and User-Defined Functions (UDF).
     - **Synonym**: Defines all possible synonyms of the word. Here, the *key* is a word and *value* are the list of synonyms.
     - **Discriminator**: Segregates the tickets with the same type of issue, but with different OS, applications, and so on. For example: Windows, Linux.
     - **User Defined Feature (UDF)**: It helps in identifying the implications from the problem statement. E.g., If a user has mentioned that my system is locked, his intention is to get his system unlocked.
   - In case of *Unique Clustering*, the system has two component codes: Discriminators and User Defined Features (UDF).

- **User Defined Features (UDF)**: It uses either regular expression or a list of words to extract common terms from ticket summary. For example, list of application names, tools, or IPs. Multiple values in UDF can separated by separator "$~$".
- **Discriminators**: Segregates the tickets with same issue, but with different OS, applications, and so on.

4. Select **Organization Specific** if user wants to configure organization-specific hyperparameters. Else, clear the selection.

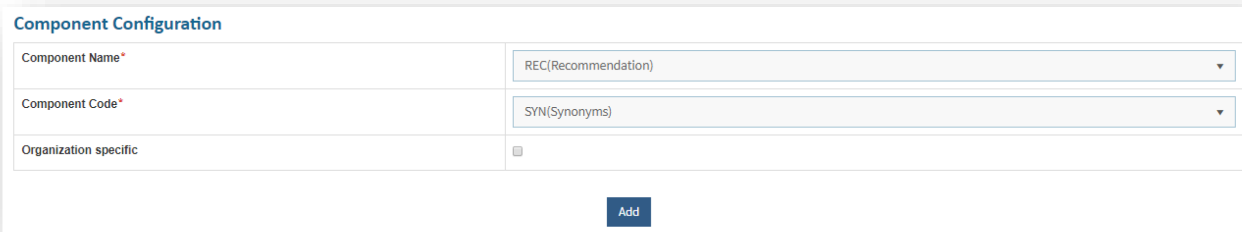


Figure 530- Component Configuration (Cont.)

Selecting a check box prompts user to fill in more fields.

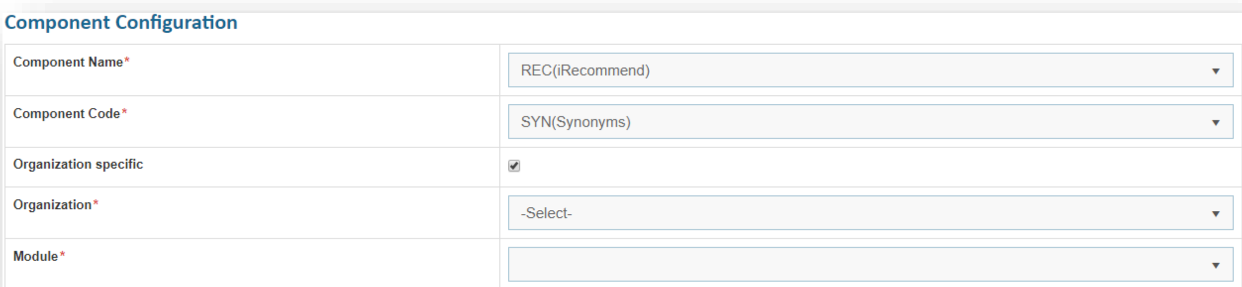


Figure 531- Component Configuration (Cont.)

5. Select the organization from the list of available organizations, then select **Module**, which enables the **Add** button.
6. Click **Add** and the **Add Component Configuration** page appears.

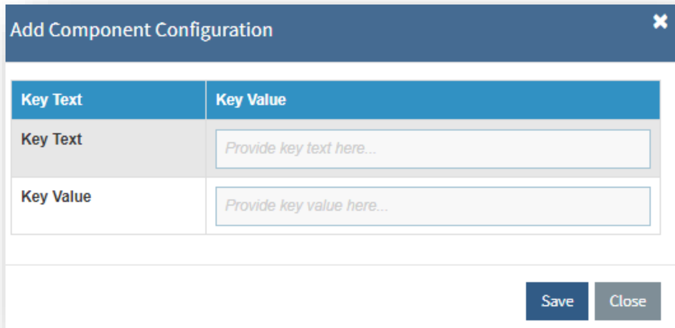


Figure 532- Component Configuration (Cont.)

7. Type the actual word in the **Key Text** field and the list of synonyms separated by comma for key text in the **Key Value** field.
8. Click **Save.** A confirmation dialog box appears:

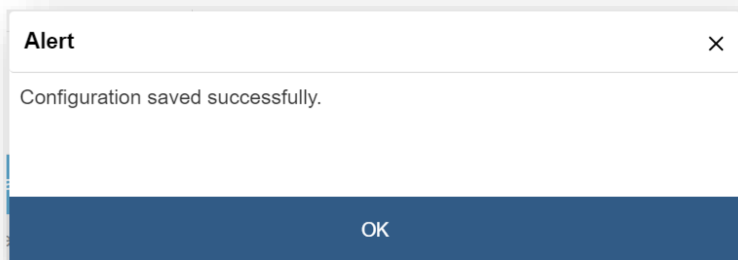


Figure 533- Component Configuration (Cont.)

This adds the new component and lists in the existing components as shown in the grid below.

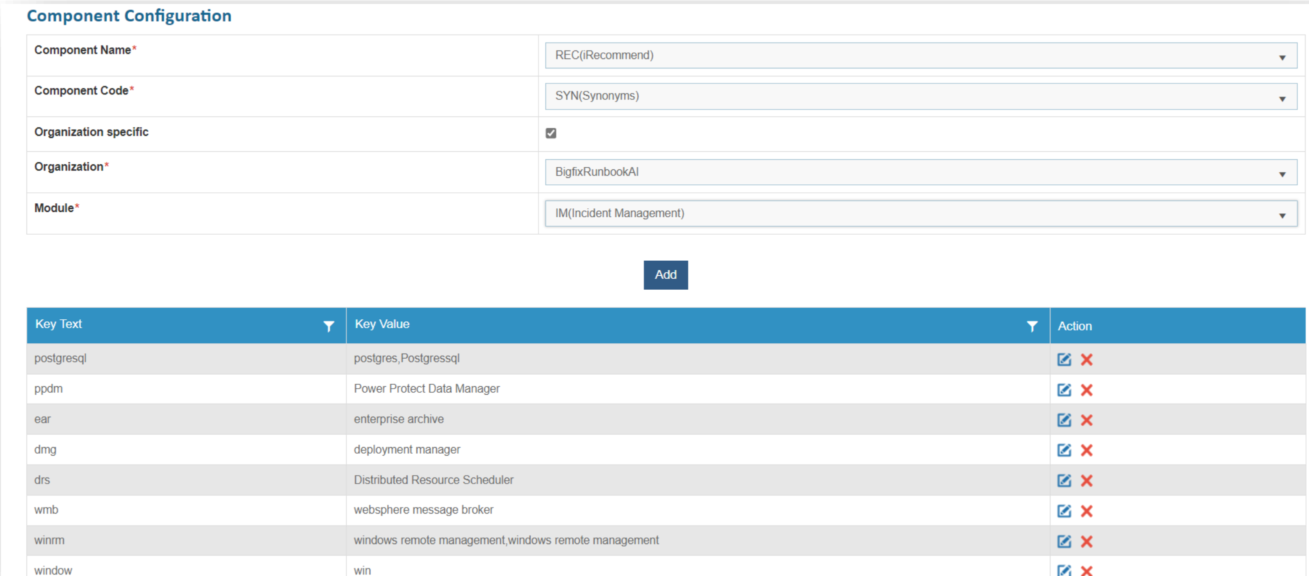


Figure 534- Component Configuration (Cont.)

9. User can edit the existing component by clicking corresponding to the required key text. It displays the details of selected component configurations.
10. Edit the required details and click **Save**.
11. Click **Yes** to confirm the changes across all organizations.

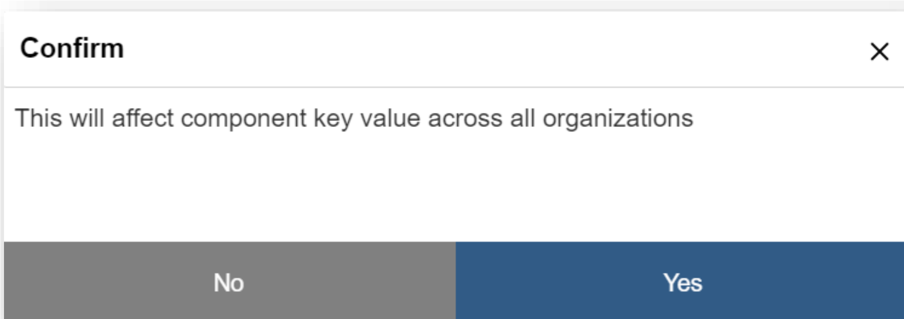


Figure 535- Component Configuration (Cont.)

A confirmation dialog box appears.

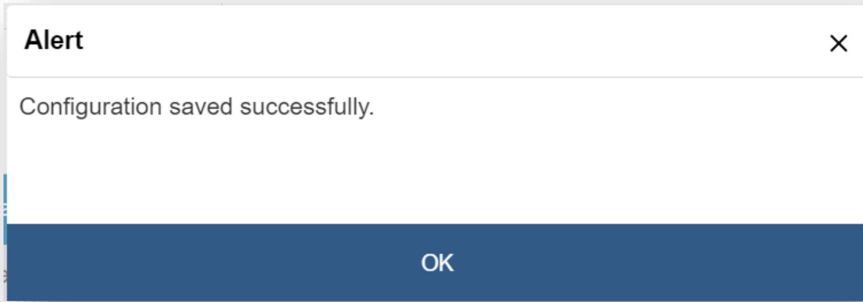


Figure 536- Component Configuration (Cont.)

3.2.12 Add Hyperparameters

This section describes how user can upload a template containing optimal values of hyperparameters that have been exported after fine tuning of Unique Clustering and Runbook recommendation for the customer.

To add hyperparameters, perform the following steps:

1. On the main menu bar, click **Advance Configuration →Parameter** , and then click **Add Hyperparameters**. The **Add Hyperparameters** page appears.

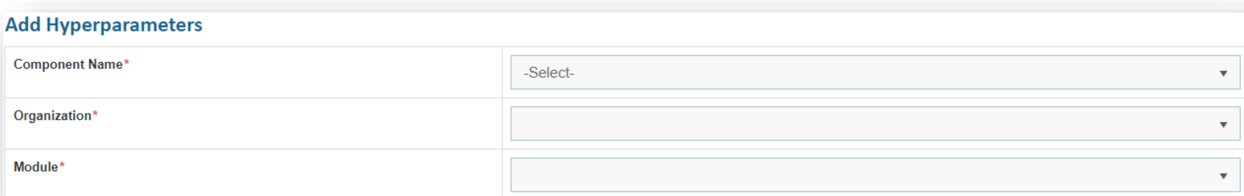


Figure 537- Add Hyperparameters

2. Select a **Component Name**, then select **Organization**, and then select **Module**. Selecting a module prompts the **Upload** button. The **Upload Hyperparameters** page appears. User can also download the template for reference by clicking on the **Download Template** button.

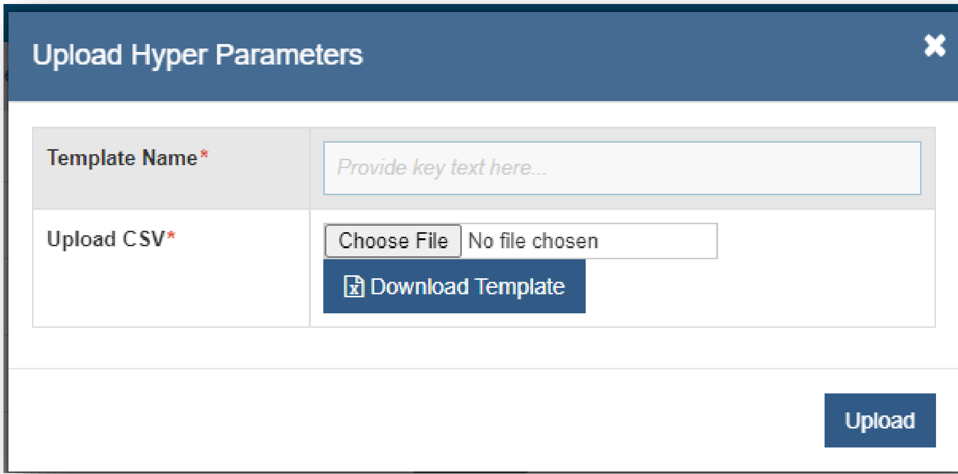


Figure 538- Upload Hyperparameters

3. Type the name for the new template in the **Template Name** field and then click **Choose file** to upload the .csv file. To download the CSV file, see Add New Unique Analysis Type.

After successfully uploading the template, the user must rebuild the model for the same customer again in case of adding a parameter for the recommendation model only. To build a model, see Build Model.

3.2.13 iRecommend Rule Configuration

This section describes how users can add rules to fine tune Runbook recommendations depending on the client's environment. Also, how the user can define regex so that Runbook recommendations get more precise from the ticket description itself.

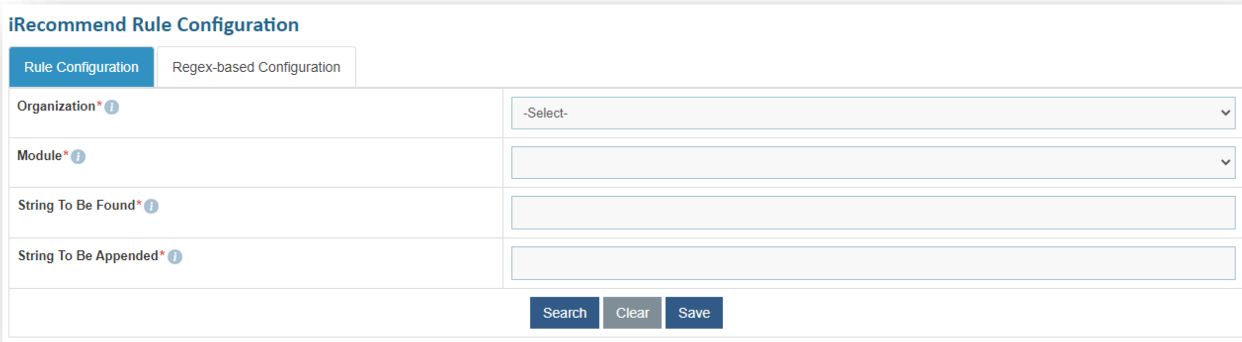


Figure 539 - iRecommend Rule Configuration

Rule Configuration:

To define the rules, perform the following steps:

1. On the main menu bar, click **Advance Configuration → iRecommend Rule Configuration**. The **iRecommend Rule Configuration** page appears.

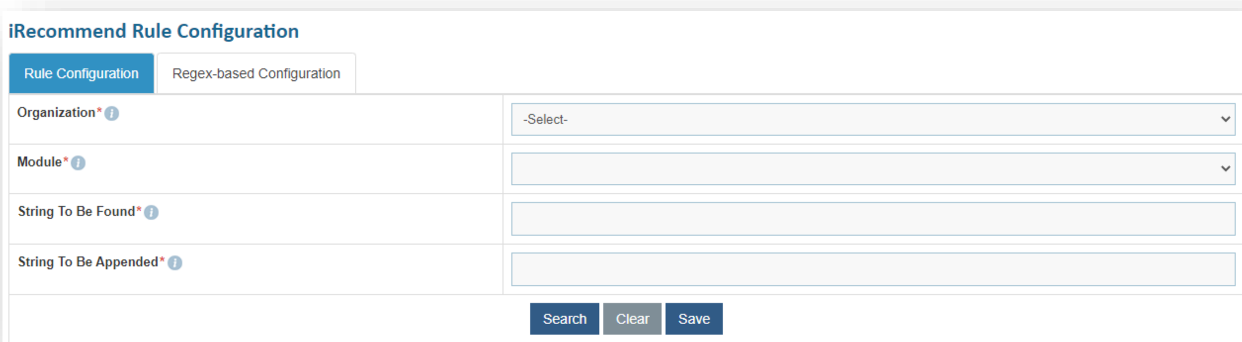


Figure 540- iRecommend Rule Configuration

2. Select **Organization**, and then select **Module.**
3. Enter the string that needs to be searched for in the ticket description, against **String to be Found** field.
4. Enter the string that needs to be appended in the ticket description, against **String to be Appended** field.
5. Click **Save**.

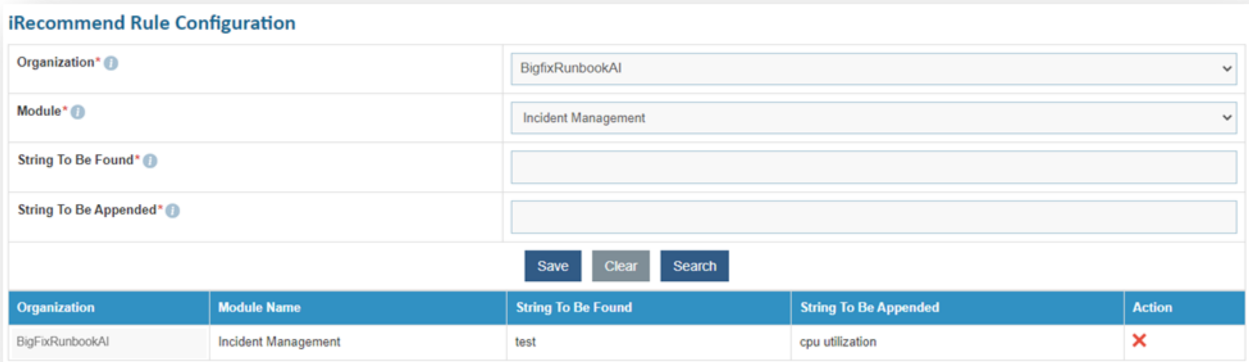


Figure 541- iRecommend Rule Configuration (cont.)

Regex-based Configuration:

To define the regex, perform the following steps:

1. On the main menu bar, click **Organization → iRecommend Rule Configuration**. The **iRecommend Rule Configuration** page appears. Click on **Regex-based Configuration** tab.

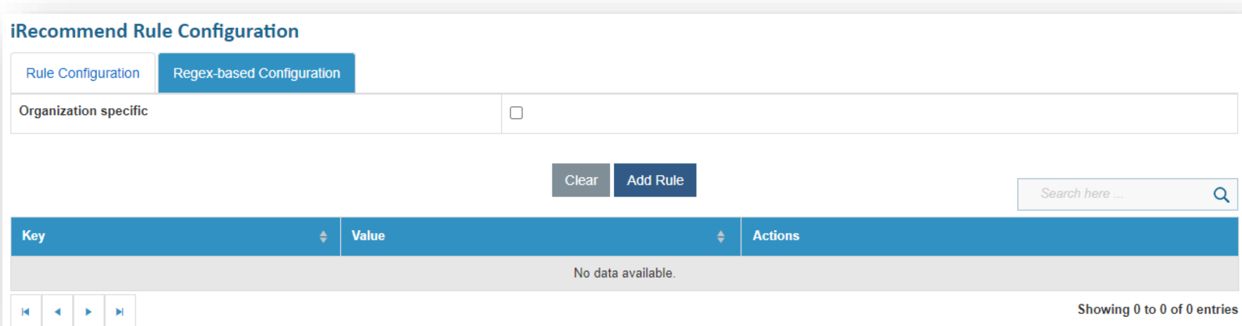


Figure 542 - iRecommend Rule Configuration (cont.)

2. Click on **Organization specific** check box if you want to apply the regex-based configuration at Organization level else leave it unchecked if it needs to be applied at admin level (For Analysis purpose).
3. Click on **Add Rule** to add new regex rule. Below pop up will appear:

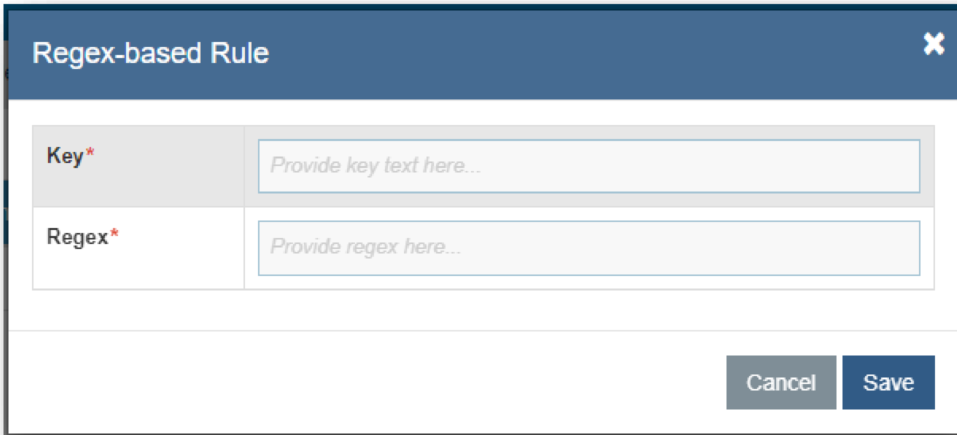


Figure 543 - iRecommend Rule Configuration (cont.)

4. Enter the key and its regex and click on save. Below alert will be generated.

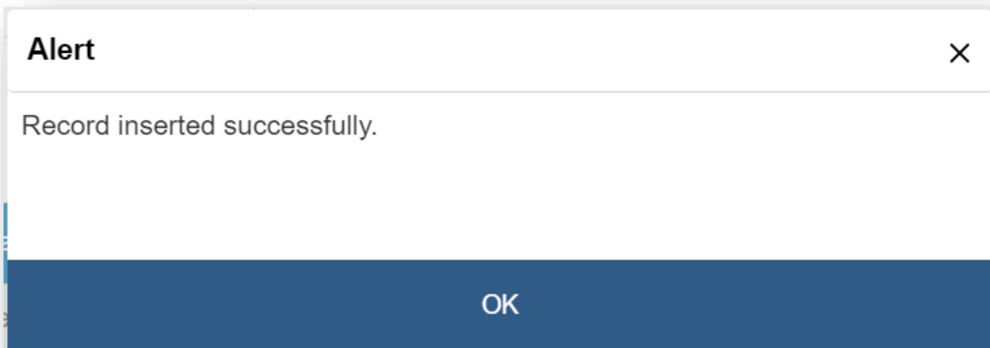


Figure 544 - iRecommend Rule Configuration (cont.)

5. The record inserted will appear in the grid.

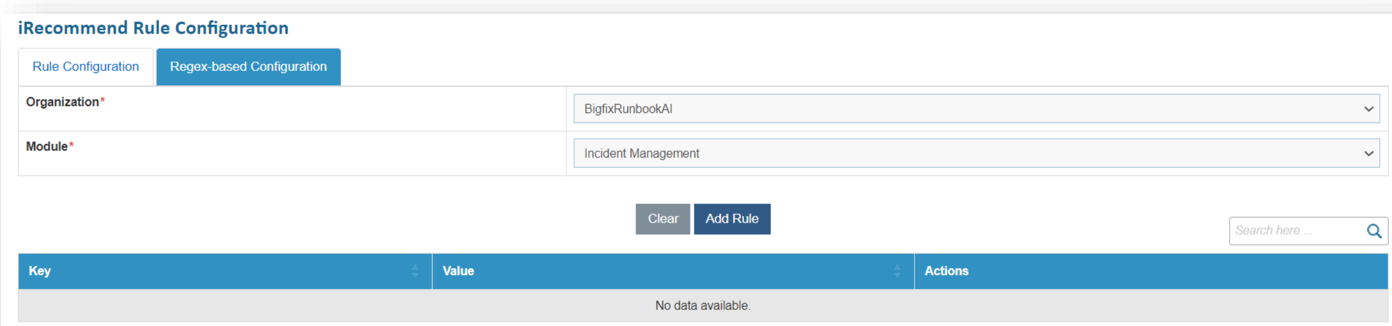


Figure 545 - iRecommend Rule Configuration (cont.)

6. To edit any rule, click on icon corresponding to that rule. The **Regex-based Rule** popup appears. Enter the updated regex and click on **Update.**

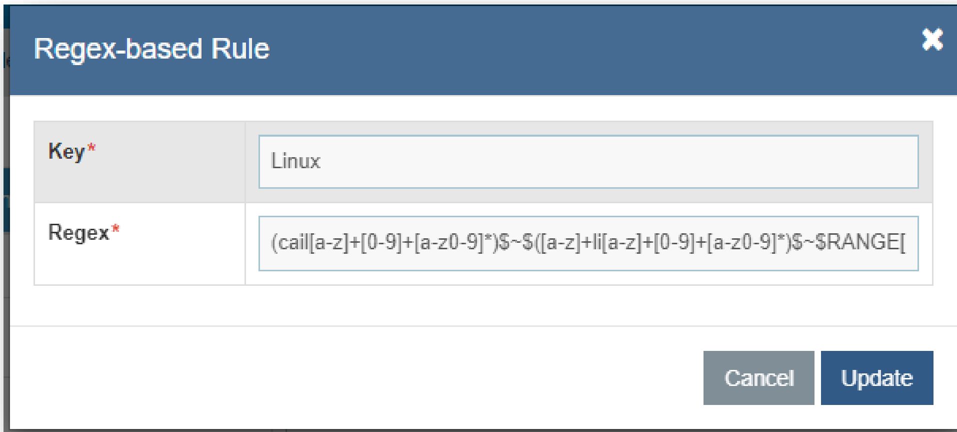


Figure 546 - iRecommend Rule Configuration (cont.)

7. To delete any rule, click on icon corresponding to that rule. The following confirmation message appears:

Figure 547 - iRecommend Rule Configuration (cont.)

8. Click **Yes**. The following success message appears:

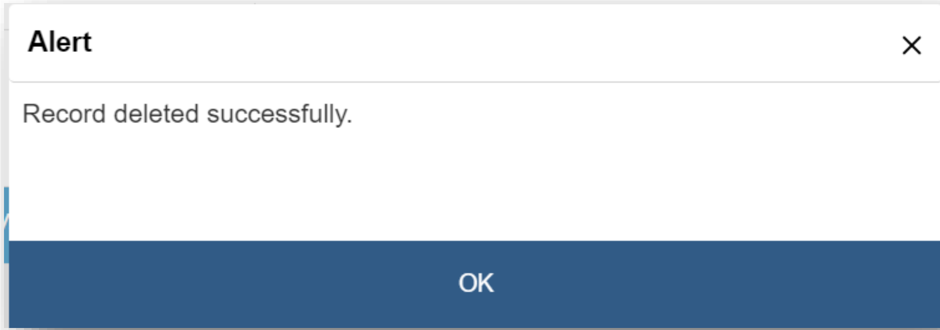


Figure 548 - iRecommend Rule Configuration (cont.)

3.2.14 Entity

This section describes how to extract entities such as an operating system, application name, and so on from the input summary of a ticket. This is considered one of the main inputs for the recommendation model. An entity can be defined as a noun or a pattern such as application name, operating system, and so on.

To build an entity model, perform the following steps:

1. On the main menu bar, click **Advance Configuration->Entity**. The drop-down lists the following options.

   – Manage Named Entity

   – Create Entity

   – Entity Mapping

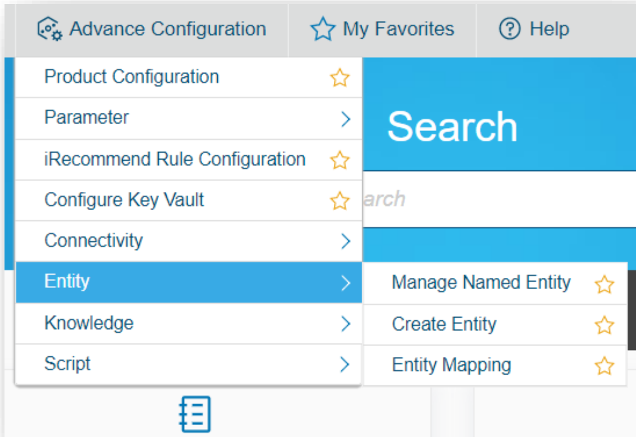


Figure 549- Entity

3.2.14.1 Manage Named Entity

Named Entities are specially curated entities against any given runbook that provides control over recommendation of a runbook against a ticket.

Consider a scenario where the system has two runbooks for the same issue but with different domains. For e.g., we may have a runbook which automates the operation of database backup. But the requirement is to support multiple types of databases like MSSQL, Oracle, etc. For each type of the database, a new runbook needs to be available in the system. For the system to understand and recommend the relevant runbook for a particular type of database, named entities need to be mapped against the runbooks.

If we want system to return only MSSQL runbook for a ticket, then we need to specifically map ‘MSSQL’ and ‘!MSSQL’ against runbook for MSSQL and Oracle respectively.

The user can map named entities against runbooks using this menu item.

To add named entities, perform the following steps:

1. On the main menu bar, click **Advance Configuration->Entity** and then **Manage Named Entity**. The **Named Entity** page appears.
2. Select **Organization**, **Module**, and the **Runbook Tool**.
3. Click **Search**. All the runbooks which are configured within the selected **Runbook Tool** will be listed.

4. Type in the **Named Entities** against the respective **Runbook Name**.
   E.g. - !windows, windows

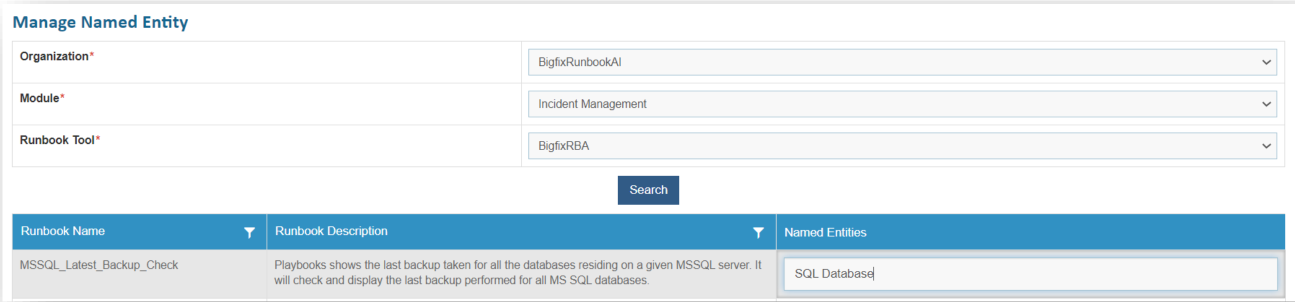


Figure 550 - Manage Named Entities

5. Click **Save Changes** to commit the changes.

It is not mandatory to mention the named entities for every runbook. It should be used only if required. Multiple values can be provided as comma separated values.

3.2.14.2 Create Entity

User can manage entities such as an operating system, application name, and so on in an organization by performing the following steps:

1. On the main menu bar, click **Advance Configuration -> Entity** then **Create Entity**.
2. Click **Create Entity**.

The **Entity Creation** page appears. It enables user to add a new entity and lists the existing entities in a tabular view.

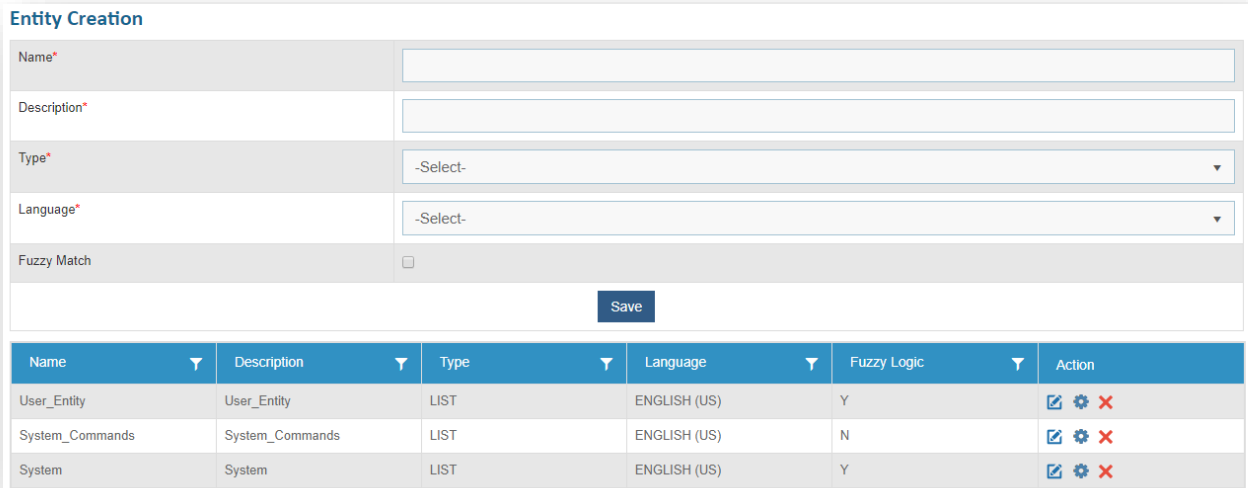


Figure 551- Manage Entity

3.2.14.2.1 Add New Entity

User can create a new entity in a customer environment by performing the following steps:

1. On the **Entity Creation** page, type the entity name in the **Name** field, and then describe the entity in the **Description** field.
2. Select the entity from the **Type** list and then select the required language from the **Language** field.
3. If required, select the **Fuzzy Match** check box to enable fuzzy match. It allows for any spelling errors in entities in the ticket summary.
4. Click **Save**.

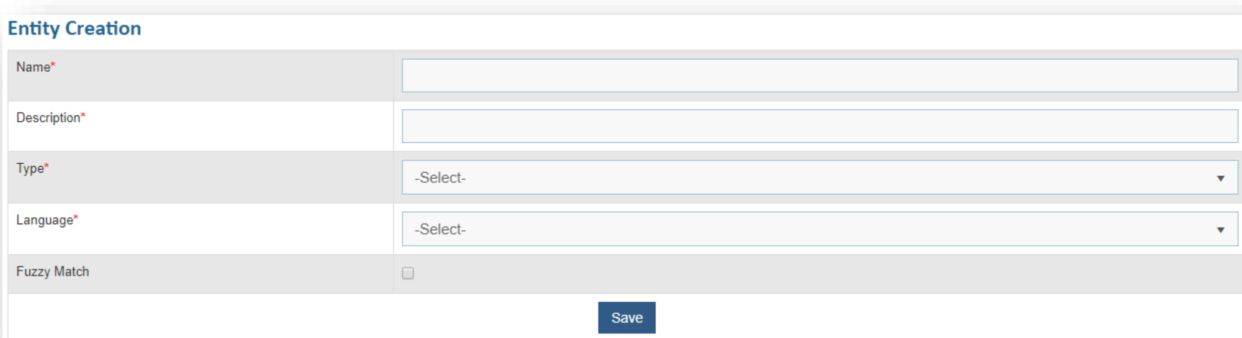


Figure 552-Add New Entity

A confirmation message dialog box appears.

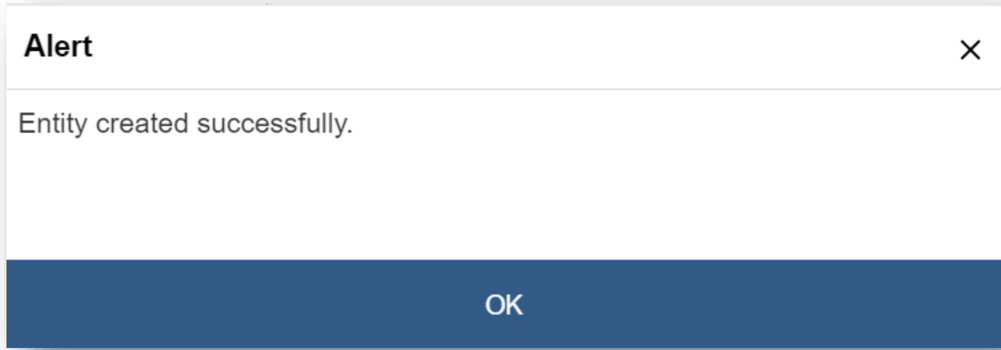


Figure 553-Add New Entity (cont.)

All fields marked with an asterisk (*) are mandatory.

The new entity is added and appears in a tabular view.

3.2.14.2.2 Edit Entity

User can view and change the existing entities by performing the following steps:

1. On the **Entity Creation** page, click next to the entity user wants to edit.

Name	Description	Type	Language	Fuzzy Logic	Action
User_Entity	User_Entity	LIST	ENGLISH (US)	Y	
System_Commands	System_Commands	LIST	ENGLISH (US)	N	Click to edit
System	System	LIST	ENGLISH (US)	Y	

Figure 554- Edit Entity

This populates the details of the selected entity.

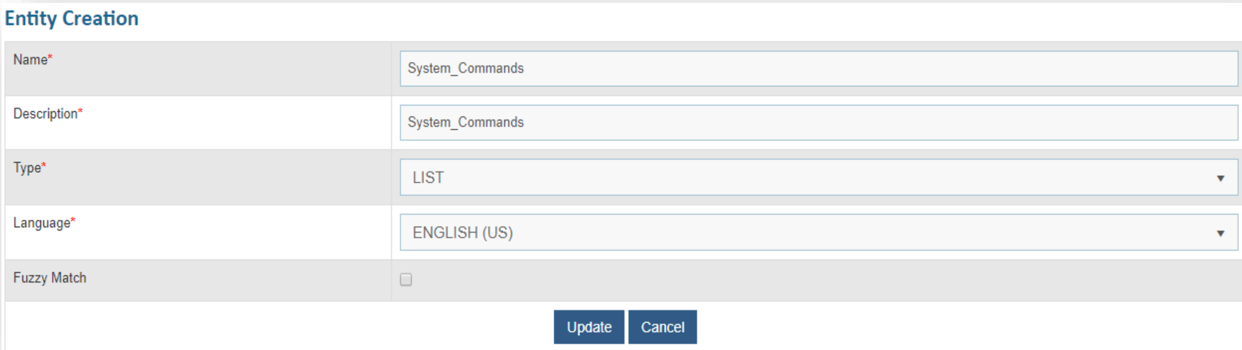


Figure 555- Edit Entity (Cont.)

2. Edit the required entity details.
3. To update changes, click **Update**. A confirmation dialog box appears.

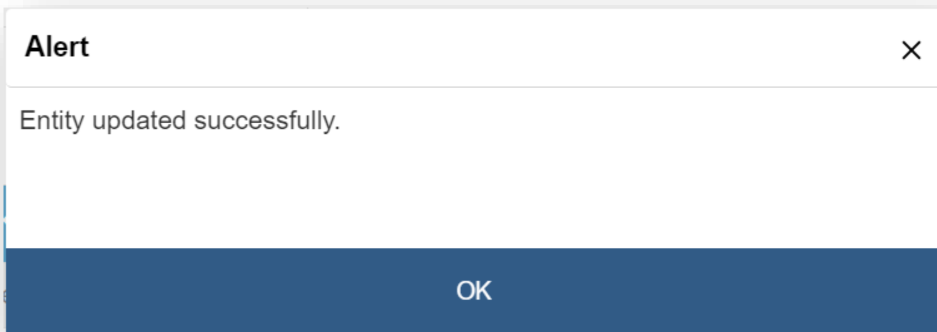


Figure 556- Edit Entity (Cont.)

All fields marked with an asterisk (*) are mandatory.

3.2.14.2.3 Add Value to Entity

User can add values to an existing entity by performing the following steps.

1. On the **Entity Creation** page, click ⚙ next to the entity to which user wants to add a value.

Figure 557- Add Value to Entity

A page appears where user can add new values and view the existing values in the selected entity.

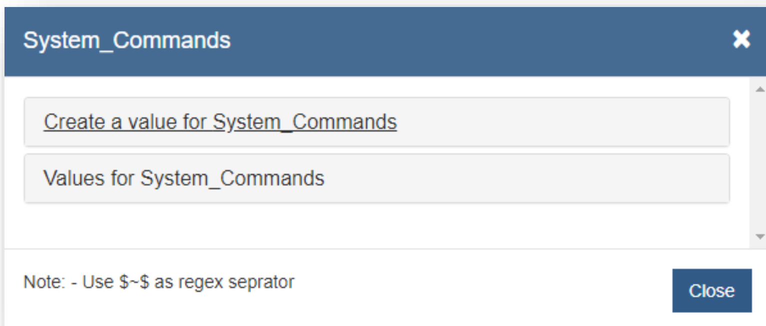


Figure 558- Add Value to Entity (Cont.)

2. To add a value, click Create a Value for Entity. This prompts you to fill the **Value Name**, the **Synonym**, and the **Pattern (or regular expression)** details. For example, in case of Hostname, a user defines the corresponding regular expression.

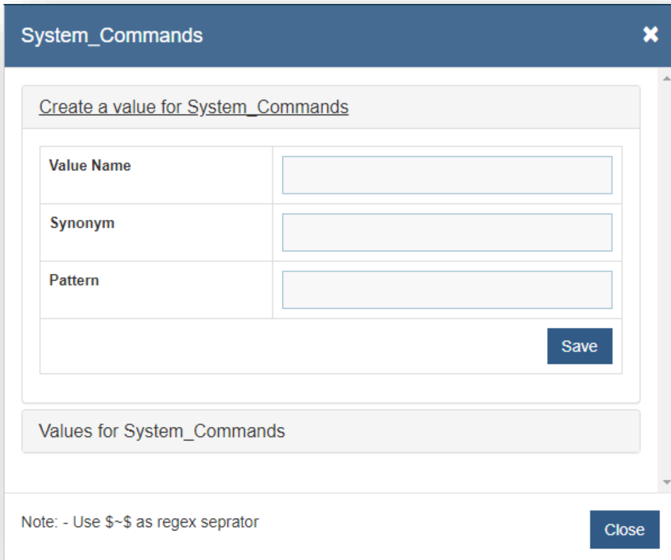


Figure 559- Add Value to Entity (Cont.)

3. Click **Save**. A confirmation dialog box appears.

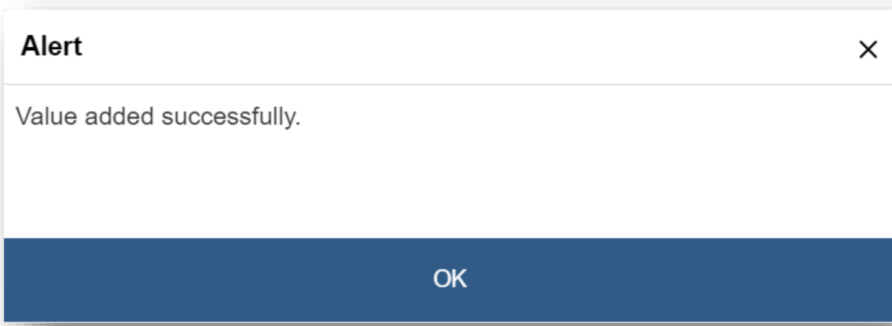


Figure 560- Add Value to Entity (Cont.)

The new value is added and appears under the **Values for Entity** tab.

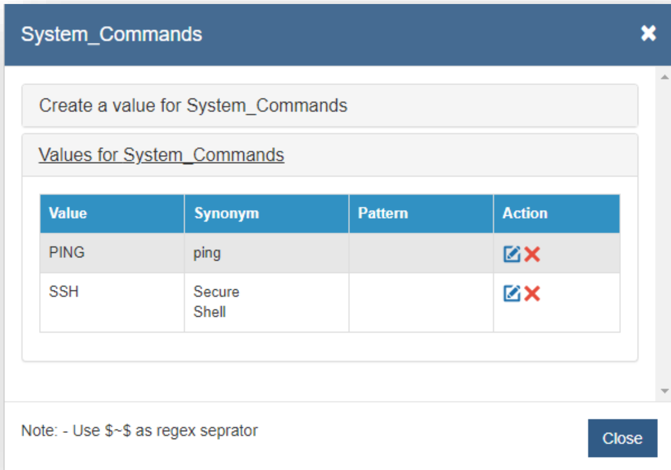


Figure 561- Add Value to Entity (Cont.)

User can edit or delete the existing values for the entity by clicking or .

3.2.14.2.4 Delete Entity

If user no longer wants a certain entity in an environment, it can be deleted by performing the following step.

1. On the **Entity Creation** page, click next to the entity you want to delete.

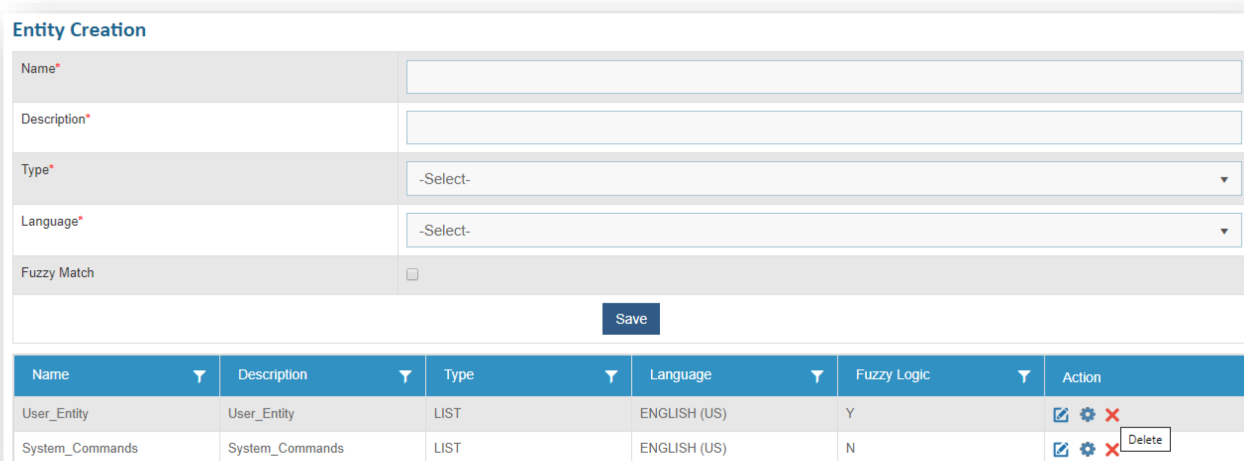


Figure 562- Delete Entity

A confirmation dialog box appears.

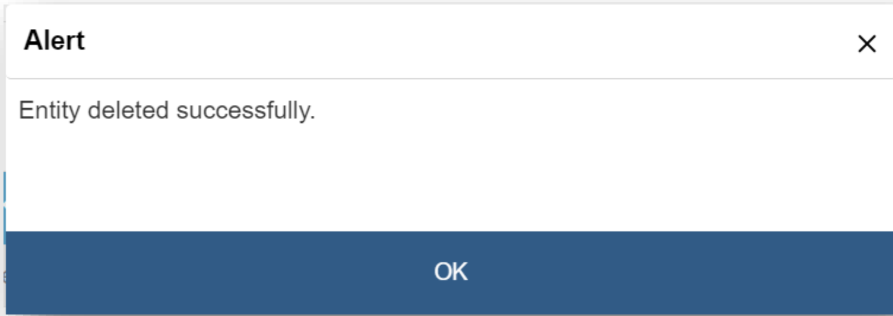


Figure 563- Delete Entity (Cont.)

3.2.14.3 Entity Mapping

User can map an entity to an organization by performing the following steps.

1. On the main menu bar, click **Advance Configuration** -> **Entity** and then click **Entity Mapping**. The **Entity Mapping** page appears.

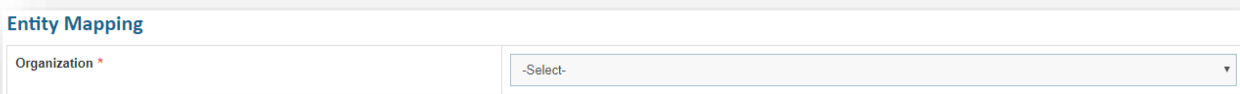


Figure 564- Entity Mapping

2. Select an **Organization** from the drop-down list.

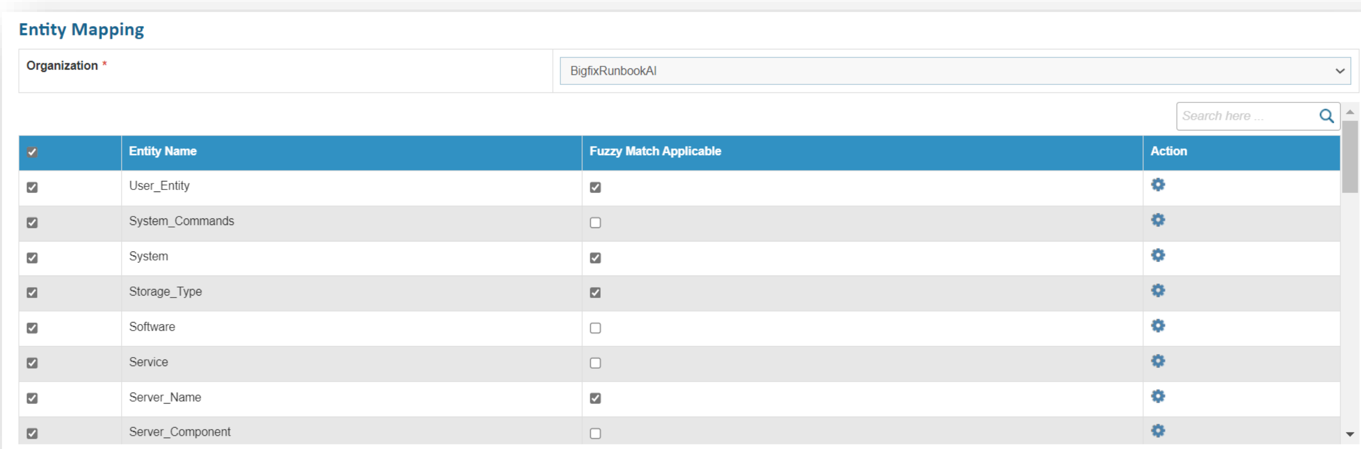


Figure 565- Entity Mapping (Cont.)

It lists the entities created in Add New Entity in a tabular view.

3. To map an entity, select the check box corresponding to the entity. A confirmation dialog box appears.

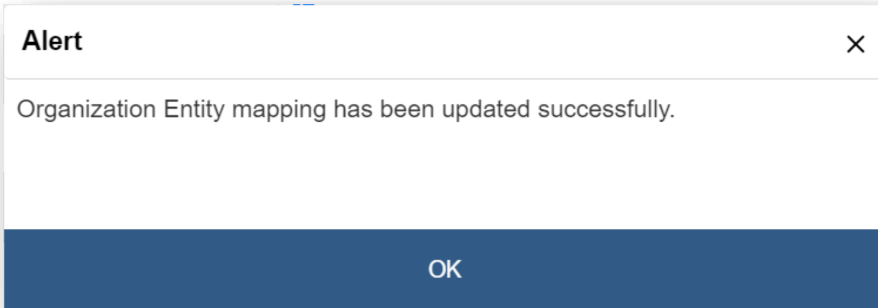


Figure 566- Entity Mapping (Cont.)

On successful mapping, the **Action** column enables to perform multiple actions on the mapped entity.

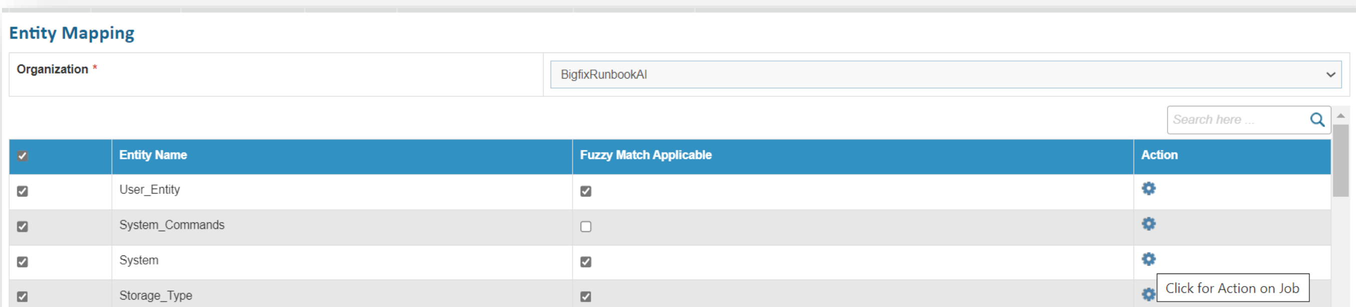


Figure 567- Entity Mapping (Cont.)

4. To manage an organization specific entity, click . A **Test** page appears.

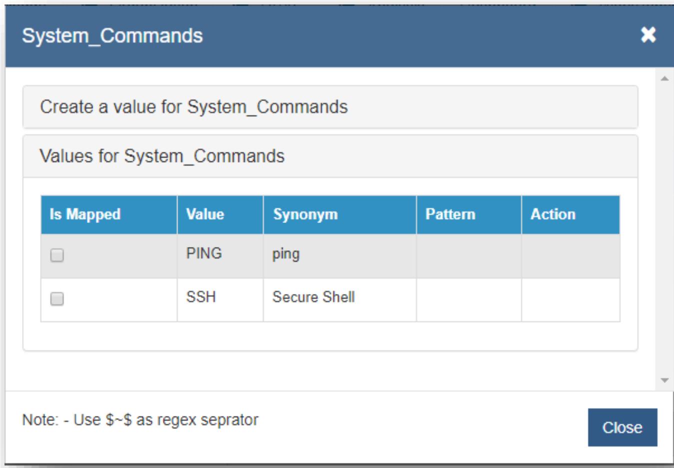


Figure 568- Entity Mapping (Cont.)

5. To map a value to the selected entity, select the **Is Mapped** check box for the corresponding value under the **Value for Entity** tab. A confirmation dialog box appears.

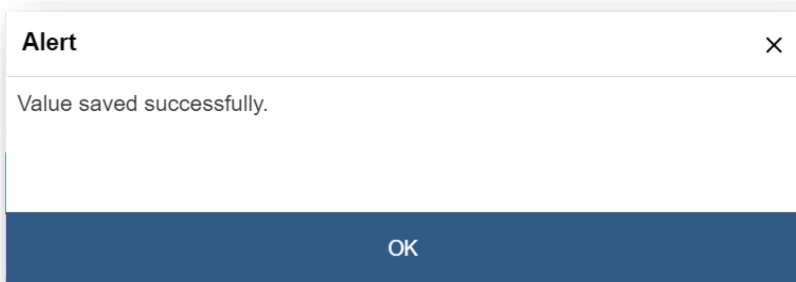


Figure 569- Entity Mapping (Cont.)

After successful mapping of a value, user can edit or delete the value by clicking on or .

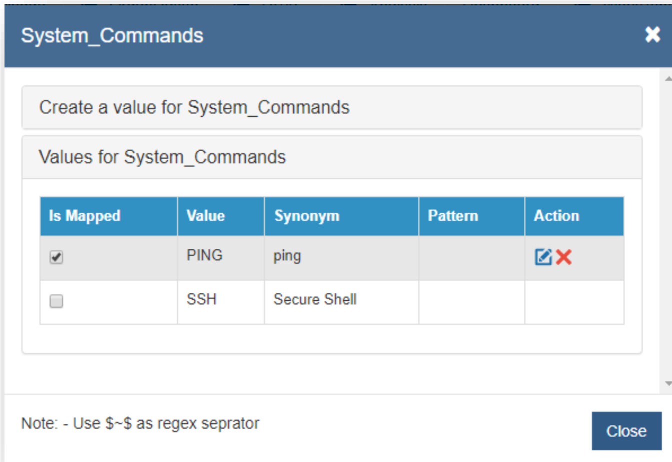


Figure 570- Entity Mapping (Cont.)

6. Click **Create a value for Entity** to add specific organization values to an entity.

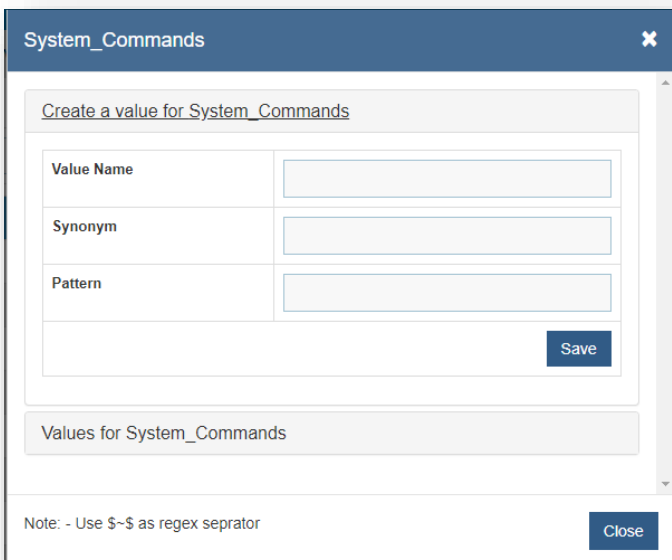


Figure 571- Entity Mapping (Cont.)

7. A page appears for you to type the **Value Name**, **Synonym**, and **Pattern** (or regular expression).
8. Click **Save**. A confirmation dialog box appears.

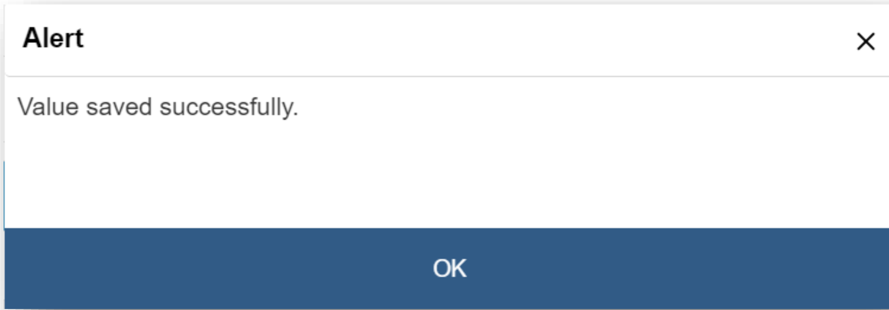


Figure 572- Entity Mapping (Cont.)

The new value is added and appears in the **Values for Entity** tab.

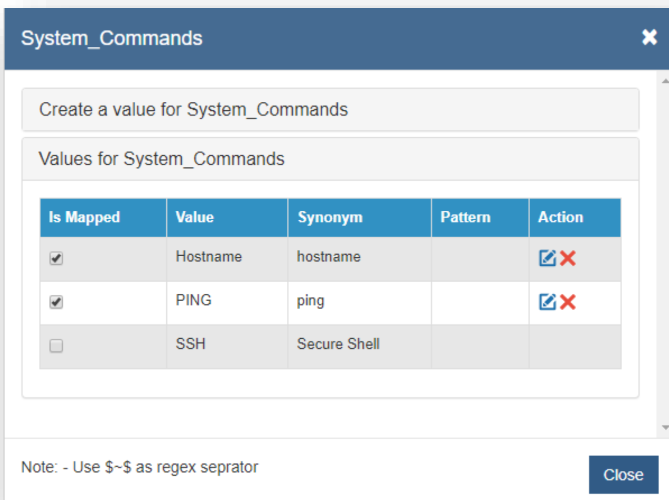


Figure 573- Entity Mapping (Cont.)

User can edit or delete the existing values for the entity by clicking on or .

User can select the **Fuzzy Match Applicable** check box to enable fuzzy match.

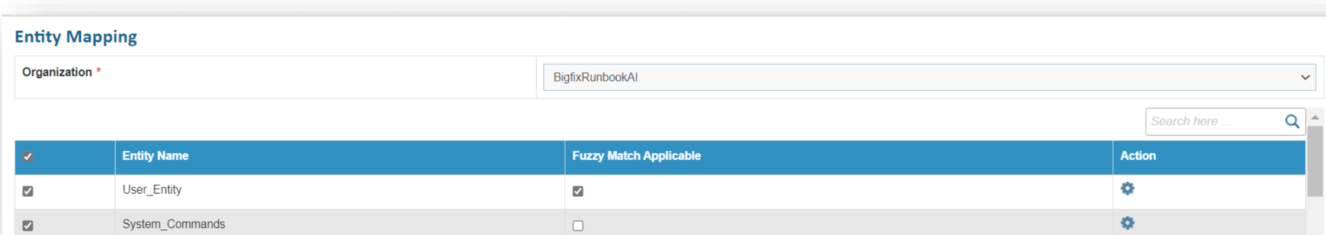


Figure 574- Entity Mapping (Cont.)

All fields marked with an asterisk (*) are mandatory.

3.3 Reports

3.3.1 Component Logs

This section describes the complete activity logs of BigFix Runbook AI components.

To view the component logs, perform the following steps:

1. On main menu bar, click on Reports and the Component Logs.
2. Select Component Name, **From Date** and **To Date**.
3. Click **Search**.

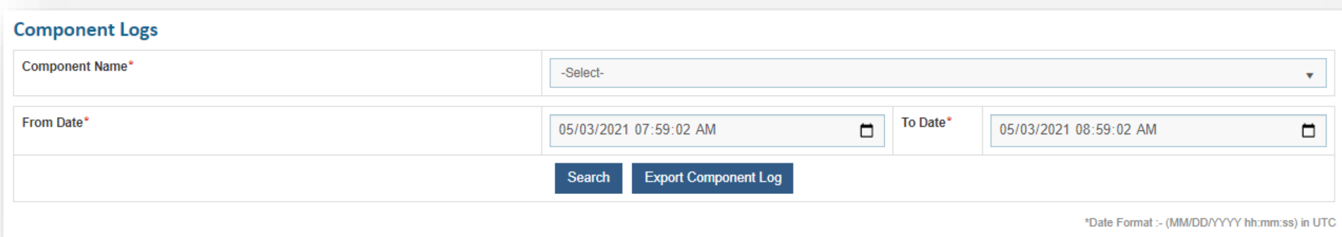


Figure 575- Component Logs

The selection lists the relevant logs in a tabular view.

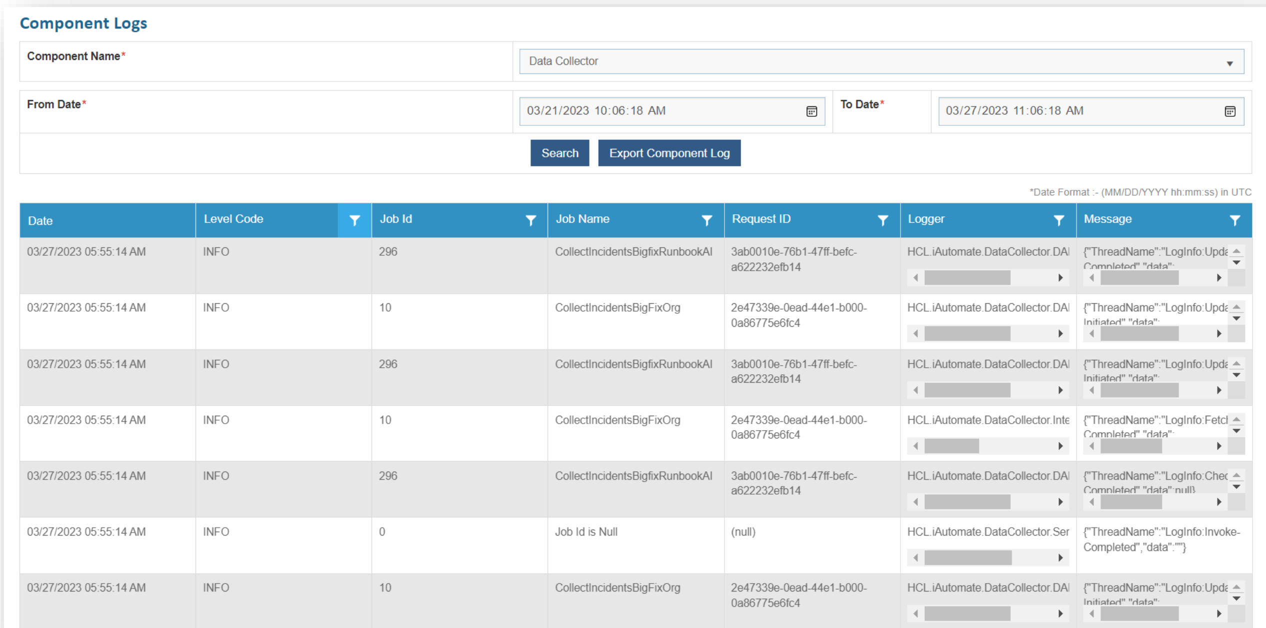


Figure 576- Component Logs (Cont.)

In case of Website and Web API, below screen appears:

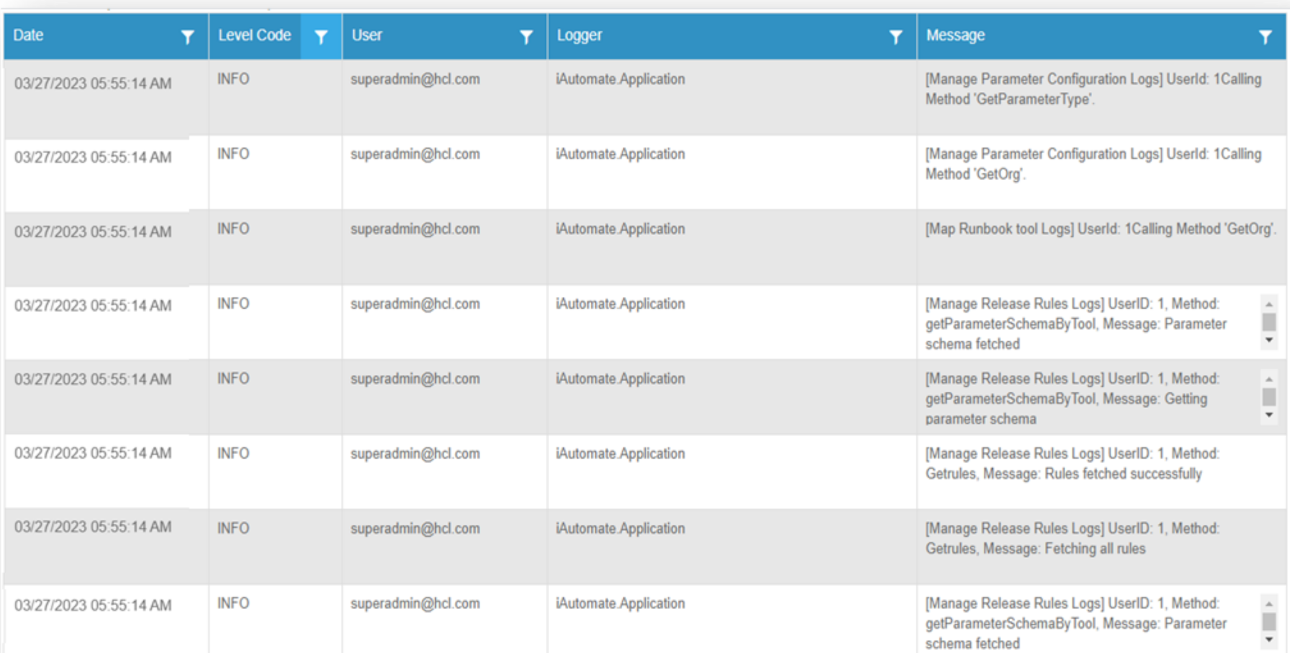


Figure 577- Component Logs (Cont.)

The user can apply filters on the **User** column. This is available only for Website and Web API only.

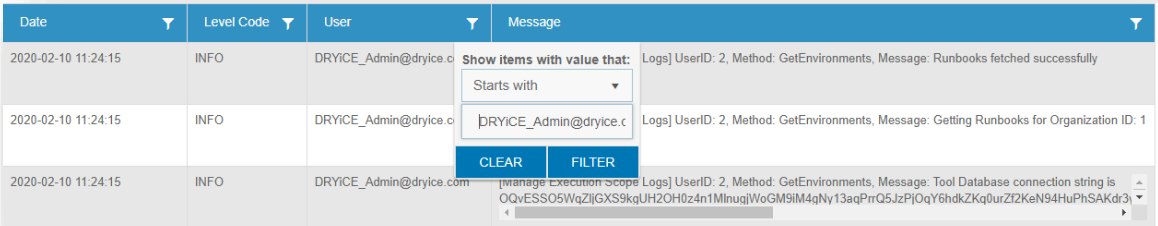


Figure 578- Component Logs (Cont.)

3.3.1. User Activity Logs

In this section, users can view the history of user activity using the following steps:

1. To view the user activity history in BigFix Runbook AI, click **Reports** and then click **User Activity Logs** to access the **User Activity Logs** page.

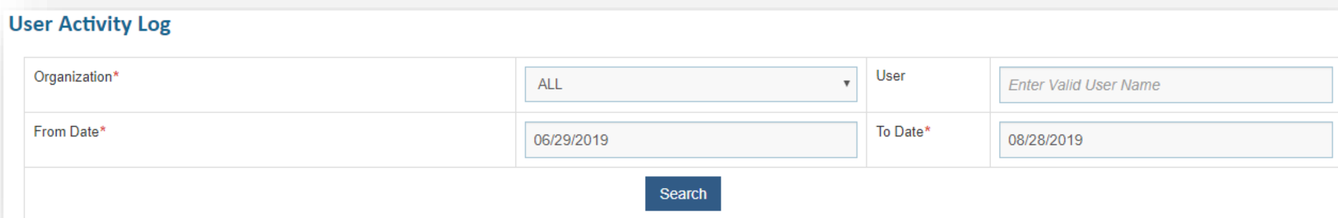


Figure 579- User Activity Logs

2. Click **Search** to refine the **User Activity Logs** results. Depending on the application used to access the **User Activity Logs**, the **Organization**, **User**, or **Date** filter options will be available.
3. Select the search options and click **Search**.

   This displays the filtered user activity log, in a tabular view.

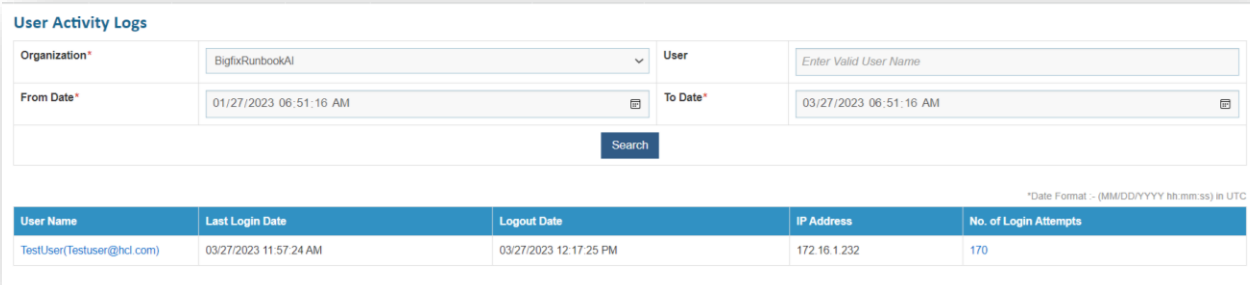


Figure 580- User Activity Logs

4. Selecting a **UserName** opens the **User Activity Details** page displaying the log of all user activities.

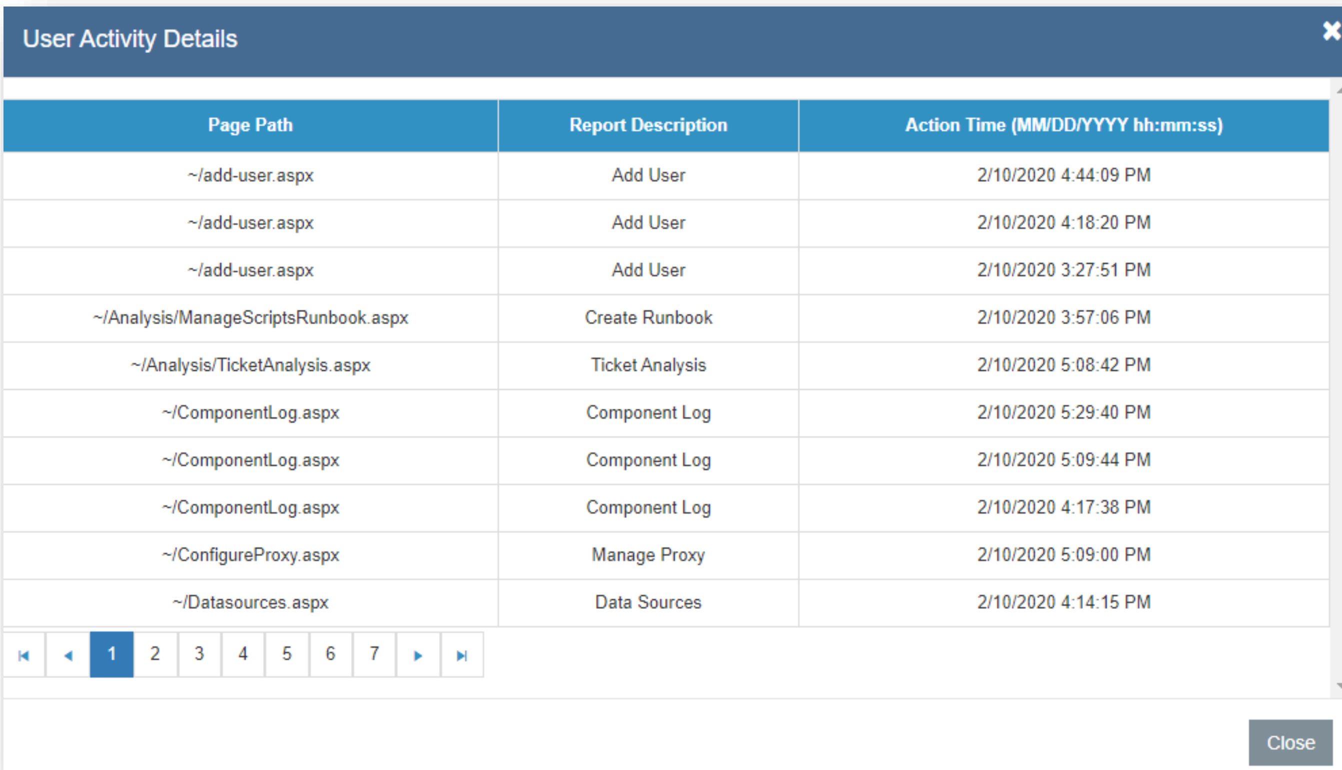


Figure 581- User Activity Logs (Cont.)

5. Selecting the **No. of Login Attempts** next to a **UserName** displays the entire log details for all attempts by a particular user.

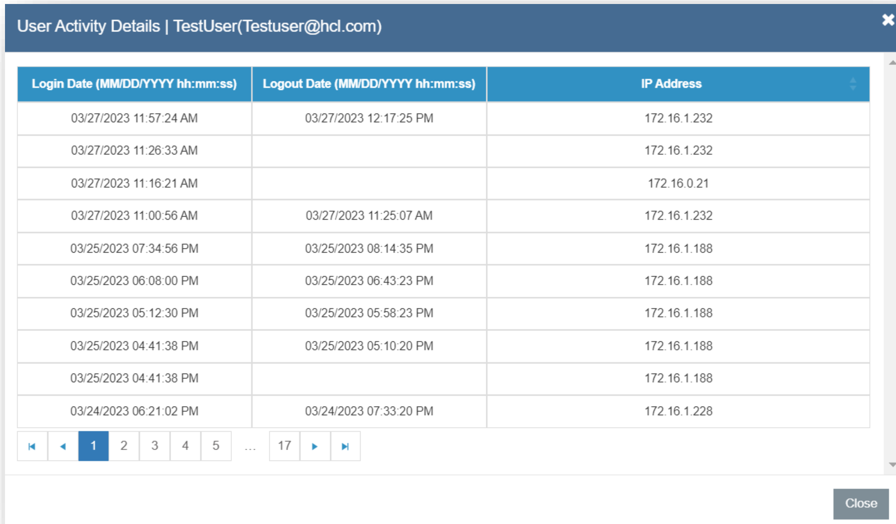


Figure 582- User Activity Logs (Cont.)

3.3.2 Dashboard

The dashboard provides a complete view of the system in your environment and helps visualize various operational metrics in real time. Each Dashboard User Interface (UI) element can instantly provide additional data insights. You can also create reports using the preconfigured widgets available on the dashboard.

This menu is available to Organization Admin, and Operations Users only.

To manage the dashboard, perform the following steps:

1. On the main menu bar, click **Reports ->Dashboard**. The **Dashboard** screen displays.

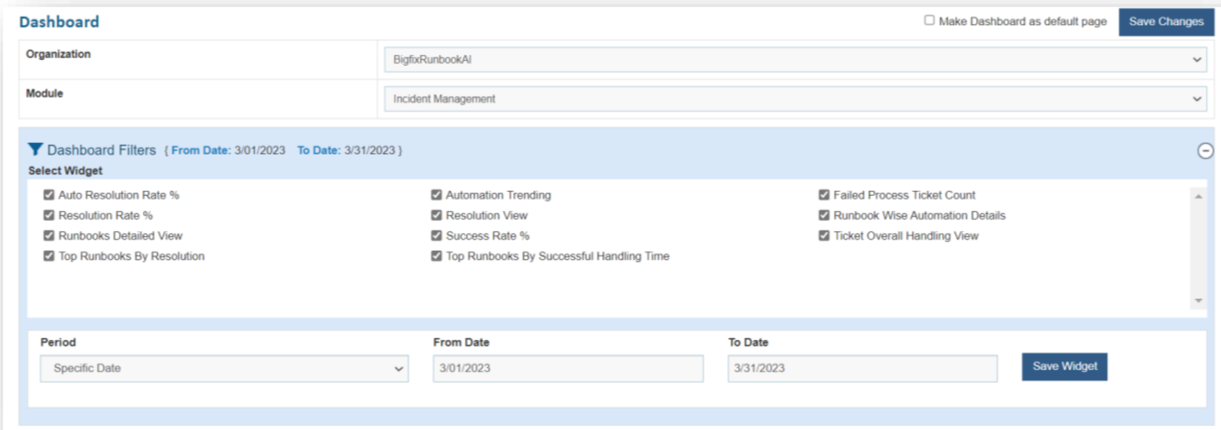


Figure 583- Dashboard

It displays the predefined widgets in the Dashboard Filters pane. User can add new widgets from the predefined widgets and change or remove existing widgets from the organization.

Figure 584- Dashboard (Cont.)

3.3.2.1 Set Dashboard as Default Page

User can set the dashboard page as default page so that when user logs into **BigFix Runbook AI**, the first page that opens by default is Dashboard page.

For that, go to Dashboard page and click on Set Default checkbox.

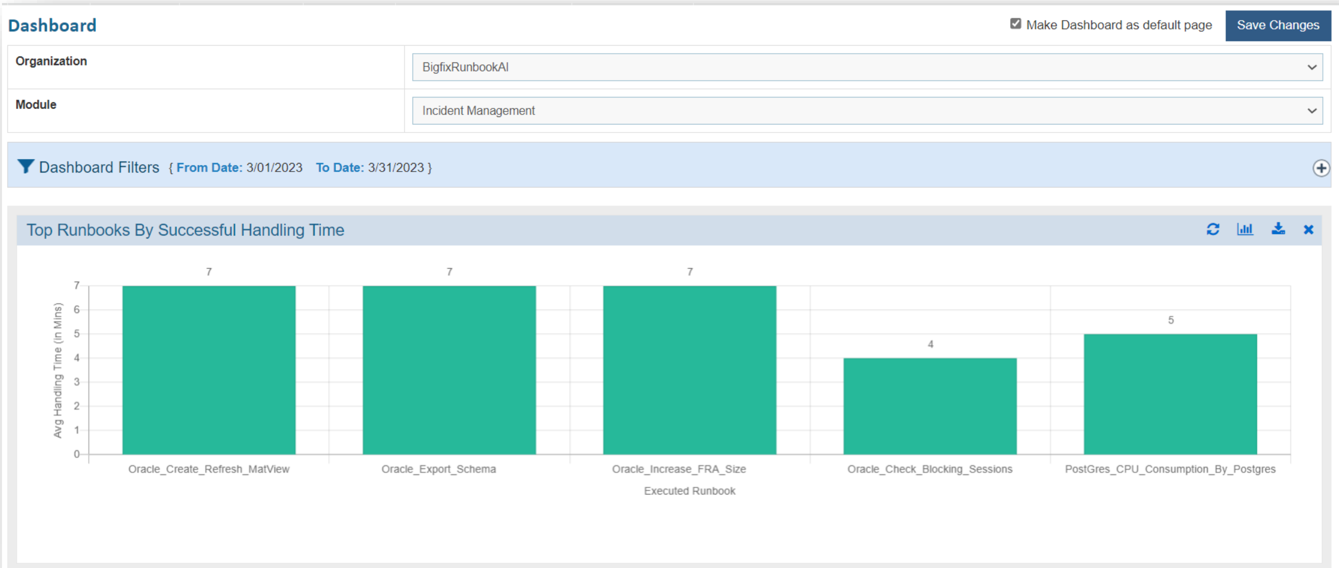


Figure 585- Dashboard (cont.)

An alert will be generated:

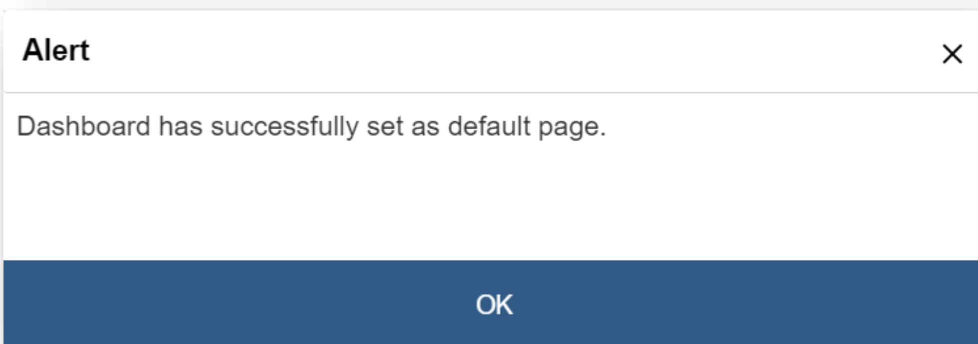


Figure 586- Dashboard (cont.)

Once dashboard page is set as default page by the user, now every time the same user logs into BigFix Runbook AI, the dashboard page will be opened as home page.

3.3.2.2 Add Widget

Dashboard customization is allowed for users with the appropriate privileges. To add more reports or data to a dashboard, user can define widgets for the selected organization.

To add a widget into an organization, perform the following steps:

1. On the **Dashboard** screen, select an **Organization**.

   If there are any configured widgets in the selected organization, they appear in the **Dashboard Filters** pane.

2. To add a widget, click on the **Dashboard Filters** pane and list the predefined widgets.

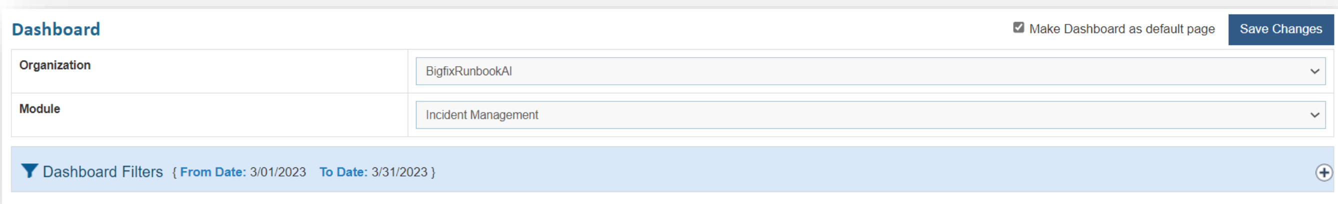


Figure 587- Add Widget

Preconfigured widgets list all the KPIs that a user can use to create their view.

3. Select the required widgets by selecting the corresponding check box and then click **Save Widget**.

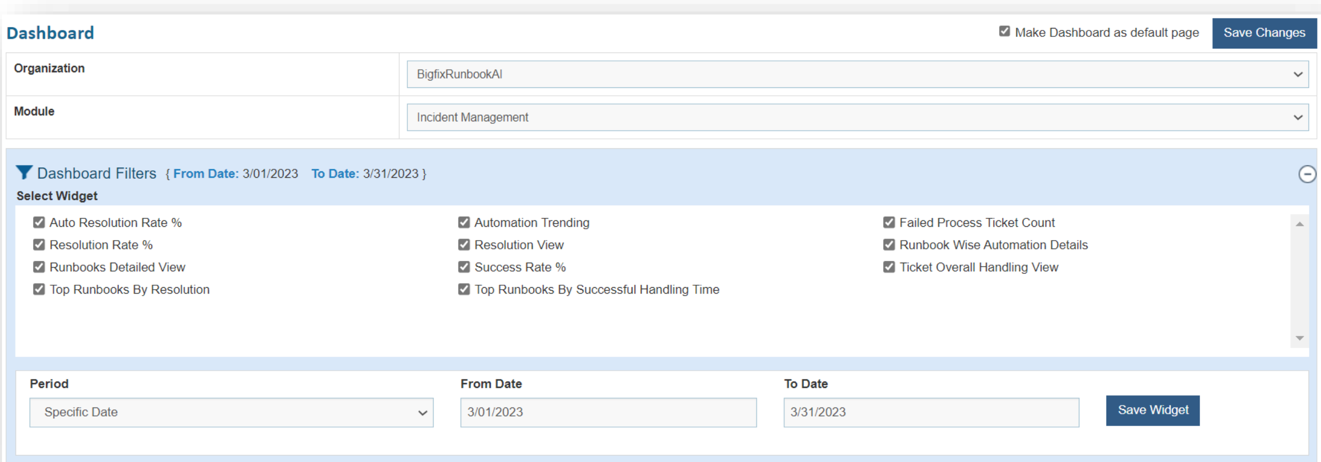


Figure 588- Add Widget (Cont.)

To delete a widget from the selected organization, clear the widget check box, and then click **Save Widget** to save the changes.

The added widgets are displayed on the dashboard.

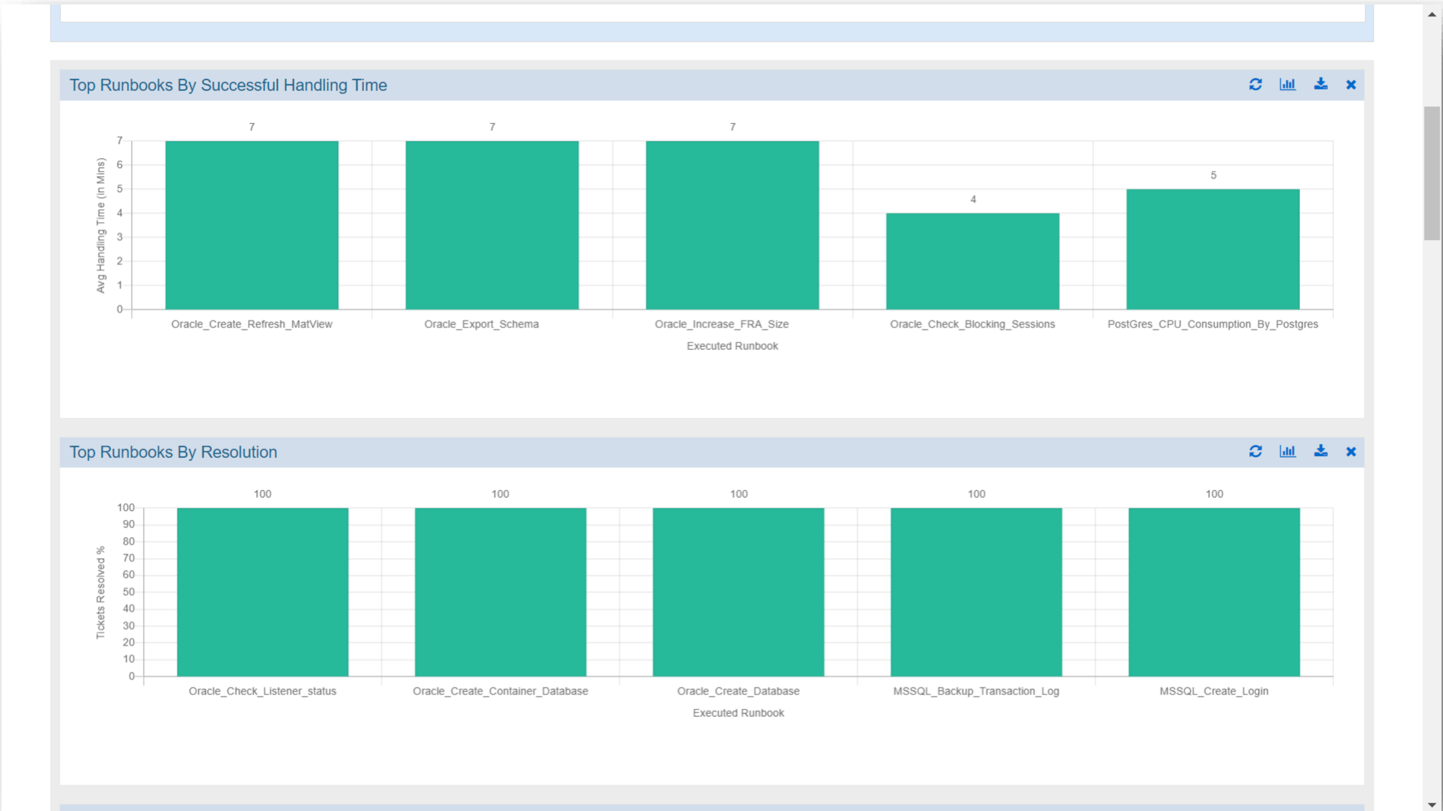


Figure 589- Add Widget (Cont.)

User can view drill-down details of any report appearing on the widget by clicking a specific data point on the widget. This allows user to explore multi-dimensional data by navigating down one level to view more details.

To view the drill-down report, click any visualization to view the drill-down report appearing on a widget.

Figure 590- Add Widgets (Cont.)

The drill-down report displays on the screen.

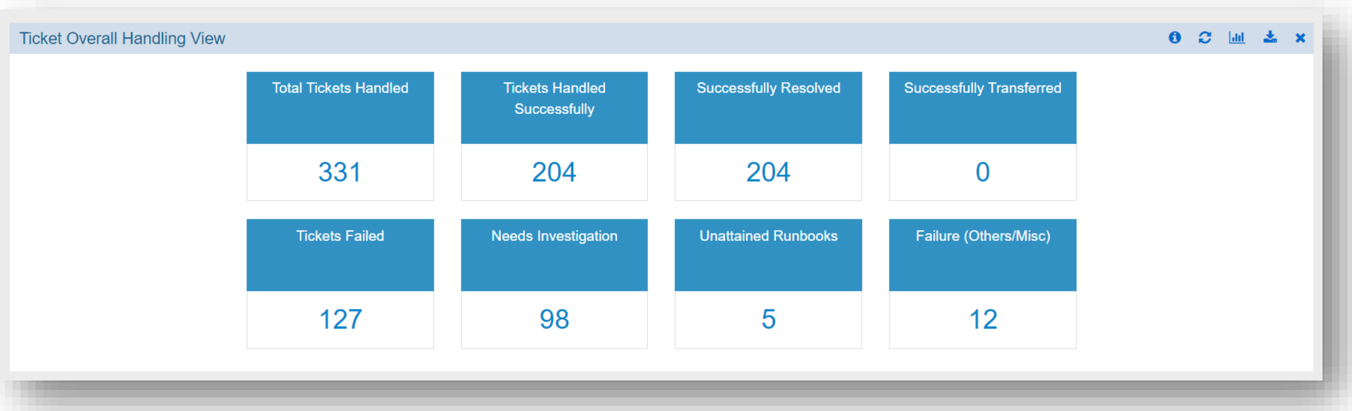


Figure 591 - Add Widgets (Cont.)

Each widget can be resized by performing the following steps:

a. Point at any corner of the selected tab with the mouse pointer. When the pointer turns into a double-headed arrow, hold down the primary mouse button and drag the corner in or out to resize the window. Release the mouse button after resizing the window.
b. Click **Save Changes**.

Each widget can be moved by performing the following steps:

a. Click a blank portion on the navigation bar of the selected tab.
b. Hold down the primary mouse button and then drag the mouse pointer to the place on the screen where you want the tab. After you move the mouse pointer to the position on your screen where you want the taskbar, release the mouse button.
c. Click **Save Changes**.

The navigation bar on each widget contains the following menus.

Table 7- Functions of Tabs

Tabs	Name and Function
/ / /	Change the view of widget to bar/grid/pie/doughnut.
	Refresh the data in a widget.
	Remove a widget from the selected organization's dashboard.
	Export the data in a widget to PDF or CSV format.

3.3.3 Ticket Evaluation Report

User can evaluate any built model for an organization, its **module,** and the mapped runbook tool**.**

1. On the main menu bar, Click **Reports** and then click **Ticket Evaluation Report.**

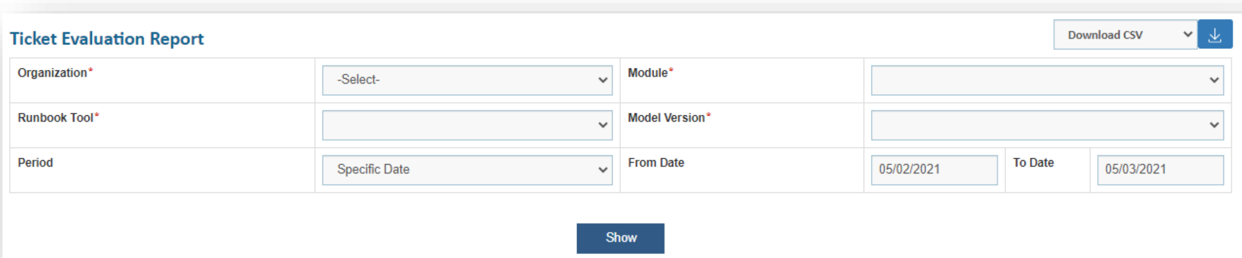


Figure 592 - Ticket Evaluation report

2. Select **Organization**, **Module**, **Runbook Tool**, **Model Version,** and the time for which user needs to see the data.
3. Then click on **Show**. All the ticket data that has been processed during the selected time will be shown in the form of a graph with **Month** on x-axis**, Success %** on left y-axis and **Success Ticket and Failed Ticket** count on right y-axis.

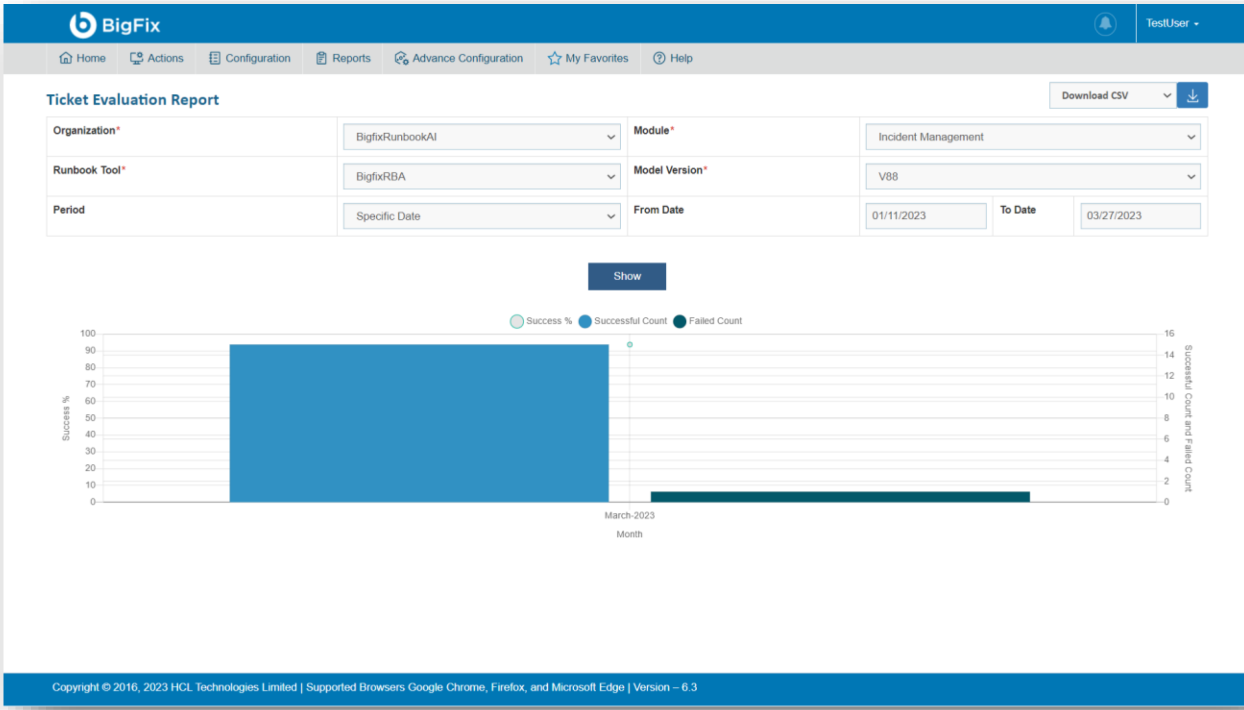


Figure 593 - Ticket Evaluation Report

4. When hovered on **Successful Count** graph, it displays the no. of successful tickets for the defined period. When hovered on **Failed Count** graph, it displays the no. of failed tickets for the defined period and when hovered on the **Success %,** it shows the percentage of successful tickets for the mentioned period.

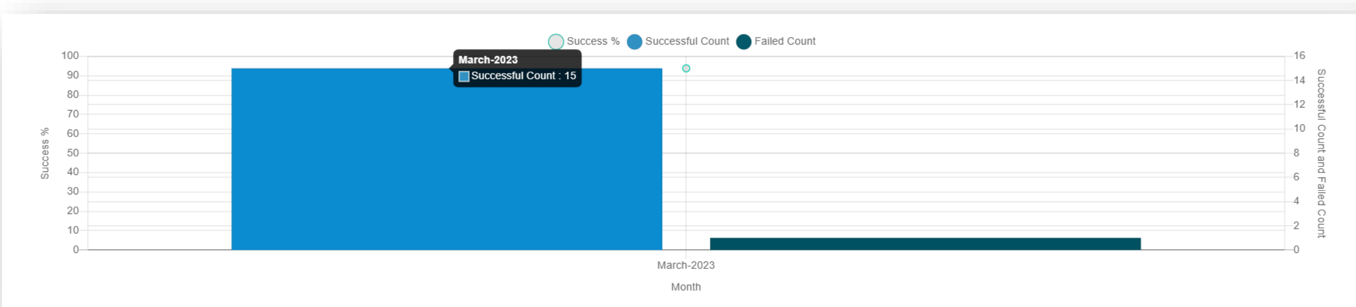


Figure 594 - Graphical Display of Ticket Evaluation Report

5. User can download this information in the form of CSV or PDF. For this, select either **Download CSV** or **Download PDF** and click on button .

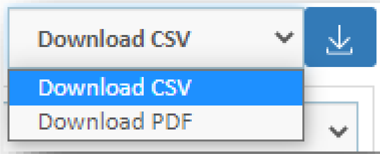


Figure 595 - Download Options

6. To get the detailed information for any block of data, click on that block. A popup will be opened that displays the **No. of tickets**, **Bucket Description**, **Bucket Detail**, **Published Duration**, **Success (%)**, and **Fail (%)**.

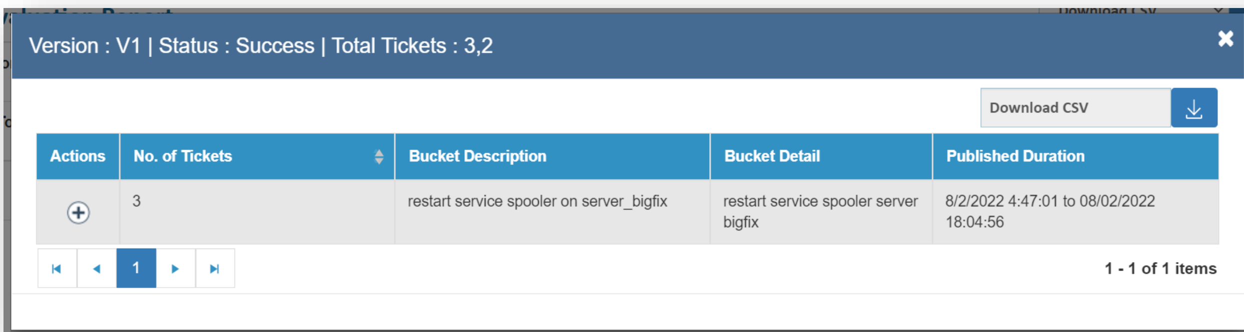
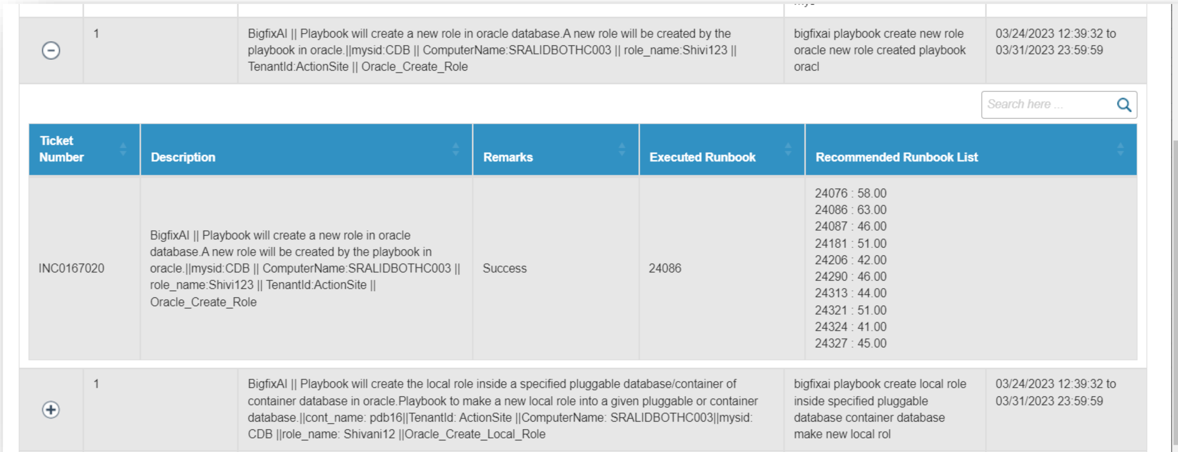


Figure 596 – Detailed Ticket Evaluation Report

7. Click on  icon to get the ticket details for that bucket description along with **Ticket Number**, its **Description**, **Remarks**, **Executed Runbook** on that ticket and **Recommended Runbook List** for that ticket.



⊖	1	BigfixAI || Playbook will create a new role in oracle database.A new role will be created by the playbook in oracle.||mysid:CDB || ComputerName:SRALIDBOTHC003 || role_name:Shivi123 || TenantId:ActionSite || Oracle_Create_Role	bigfixai playbook create new role oracle new role created playbook oracl	03/24/2023 12:39:32 to 03/31/2023 23:59:59

Search here ...

Ticket Number	Description	Remarks	Executed Runbook	Recommended Runbook List
INC0167020	BigfixAI || Playbook will create a new role in oracle database.A new role will be created by the playbook in oracle.||mysid:CDB || ComputerName:SRALIDBOTHC003 || role_name:Shivi123 || TenantId:ActionSite || Oracle_Create_Role	Success	24086	24076 : 58.00 24086 : 63.00 24087 : 46.00 24181 : 51.00 24206 : 42.00 24290 : 46.00 24313 : 44.00 24321 : 51.00 24324 : 41.00 24327 : 45.00

⊕	1	BigfixAI || Playbook will create the local role inside a specified pluggable database/container of container database in oracle.Playbook to make a new local role into a given pluggable or container database.||cont_name: pdb16||TenantId: ActionSite ||ComputerName: SRALIDBOTHC003||mysid: CDB ||role_name: Shivani12 ||Oracle_Create_Local_Role	bigfixai playbook create local role inside specified pluggable database container database make new local rol	03/24/2023 12:39:32 to 03/31/2023 23:59:59

Figure 597 - Detailed Ticket Evaluation Report- Ticket Details

8. User can also download this ticket information in the form of CSV. For this, click on button next to Download CSV

3.3.4 License Report

This screen shows the information regarding Licensing of the product and CI usage and entitlement**.**

On the main menu bar, Click **Reports** and then click **License Report.**

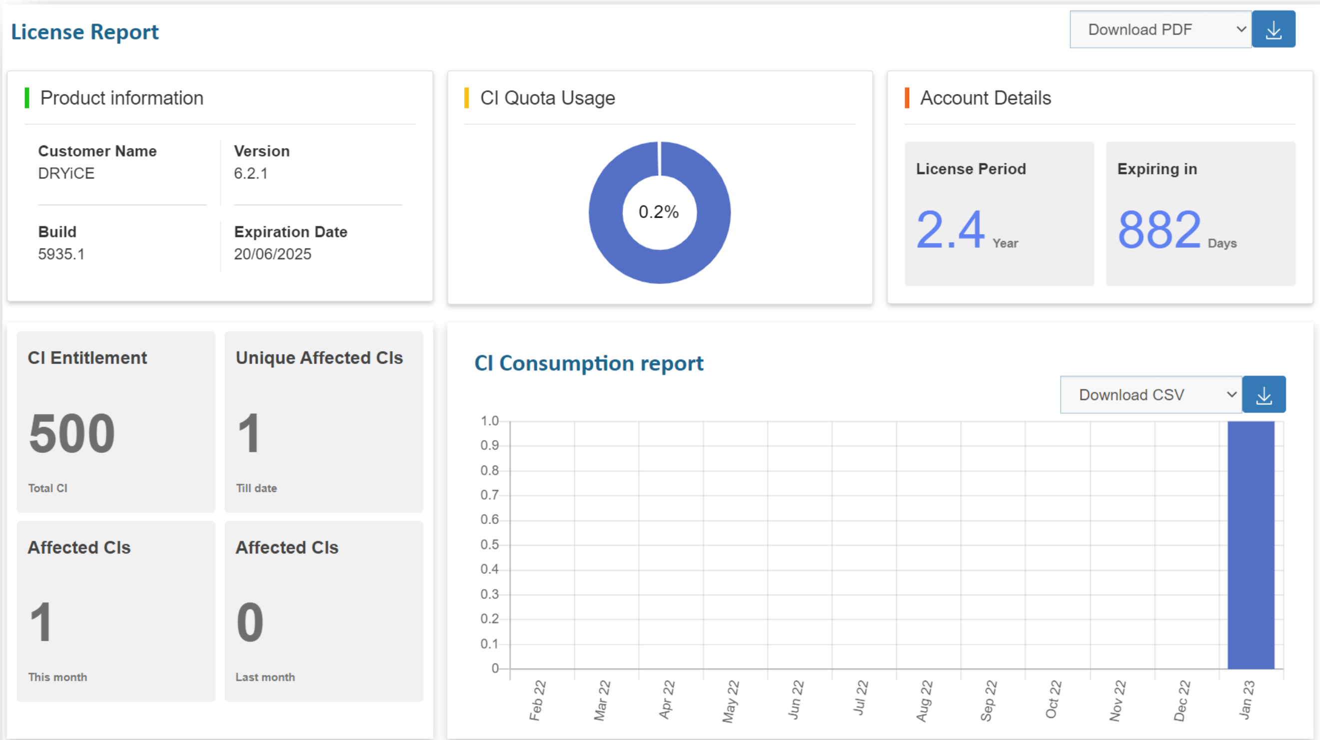


Figure 598- License report

The page opened shows the below data:

a. Product Information: It displays the Customer Name, the current version of the product, build version and license expiry date.
b. CI quota usage: It displays the % of CIs that have been utilized by the system.
c. Account Details: It displays the period of license and the no. of days left for expiration.
d. CI Entitlement: It displays the total CI count present in the system, no. of unique affected Cis till date, no. of affected Cis for current month and no. of affected Cis for last month.
e. CI Consumption Report: It displays the graphical representation of the CIs consumed over the last one year. User can download the CSV report for this graphical data.

User can also download the data in pdf format using the ‘Download PDF’ option.

3.4 My Favorites

There is another option to add a menu into favorites tab. For all the menus that are frequently required can be added in favorites menu so that they can be easily accessed from this menu. For that, click on icon ☆ corresponding to any menu.

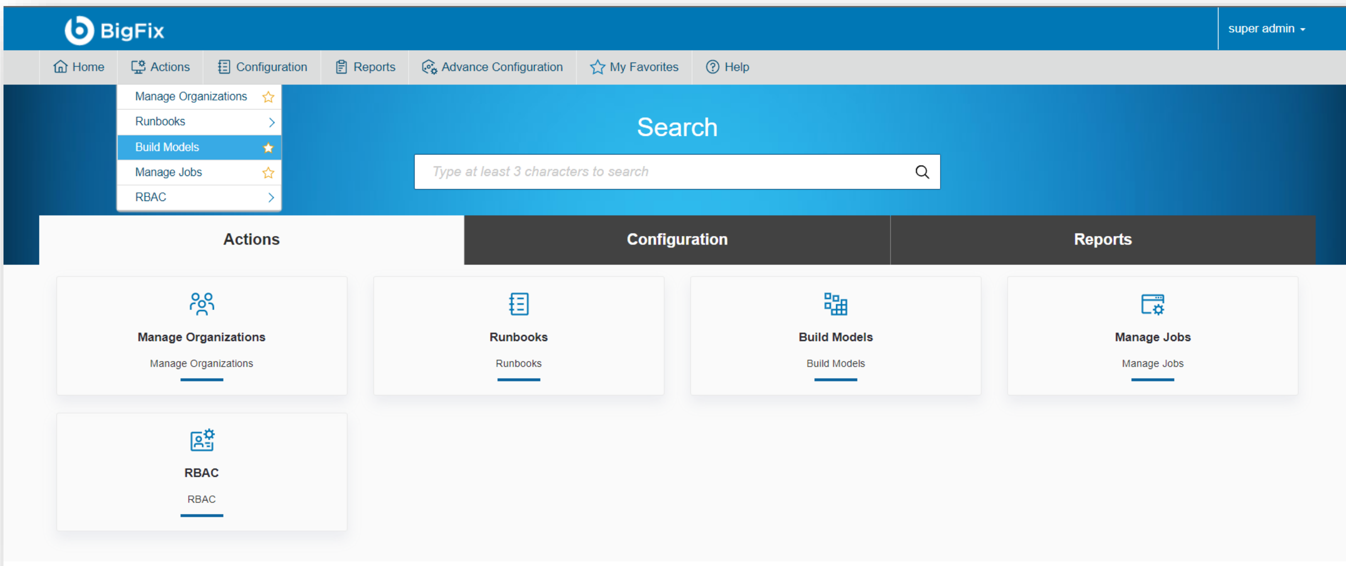


Figure 599- Add Favorite

The menu will then be added to My Favorites menu from where menus can be directly access without looking for them under menus.

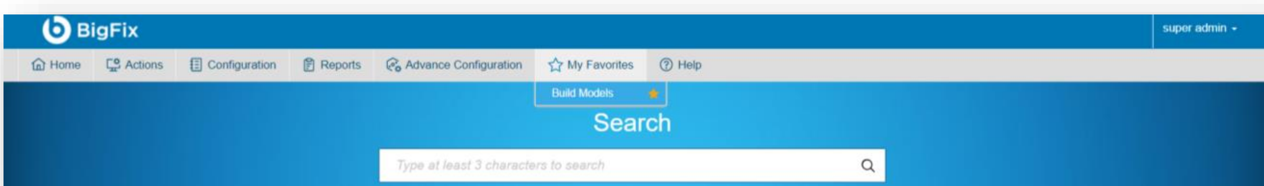


Figure 600- Add Favorite (cont.)

3.5 Help

This page helps the user to locate the necessary documents for better understanding of the tool as well as get the details of the components being running in BigFix Runbook AI.

1. On main menu bar, click on **Help**. The below page appears:

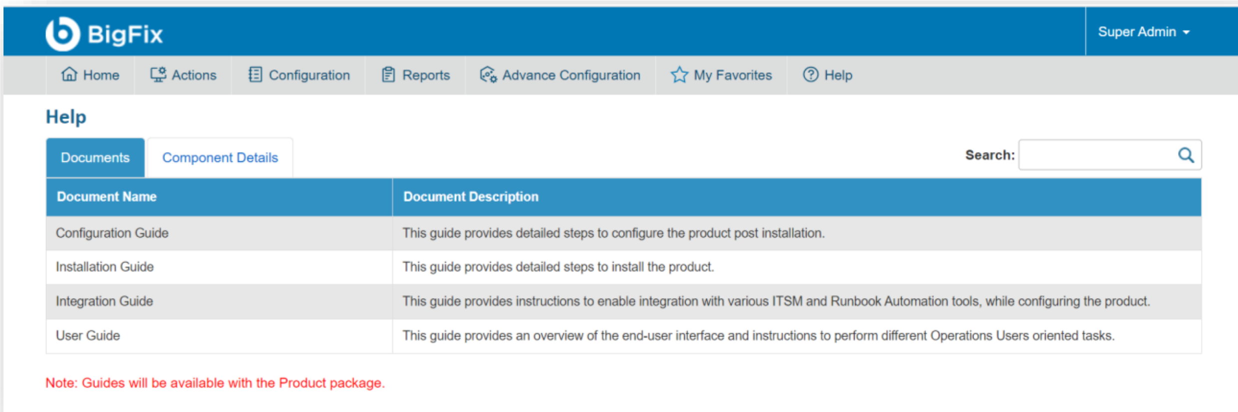
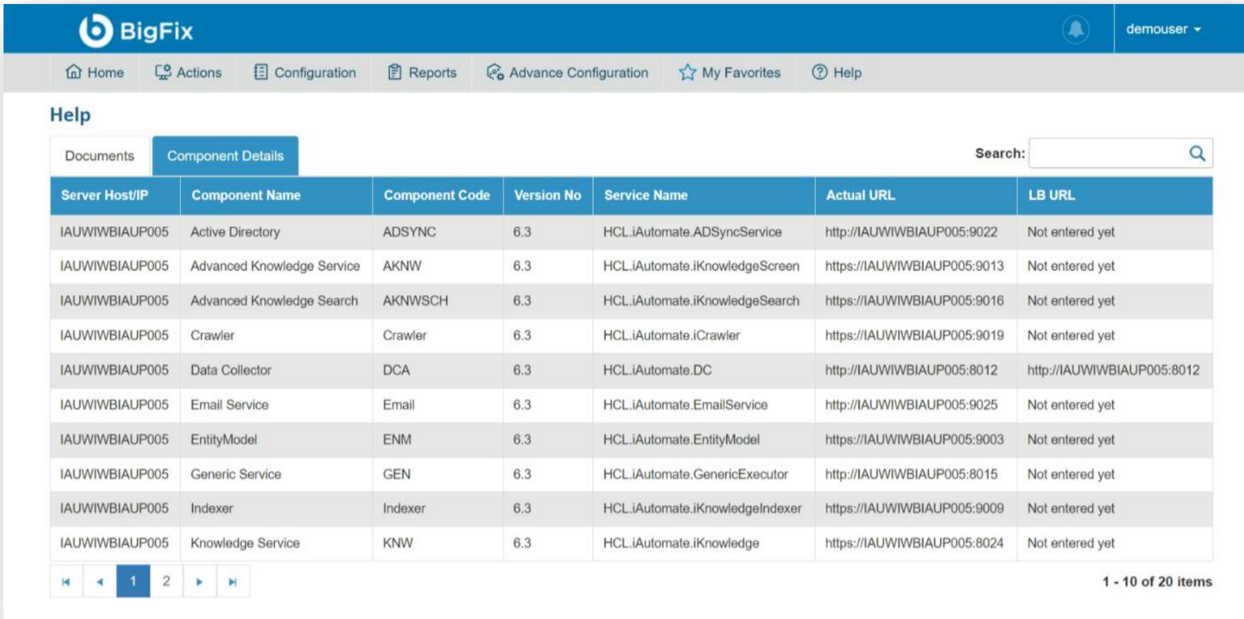


Figure 601- Help

It has two tabs:

a. **Documents**: On this tab, it shows all the required documents needed for better understanding of BigFix Runbook AI:
   i. Configuration Guide
   ii. Installation Guide
   iii. Integration Guide
   iv. User Guide
b. **Component Details:** On this, it displays all the components running on BigFix Runbook AI along with the server Host/IP on which component is running, the name of the component, component code, the version of BigFix Runbook AI currently running, the service name with which component is installed, the actual URL along with port on which component is running and the LB URL, if exists, for the component.



Server Host/IP	Component Name	Component Code	Version No	Service Name	Actual URL	LB URL
IAUWIWBIAUP005	Active Directory	ADSYNC	6.3	HCL.iAutomate.ADSyncService	http://IAUWIWBIAUP005:9022	Not entered yet
IAUWIWBIAUP005	Advanced Knowledge Service	AKNW	6.3	HCL.iAutomate.iKnowledgeScreen	https://IAUWIWBIAUP005:9013	Not entered yet
IAUWIWBIAUP005	Advanced Knowledge Search	AKNWSCH	6.3	HCL.iAutomate.iKnowledgeSearch	https://IAUWIWBIAUP005:9016	Not entered yet
IAUWIWBIAUP005	Crawler	Crawler	6.3	HCL.iAutomate.iCrawler	https://IAUWIWBIAUP005:9019	Not entered yet
IAUWIWBIAUP005	Data Collector	DCA	6.3	HCL.iAutomate.DC	http://IAUWIWBIAUP005:8012	http://IAUWIWBIAUP005:8012
IAUWIWBIAUP005	Email Service	Email	6.3	HCL.iAutomate.EmailService	http://IAUWIWBIAUP005:9025	Not entered yet
IAUWIWBIAUP005	EntityModel	ENM	6.3	HCL.iAutomate.EntityModel	https://IAUWIWBIAUP005:9003	Not entered yet
IAUWIWBIAUP005	Generic Service	GEN	6.3	HCL.iAutomate.GenericExecutor	http://IAUWIWBIAUP005:8015	Not entered yet
IAUWIWBIAUP005	Indexer	Indexer	6.3	HCL.iAutomate.iKnowledgeIndexer	https://IAUWIWBIAUP005:9009	Not entered yet
IAUWIWBIAUP005	Knowledge Service	KNW	6.3	HCL.iAutomate.iKnowledge	https://IAUWIWBIAUP005:8024	Not entered yet

Figure 602- Help (Cont.)

4 Appendix

4.1 List of Abbreviations

Table 8 – List of Abbreviations

Abbreviation	Expansion
AD	Active Directory
AI	Artificial Intelligence
ITOPS	IT Operations
ITSMS	IT Service Management System
KEDB	Known Error Database
SNOW	ServiceNow