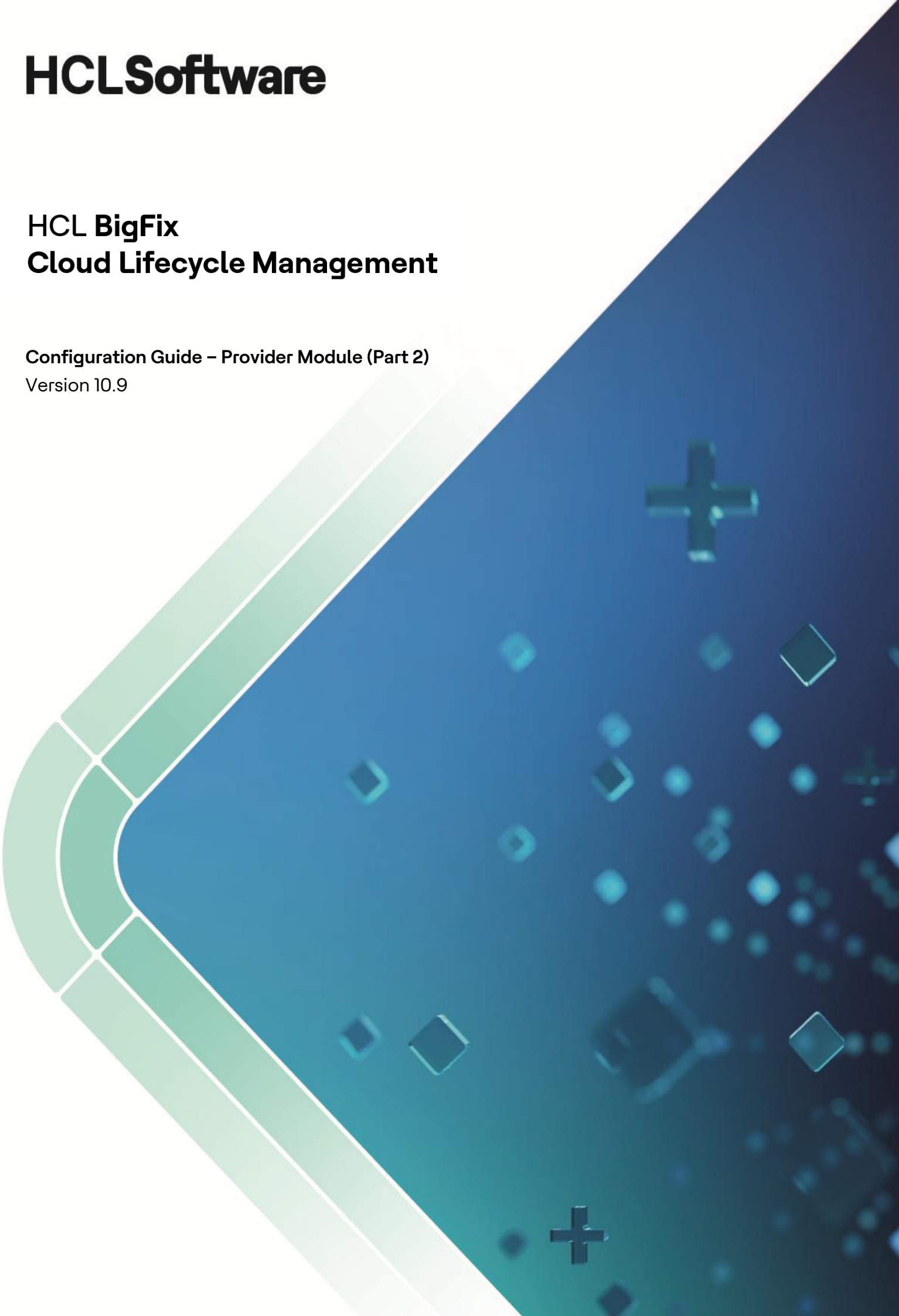
HCLSoftware

HCL **BigFix**
Cloud Lifecycle Management

Configuration Guide – Provider Module (Part 2)

Version 10.9



HCL has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the HCL website at www.hcltechsw.com.

Contents

Table of Figures

List of Tables

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
May, 2020	DRYiCE MyCloud V9.2 Configuration Guide – Provider Module (Part 2)
August, 2020	DRYiCE MyCloud V10.0 Configuration Guide – Provider Module (Part 2)
November, 2020	DRYiCE MyCloud V10.1 Configuration Guide – Provider Module (Part 2)
February, 2021	DRYiCE MyCloud V10.2 Configuration Guide – Provider Module (Part 2)
April, 2021	DRYiCE MyCloud V10.4 Configuration Guide – Provider Module (Part 2)
October, 2021	DRYiCE MyCloud V10.5 Configuration Guide – Provider Module (Part 2)
September, 2022	DRYiCE MyCloud V10.6 Configuration Guide – Provider Module (Part 2)
August, 2023	HCL_DRYiCE_MyCloud_10.7_Configuration_Provider_Guide_Part2
April, 2024	HCL_DRYiCE_MyCloud_10.8_Configuration_Provider_Guide_Part2
September, 2024	HCL_DRYiCE_MyCloud_10.8.1_Configuration_Provider_Guide_Part2
February, 2025	HCL_DRYiCE_MyCloud_10.8.2_Configuration_Provider_Guide_Part2
July, 2025	HCL_BigFix_Cloud_Lifecycle_Management_10.9_Configuration_Provider_Guide_Part2

1. Preface

This section provides information about the HCL BigFix Cloud Lifecycle Management configuration guide and includes the following topics.

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

1.1 Intended Audience

This document is intended for its administrator's/business administrators who are responsible for configuring HCL BigFix Cloud Lifecycle Management (provider module) and enabling end-users to consume HCL BigFix CLM services.

1.2 About This Guide

This guide provides instructions to configure HCL BigFix Cloud Lifecycle Management. This includes the post-installation and configuration procedures for the product. This document is in continuation to the **HCL BigFix CLM Configuration Guide – Provider Module (Part 1).**

1.3 Related Documents

The following documents can be referenced in addition to this guide for further information on HCL BigFix Cloud Lifecycle Management.

- HCL BigFix CLM Introduction Guide
- HCL BigFix CLM Installation Guide
- HCL BigFix CLM User Guide
- HCL BigFix CLM Troubleshooting Guide
- HCL BigFix CLM API Guide
- HCL BigFix CLM V3 API Guide
- HCL BigFix CLM Developer Guide
- HCL BigFix CLM Configuration Guide - Admin Module
- HCL BigFix CLM Configuration Guide - Provider Module - Part 1

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
Courier New (Font)	Indicates commands within a paragraph, URLs, code in examples, and paths including onscreen text and text input from users
Italic	Indicates document titles, occasional emphasis, or glossary terms
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. HCL BigFix CLM Configuration and Management

HCL BigFix CLM environment is an extensive open distributed system that stores the data and protects the privacy of users. A user's role determines the tasks that the user will be able to perform. Each role is associated with permissions or rules that define the degree to access the features in HCL BigFix CLM.

The following lists five fundamental built-in roles.

Table 2 – Built-In Roles

Section Name	Description
HCL BigFix CLM Admin	HCL BigFix CLM admin has the rights to manage providers, admin level jobs and other component related configurations
Provider Admin	Provider admin is a business manager or an administrator responsible for configuring HCL BigFix CLM as per the organization requirements. The primary responsibilities are: • Manages and configures the organization • Manages the users and groups (within the organization) • Manages UI template • Manages services catalog • Creates approval groups and workflows • Manage organization resources • Manage domains/AD users in organizations • Request status tracking • Onboard tenant in system
Organization Admin	Organization admin has the rights to manage the users, roles, and groups assigned to them (organization-specific)
Requester	Requester has the rights to request for infrastructure resources (IaaS & PaaS services) view or manage reports related to the resources.
Approver	Approver has the rights to approve the requests raised by the requesters.

1.5 HCL BigFix CLM Provider Module

This document continues from the last step (Publish Service Catalog) covered in HCL BigFix CLM Configuration Guide – Provider Guide (Part 1) Module. The Rest of the configuration steps will be covered in the following sections.

1.5.1 Role Based Access Control (RBAC)

Role Based Access Control (RBAC) is an important component of HCL BigFix CLM. This module details the steps to manage RBAC model within an environment to implement several important security principles such as least privilege, separation of duties, and data abstraction.

This model includes two kinds of role management: Manage Group and Manage User. Different users of this platform communicate with service providers and get permissions to access resources, and these permissions are given based on mapping of the users to system-based groups.

1. On the side menu bar inside administration, click **RBAC**.
2. The drop-down appears with the following options:

- Group
- Users
- Roles

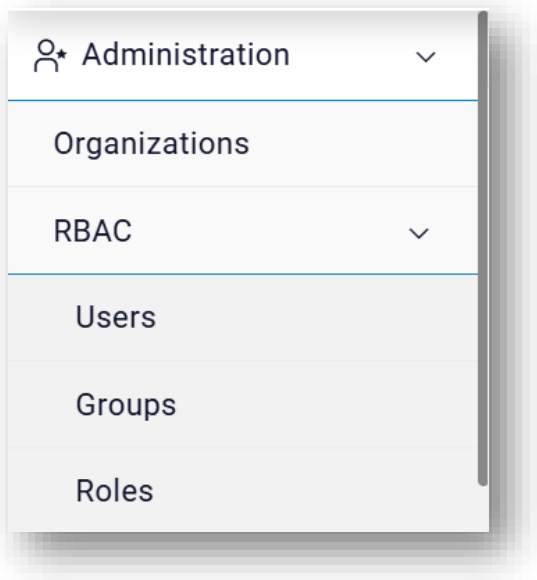


Figure 1 – RBAC

The provider gets to access both Manage User and Manage Group.

1.5.1.1 Role

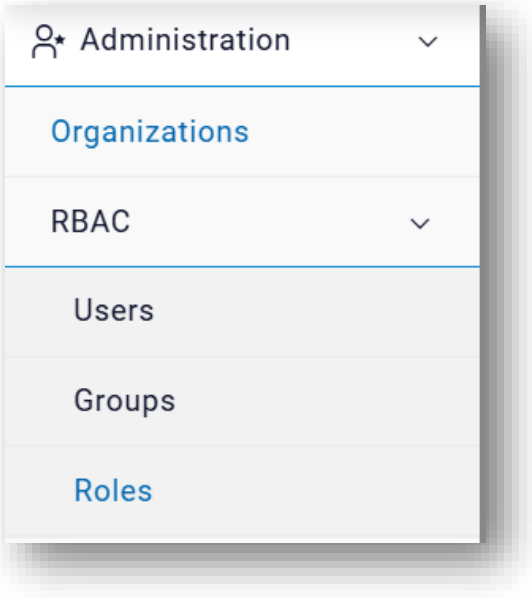


Figure 2 - Roles

Through this module, provider users can manage roles in an organization through following actions:

- **Add Role** : To add roles in an organization
- **View Role**: To view the existing roles in an organization

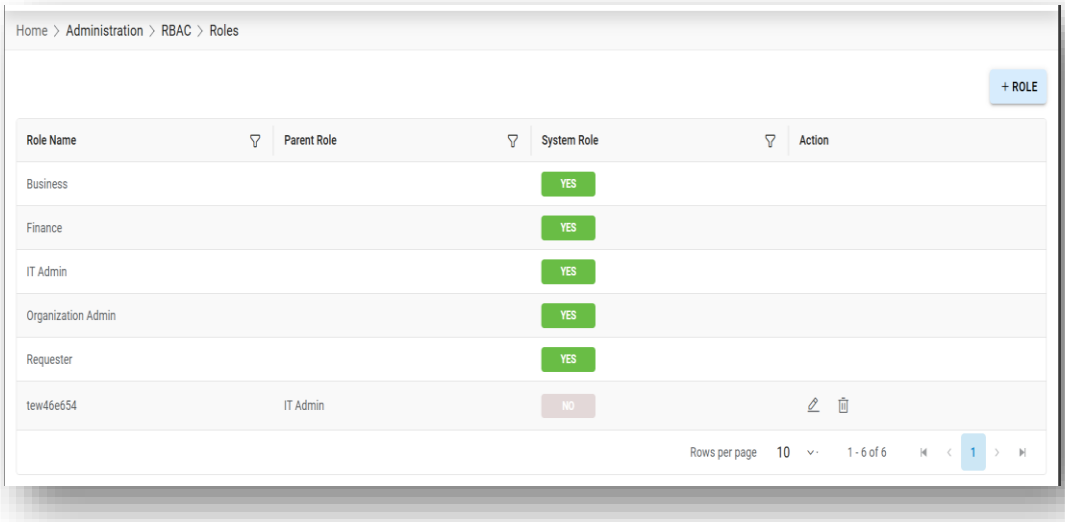


Figure 3 - RBAC Roles

1.5.1.1.1 View Role

Through this module, provider users can view existing roles in an organization.

1. Select **Organization** from the drop-down.

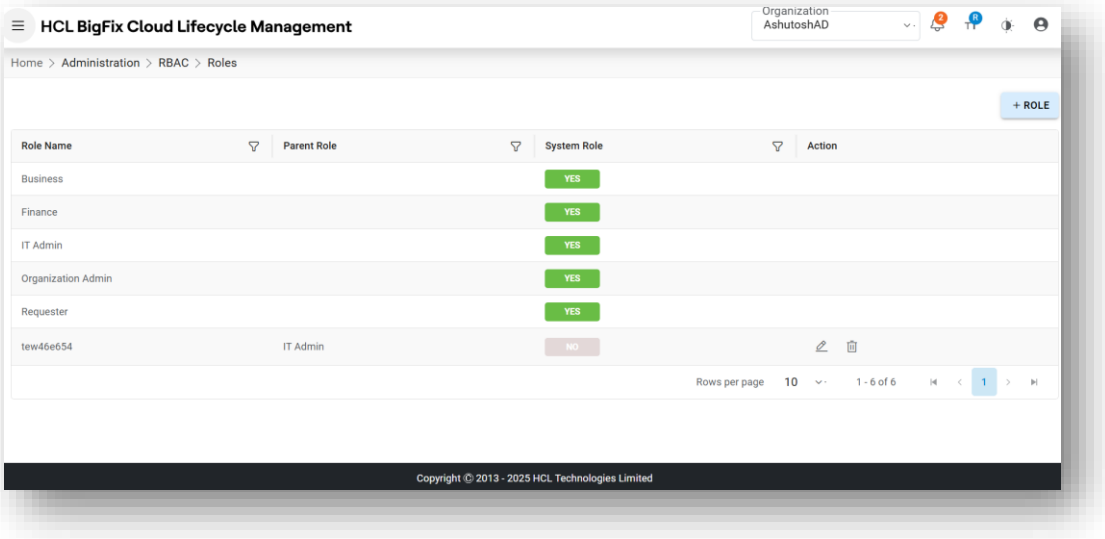


Figure 4 – View Roles

2. Refer to the below table to understand the fields mentioned in the above figure:

Table 3 - Role Management

Fields	Description
Role Name	Name of the HCL BigFix CLM user's role
Status	Whether role is active or in active
Parent Role	HCL BigFix CLM system created role that will act as a parent role for the newly added role
HCL BigFix CLM System Role	**Yes**: default system roles created by HCL BigFix CLM **No**: role created by provider

3. Through this, provider user can perform below actions on the role:

- **Edit** ( ) : To edit the roles
- **Delete**( ) : To delete the roles
- **Configure Menus**( ) : To assign menu to this role
- **Configure Widgest**( ): To assign widgets to this role

1.5.1.1.2 Edit Role

To edit/ modify the information of an existing role management, provider user needs to follow the below steps:

1. On the Role Management screen, click View Role.
2. Select Organization.
3. Available roles list down in a tabular view.
4. Click Edit ( ) corresponding the role to be edited.

5. Below the screen appears.

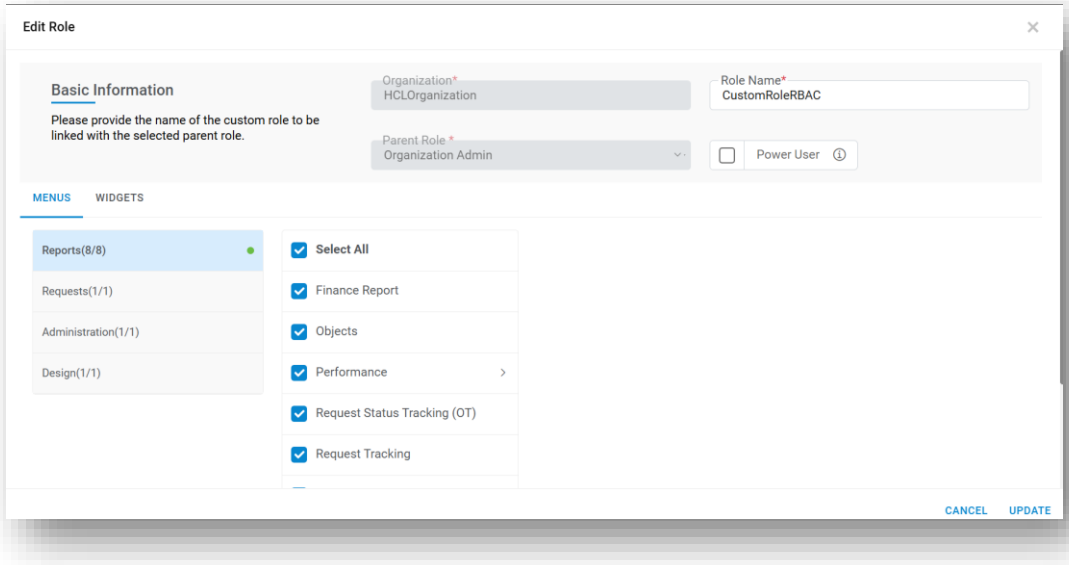


Figure 5 - Edit Role

6. Users can modify the appropriate fields and click on **Update**.
7. A success message appears.

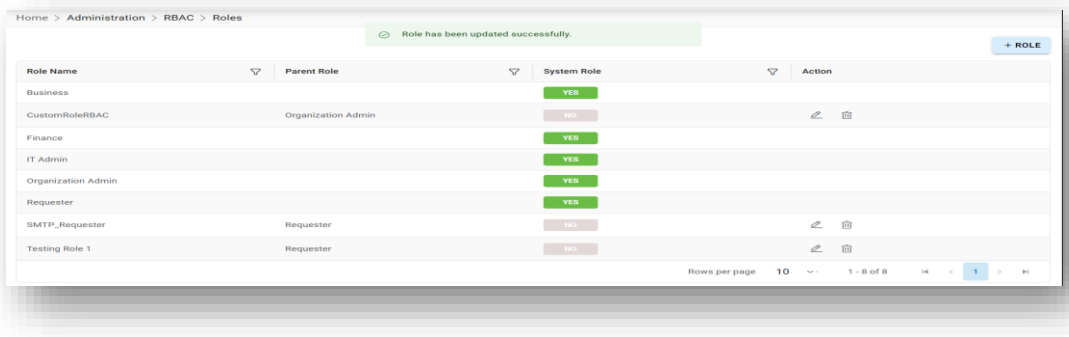


Figure 6 - Success Message Role

1.5.1.1.3 Delete Role

To delete an existing role, provider user needs to follow the below steps:

1. On the Role Management screen, click View Role.
2. Select Organization.
3. Available role lists down in a tabular view.
4. Click **Delete** ( ) against the role to be deleted.
5. A confirmation message appears.

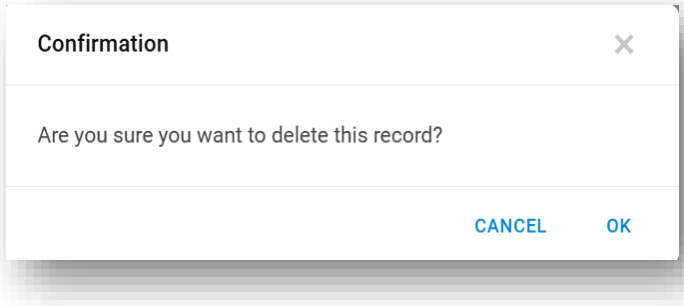


Figure 7 - Confirm Message

6. Click **OK** to confirm. A success message appears.

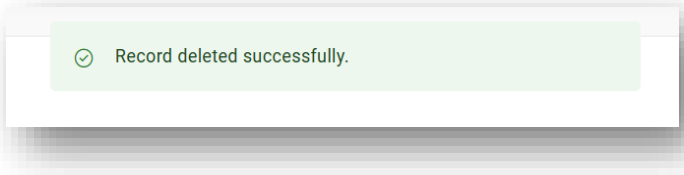


Figure 8 - Success Message

1.5.1.1.4 Configure Menu

To configure the menus in existing role, provider user needs to follow the below steps:

1. On the Role Management screen, click View Role.
2. Select Organization.
3. Available role lists down in a tabular view.
4. Click **Edit** ( ) corresponding to the role for which the user wants to configure menu.
5. The below screen appears.

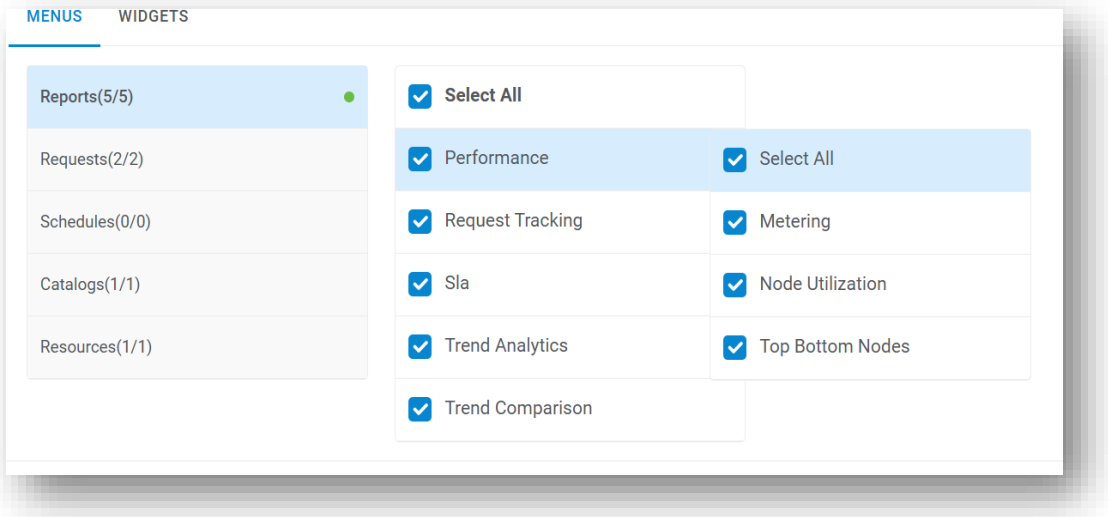


Figure 9 - Configure Menu

6. Click on checkbox to select the menu items and click on **Assign Menu** to save the selection.

1.5.1.1.5 Configure Widgets

To configure the widgets for an existing role, provider user needs to follow the below steps:

1. On the Role Management screen, click View Role.
2. Select Organization.
3. Available role lists down in a tabular view.
4. Click **Edit** ( ) corresponding to the role for which you want to configure widget.
5. The below screen appears.
6. Click on the **checkbox** to configure the appropriate widgets and click on **Assign Widgets** to assign.

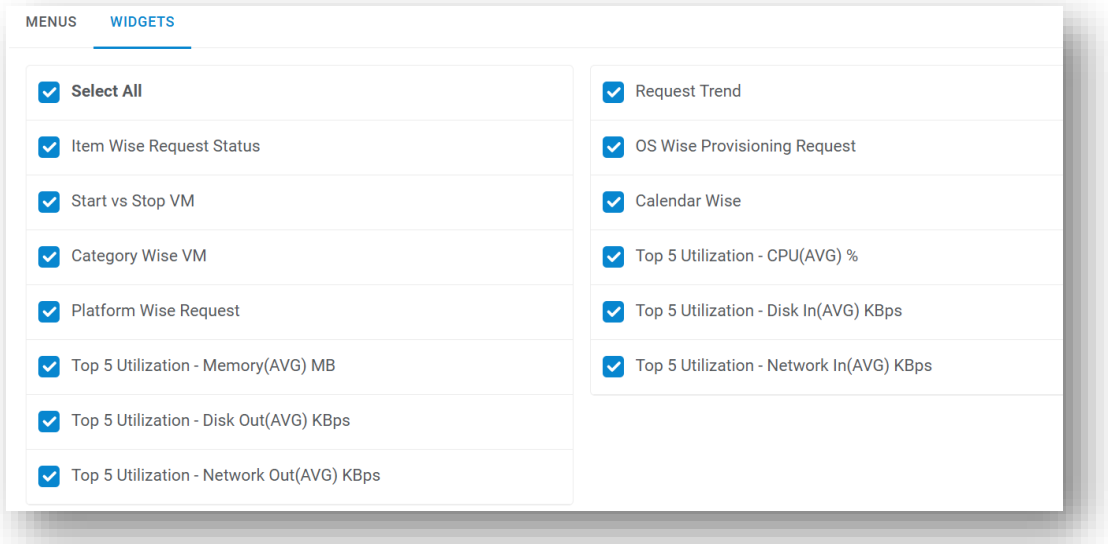


Figure 10 - Configure Widgets

1.5.1.1.6 Add Role

Through this module, provider user can **Add** new roles in an organization.

1. Click on **Add Role**, the **Role Management** popup appears.

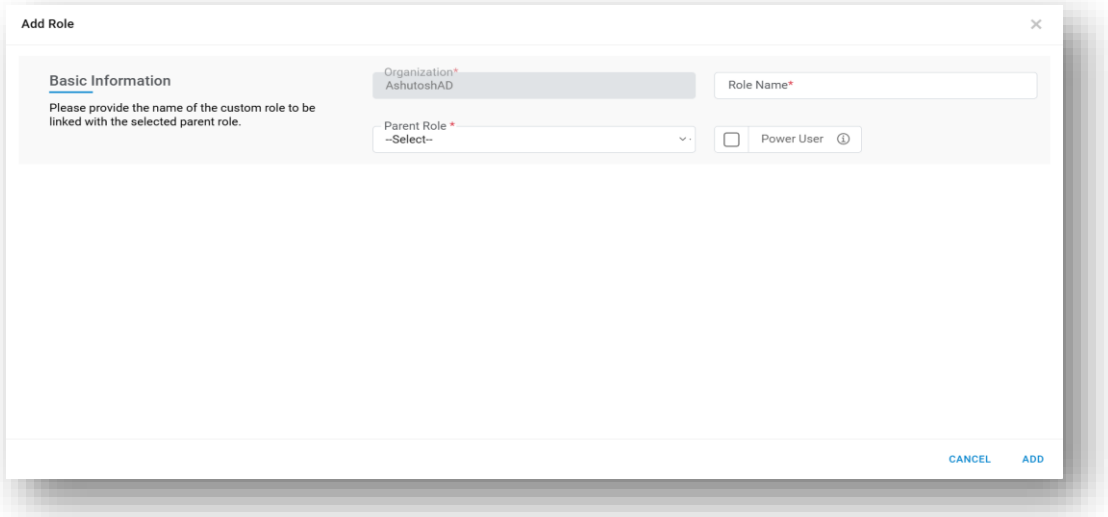


Figure 11 - Add Role

2. Refer to the below table to understand the fields mentioned in the above figure:

Table 4 – Add Role

Fields	Description
Organization	The name of the organization (business units/ divisions in organizations)
Role Name	The name of HCL BigFix CLM role
Parent Role	HCL BigFix CLM system created role that will act as a parent role for the newly added role.
Power User	Power user will be able to see request and object belongs to another user in same role.

3. Select Organization, Role Name, and Power User.
4. Enter Role Name.
5. Click **Add**. A success message appears.

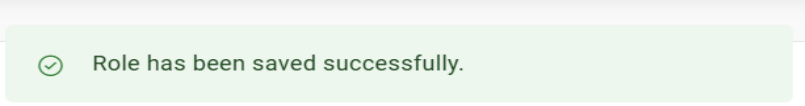


Figure 12 - Success Message

1.5.1.2 Users

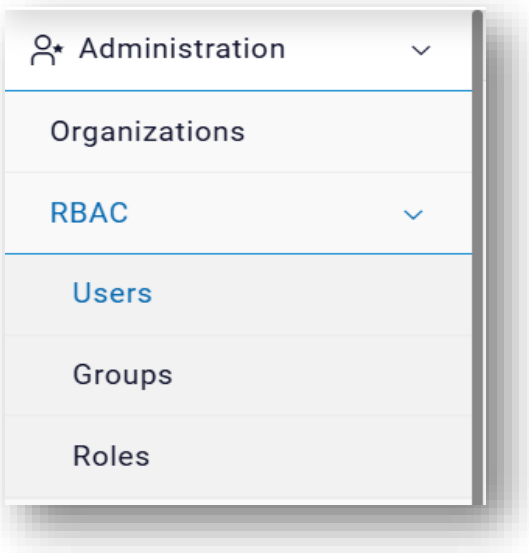


Figure 13 - Users

Through this module, provider users can manage users in an organization. It has the following options:

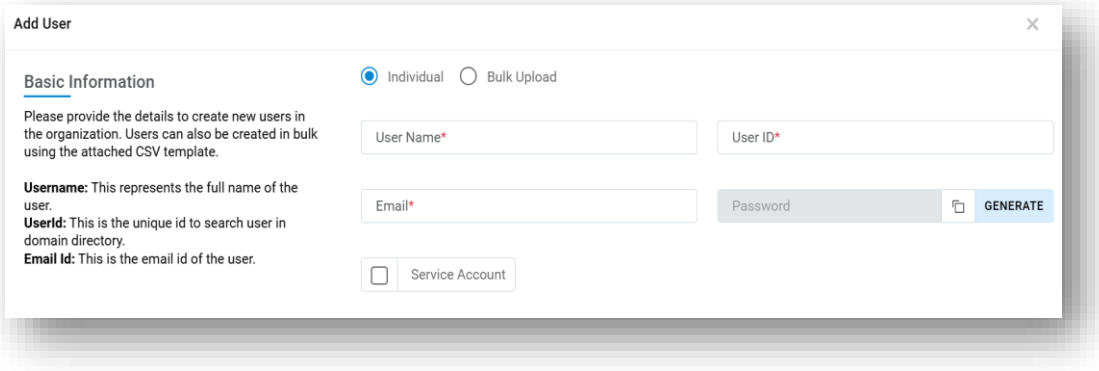


Figure 14 - Manage User

- **Individual:** To add users in an organization
- **Bulk Upload**: To add bulk users in an organization
- **View Users**: To view the list of users in an organization

1.5.1.2.1 Add User

To add an end user in an organization, provider user needs to follow the below steps:

1. Click on the **Manage User** screen and then click **+User**.

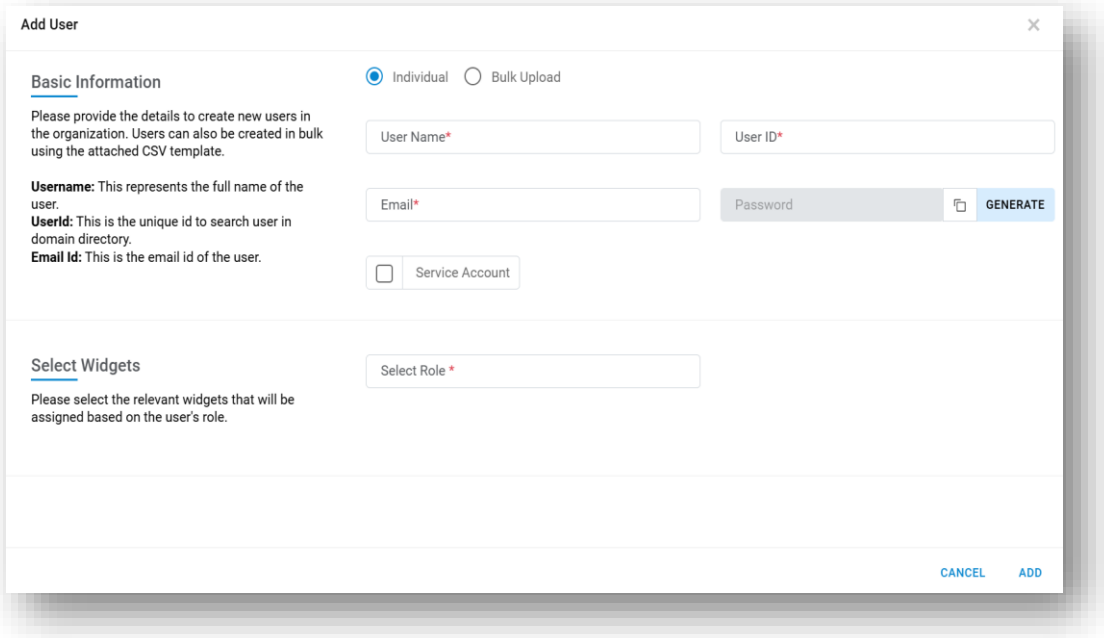


Figure 15 - Add User

2. Refer to the below table to understand the fields mentioned in the above figure:

Table 5 – Add User

Fields	Description
API User	This type of user used for API integration with HCL BigFix CLM
Organizational User	User for request and manage resources
Password	HCL BigFix CLM generated password

Generate Password	The option that helps to generate a password in HCL BigFix CLM
Token Expiration Time (in seconds)	This section is applicable for service account user it is an integer value to define the access token timeout for this user, to override the default token expiration value configured by admin user.
Role	This section is applicable for organization users. Provider-user needs to provide a role to a user while adding it in HCL BigFix CLM
Select Widget	This section is applicable for organization users. HCL BigFix CLM dashboard widgets are listed. System defined widgets appear

3. Select **Organization** to add user.
4. Select **User Type**. HCL BigFix CLM supports two types of users:

- **API User**: has access to HCL BigFix CLM apis and used for integration with HCL BigFix CLM.
- **Organizational User**: has access to HCL BigFix CLM web portal and used to request services.

5. Enter the **Username** and then enter the **User ID**.
6. Enter Email ID.
7. Click **Generate Password** to generate new password.
8. Select **Role**.
9. Once the role is selected, the widgets appear in the widget box.
10. Select **Widget**. Provider selects the dashboard widgets according to the role to be assigned to an end user.
11. Click **Add**.

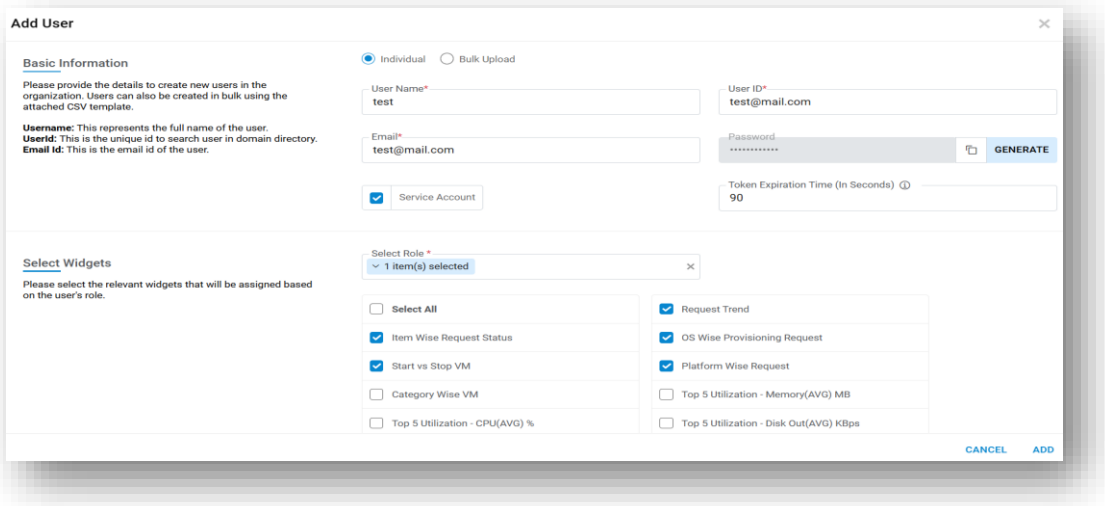


Figure 16 - Add User (Cont.)

Change the password frequently, at least once a month, to keep hackers out of the system. When the application is not being used then log off for security purposes. All fields marked with asterisk (*) are mandatory.

12. A success message box appears.

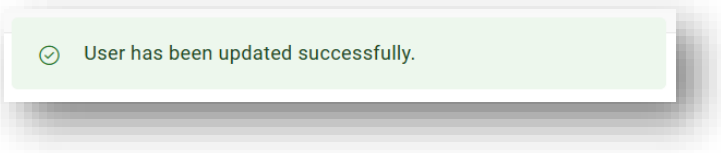


Figure 17 – Success Message

1.5.1.2.2 View Users

This section lists all the users that have been created by provider users in an organization.

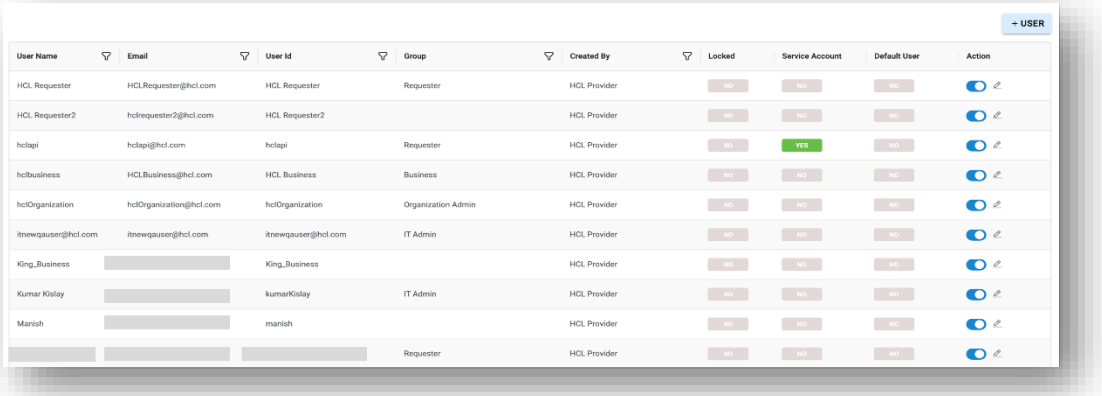


Figure 18 – View Users

Refer to the below table to understand the fields mentioned in the above figure:

Table 6 - View Users

Fields	Description
Organization	Select the name of the organization (business units/ divisions in organizations)
Username	Username of the user that has been added
Email	Email of the user that has been added
User ID	User ID of the user that has been added
Role/Group	Role of the user that has been provided while adding the user
Is User Locked	Displays whether the user has been locked by HCL BigFix CLM, post multiple failed login attempts
Is API User	**Yes**: user is API user **No**: user is organization user
Action	Provider user to take actions like edit and delete against the listed users

It also comprises of the following actions:

- **Edit** ( ): To modify the details of existing users.

1.5.1.2.3 Edit User

To edit/ modify user details, provider user needs to follow the following steps:

1. Go to **User** screen.

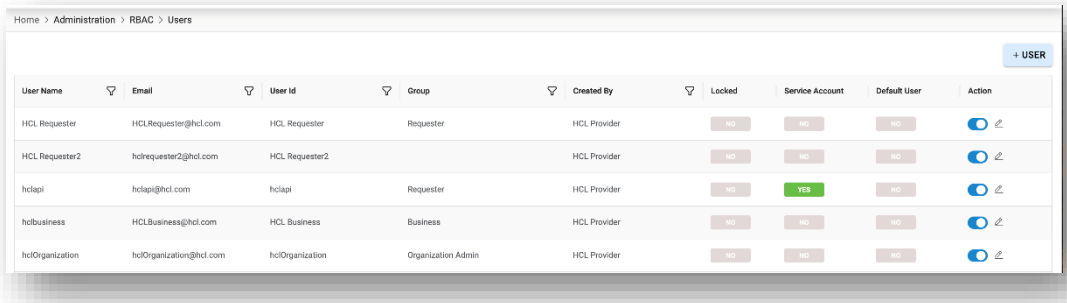


Figure 19 - Edit User

2. Select an **Organization** and then click **Go**. Available users appear in a tabular view.
3. Click **Edit** ( ) in Action.
4. Modify the details as desired and click **Update**.

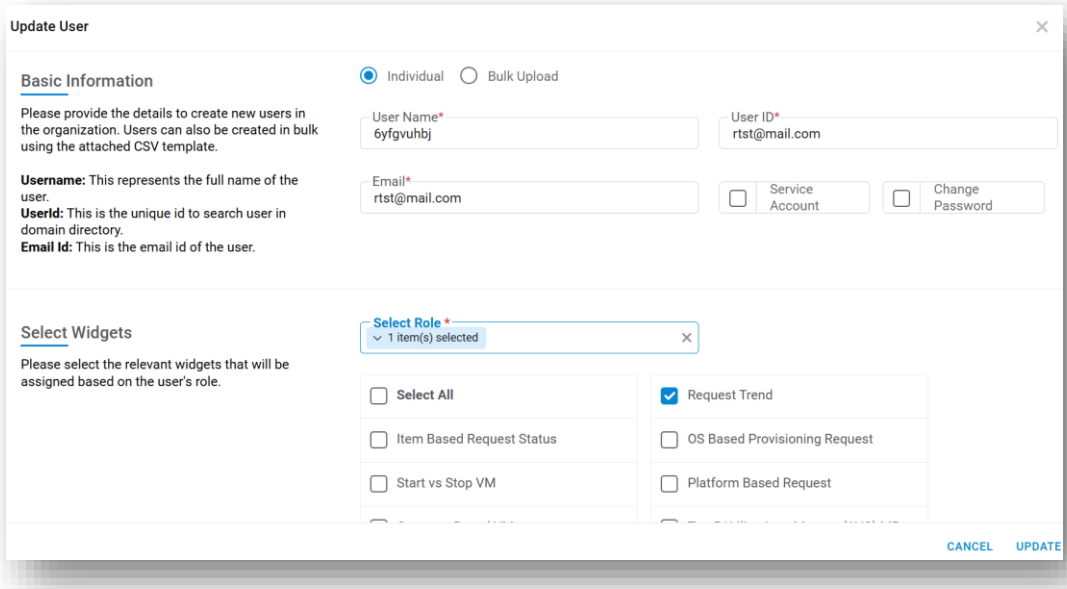


Figure 20 - Edit User (Cont.)

5. A success message box appears.

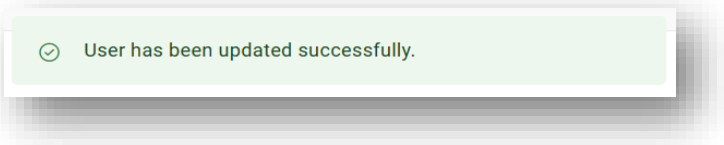


Figure 21 - User Updated Successfully

1.5.1.2.4 Import Users

To Import end users in an organization, provider users need to follow the below steps:

1. Select the Organization from the top nav bar, and click on Edit in Action.
2. Click **Bulk Upload** and **Choose File** to select the csv file that has the user details.

3. Click on Import Button.

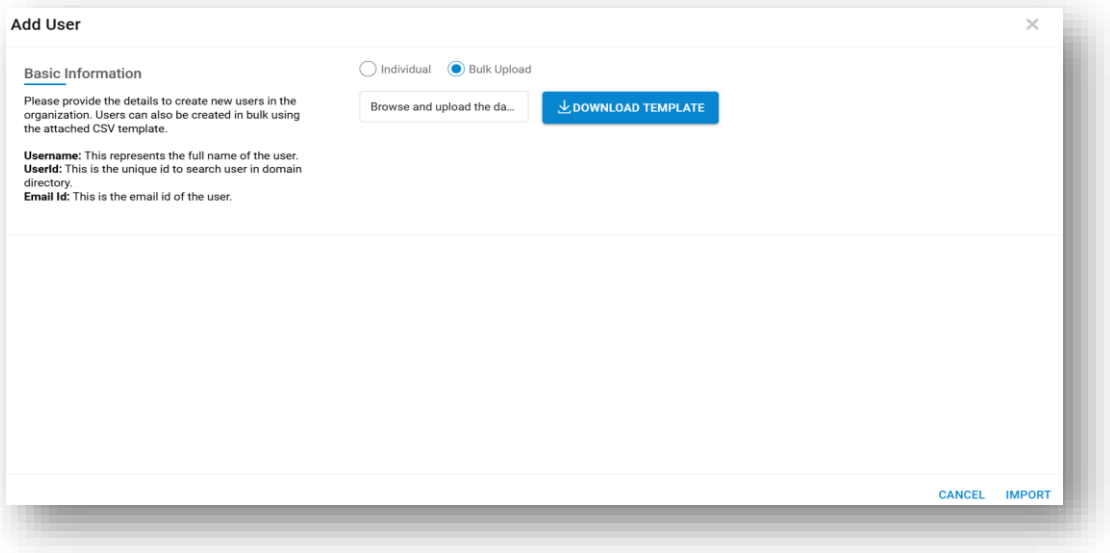


Figure 22 - Import User

4. A success message box appears.

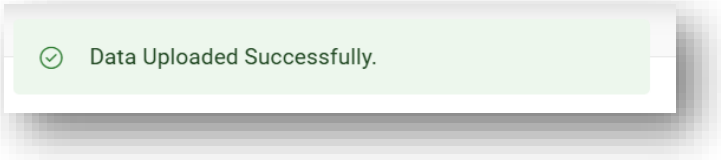


Figure 23 - Upload User Confirmation

To download the csv template for users, click on **Download Template** button.

1.5.1.3 Groups

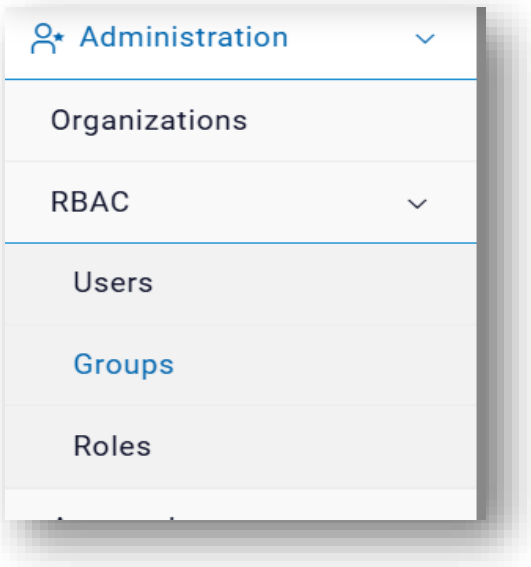


Figure 24 – Groups

To create a system group in an organization and map users to it, provider user needs to follow the below steps:

1. On the main menu bar, under Administration, click **RBAC** and then click **Groups**.
2. The **Groups** screen appears. It lists down the available groups in a tabular view that helps to see available groups and map users/assign group user and assign actions to them.

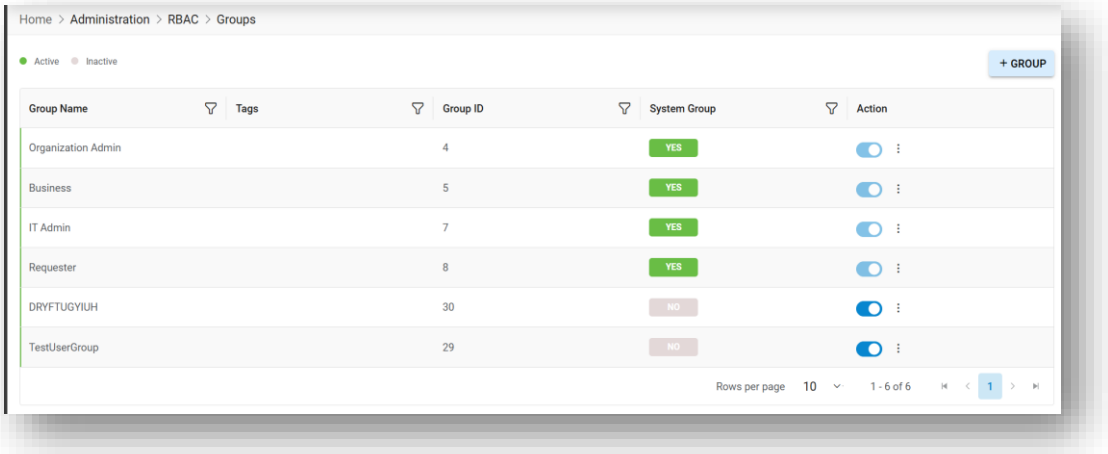


Figure 25 - Group Management

1.5.1.3.1 View Group

To view a group, provider user needs to follow the below steps:

1. On the **Groups** screen, click **View Group** against the selected group.

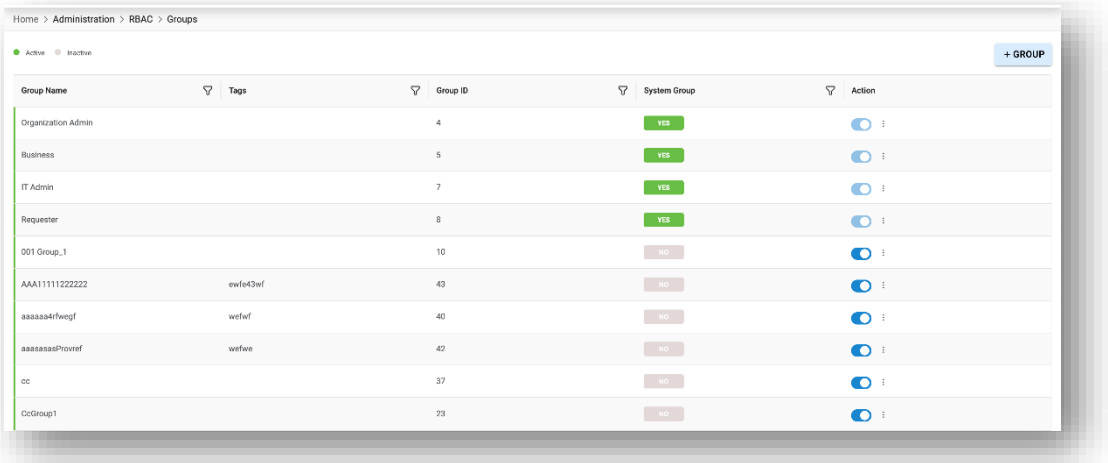


Figure 26 - View Group

2. Below actions are available on the screen.

- **Change Status** ( ) : to change status of an existing group
- **Othe Options (** **)**: to Edit, Delete, Add User, Mapped Role, RBAC/AD Group

1.5.1.3.2 RBAC/AD Group

To add RBAC /AD group to the group, perform the below steps:

1. Click on Menu icon in Actions then select **RBAC/AD Group** to **Map Group to** column on the on the grid.
3. A pop-up window prompts to map AD group to the selected RBAC group.

4. Select **Organization** to filter group specific to organization.
5. Enter Group Name.
6. Click **Search** and available AD groups appear in the available groups box.
7. Select **AD Groups** and then click on › to move selected AD groups to selected RBAC groups box or vice-versa, to unselect the ad groups from a RBAC group.

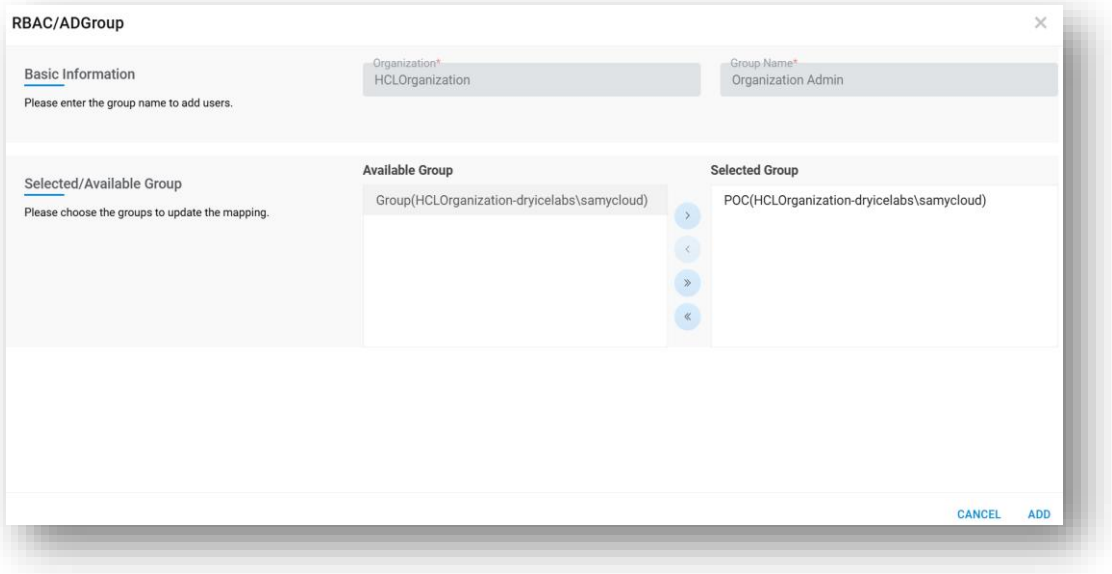


Figure 27 - Group User Mapping (Cont.)

8. Click **Add**.
9. A success message box appears.

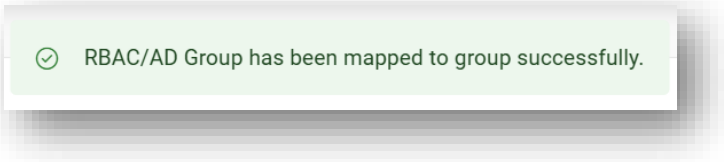


Figure 28 - Confirmation Message

1.5.1.3.3 Group User Mapping

To add user to the existing group.

1. Click on Menu icon in Actions then select **Add User** to **Map Group To** column on the grid.
2. A pop-up window prompts to map users to the selected RBAC group.
3. Select **Organization** to filter user specific to organization.
4. Enter Email/ Group Name
5. Click **Search** and available users will appear in the available user box.
6. Select **Users** and then click on › to move selected users to selected user box or vice-versa, to unselect the user from a RBAC group.

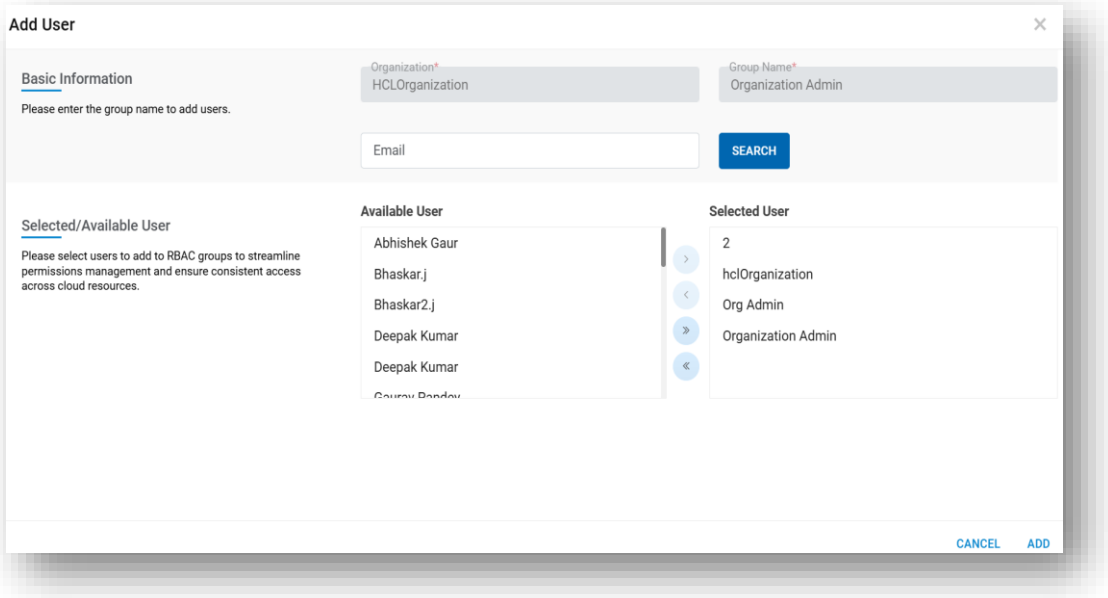


Figure 29 - Group User Mapping

1.5.1.3.4 Group Role Mapping

To map role to the existing group:

1. Click on Menu icon in Actions then select Mapped Role to **Map Group To** column on the grid.
2. A pop-up window prompts map role to the selected RBAC group.
3. Select **Available Roles** and then click on to move selected roles to selected roles box or vice-versa, to unselect the roles from a RBAC group.

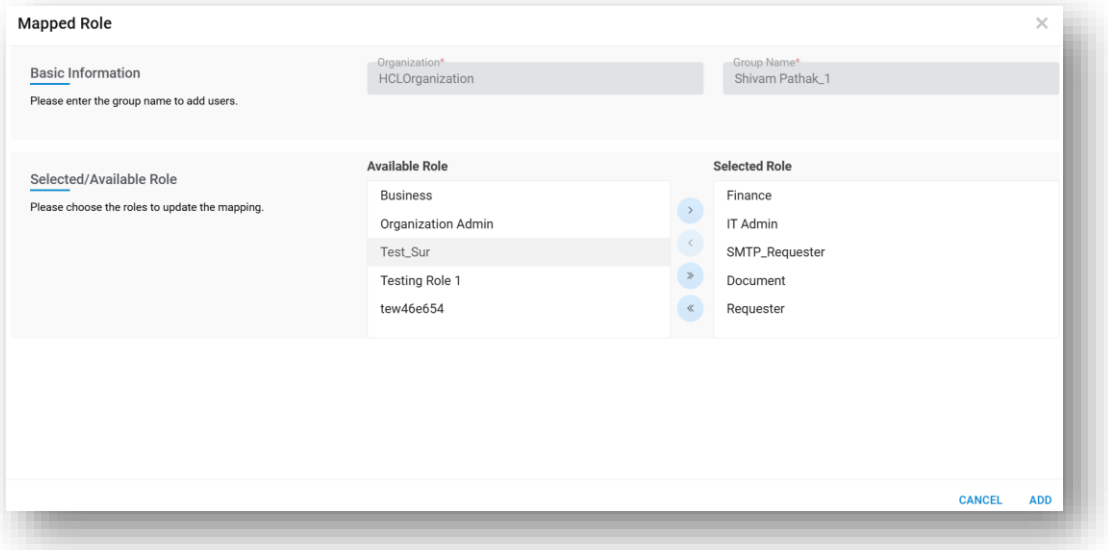


Figure 30 - Group Role Mapping

4. Click **Add**.
5. A success message box appears.

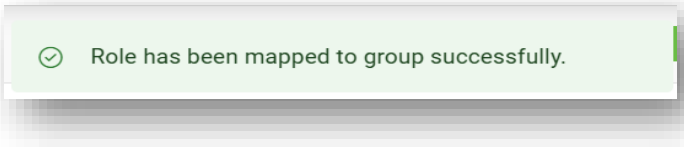


Figure 31 - Success Message

1.5.1.3.5 Delete Group

To delete existing RBAC group,

1. Click on Menu icon in Actions then Select **Delete**.
2. A confirmation message appears on the screen.
3. Click **OK** to proceed.

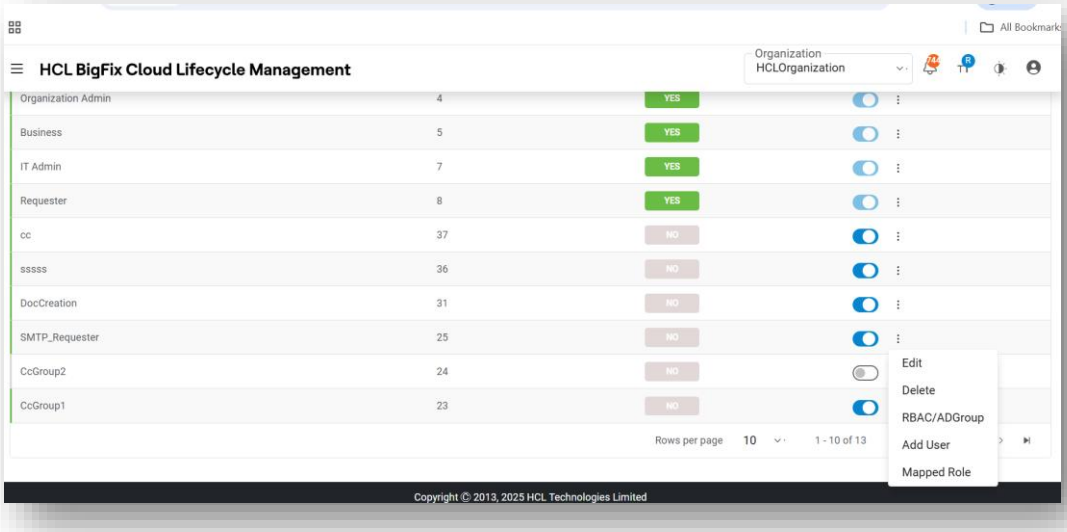


Figure 32 – Delete

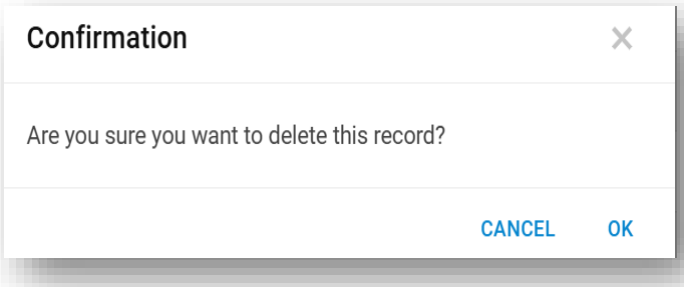


Figure 33 - Confirmation Message

1.5.1.3.6 Edit Group

To edit existing RBAC group.

1. Click on Menu icon in Actions then select **Edit**.
2. The below popup appears.
3. Enter **Group Name** and **Tags** to update and click **Update**.

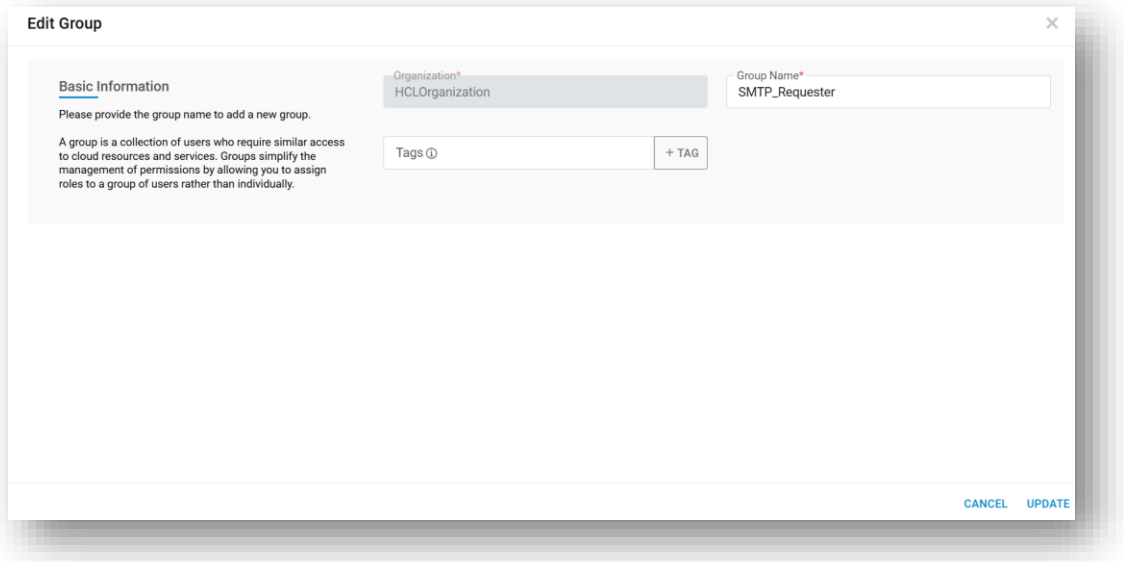


Figure 34 - Edit Group

4. A success message appears on the screen.

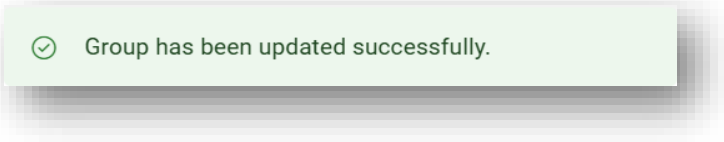


Figure 35 - Success Message

1.5.1.3.7 Change Status

To change status of existing RBAC group.

1. Click Change Status Toggle from the Grid.
2. A confirmation message appears on the screen.

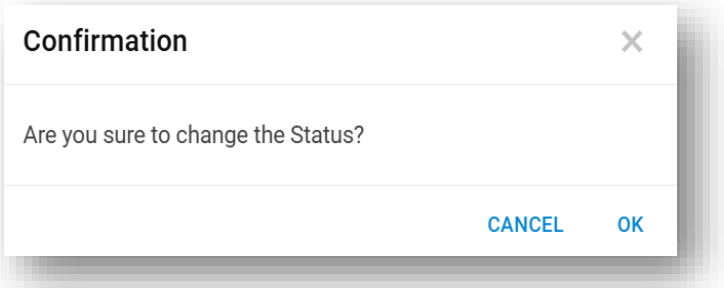


Figure 36 - Confirmation Message

3. Click **OK** to confirm.

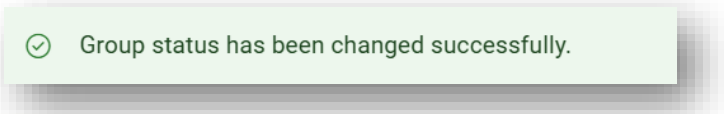


Figure 37 - Success Message

1.5.1.3.8 Add Group

To add tags to existing RBAC group,

1. To create new group on the **Group** screen, click **+Group** button.
2. The below screen appears.

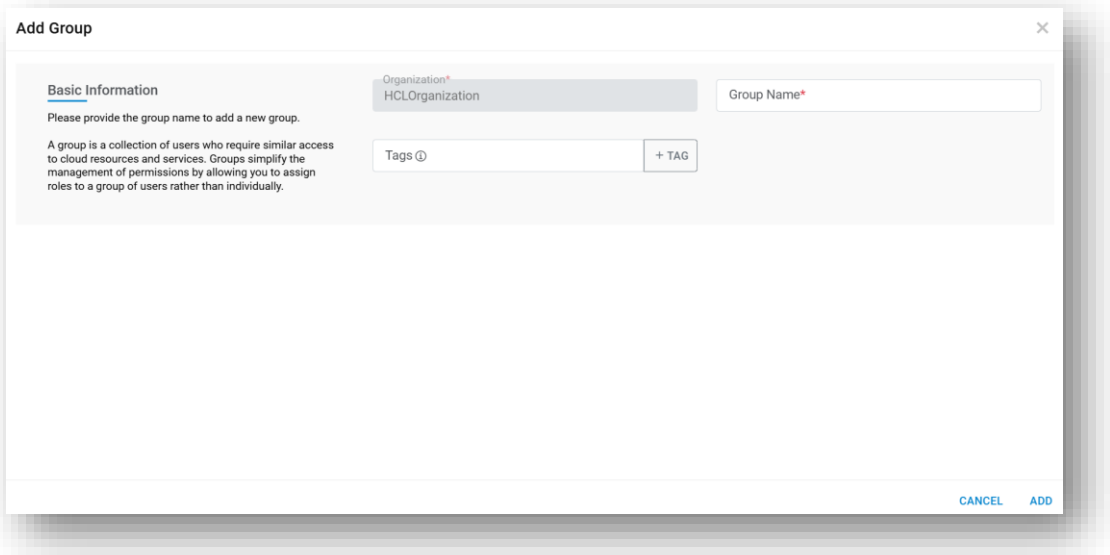


Figure 38 – Add Group

3. Enter Name and Organizations and Tags.
4. Click **Add**.

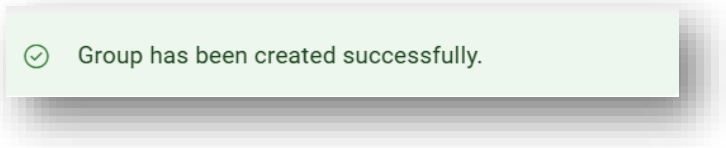


Figure 39 - Success Message

1.5.1.4 Ownership

This section explains how provider users manage ownership in HCL BigFix CLM.

1. On the main menu bar under **Configuration,** click on **Objects** and then click **Ownership**.

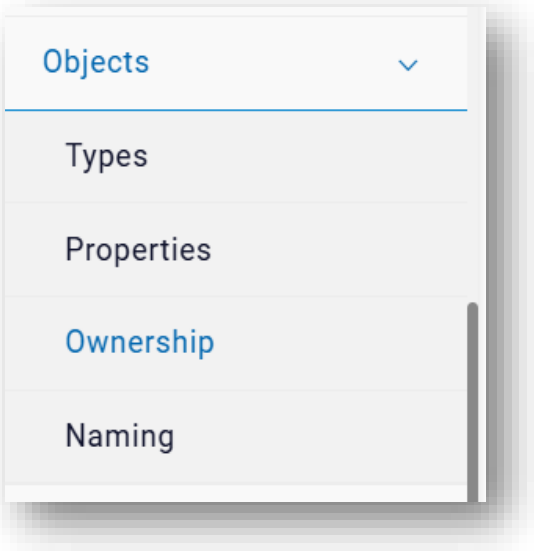


Figure 40 – Ownership

2. The below screen appears:

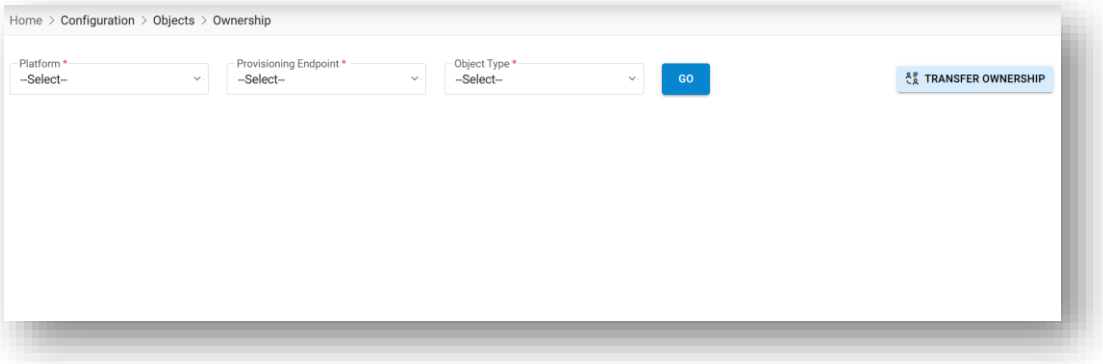


Figure 41 - Transfer Object Ownership

3. Select Organization, Platform, and Provisioning Endpoint.
4. Select Object Type.
5. Click **Go**.
6. Below screen will appear.

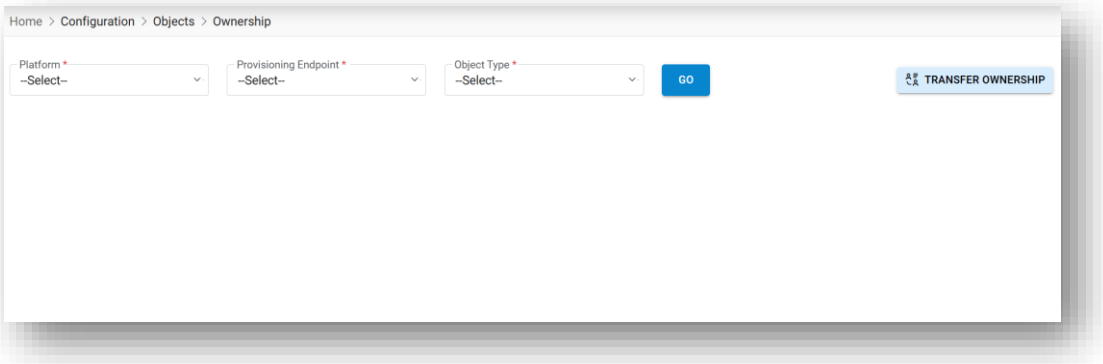


Figure 42 - List of Objects

7. Provider users can either transfer the multiple objects by clicking on checkbox or by individual object.

8. To change multiple object ownership user can click on "**Transfer Ownership**" and for single object user can click on "**Transfer Ownership**" action.
9. The following pop-up appears.

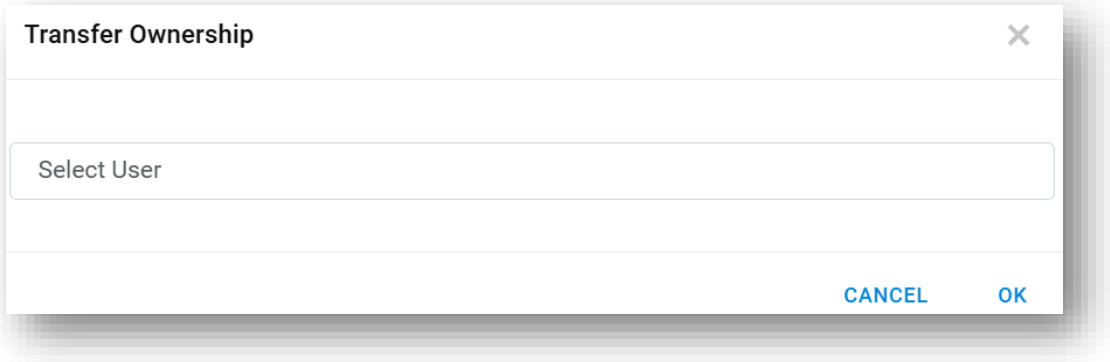


Figure 43 - Select Owner to Transfer Object

10. Enter **Requester Name** to whom object will be transferred (auto-populated list).
11. Click **Ok**.
12. The success message appears.

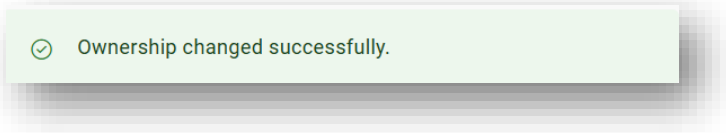


Figure 44 - Success Message

1.5.2 Pricing

This section explains how provider user manages cost models in HCL BigFix CLM.

1. On the main menu bar, click **Cost Model**. Below screen appears.

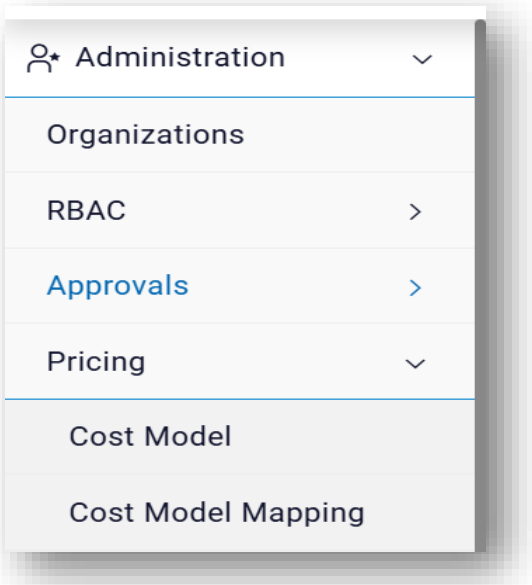


Figure 45 - User Cost Model

1.5.2.1 Manage Service Plan

Using this interface, provider user creates service plans like platinum, gold, silver, and bronze etc. And while creating the plan, it defines services that are free of cost.

While requesting service catalog, end users need to specify the service plan that needs to be continued.

It has the following options:

- View Service Plan
- Create Service Plan
- Edit Service Plan

1.5.2.1.1 Create Service Plan

To create a new service plan, provider user needs to follow the below steps:

1. Click on **Service Plan** tab.
2. In Grid, the Action contain + icon to create new service plan.
3. Enter Service Plan Name and Description.
4. Click **Add**.

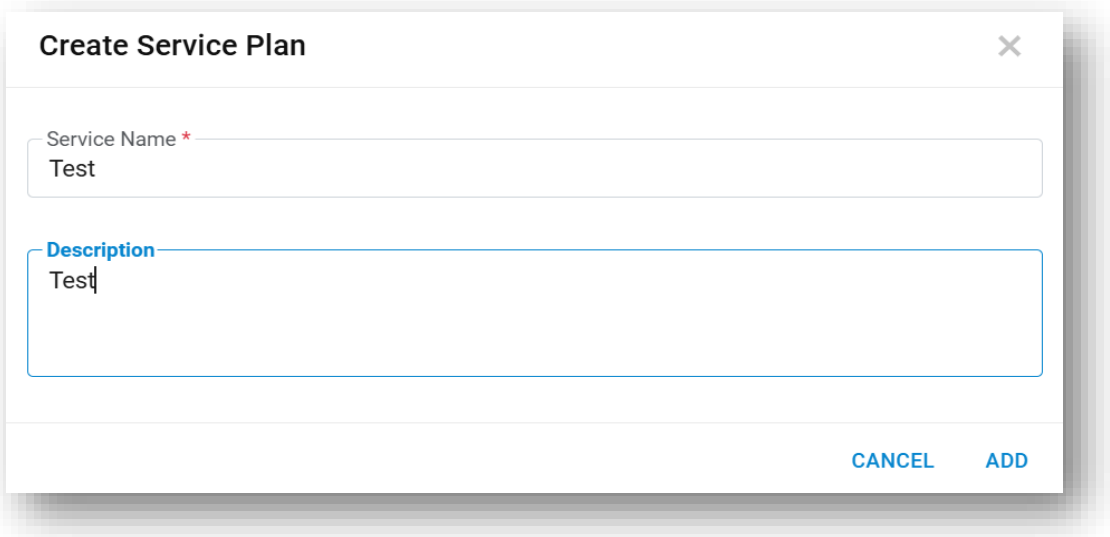


Figure 46 - Create Service Plan

5. A success message box appears.

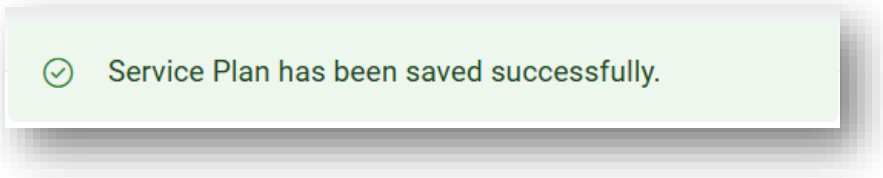


Figure 47 - Confirmation Message

1.5.2.1.2 View Service Plan

This section lists all the service plans that have been created by a provider user.

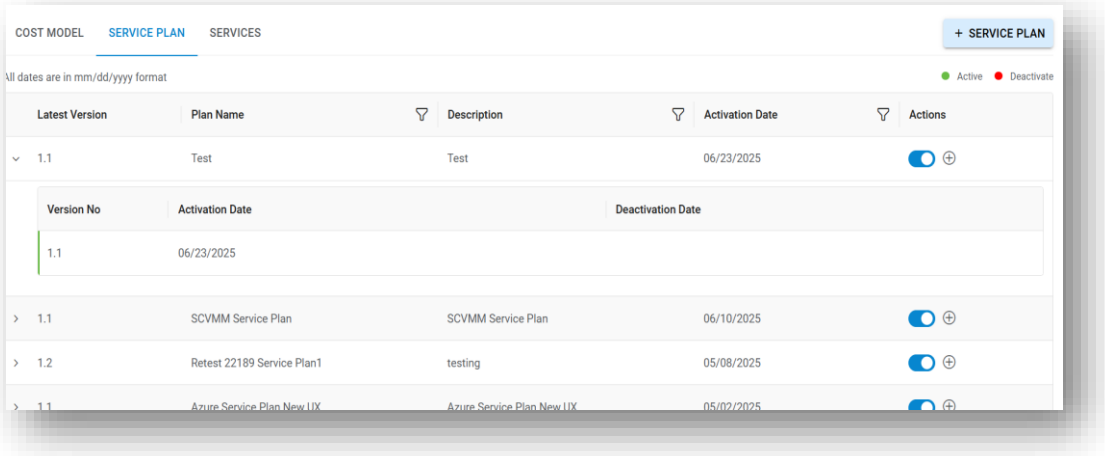


Figure 48 - Service Plan

It also comprises of the following actions:

- **Edit** ( ): To modify/update the details of existing service plans
- **Delete** ( ): To delete the details of existing service plans

1.5.2.1.3 Edit Service Plan

To create a new version of a service plan, the provider needs to follow the below steps:

1. Click on **Edit** ( ).
2. Click on **Create New Version** after changes.

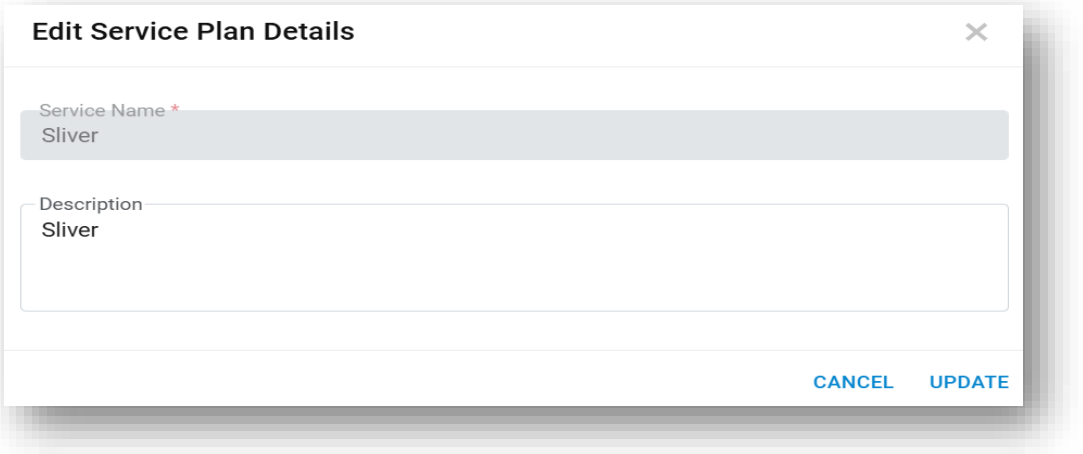


Figure 49 - Edit Service Plan (Cont.)

3. A success message box appears.

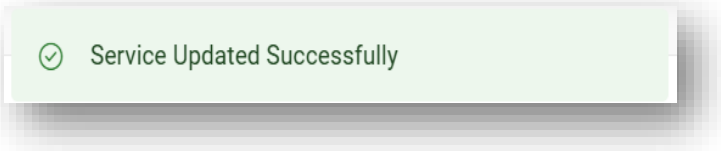


Figure 50 - Confirmation Message

1.5.2.1.4 Delete Service Plan

To delete the service plan, provider needs to follow the below steps:

1. Click on **Delete** ( ).
2. A confirmation box appears:

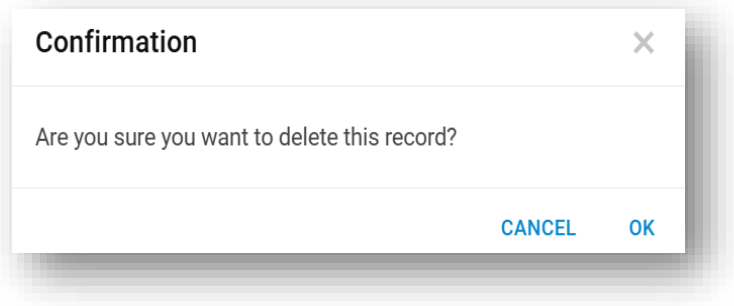


Figure 51 – Confirmation Query

3. Click **OK** to continue.
4. A success message box appears.

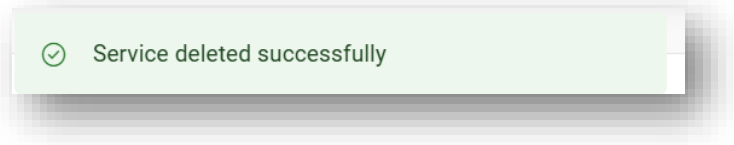


Figure 52 - Confirmation Message

1.5.2.1.5 Services

The **Services** tab lists all the configured services. Provider users can edit the service description or can delete the service from this screen.

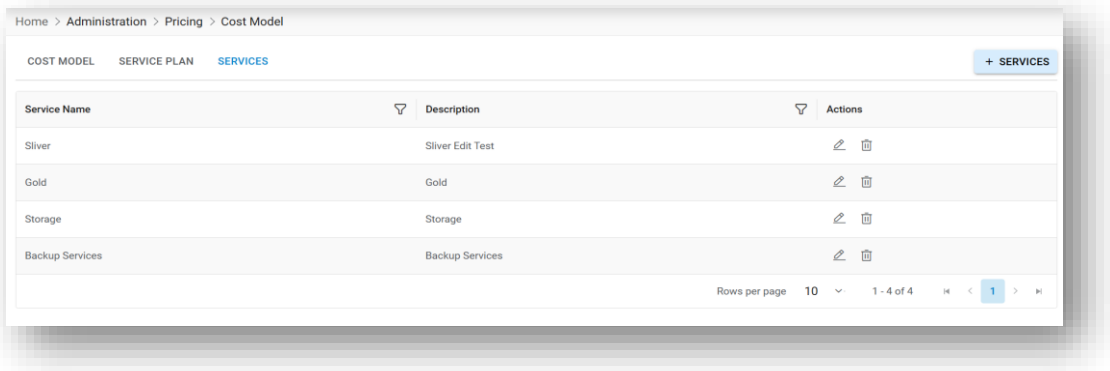


Figure 53 - Services

Manage services have edit and delete actions. These actions have similar workflow as described above in-service plan actions.

1.5.2.2 Cost Model

This section explains the steps to manage the cost model of an organization which is mapped to a service plan, data center, location, and organization. Cost model is categorized as follows:

- **Allocation Based Cost**: in this type of model, the instance is reserved for the user, and the whole cost for that infra resource is being charged on the first month's bill.
- **Time Based Cost**: under such model, user is charged for the time that the infra resource is on, but storage cost is charged for the whole period i.e., 24 hours.

Along with the above cost models, provider users can also configure additional cost through in-built options like,

- **One-Time Cost**: it is the amount which is paid on a one-time basis (like amc) post availing of services (associated with either allocation or time-based cost model). This option is not mandatory and depends on organizational policies.
- **Recurring Cost**: the cost, which is occurring periodically over a time like daily, weekly, monthly, half-yearly etc. Till the services are availed (associated with either allocation or time-based cost model). This option is not mandatory and depends on organizational policies.

On the main menu bar, click **User Cost Model**, and then click **Manage Cost Model**. The section has the following options:

- Add Cost Model
- View Cost Model

1.5.2.2.1 Add Cost Model

To add a cost model for an organization, provider user needs to follow the below steps:

1. On the Cost Model screen, click +**Cost Model**.

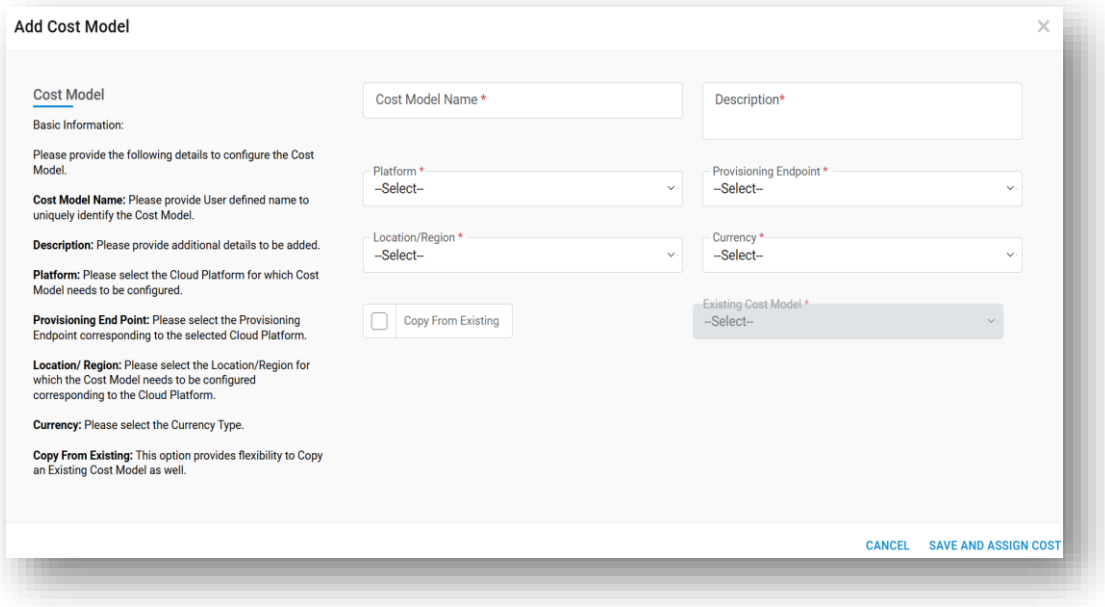


Figure 54 - Add Cost Model

2. Refer to the below table to understand the fields mentioned in the above figure:

Table 7 - Add Cost Model

Fields	Description
Cost Model Name	Field to add the name of a cost model

Description	Describe the cost model and how it is used
Platform	Select Platform from the drop down
Provisioning Endpoint	The cloud endpoint that has been created in HCL BigFix CLM
Activation Date	The day that will activate the cost model/ billing will start against an organization
Existing Cost Model	Lists of existing cost model that were added before

3. Enter Cost Model Name and then enter the Cost Model Description.
4. Select the Environment, Platform, and Location.
5. Select **Currency** and then enter the **Plan Activation Date**.
6. Select the check box **Copy from Existing** if provider user wants to copy the cost plan from the existing cost plan.
7. Select Cost Model Plan from Existing Cost Model drop-down.
8. Click Save and Assign Cost.

All fields marked with asterisk (*) are mandatory.

9. A success message box appears.

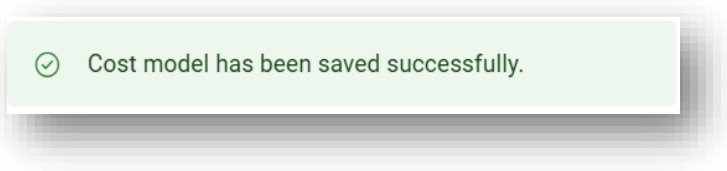


Figure 55 - Add Cost Model (Cont.)

1.5.2.2.2 Assign Cost

Cost assignation in each category is done as steps below:

1. After Saving the cost the popup appears to Assign the Cost Against the cost item you have created.

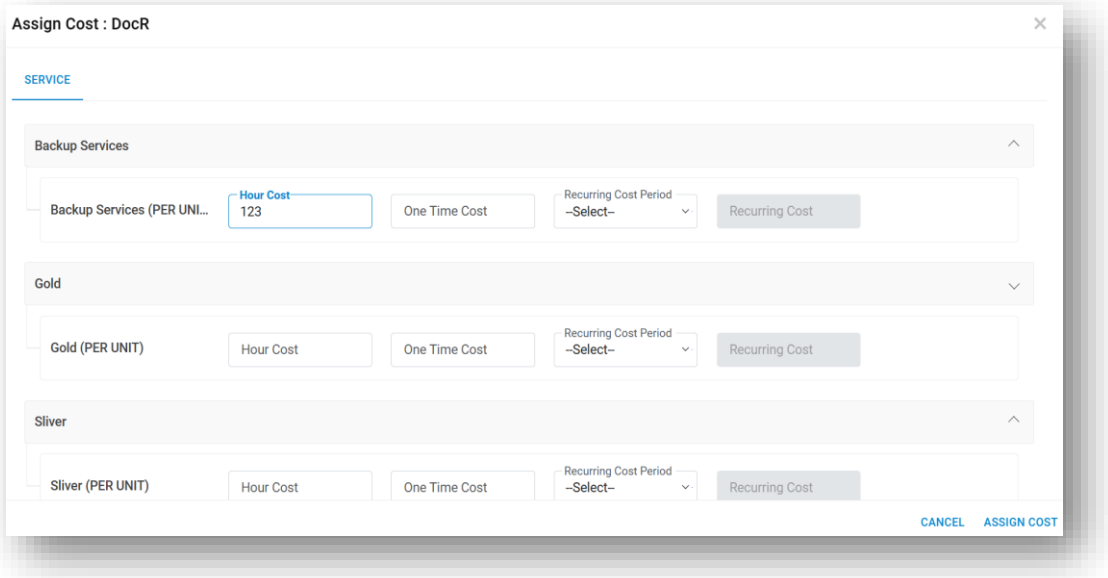


Figure 56 - Assign Cost to The Cost Model

2. Refer to the below table to understand the fields mentioned in the above figure:

Table 8 - Assign Cost to The Cost Model

Fields	Description
Cost Item Category	Signifies resource Category. This can be Catalog, Disk, and Network etc.

In case of allocation-based cost assignation,

- Click the Grid action menu then select **Assign Cost** and a pop-up appears.
- Fill the required details in popup and click **Save**.

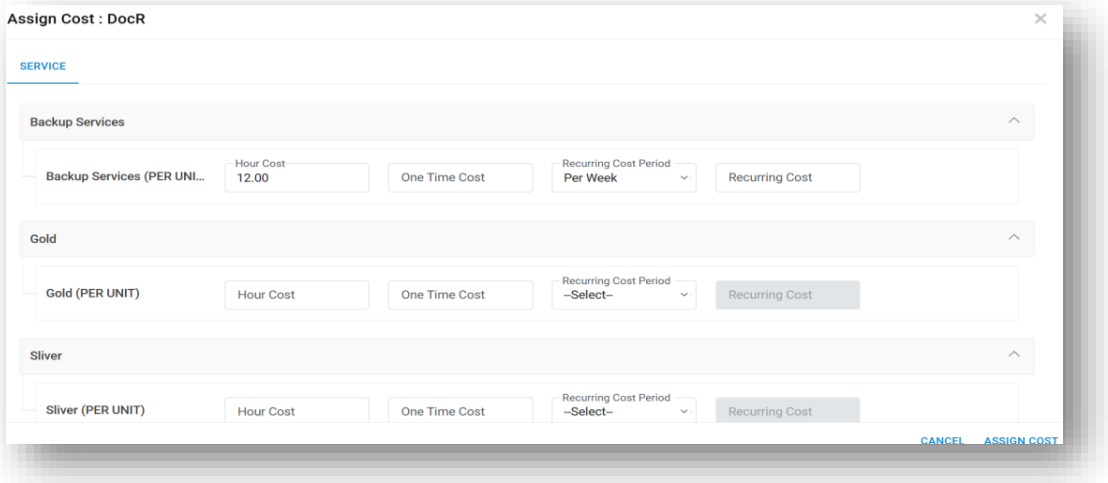


Figure 57 - Assign Cost to The Cost Model (Cont.)

3. A success message box appears.

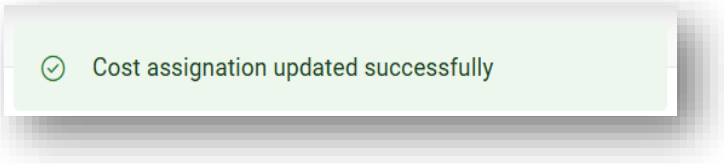


Figure 58 - Assign Cost to The Cost Model (Cont.)

In case of time-based cost assignation,

- Click the Grid action menu then select **Assign Cost** and a pop-up appears.
- Fill the required details in popup and click **Save**.

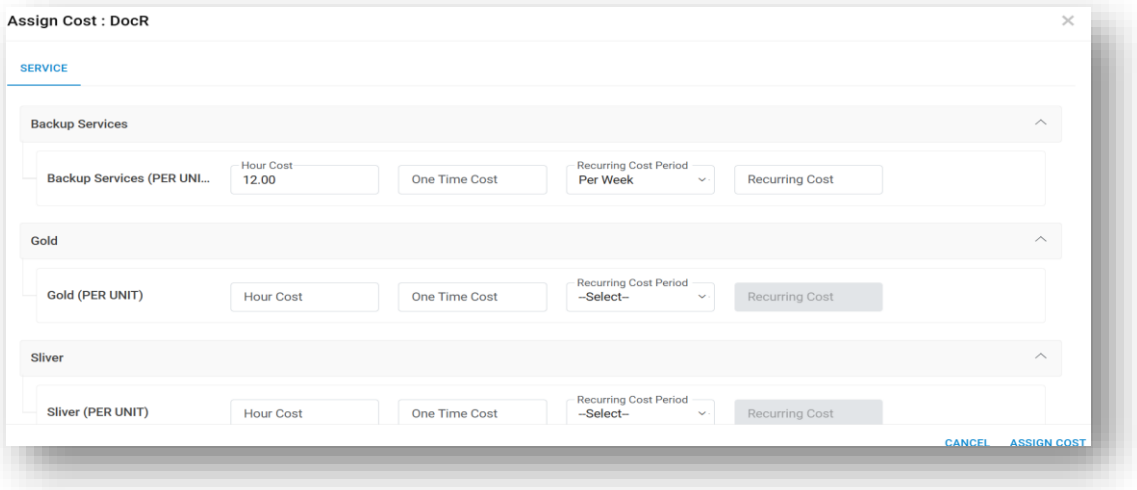


Figure 59 - Assign Cost to The Cost Model (Cont.)

4. A success message box appears.

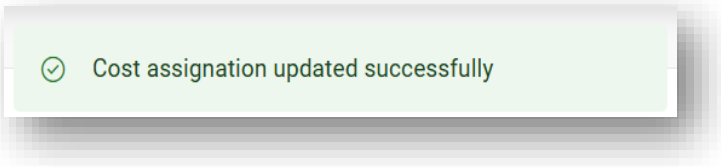


Figure 60 - Assign Cost to The Cost Model (Cont.)

1.5.2.2.3 View Cost Model

This section lists out all the cost models that have been created by provider users. It also comprises of the following actions:

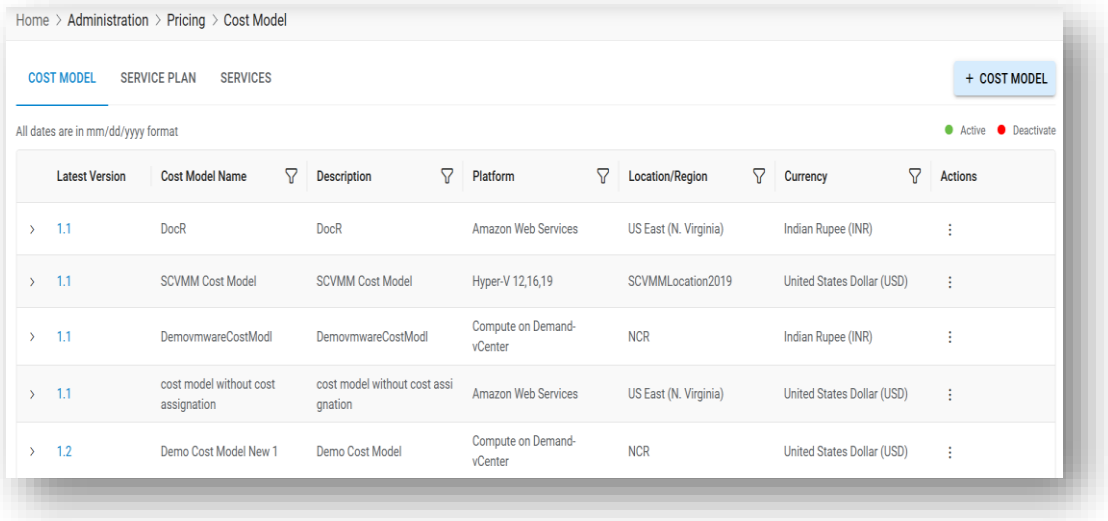


Figure 61 - View Cost Model

The Action menu contains:

- **Copy Costmodel**: To Copy existing cost models into another platform and Region/Location
- **Create New Version**: To create new version of existing cost models
- **Assign Cost**: To assign cost models
- **Delete**: To delete existing cost model.

1.5.2.2.4 Copy Cost Model

1. Provider admin user can copy existing cost model for another provisioning endpoint and location within the same organization.
2. On the Cost Model screen, click on Action's Copy Cost Model.
3. Click **Copy Cost Model** against the cost model.

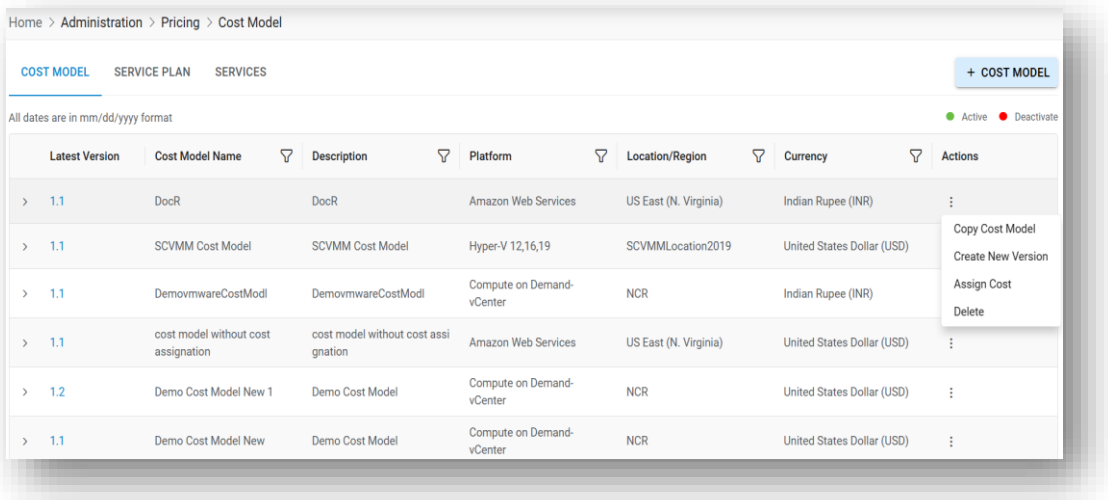


Figure 62 - Copy Cost Model

While copy cost model provider admin user can create new cost model with following information

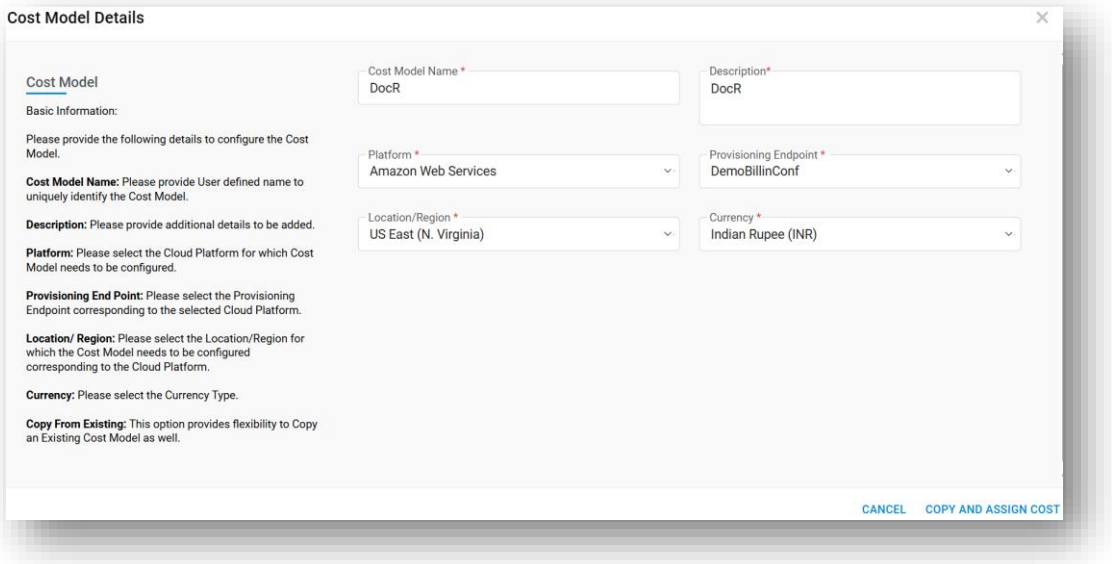


Figure 63 - Copy Cost Model (Cont.)

Table 9 – List of Fields

Fields	Description
Cost Model Name	Field to add the name of a cost model
Description	Describe the cost model and how it is used
Platform	User can copy cost model to any platform
Provisioning Endpoint	User can select provisioning endpoint of selected platform
Location/Region	User can select Location/region of selected provisioning endpoint
Currency	User Can select currency supports by HCL BigFix CLM

4. A confirmation message appears as below.

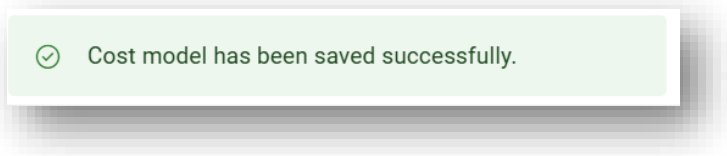


Figure 64 – Confirmation Message

5. To assign cost of existing cost models, click Assign Cost.

Cost of applicable catalog, compute, service and storage will be copied for new cost model.

In the case of service, compute and storage exist defined cost will populate to save as new cost model and in case of catalog if catalog name will same for current endpoint then cost will prepopulate to save as new cost model.

1.5.2.2.5 Create New Version

To create new version of cost models, provider user needs to follow the below steps:

1. On the Cost Model screen, in grid action menu, click Create New Version.

2. Modify the details as required and then click the **New Version and Assign Cost** button.

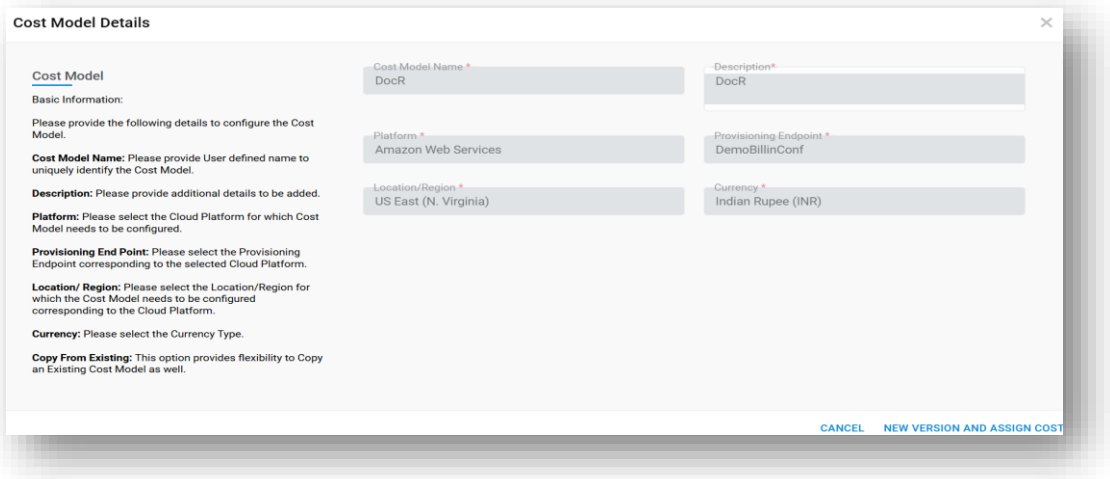


Figure 65 - Edit Cost Model (Cont.)

3. A confirmation message appears as below.

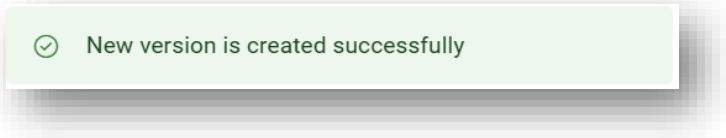


Figure 66 – Confirmation Message

1.5.2.2.6 Delete Cost Model

1. To delete Existing Cost Model, click on Action menu in grid the Select Delete.
2. A confirmation message appears.

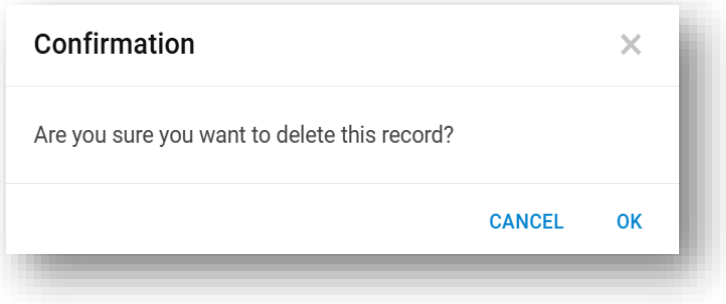


Figure 67 - Confirmation Cost Model

3. Click Ok and a success message appears.

1.5.2.3 Cost Model Mapping

To map a cost model with service plan, platform, environment, location, and organization, provider user needs to follow the below steps:

1. On the main menu bar under Administration, then Pricing , and then click **Cost Model Mapping**.
2. To map a cost model with an organization, follow the next steps below.

3. On the Map cost model screen, select Organization from top header then click +Map Cost Model.
4. Select the Organization, Platform, Provisioning Endpoint, Location/Region, Cost Model and Service Plan.
5. Click **Map** to map a cost model and click **Cancel** to discard changes.

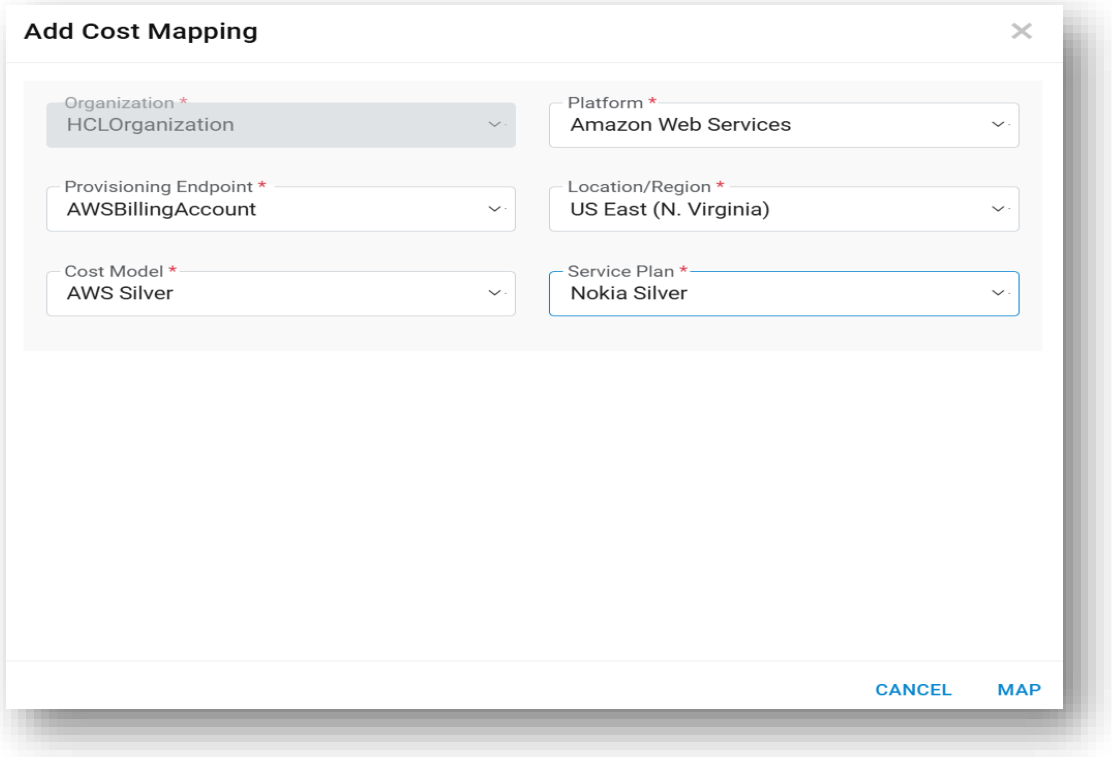


Figure 68 - Cost Model Mapping

6. A success message box appears.

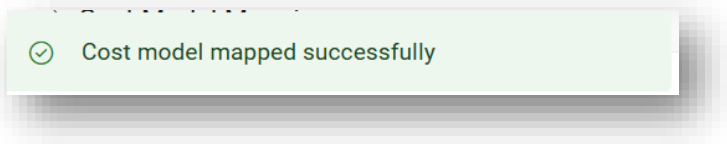


Figure 69 - Cost Model Mapping (Cont.)

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

1.5.2.3.1 View Cost Model Mapping

This section lists out all the cost models that have been created by provider users.

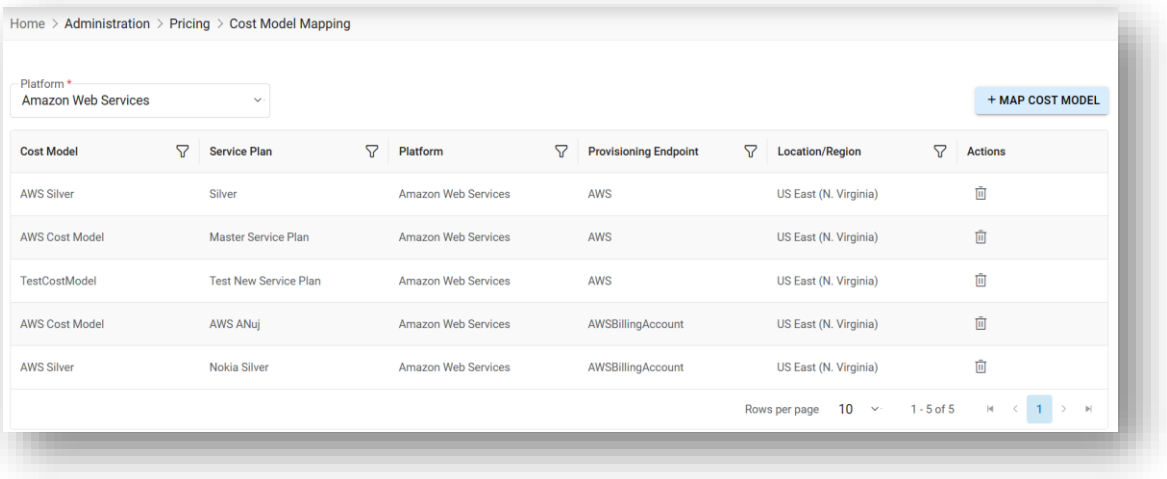


Figure 70 - View Cost Model Mapping

It also comprises of the following action:

- **Delete** (): To delete the existing cost model

1.5.2.3.2 Delete Cost Model Mapping

To delete the mapped cost model, provider user needs to follow the below steps:

1. On Cost Model Mapping tab, click Delete ().
2. When prompted to confirm, click **Ok**.

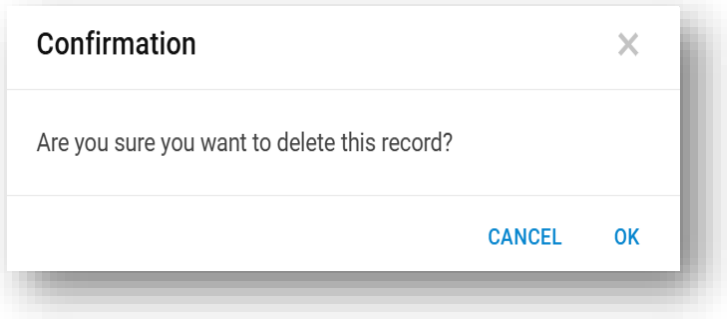


Figure 71 - Delete Cost Model Mapping (Cont.)

1.5.3 Catalog

This section details out the process of managing a catalog. It has the following sections:

- Create Catalog
- View

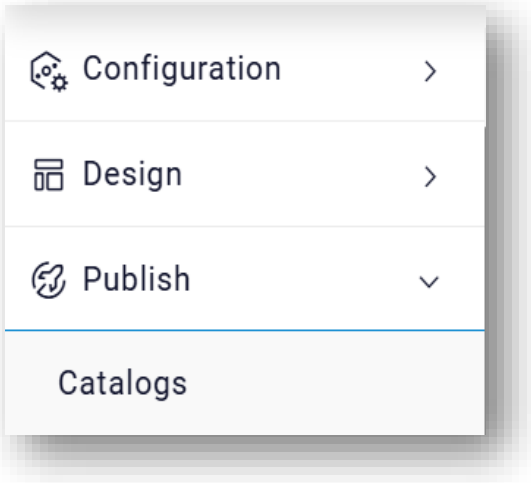


Figure 72 - Catalog

1.5.3.1.1 Create Catalog

To create a catalog, the provider user needs to follow the steps below:

1. On The Catalog screen, select the platform and click +Catalog.

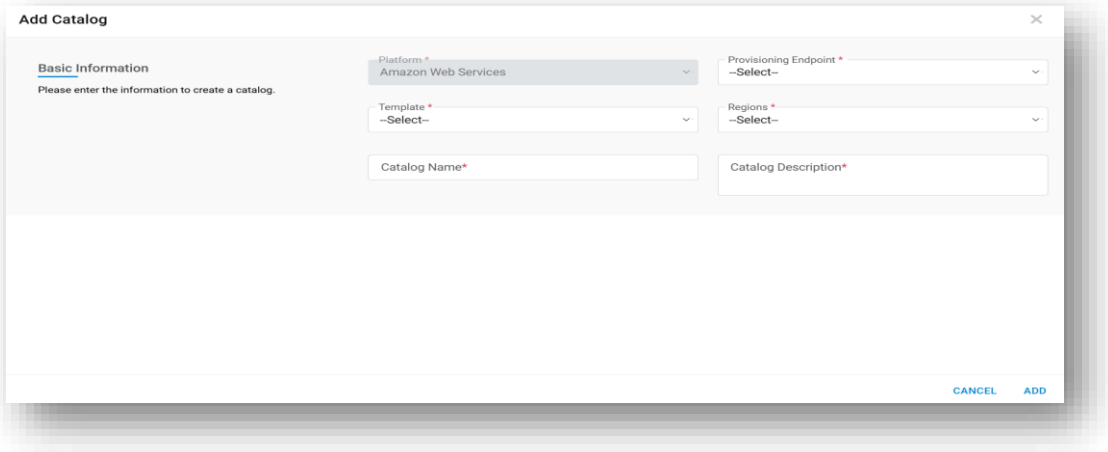


Figure 73 - Create Catalog

2. Select Platform and Provisioning Endpoint.
3. Select **Template**.
4. Select **Region**.
5. Enter Catalog Name and Catalog Description.
6. To add a catalog, click **Add**.

Click **Cancel** to discard changes and all the fields marked with asterisk (*) are mandatory.

7. A success message box appears:

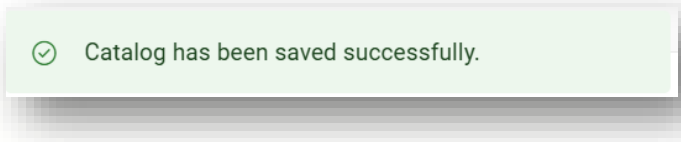


Figure 74 - Create Catalog Success Message

8. The new catalog is created and appears in the list of catalogs.

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

1.5.3.1.2 View Catalog

This section lists all the catalogs that have been created by provider user.

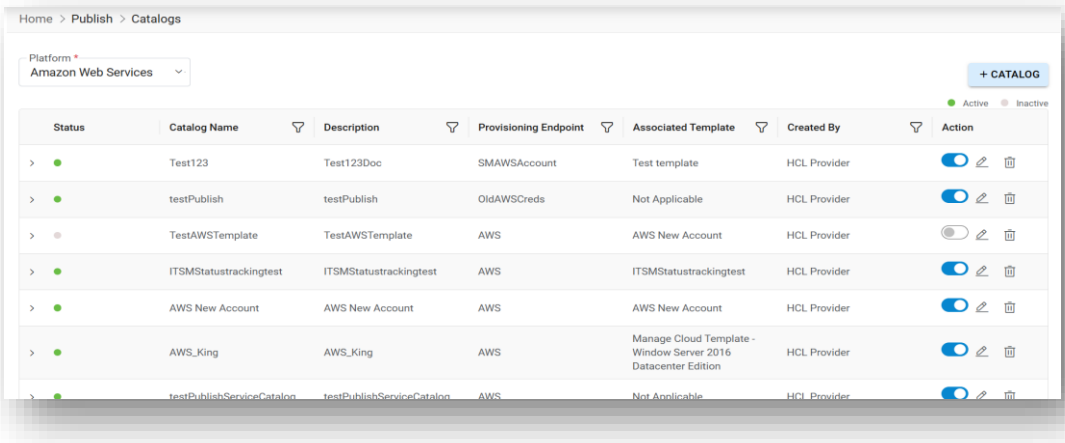


Figure 75 - View Catalog

It also comprises of the following actions:

- **Change Status** ( ): To change the status (**Active**/**Inactive**) of an existing catalog.
- **Edit** ( ): To modify the details of an existing catalog.
- **Delete** ( ): To delete a catalog.

1.5.3.1.3 Edit Catalog

To edit/ modify information of an existing catalog, provider user needs to follow the below steps:

1. On the Catalog screen.
2. Select Platform.

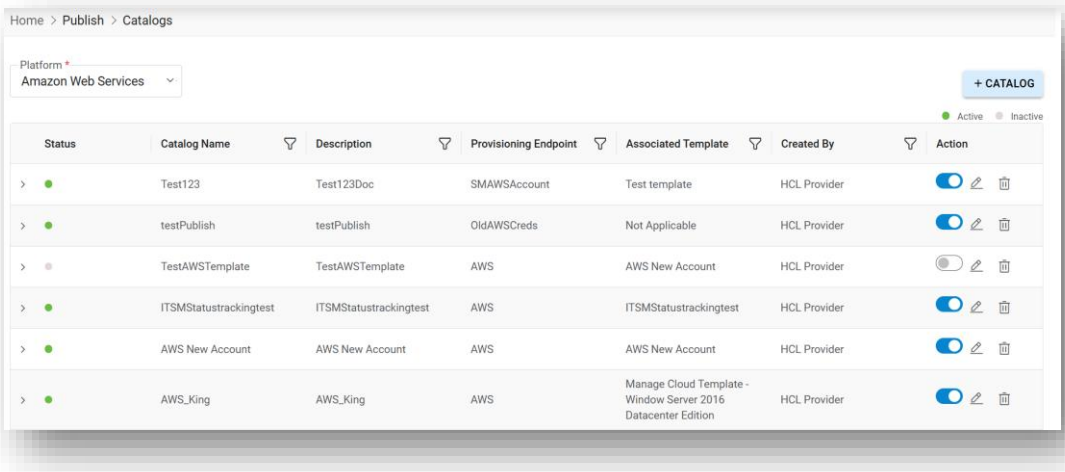


Figure 76 - Edit Catalog

3. Available catalogs list down in a tabular view.
4. Click **Edit** ( ).

5. Modify the details as desired and click **Update**.
6. Click **Cancel** to discard all changes.

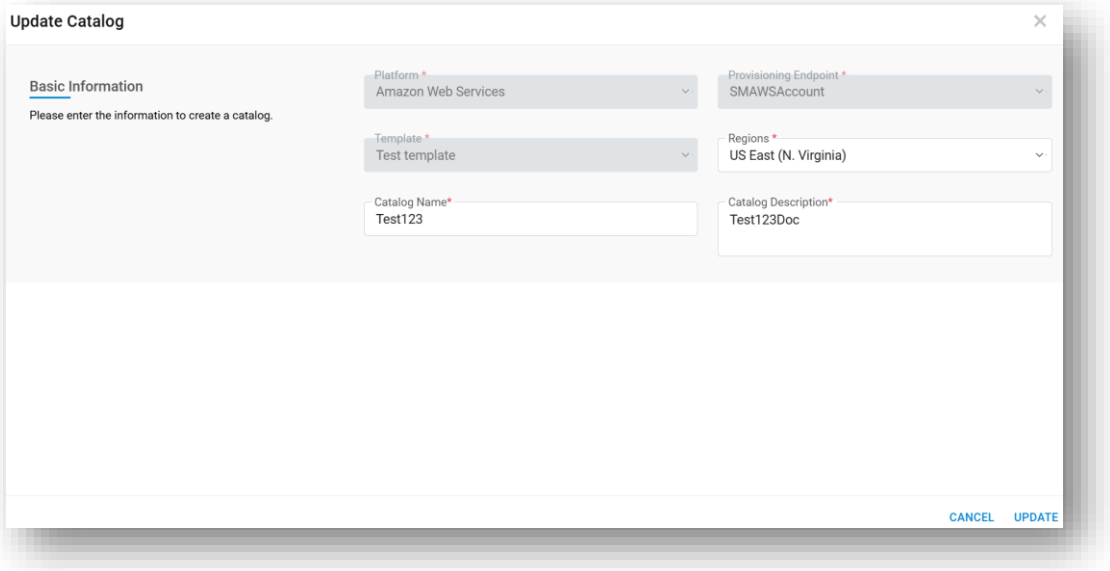


Figure 77 - Edit Catalog (Cont.)

7. A success message box appears:

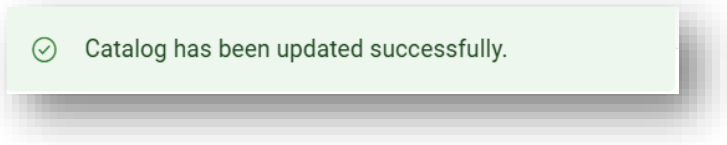


Figure 78 - Edit Catalog Success Message

1.5.3.1.4 Delete Catalog

To delete a catalog from the platform, provider users need to follow the below steps:

1. On the **Catalog** pane, click **Delete** ( ).

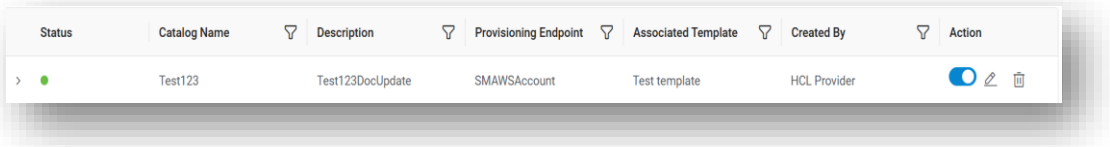


Figure 79 - Delete Catalog

2. When prompted to confirm, click **OK**.

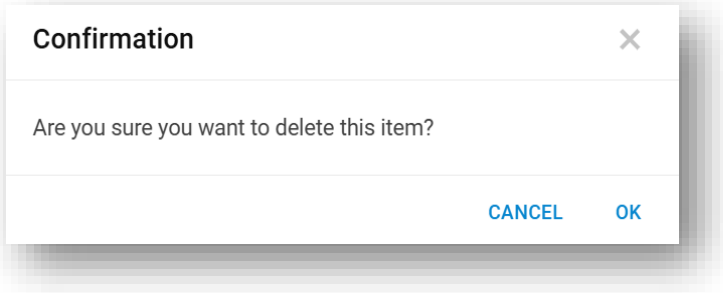


Figure 80 - Delete Catalog (Cont.)

3. A success message box appears.

1.5.3.2 Services

This section emphasizes how to publish service catalogs for end-user of an organization and align dynamic UI fields that are mentioned in **Cloud Templates**. Provider user adds a custom image to service catalogs.

It has following Options:

- Create Service Catalog
- View Service Catalog

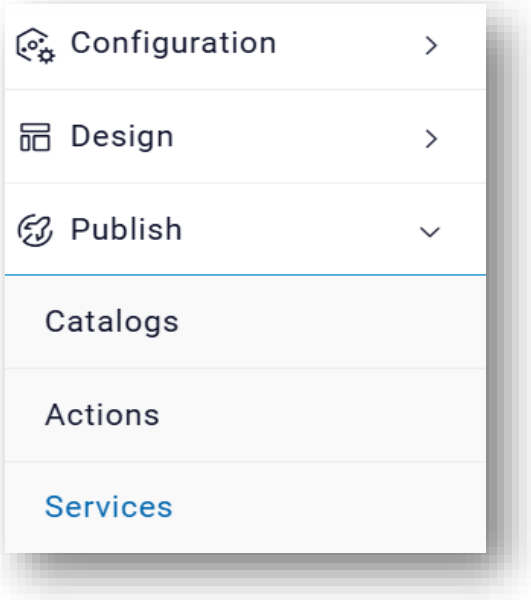


Figure 81 – Services

1.5.3.2.1 Create Service

To publish a new service catalog from an imported template of an organization, provider user needs to follow the below steps:

1. On the Service screen, click Create + Service button.

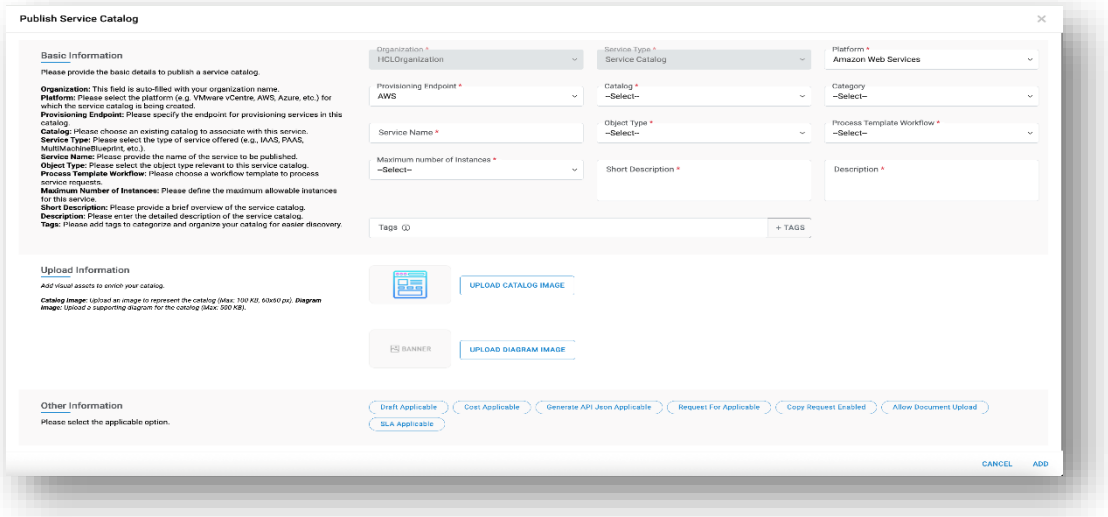


Figure 82 - Create Service

2. Refer to the below table to understand the fields mentioned in the above figure:

Table 10 - Create Service Fields

Fields	Description
Organization	The name of the organization (business units/ divisions in organizations)
Platform	The name of cloud service providers
Environment	The cloud endpoints that have been created in HCL BigFix CLM
Catalog Type	This lists the different types of catalogs
Catalog	Name of the catalog
Service Type	Lists all service types that are created
Service Name	Name of service
Object Type	Type of object that will be provisioned
Process Template Workflow	This is the template for orchestrating tasks sequence
Max. Number of Instances	This template has max no. of instances.
Draft Applicable	To enable draft button on service request.
Cost Applicable	To enable cost button, user must ensure that UI template must defined JavaScript function showcost ().
Request For Applicable	To enable "request for" option, this will help user to create request on behalf of another user.
Generate API Json Applicable	To enable generate API JSON button on service request. It helps user to generate API JSON.

SLA Applicable	To enable "SLA (in mins)" option.
Allow Document Upload	This will enable the document upload functionality on requester form.
Architecture Diagram	After saving the image from Publish Service Catalog, same image will display on requester side in first tab when dynamic form will open for requester. If requester will place a request, then this diagram will be applicable for that request, and if provider delete or change the image at service catalog it will not impact on placed request.

3. Select Organization.
4. Select **Platform**.
5. Select Provisioning Endpoint.
6. Select **Catalog**.
7. Select Service Type and Service Name.
8. Select Object Type.
9. Enter **Short Description** and **Description** of the catalog.
10. Select Process Template Workflow.
11. Select Maximum number of Instances.
12. Upload image file for **Catalog Logo**.
13. To publish a catalog, click **Add**.

Click cancel to discard changes. All fields marked with asterisk (*) are mandatory.

14. A success message box appears:

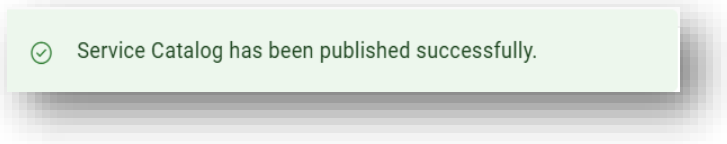


Figure 83 - Service Confirmation Message

15. The new service catalog is published and appears in the list of service catalogs.

1.5.3.2.2 View Service

This section lists all service catalogs that have been created by provider users.

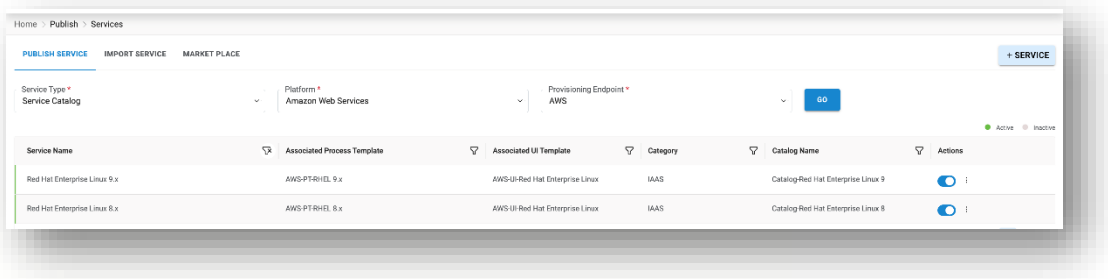


Figure 84 - View Service

It also comprises of the following actions:

- **Edit**: To modify the details of existing Service Catalogs.
- **Delete**: To delete the Service Catalogs.
- **Change Status** ( ): To Change Status the Service Catalogs.
- **Copy to other region**: To copy to other region the Service Catalogs.
- **Copy to other endpoint**: To copy to other endpoint the Service Catalogs.
- **Export service catalog**: To export the Service Catalogs.

1.5.3.2.3 Edit Service

To edit/ modify the information of an existing service catalog, provider user needs to follow the below steps:

1. On the Publish Service Catalog screen, select organization.
2. Available catalogs list down in a tabular view.
3. Click **Edit** in Action menu against the Published Service Catalog to be edited.

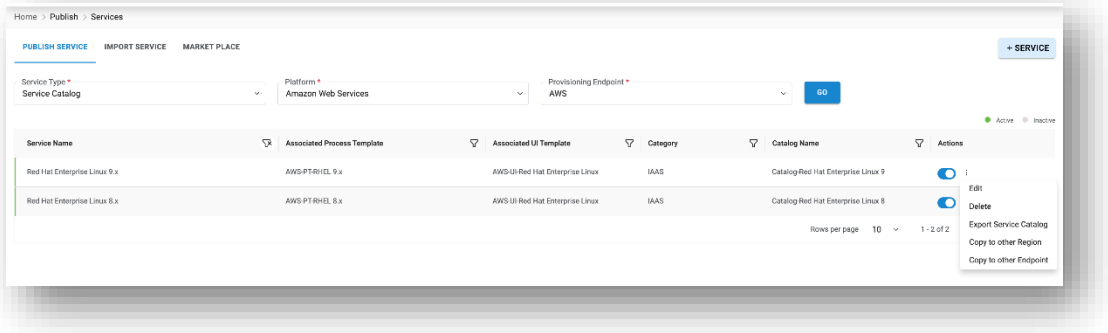


Figure 85 - Edit Service

4. Modify the details as desired and click **Update**.
5. Click **Cancel** to discard all changes.

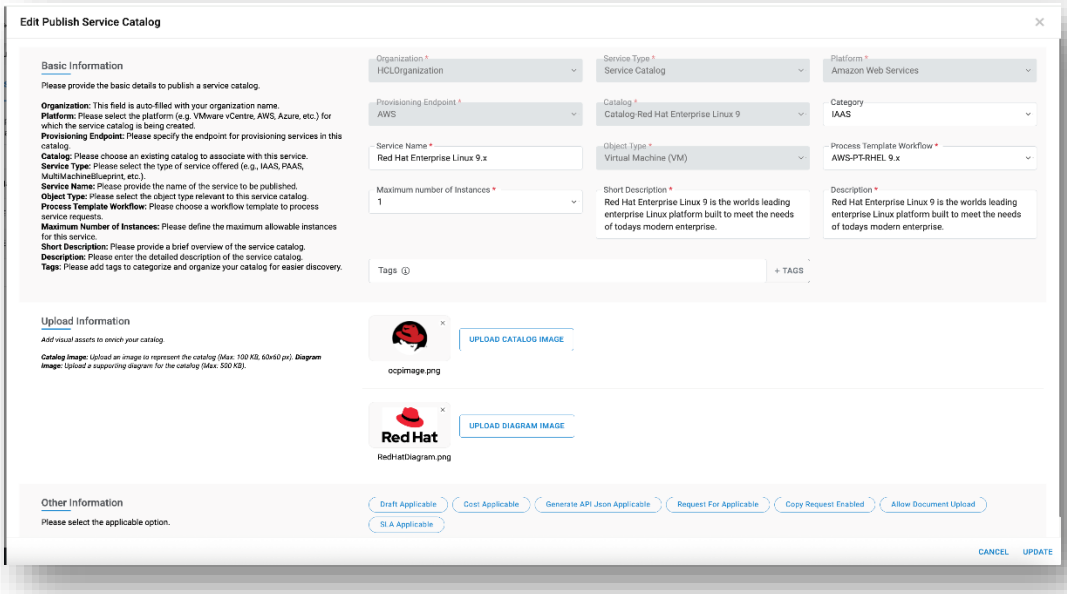


Figure 86 - Edit Service (Cont.)

6. A success message appears:

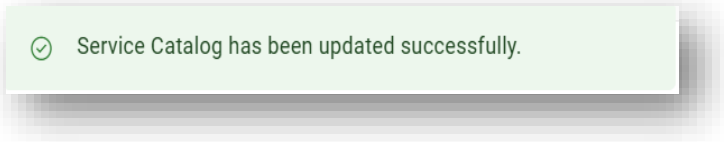


Figure 87 - Edit Catalog Confirmation Message

1.5.3.2.4 Export/Import Service Catalog

Export:

To export a service catalog, provider needs to select **Organization**, **Service Type, Platform**, and **Endpoint** as per the mandatory check and click on Export Service Catalog option under the menu in the **Action** column.

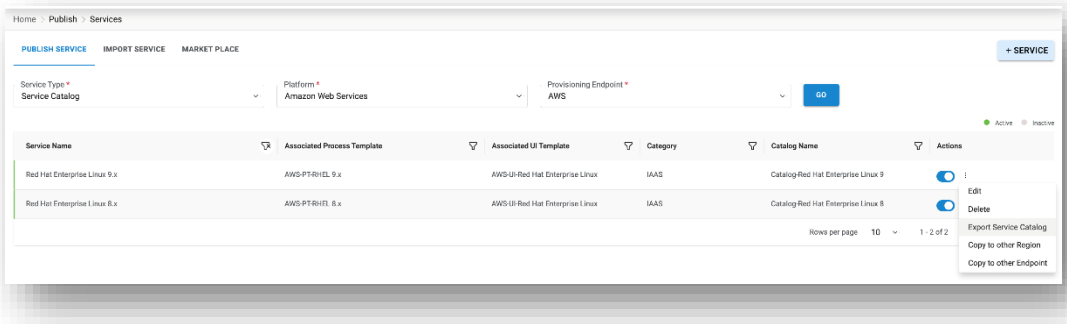


Figure 88 – Export Service Catalog

Import:

To import a service catalog, select the **Import Service** tab in the **Service** screen under **Publish** and perform the following steps:

1. Upload File

- Provide the preliminary information (**Organization**, **Service Type**, **Provisioning Endpoint**, and **Upload File**) that is mandatory. If not provided, then it would trigger a validation message.

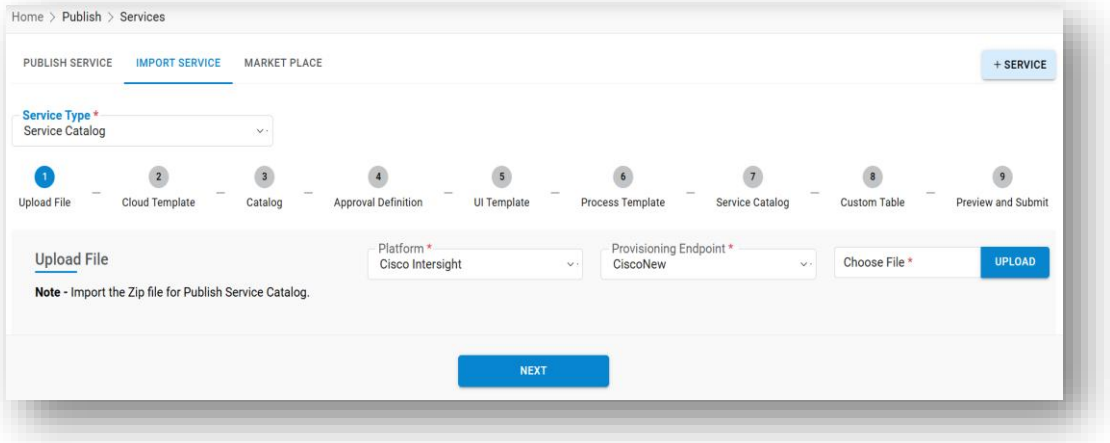
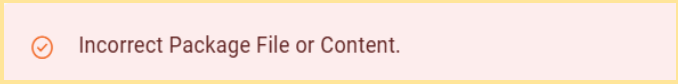


Figure 89 – Service Catalog Import

While Importing JSON template, region must be mapped with the selected end point region. Failing this, results to a validation message as shown in the figure below:



If Object Type does not exist in current environment as per the imported Zip File, then it will show the validation message as Object Type does exist.

When we import the zip for all the steps then it checks inactive Resources for all the steps and if it is inactive they will show the validation message for the same to active or delete the element to proceed with import.

2. Cloud Template

- **Public Cloud** – In the case of public cloud, if user selects the **Map & Overwrite** option as **Import Type**, it will overwrite the existing information from the selected zip file and map with same. But if the user selects the **Map Only** option, it only maps the template with existing information and do not overwrite to existing one.

  If no matches occur, then only '**NEW'** option appears, and it creates a new template as per the imported information.
- **Private Cloud** – In the case of private cloud, the **NEW** option never appears and **Map & Overwrite** and **Map Only** options work similarly as in the case of Public Cloud.

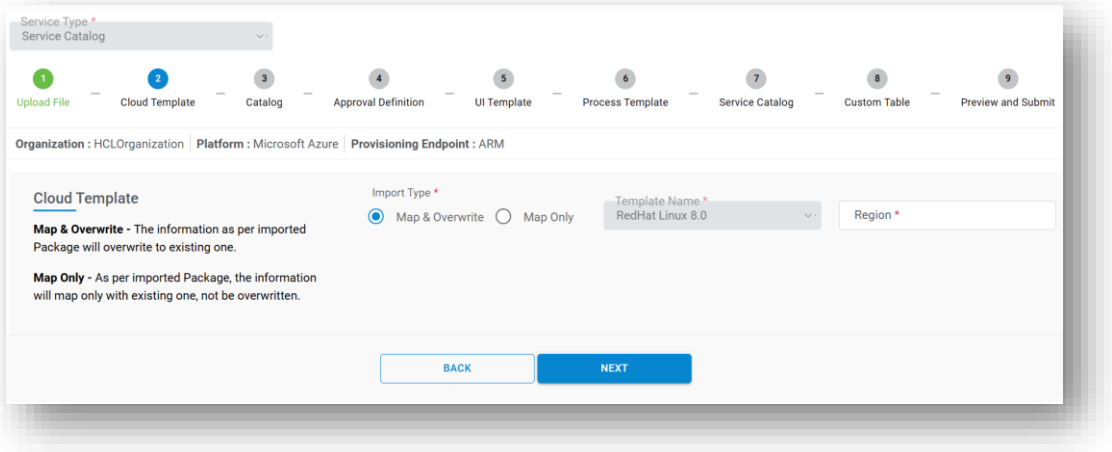


Figure 90 – Service Catalog Import

3. Once the **Import Type** is specified, click **Next**.

4. **Catalog**: In the case of **Public Cloud,** it works as per previous. In the case of **Private Cloud,** it comes as per the cloud template selected in **step 1**. If the selected template is not mapped with catalog, it shows a validation message.

- **Catalog Exists in the Current Environment** - It works as **step 1**. If the user selects a cloud template which is mapped with the catalog to be imported, then it comes as auto selected or is available in the dropdown to select the mapped catalog.
- **Catalog does not exist in the Current Environment** - If catalog does not exist in the current environment, then it will be available for 'New' creation.

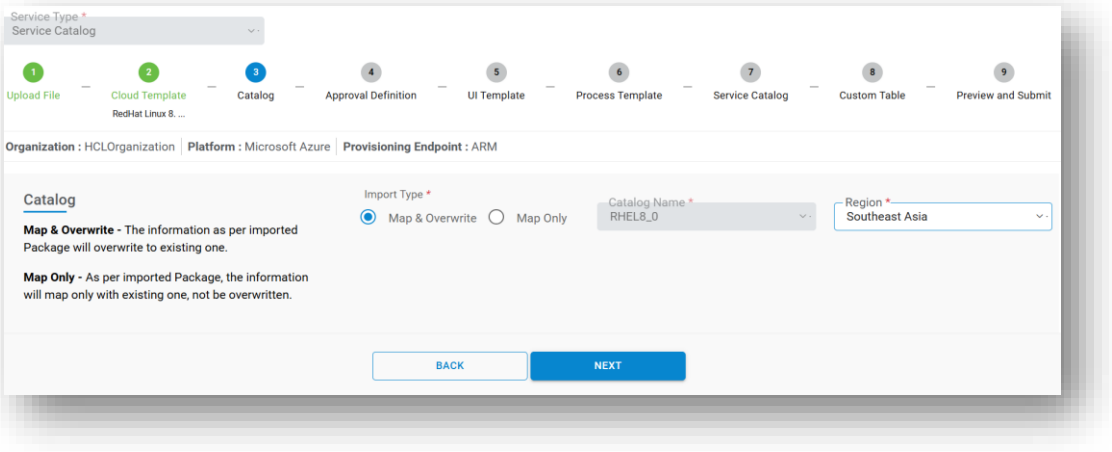


Figure 91 – Service Catalog Import

5. Click **Next**.
6. Approval Definition

- **Static Approval** – If static approval is mapped with the Imported info, then it follows the same process as for Public Cloud explained in **step 2** for **NEW**, **Map & Overwrite** and **Map Only** options.
- **Dynamic Approval** – If user has imported the dynamic rule, the drop down works as static but there will be a list of static templates which are tagged to dynamic rule and appear with same action as **New**, **Map & Overwrite** and **Map only** options.

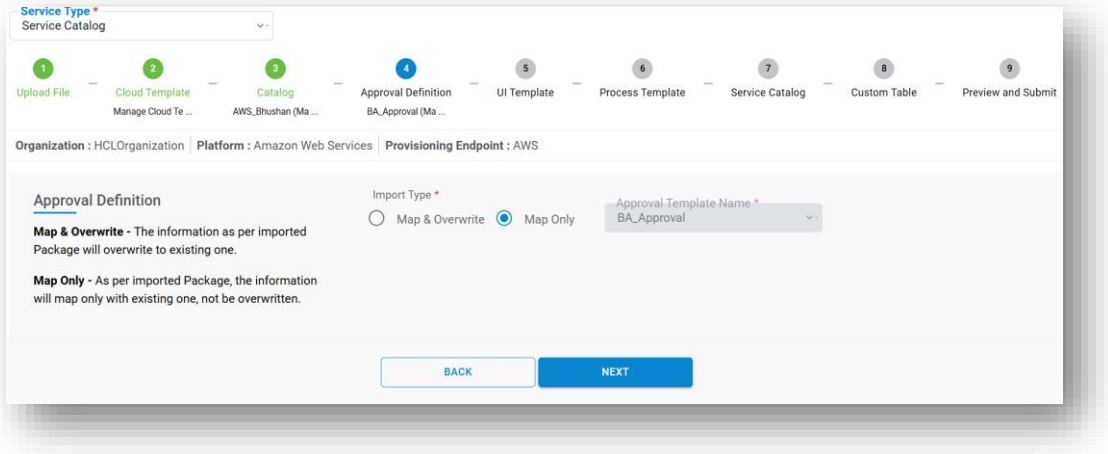


Figure 92 – Service Catalog Import

7. Click **Next**.
8. **UI Template**: The UI Template Import works similarly as for Public Cloud explained in ***step-2*** as per the given action.

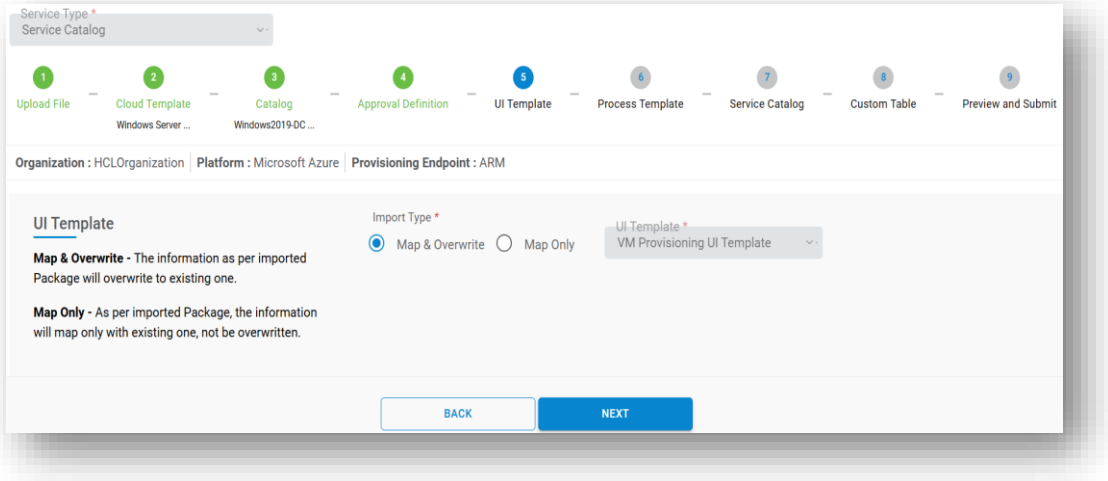


Figure 93 – Service Catalog Import

If provider user exports any published service catalog, then all existing custom JS functions used in the UI should also be export with existing UI JSON (manageuitemplate.json). Similarly, if provider user imports any publish service catalog, then all custom JS functions (using in the mapped UI) should also be import.

9. Process Template

- **Process templates** – It works similarly as for Public Cloud explained in **step-2** for the imported information.
- This screen also contains the ITSM information which has been imported in **step-1** ith the same action as **NEW**, **Map & Overwrite** and **Map Only**.

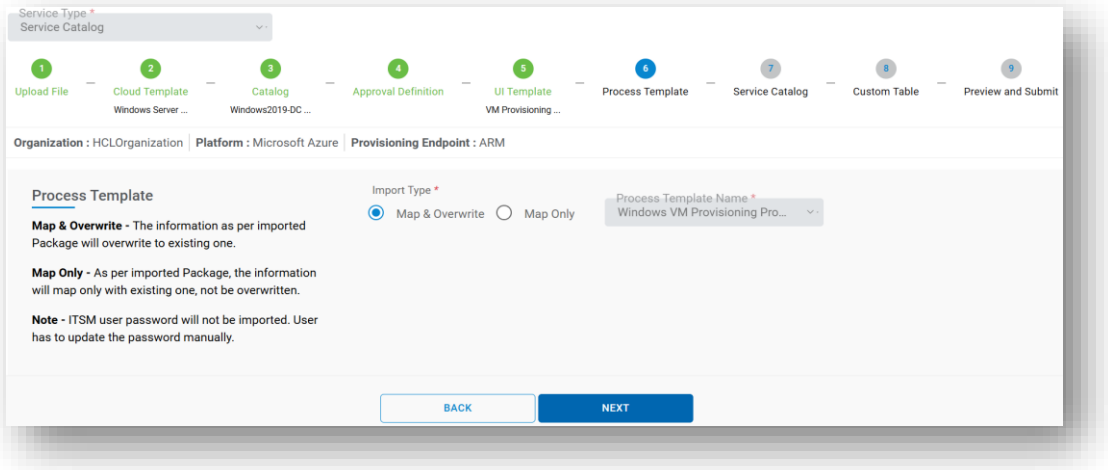


Figure 94 – Service Catalog Import

10. Click **Next**.

11. Service Catalog

- It publishes the service catalog information for the imported information and works as for public cloud explained in **Step-2**.

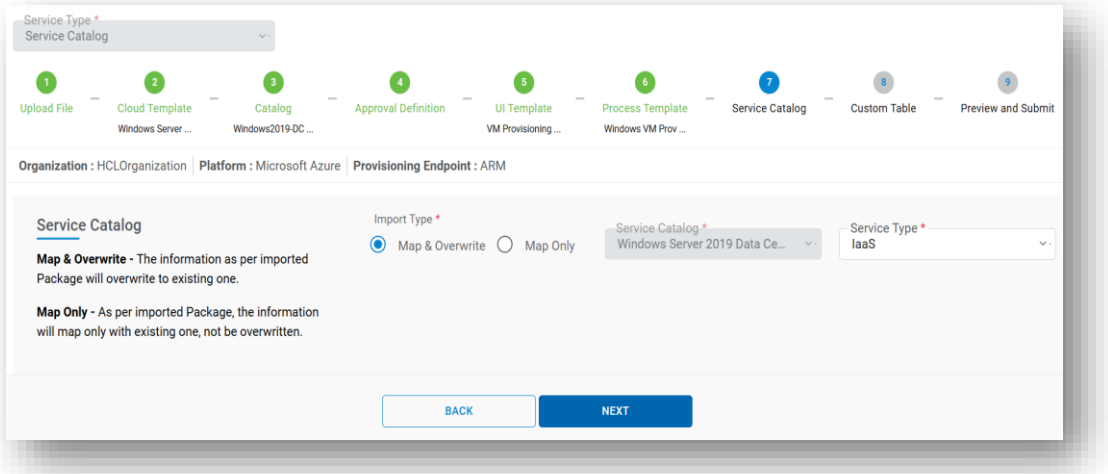


Figure 95 – Service Catalog Import

12. Click **Next**.

13. Preview and Submit

- This screen displays the summary of all the steps which the user have selected. There is a **Submit** button to process all the information related to Imported and Selected information.
- If any error occurs while processing, it shows an error message on the same **Summary** page.

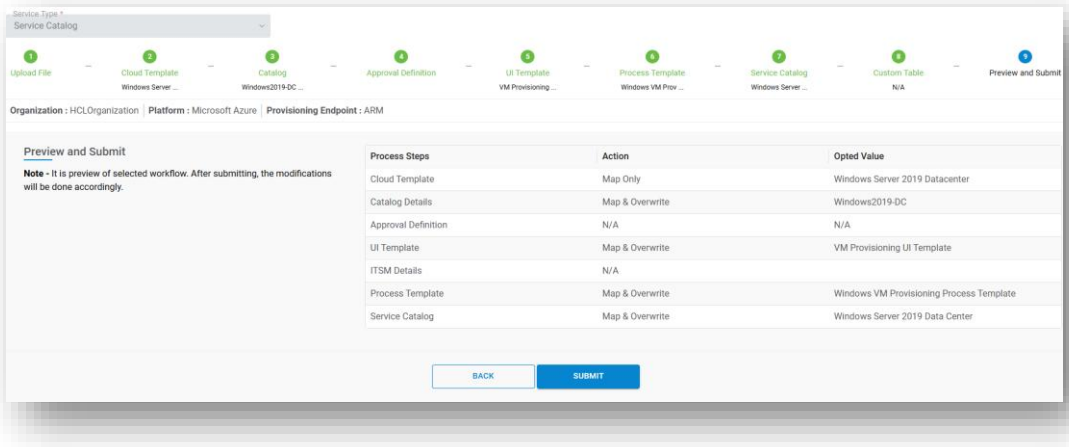


Figure 96 – Preview and Submit

14. Click **Submit**. The system confirms the action. Click **OK** to confirm.

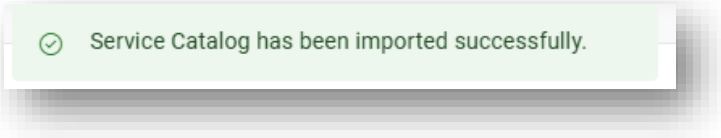


Figure 97 – Confirmation Message

1.5.3.2.5 Delete Service

To delete a service catalog, the provider needs to follow the below steps:

1. On **Service page**, click Delete under Action menu.

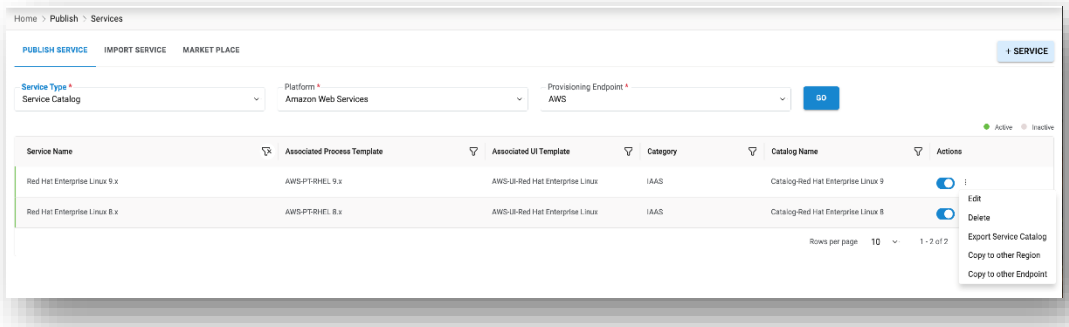


Figure 98 – Delete Service

2. When prompted to confirm, click **OK**.

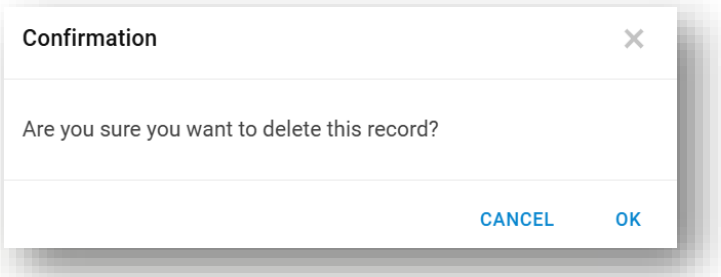


Figure 99 - Delete Published Service Catalog

3. Click Ok and a success message box will appear.

1.5.3.2.6 Copy to Other Region

To Copy a service catalog for Other Region, provider needs to follow the below steps:

1. On **Service** under Actions, click Copy to Other Region.

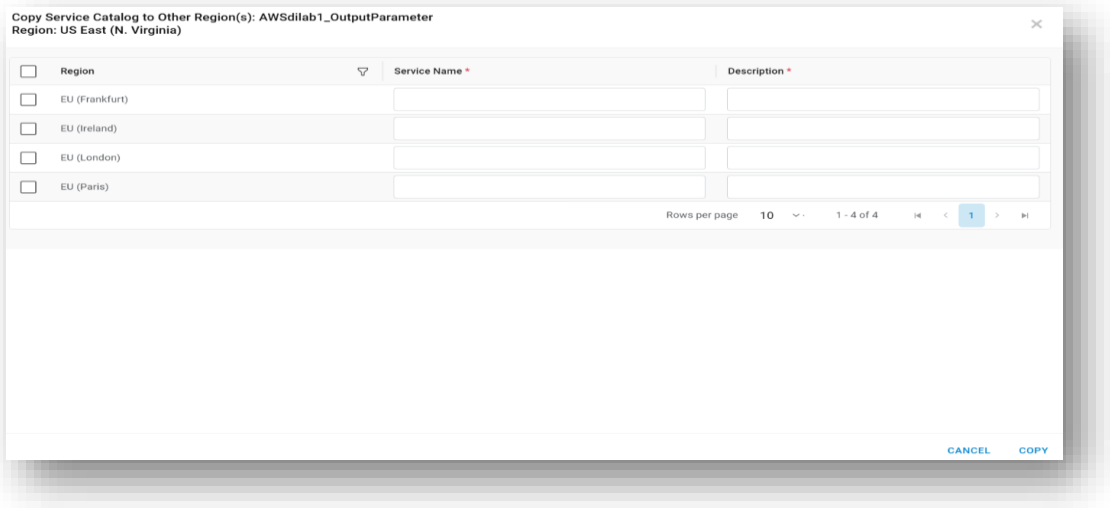


Figure 100 – Copy Service Catalog to Other Region

2. When prompted to confirm, click **OK**.

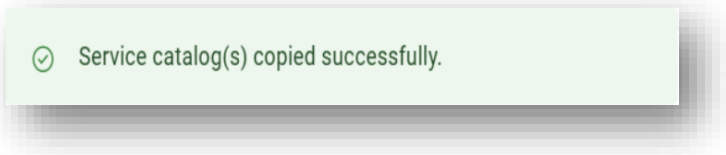


Figure 101 – Success Message

1.5.3.2.7 Copy to Other Endpoint

To copy a service catalog, the provider needs to follow the below steps:

1. On **Service** page, under Actions, click Copy to Other Endpoint.

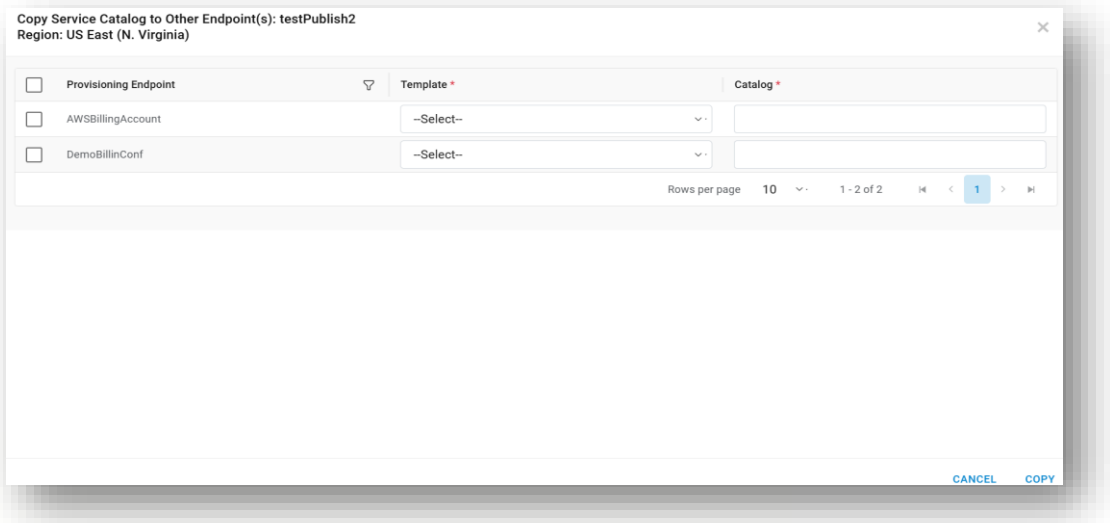


Figure 102 - Copy Published Service Catalog to Other Endpoint

2. When prompted to confirm, click **OK**.

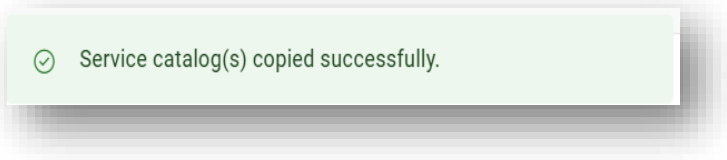


Figure 103 – Success Message

1.5.3.2.8 Marketplace

This section lists out of box catalog library to import.

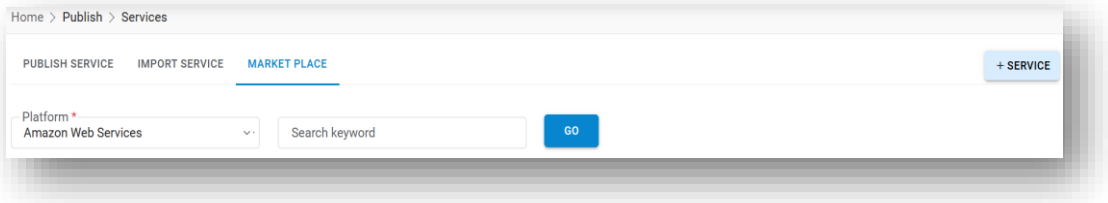


Figure 104 - Service Catalog Library

Select a platform and click the GO button. List of existing Service Catalog Library shown below :-

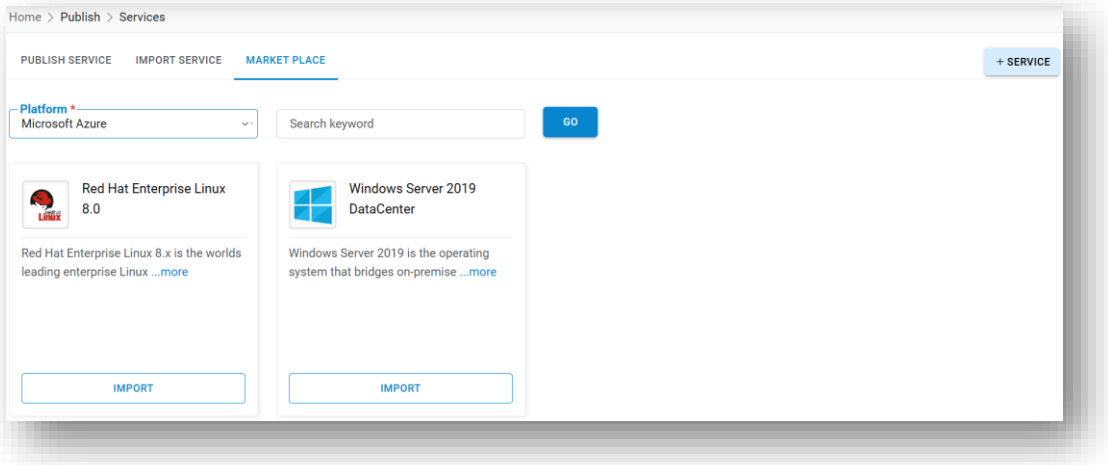


Figure 105 – List of Existing Service Catalog Library

Select a Service Catalog Library and click on Import Button the page redirect to Import Service Catalog Tab.

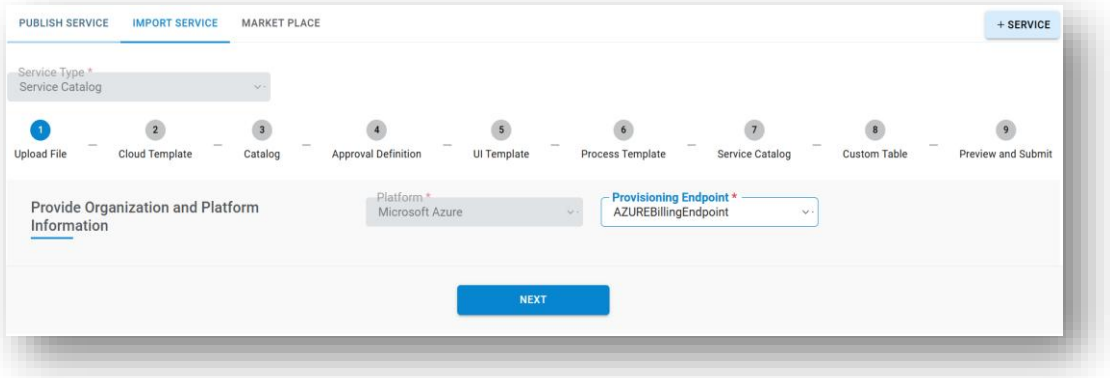


Figure 106 – Import Service Catalog by Existing Service Catalog Library

Select an Organization, Platform automatic selected as per existing Service Catalog Library and Select a Provisioning Endpoint then click **Next** button.

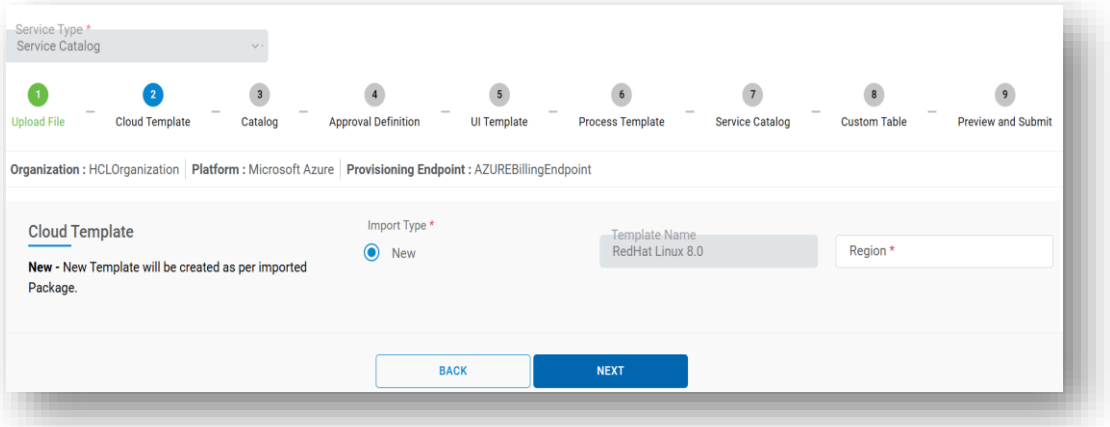


Figure 107 – Import Service Catalog by Existing Service Catalog Library

After that Refer to 1.5.3.2.4 Section for Import Service Catalog.

1.5.3.3 Publish Service

Through this module, a provider user can map action and respective process workflow templates to an object type like Virtual Machine (VM), load balancer, RDS etc. For an organization. The workflow will be triggered or executed after an action request is placed on an object (once it gets provisioned).

1.5.3.3.1 Create Action

To add a publish action in HCL BigFix CLM, provider user needs to follow the below steps:

1. Under the menu click **Publish,** then click Service and on Screen select Service Type as **Actions**, then click +Service.

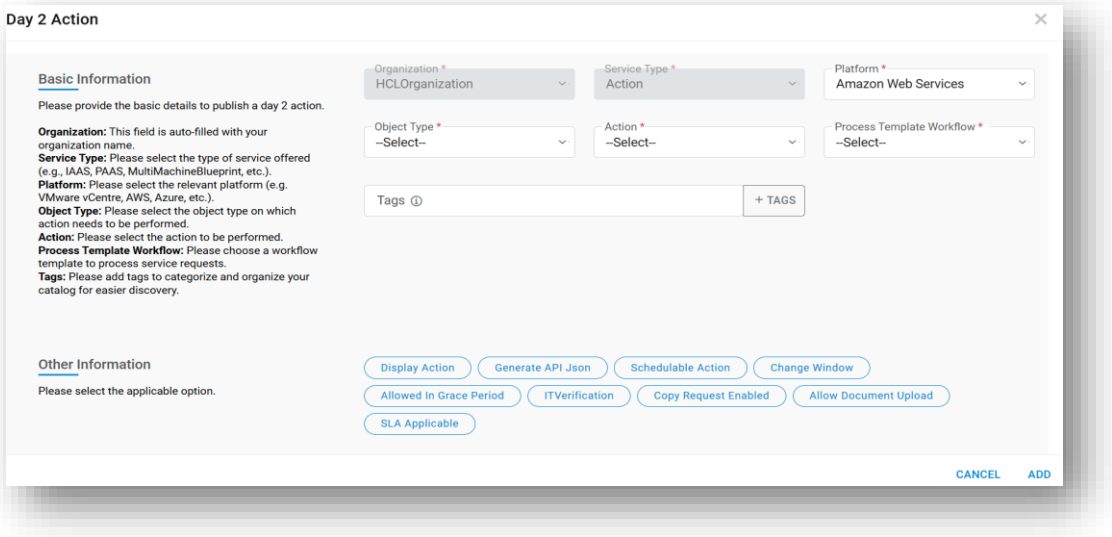


Figure 108 - Publish Action

2. Select Organization.
3. Select **Platform**.
4. Select Object Type.
5. Select **Action**.
6. Select Process Template Workflow.
7. Enter **Tags**.
8. Select Filter Type, Filter Operators, Filter Value for rule filters.
9. To map the publishing action to selected object type, click **Add**.
10. A success message box appears.

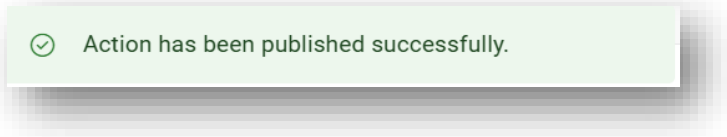


Figure 109 - Add Publish Action (Cont.)

All the fields marked with asterisk (*) are mandatory. Click reset to discard changes.

11. The **Action** is created and appears.

1.5.3.3.2 View Publish Action

This section lists out all the object actions that have been created by provider user.

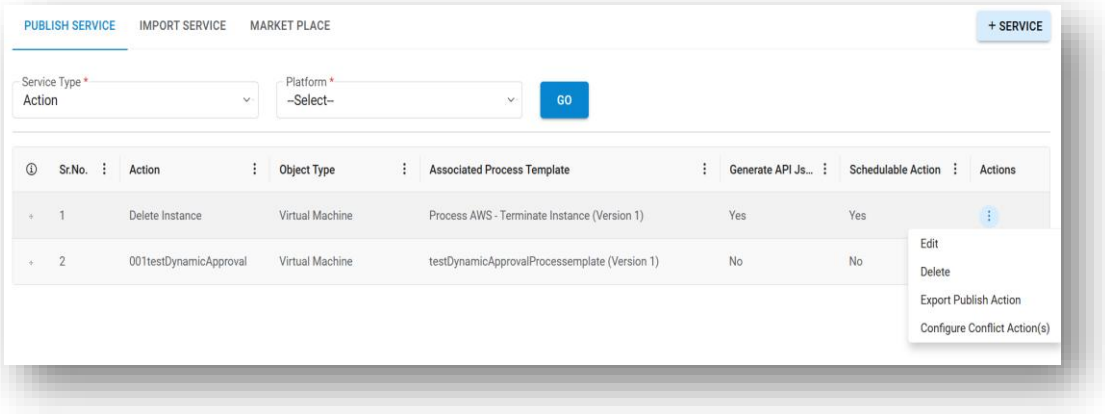


Figure 110 - View Action

It also comprises of the following actions:

- **Edit**: To modify the details of existing object actions
- **Delete**: To delete the actions of existing objects
- **Configure Conflict Action**: To configure the conflict action settings.
- **Configure Export Action**: To Export the Publish action with all depended resources .

1.5.3.3.3 Edit Action

To edit/ modify an assigned publishing action in HCL BigFix CLM, provider user needs to follow the below steps:

1. On the Publish Service screen, select Service Type as Actions, then select platform click Go**.**
2. Click **Edit** against the **Publish Action** to be edited. It redirects the user to **Create Publish Action** pane.
3. Modify the details as desired and click **Update**.

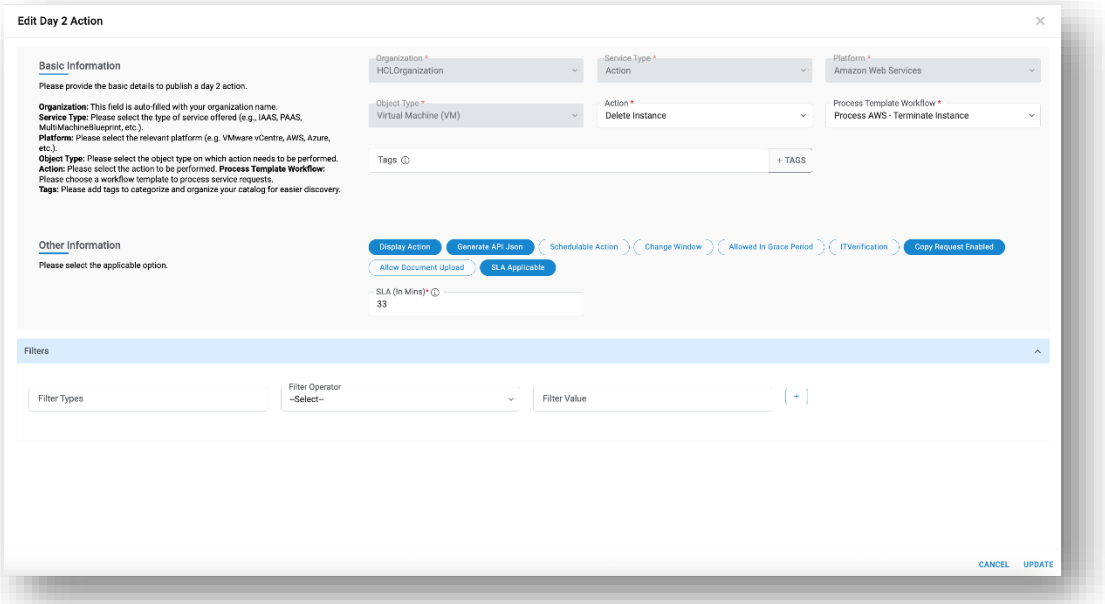


Figure 111 - Edit Action (Cont.)

4. After clicking Update, a success message box appears.

1.5.3.3.4 Delete Action

To delete a publish action from HCL BigFix CLM, provider user needs to follow the below steps:

1. On the **Publish Service** page, select Service Type as Actions, then select platform and click Go, then in **Action** Menu click **Delete** ( ).

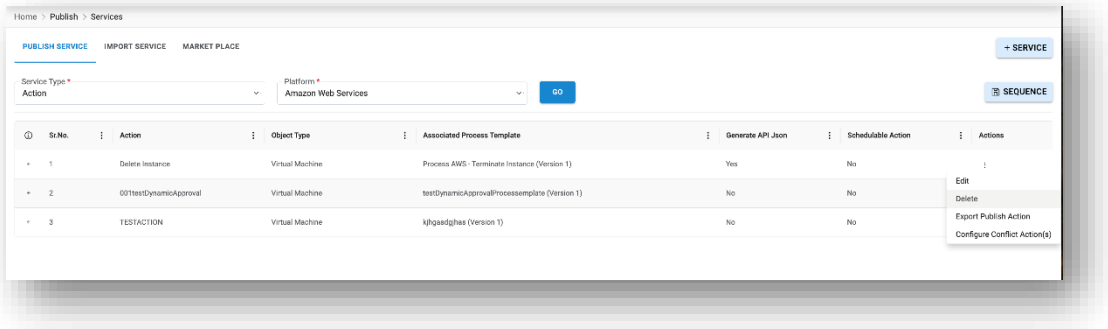


Figure 112 - Delete Object Action

2. When prompted to confirm, click **OK**.

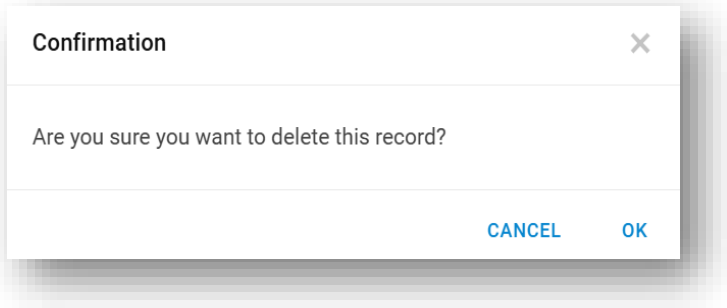


Figure 113 - Delete Object Action

3. A success message box appears.

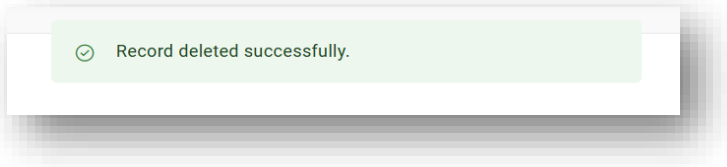


Figure 114 - Confirmation Message

4. Click **OK**.

1.5.3.3.5 Export Service Catalog Action

To Export a published action from HCL BigFix CLM, provider user needs to follow the below steps:

1. On the **Publish service** page, select service type as Actions, then select platform and click Go, then in Action Menu, click Export Service Catalog.

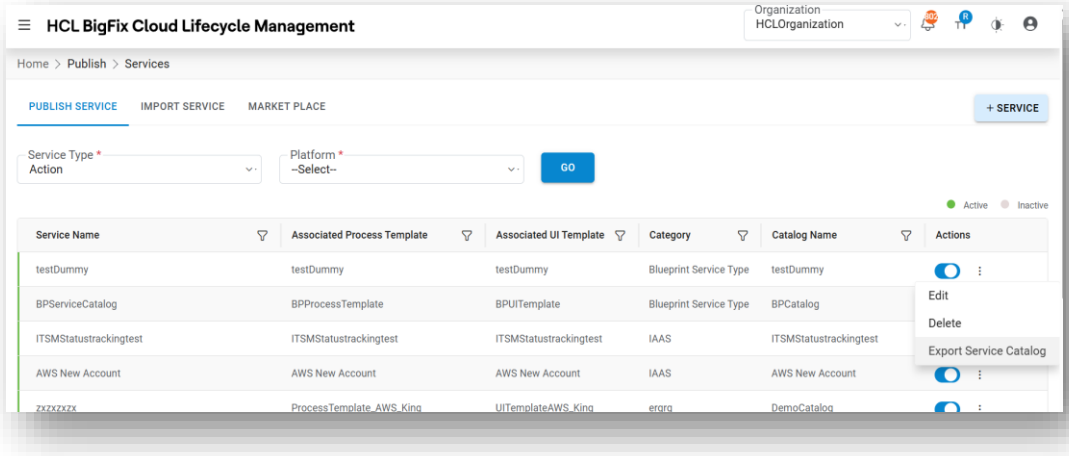


Figure 115 – Publish Action

2. After clicking the export service catalog button, a popup opens.

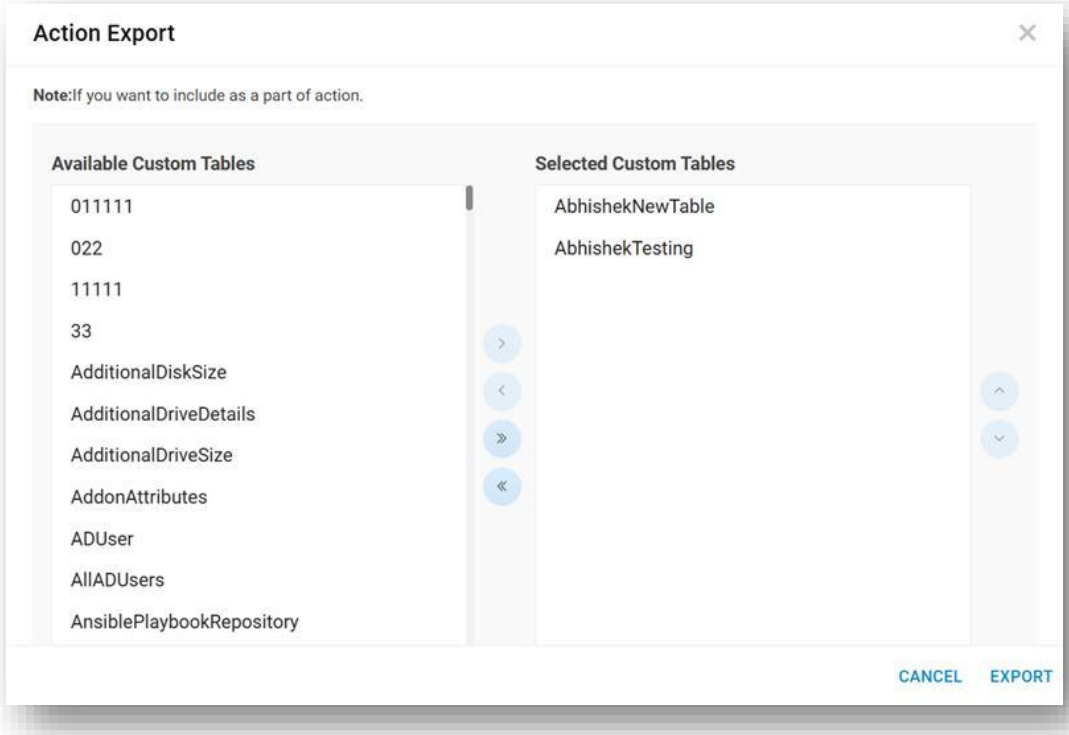


Figure 116 – Publish Action Export

3. In the popup, If you need to select the table name available in the custom table section, move to the selected custom tables section, and after that, click the export button to export a JSON zip folder.

1.5.3.3.6 Configure Conflict Action

To configure an object action from HCL BigFix CLM, provider user needs to follow the below steps:

1. On the Publish Service page, select Service Type as Actions, then select platform and click Go, then in Action Menu, click Configure Conflict Action ( ).

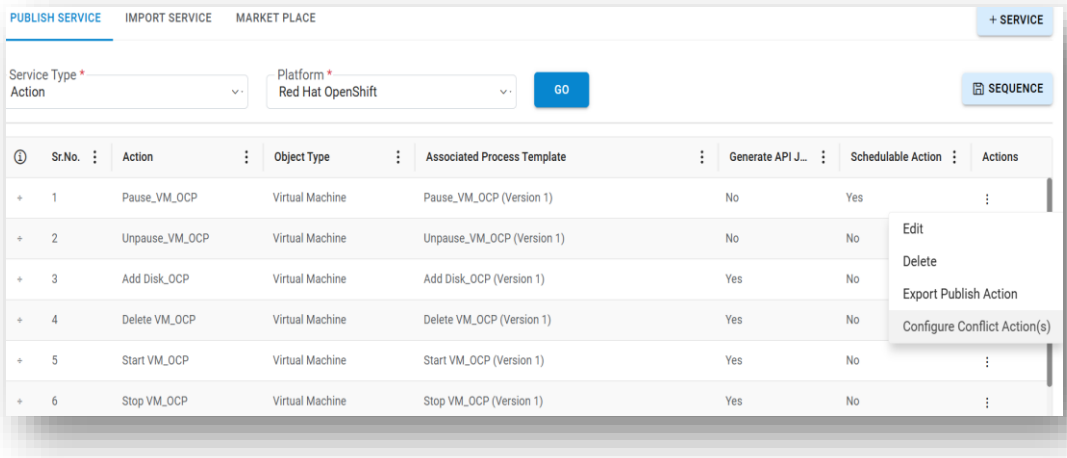


Figure 117 - Configure Conflict Action

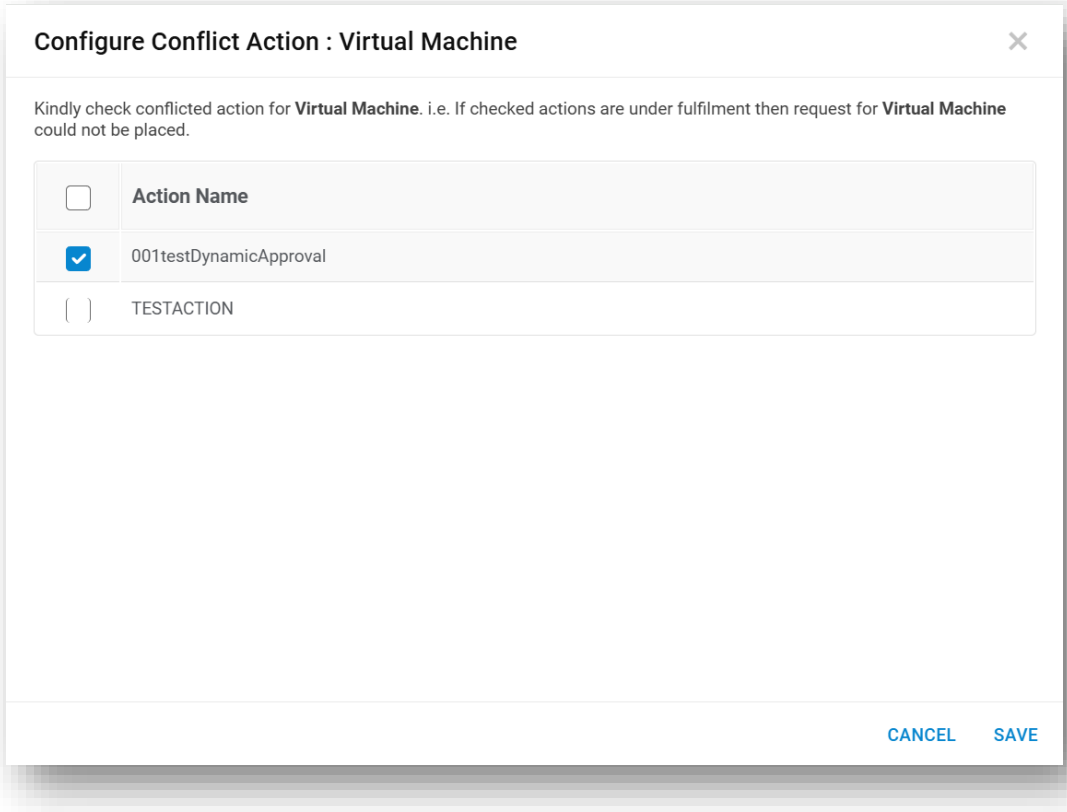


Figure 118 - Configure Conflict Action (Cont.)

2. Click on the checkbox and **Save** to configure the **Conflict Action**.

1.5.3.3.7 Import Publish Action

- **New**: When imported, key information does not exist in the current environment based on required parameters such as platform, provider, object type, etc. It will create a new entry for the ongoing step as per the selected Zip file.
- **Map & Overwrite**: When imported information already exists in the current environment, it will appear, and on selection, it will overwrite the existing information from the selected Zip file.
- **Map Only**: When imported information already exists in the current environment, it will appear, and on selection, it will map with the existing information and not overwrite the existing one.

To Import a published action from HCL BigFix CLM, provider user needs to follow the below steps:

Step- 1 - Upload File: User need to select preliminary information that is mandatory if not then it would trigger a validation message. As mentioned below:

a. Organization: Select the organization where you need to import the published action.

b. Platform: Select the platform where you need to import the published action.

c. Upload: Click the upload file button and choose import zip file for import.

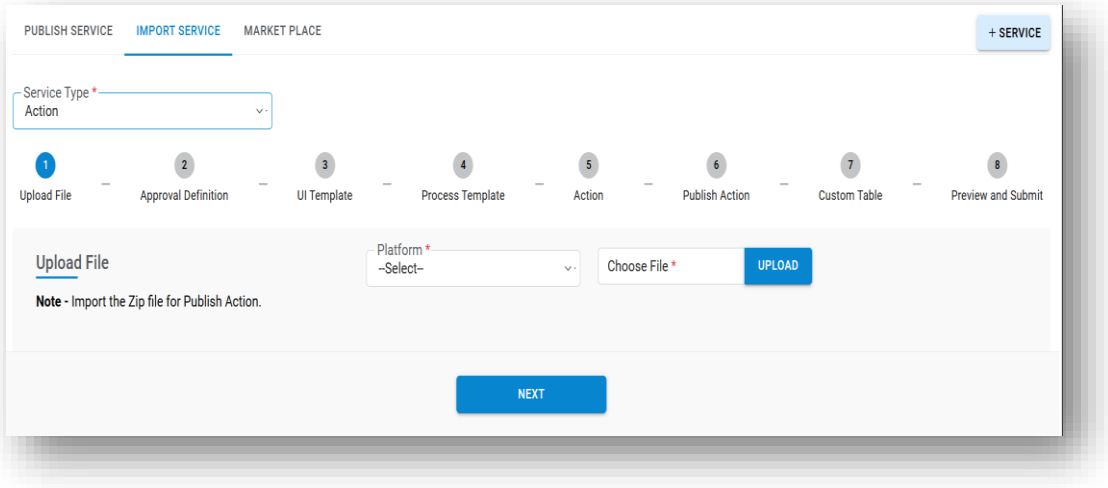


Figure 119 – Upload File

If a user does not select an organization or platform and clicks the next button. then the alert message below will be shown.

- **When Platform is not selected**

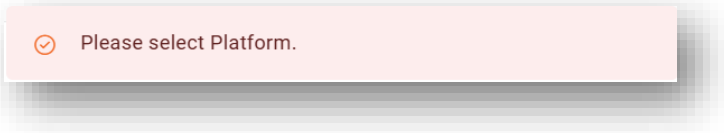


Figure 120 - Platform Not Selected

- **When uploaded file is not a Zip folder**

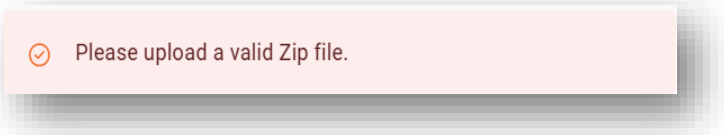


Figure 121 – Invalid Zip File

When an invalid zip file that is imported and is not mapped to the correct platform, the alert message shown below appears.

- **When a zip file without valid content is uploaded**.

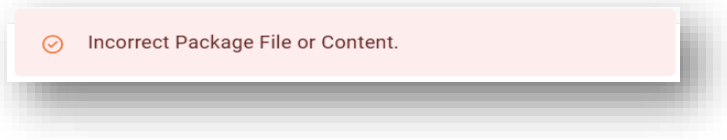


Figure 122 – Incorrect Zip File/Content

– **When selected platform and uploading zip file platform are not the same.**

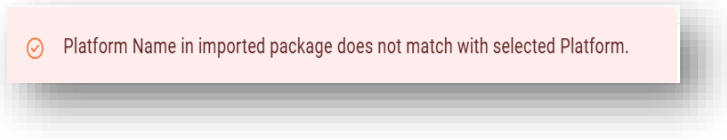


Figure 123 – Platform Name does Not Match

Click on **Next** to validate that the object type exists for which the publish action import is being processed and it will show the validation message for the same.

After that Refer to 1.5.3.2.5 Section for Import Action.

1.5.3.4 Action

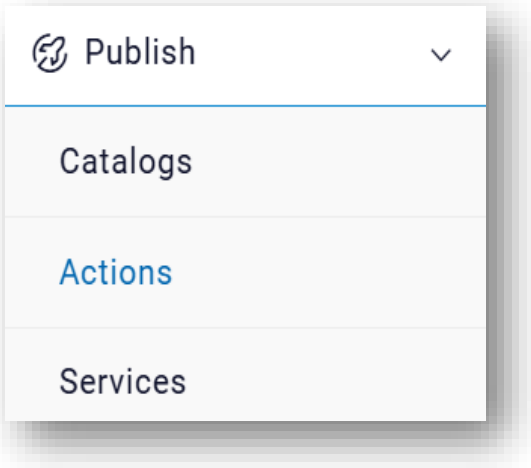


Figure 124 – Actions

This section explains how actions that are assigned to an object type in an organization, are managed through this module. This section has the following options:

- Create Action
- View Action
- Edit Action

1.5.3.4.1 Create Action

To create object actions in an organization, the provider needs to follow the steps below:

1. On the Action screen, click +Action.

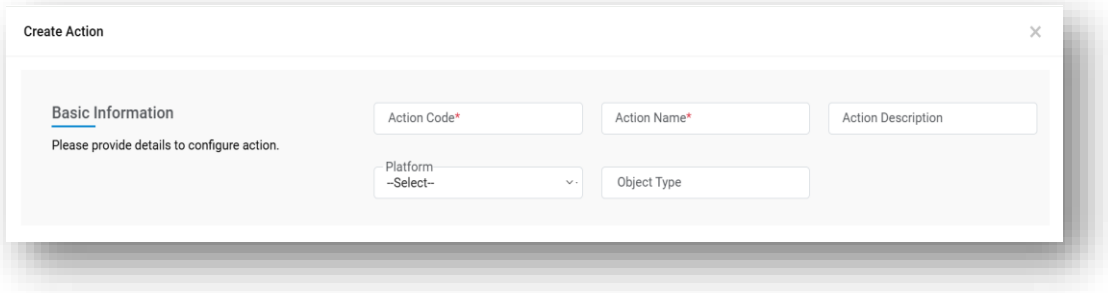


Figure 125 - Add Action

2. Refer to the below table to understand the fields mentioned in the above figure:

Table 11 – Add Action

Fields	Description
Action Code	It is a code to initiate an action against the infrastructure resources
Action Name	Name the action as per the user
Action Description	Highlight the purpose of the action
Platform	Platform on which Action will create
Object Type	Object type for creating the action

3. Enter Action Code and Action Name.
4. Enter Action Description.
5. Select Platform and Object Type.
6. To add object action, click **Save**.
7. A success message box appears.

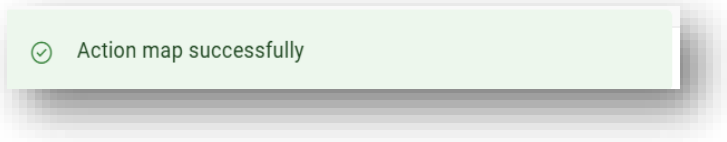


Figure 126 - Confirmation Message

All the fields given with asterisk (*) mark are mandatory.

1.5.3.4.2 View Action

This section lists all the provider users that have been created by HCL BigFix CLM Admin.

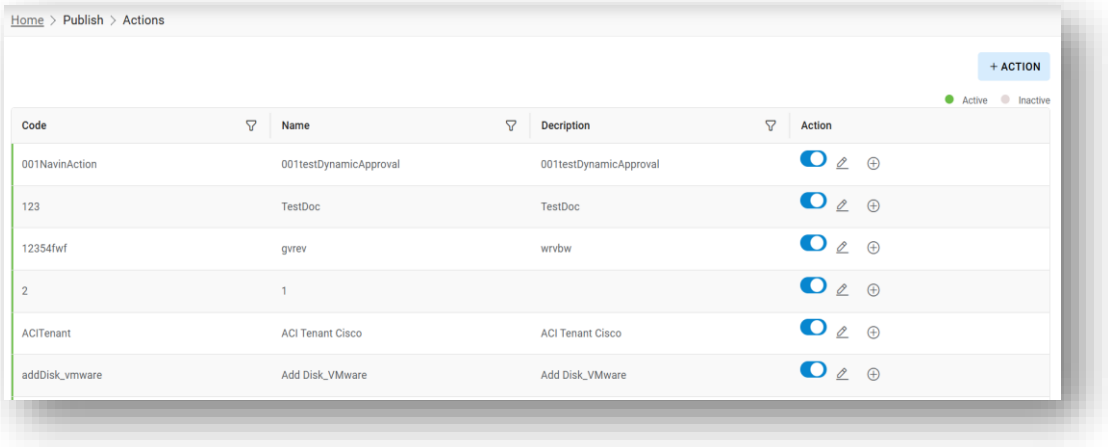


Figure 127 - Edit Action

It also comprises of the following actions:

- **Edit** ( ): To edit/ modify the details of existing actions
- **Add** ( ): To add the actions
- **Change Status** ( ): To change the status of the action as active / inactive.

1.5.3.4.3 Edit Action

To edit/ modify existing actions in an organization, provider user needs to follow the below steps:

1. On the Action screen in grid **Action** Column.
2. Click **Edit** ( ).
3. Modify the details as desired and click **Update**.

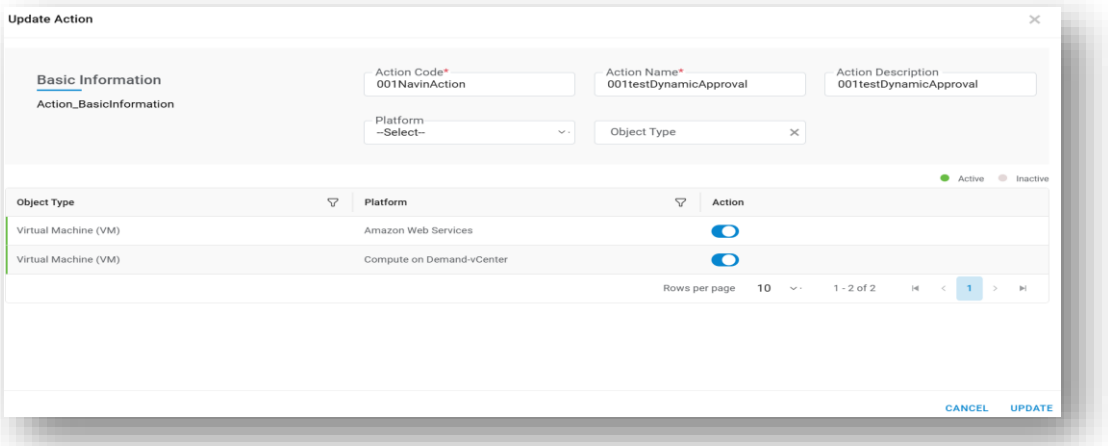


Figure 128 - Edit Action (Cont.)

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

4. A success message box will appear.

1.5.3.4.4 Action Mapping

To map the actions to an object type in HCL BigFix CLM, provider user needs to follow the below steps:

1. On the Action screen, click grid Action column.
2. Click **Map Action** (⊕) against the action code to be mapped to an object type.
3. It prompts the following window:

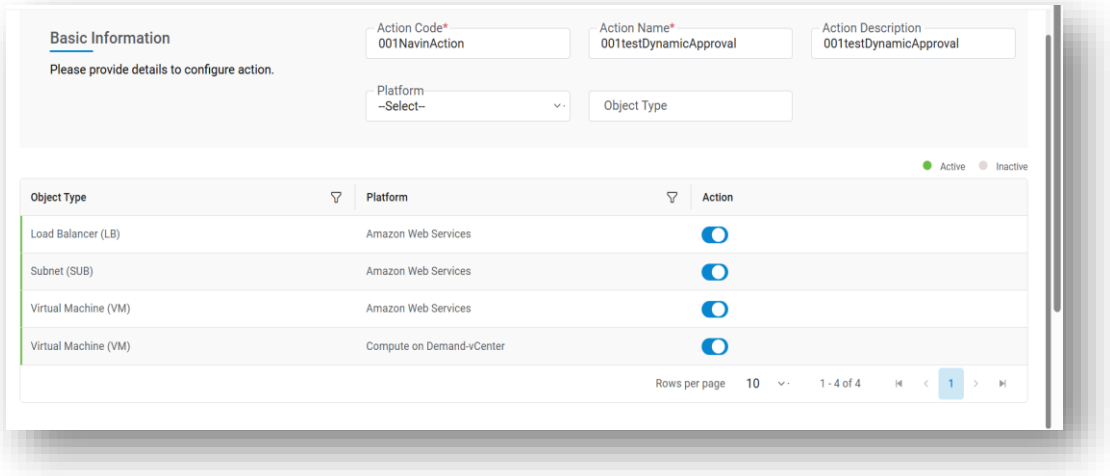


Figure 129 - Action Object Mapping (Cont.)

4. Select **Platform**.
5. The object type configured in a selected platform appears in the **Object Type** text box.
6. Select the **Object Type**.
7. Click Map Action.

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

8. A success message box appears.

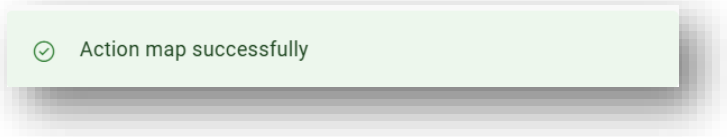


Figure 130 - Action Mapping (Cont.)

9. The action is mapped to an object type and appears in a list of mapped action.

1.5.3.4.5 Change Status

To change the status of an action, provider user needs to follow the below steps:

1. On the Action screen, in grid Action Column.
2. Click **Change Status** (⬭) against the action code to change the status from active to inactive and vice versa.

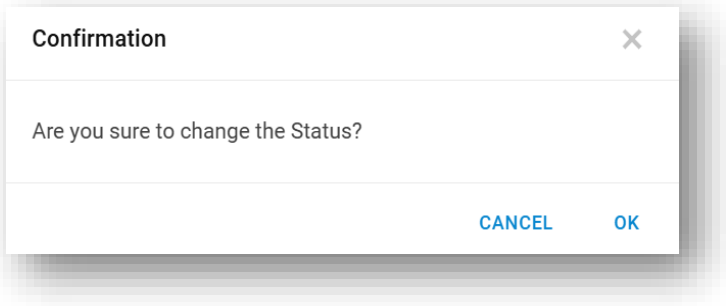


Figure 131 – Change Action Status

3. Click **OK** to change the status. A success message box appears.

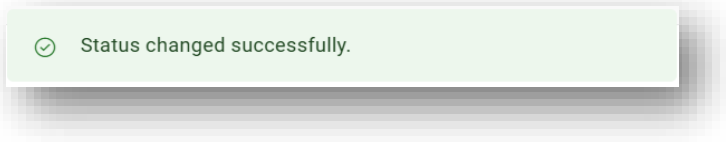


Figure 132 – Confirmation Message

1.5.4 Billing

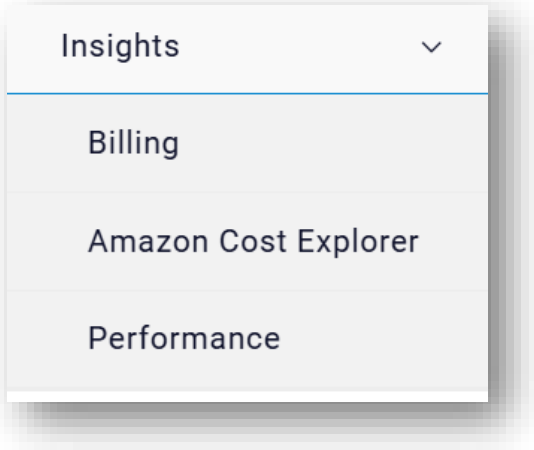


Figure 133 – Billing

This section details the steps to manage cloud billings.

1. On the main menu bar, click **Master** and then click **Manage Billing Configuration**.
2. The section has the following options:

- Add Billing
- View Billing

1.5.4.1 Add Billing

To add configuration of billing, provider user needs to follow the below steps:

1. On the Billing Configuration screen, choose Platform and click +Billing Configuration.

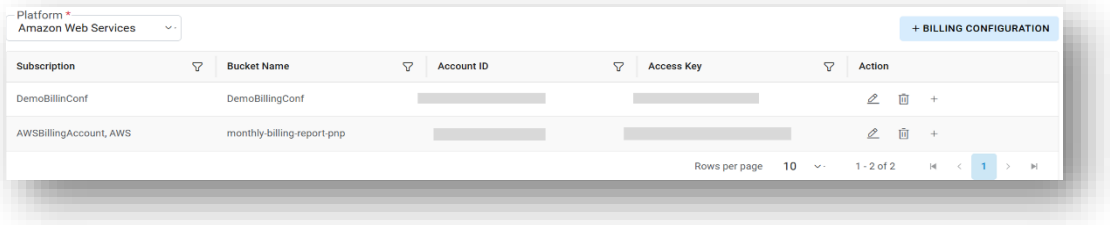


Figure 134 - Add Billing

2. Refer to the below table to understand the fields mentioned in the above figure:

Table 12 – Add Billing (Azure)

Fields	Description
Platform	The field lists down the cloud service providers
Account ID	Signifies unique enrolment ID provided by Microsoft
Secret Key	To access account secret key is required associated with account
Access Key	Access Key of endpoint
Bucket Key	The field list down the available currencies i.e., INR, USD, EUR etc.

3. Select **Platform**. Enter details based on the platform selected.
4. Select Bucket Name, Account ID, Access Key, Secret Key.
5. Click **Add**.
6. A success message box appears as below:

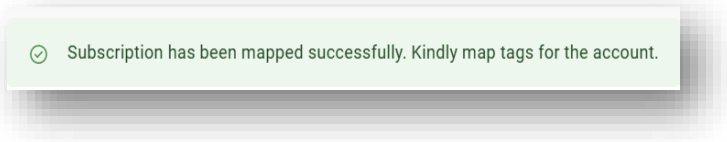


Figure 135 - Add Billing (Cont.)

All the fields given with asterisk (*) mark are mandatory.

The mapping for the subscriptions is created and appears in View **Mapping**.

1.5.4.2 View Billing

This section lists all the configurations that have been created by provider user.

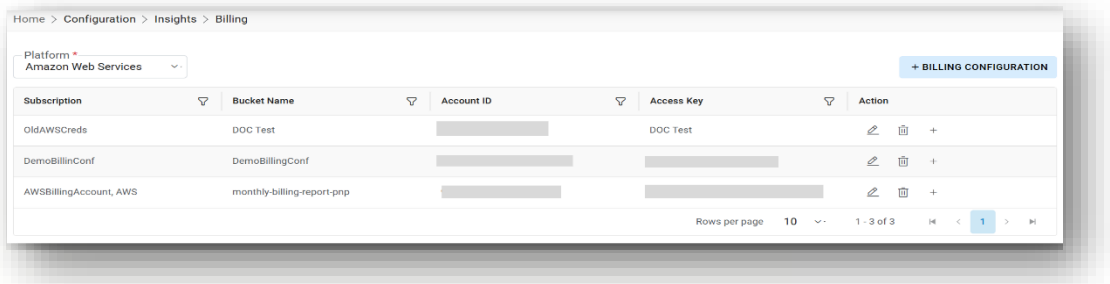


Figure 136 - View Billing

It also comprises of following actions:

- **Edit** ( ): To Modify the details of Existing Mapping
- **Delete** ( ): To delete the Mappings
- **Map Tags** ( ): To do tags & column mapping (applicable only for amazon)

1.5.4.3 Edit Billing

To edit/ modify the assigned mapping of subscription or configuration of billing access key, provider user needs to follow the below steps:

1. On the Billing screen.
2. Select the Platform Type.
3. Click **Edit** ( ). Modify the desired details.
4. Click Update to save the changes.

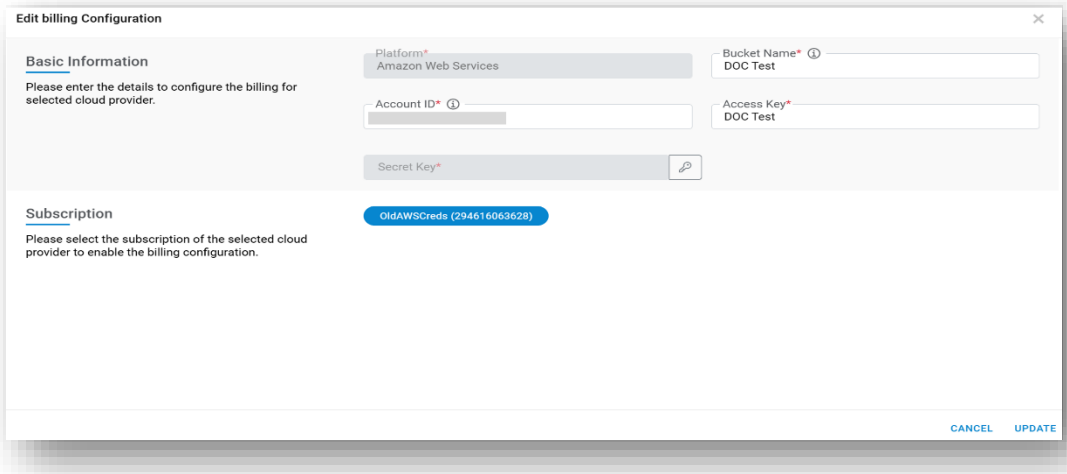


Figure 137 - Edit Mapping

5. A success message box appears.

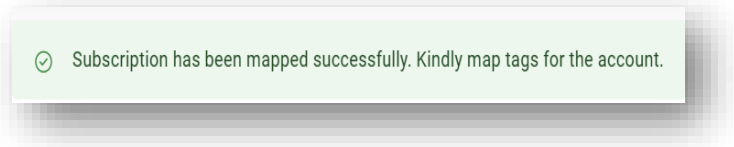


Figure 138 - Edit Mapping (Cont.)

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

1.5.4.4 Delete Billing

To delete a configuration from HCL BigFix CLM environment, provider user needs to follow the below steps:

1. On the Billing screen, select the Platform Type.
2. Click **Delete** against desired configuration.

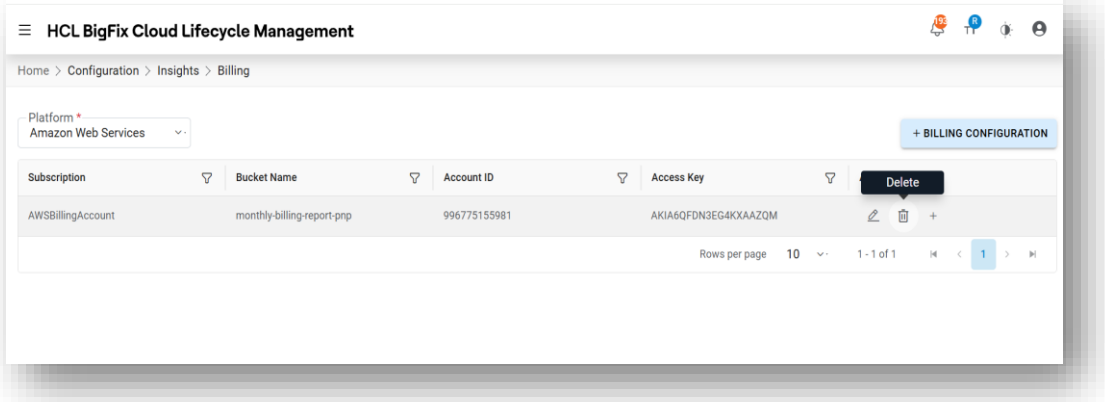


Figure 139 - Delete Billing

3. When prompted to confirm, click **OK**.

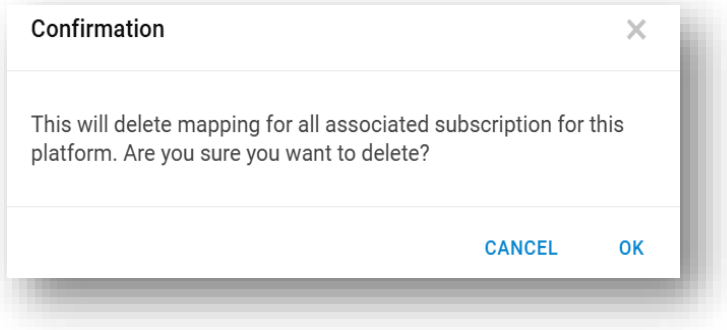


Figure 140 – Delete Billing (Cont.)

4. A success message box appears.

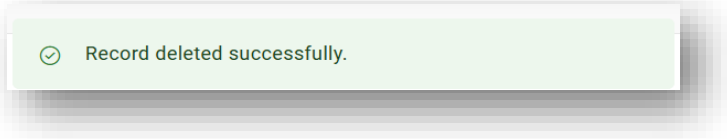


Figure 141 - Delete Billing (Cont.)

1.5.4.5 Add Tag

To edit/modify the mapping of Amazon cloud, follow the steps below:

1. On Billing screen, under Action, click on Add Tags.

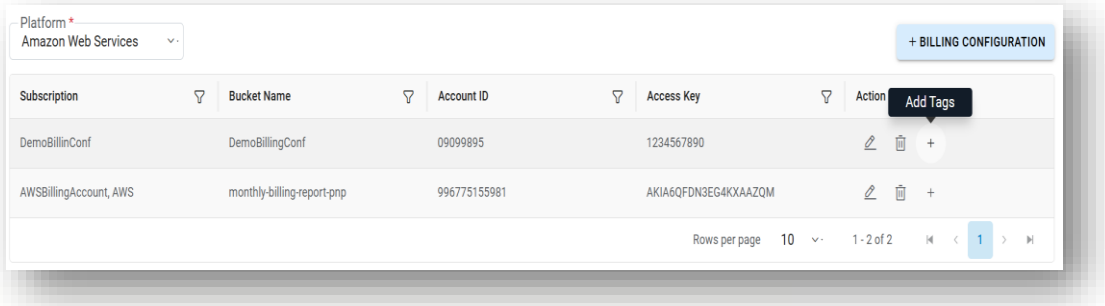


Figure 142 – Add Tag(s)

2. A pop-up window with **Tag and Column mapping** appears as below.

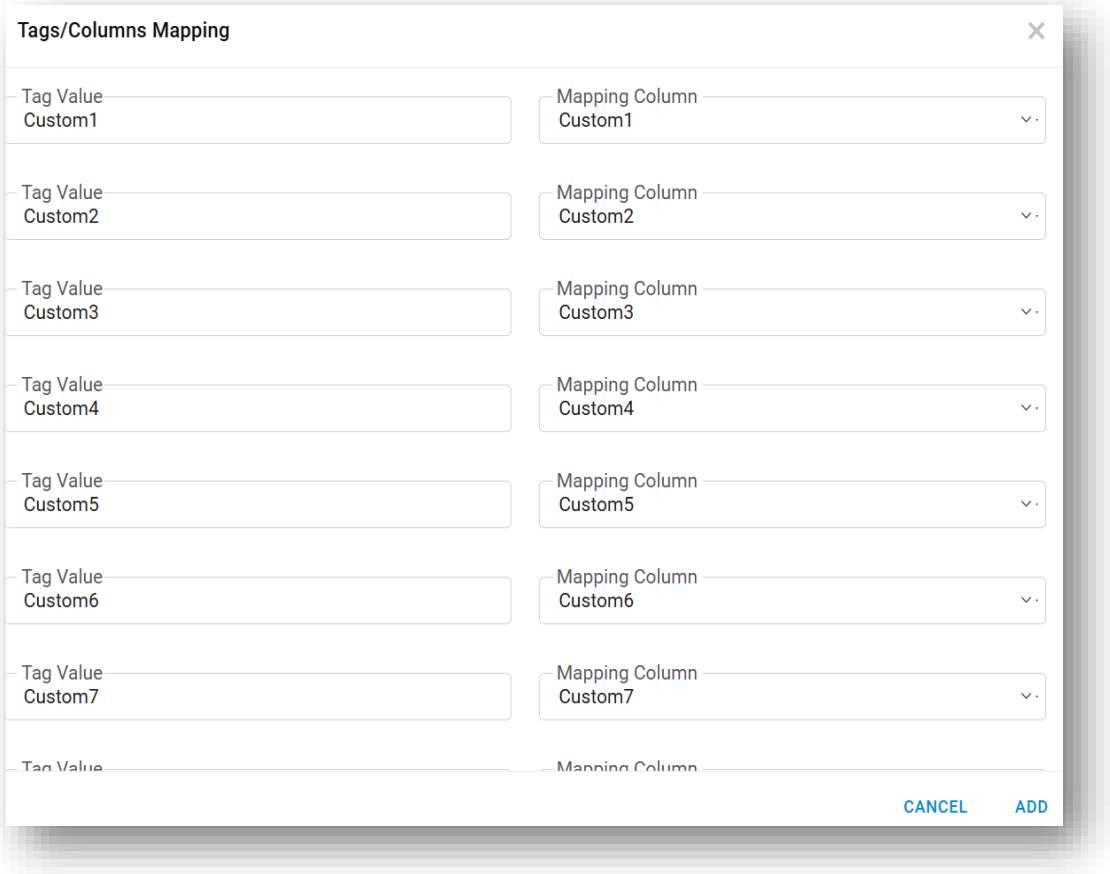


Figure 143 – Tag Mapping (Cont.)

3. Modify the desired results.
4. Click Add.
5. A success message box will appear.

Tag Mapping is only available for AWS. To View any of the Listed Mappings, click View .

1.5.5 IP Reserve/Release

This section details out the steps to release IPs which remained unutilized in private cloud environment. To release IP, provider user needs to follow the below steps:

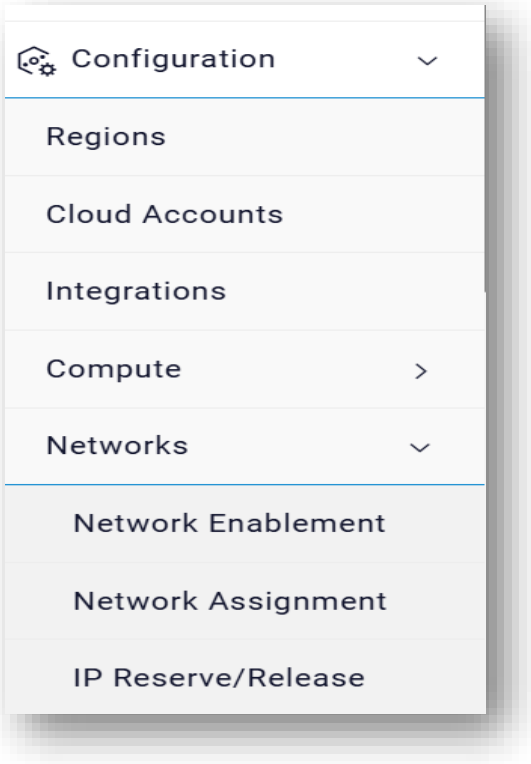


Figure 144 – IP Reserve/Release

1. On the **IP Reserve/Release** screen fill the below information:
2. Select Organization, Platform and Provisioning Endpoint.
3. Lastly, select **Cluster** and **Network**.

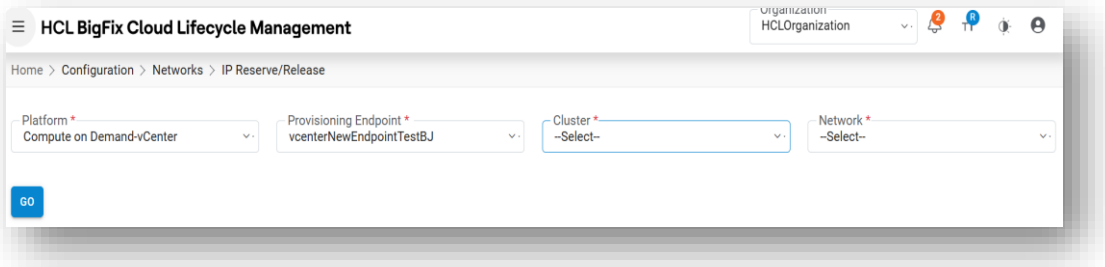


Figure 145 – IP Reserve/Release

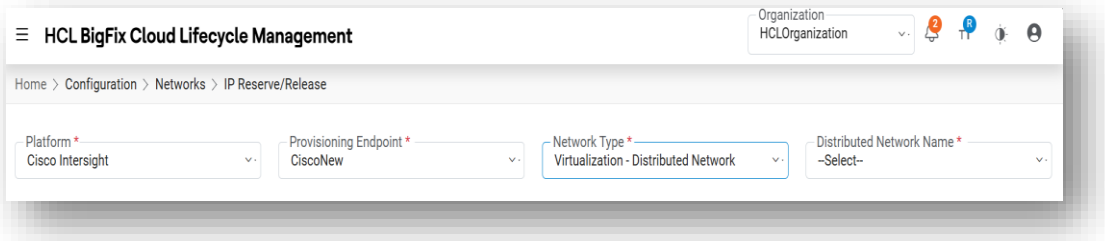


Figure 146 – IP Reserve/Release Home Screen for Cisco Intersight

4. Refer the below table to understand the fields mentioned in the above figure:

Table 13 – IP Reserve/Release

Table Field	Description
Organization	Name of the Organization (Business Units/Divisions in Organizations)
Platform	Name of the cloud service providers
Provisioning Endpoint	The cloud endpoints that have been created in HCL BigFix CLM
Cluster	It lists the clusters associate with cloud platform.
Network	It lists the network associate with cloud platform
Network Type	It is the network type applicable for Cisco Intersight, possible values could be distributed switch or distributed network
Distributed Switch Name	It lists the distributed switch name for Cisco Intersight
Distributed Network Name	It lists the distributed network name for Cisco Intersight

All fields marked with (*) are required.

5. Click **Go**.

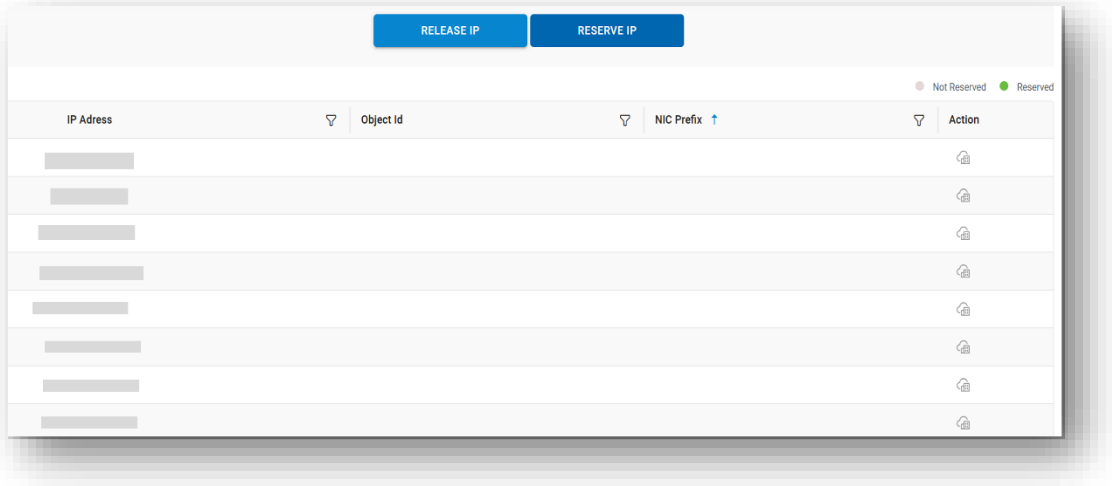


Figure 147 – IP Reserve/Release Details

6. Refer the below table to understand the fields mentioned in the above figure:

Table 14 – IP Reserve/Release Details

Field	Description
IP	List of IP
Is Used	Whether IP is in use or not
Active	Whether IP is in active state
Action	To release the allocated IP, release IP action is available. And to reserve the released IP, reserve IP action is available.
Select	To select multiple IP address for bulk IP release

7. Select checkbox from the IP list.
8. Click Release .
9. A confirmation message appears as below.

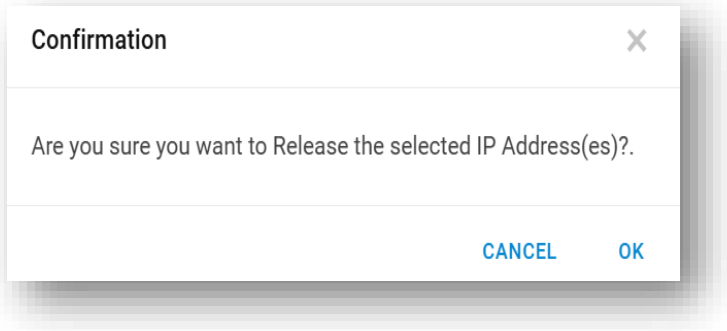


Figure 148 - Confirmation of Release IP

10. Click **Ok** to **Release** or **Cancel** to **Discard** the action.
11. Click **OK**.
12. A success message box appears as below.

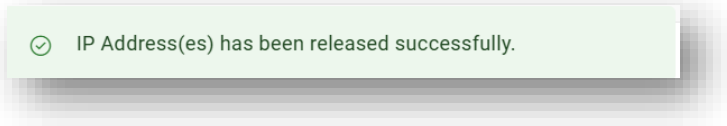


Figure 149 - Success Message

13. Click **Reserve** ( ).
14. A popup box appears as below.

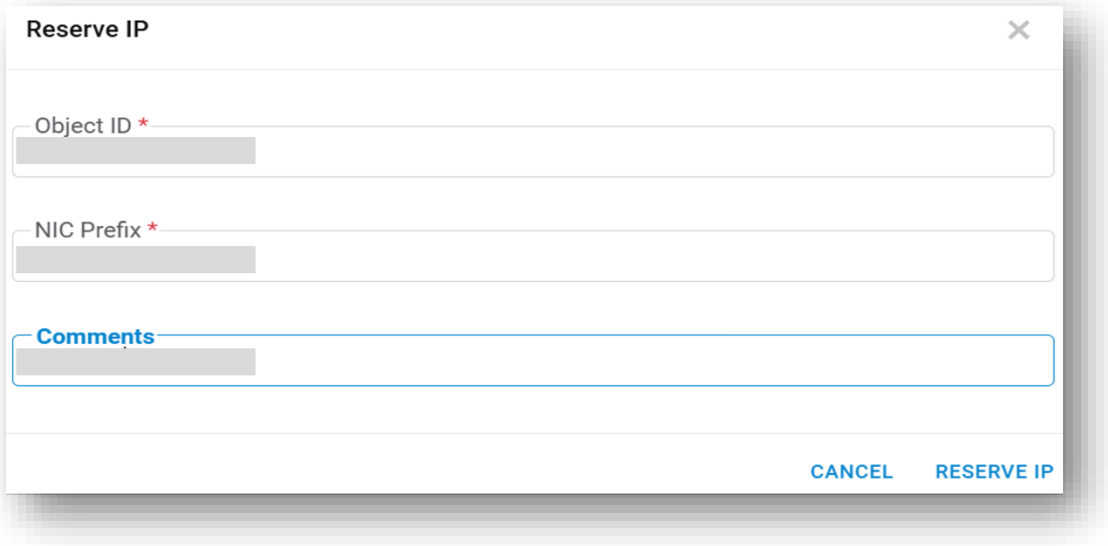


Figure 150 - Popup Box for IP Reserve/Release

15. Enter Object ID, NIC Prefix, and Comments.
16. Click **Reserve** to Reserve the IP or **Close** to close the popup.
17. On clicking **Reserve**, a confirmation message appears as below:

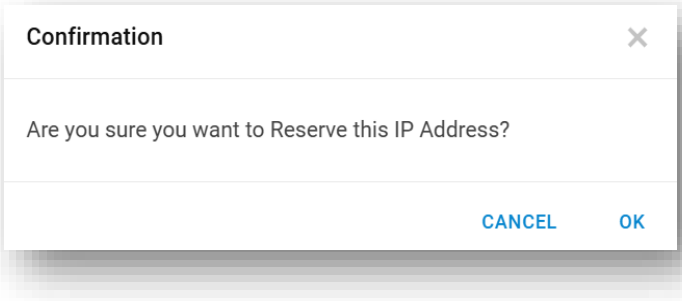


Figure 151 - Confirmation for Reserve IP

18. Click **Ok** to reserve or **Cancel** to discard the action.
19. Click **OK**.
20. A success message box appears as below.

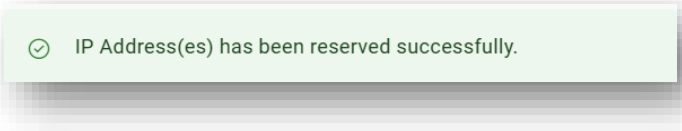


Figure 152 - Success Message for Reserve IP

21. Select multiple IP addresses for bulk IP release.

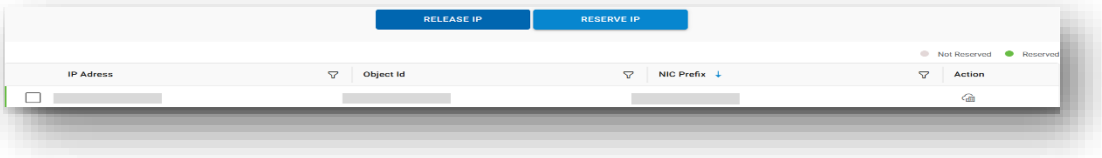


Figure 153 - Success Message for Bulk IP Reserve/Release

22. Click on **Release IP** button.
23. On clicking **Release IP**, a confirmation message appears.
24. Click **Ok** to reserve or **Cancel** to discard the action:
25. A success message box appears as below:

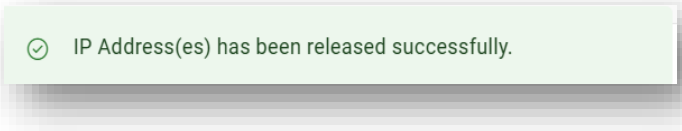


Figure 154 - Success Message for Bulk IP Reserve/Release

1.5.6 Performance

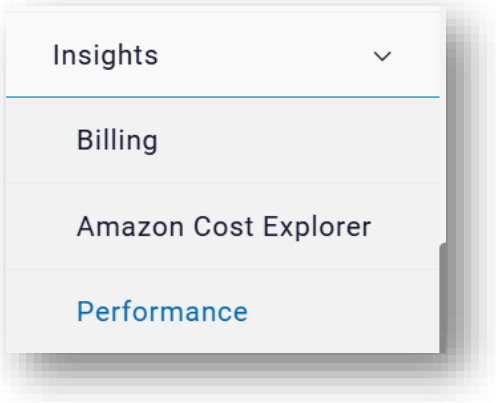


Figure 155 – Performance

This section details the steps to configure performance parameters like CPU utilization, memory utilization, and many more from an endpoint/ cloud platform.

1. On the main menu bar, click **Configuration** and then click Insights and then click **Performance**.
2. It has the following options:

- Add Performance
- View Performance

1.5.6.1 Add Performance

To add configuration, provider user needs to follow the below steps:

1. On the Performance screen, click Configuration.
2. Screenshot below is with reference to azure.

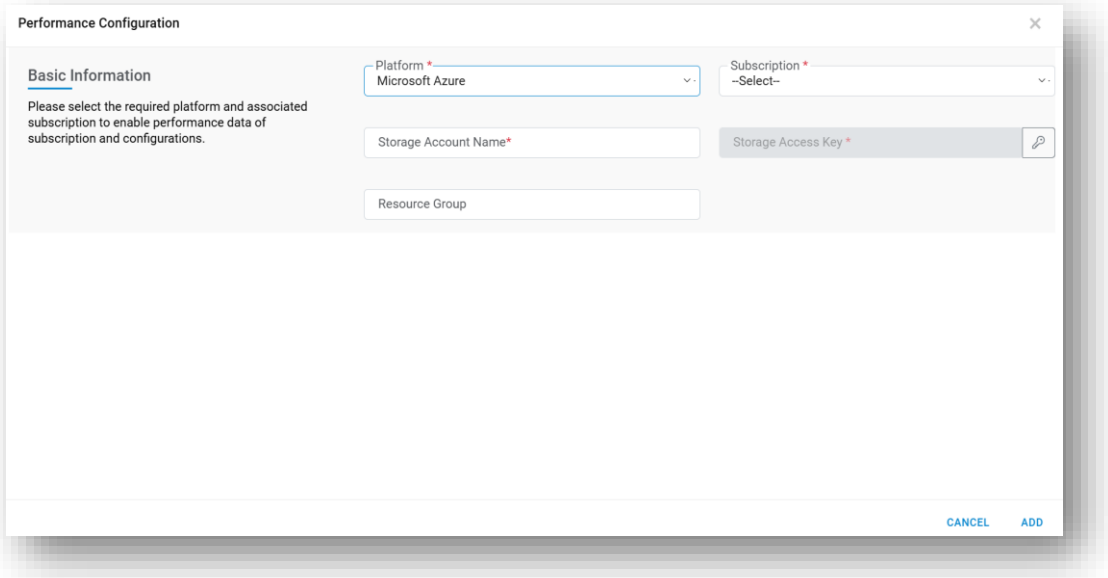


Figure 156 – Add Performance Configuration

3. Refer to the below table to understand the fields mentioned in the above figure:

Table 15 - Add Performance Configuration

Field	Description
Platform	The field lists down the cloud service providers
Subscription	List the endpoints created
Storage Account Name	Name of storage account where performance data needs to be picked
Storage Access Key	Required to access storage account programmatically
Resource Group	Name of the resource group where storage account exists. This is a logical boundary created to manage resources as per their usage

4. Select **Platform**.
5. Select Subscription.
6. Provide Storage Account Name and Storage Access Key.
7. Click Enable Performance.
8. A success message box appears as below:

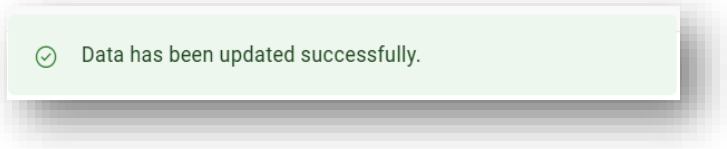


Figure 157 - Add Performance Configuration (Cont.)

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

The mapping is added and gets listed.

1.5.6.2 View Performance

This section lists out all the configurations that have been created by the provider user.

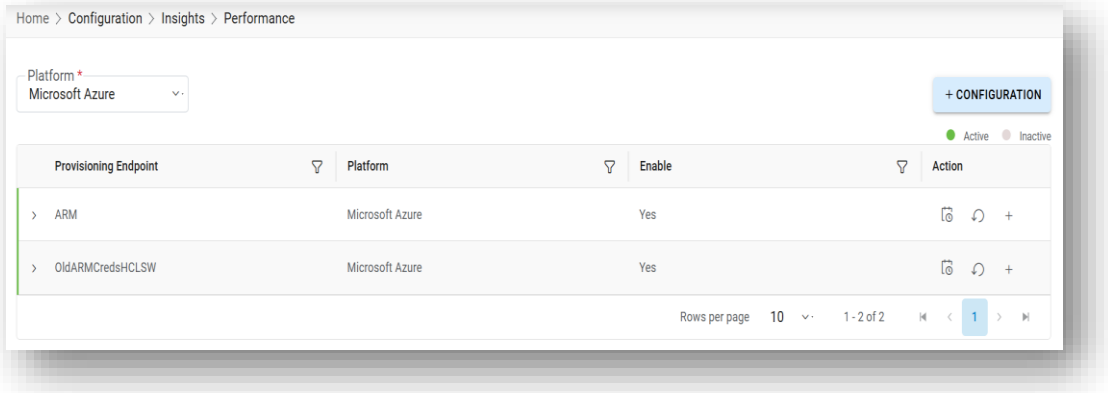


Figure 158 – Performance Configuration

It also comprises of following actions:

- **Change Status ( ):** To change the status of endpoint.
- **Reset Data Collection Start date ( ):** To reinitiate the configurations.
- **Schedule** ( ): To schedule data frequency and max retry count of an existing configuration.

1.5.6.3 Change Status

To edit/modify the assigned mapping of subscription or configuration of performance access key, provider user needs to follow the below steps:

1. On the Performance screen in the grid Action menu.
2. Click **Change Status** ( ) against the configuration that needs to change the status.

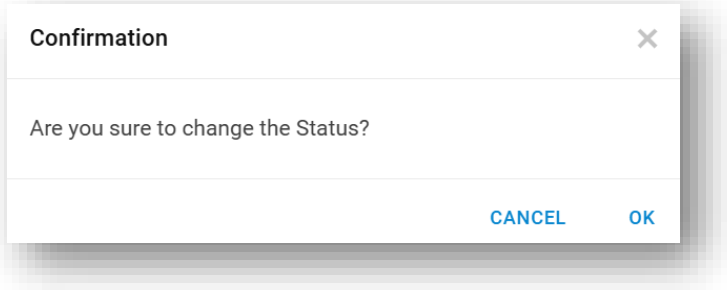


Figure 159 – Change Status Confirmation Box

3. Click OK to change the status and CANCEL to discard.

1.5.6.4 Reset Data Collection Start Date

To reinitiate the performance job. Provider user needs to follow below steps:

1. On The Performance Configuration Screen, in the Action grid menu.
2. Click **Reset Data Collection Start Date** ( ) against the configuration that needs to be reinitiated.
3. Click Ok to accept and Cancel to discard.
4. A success message appears.

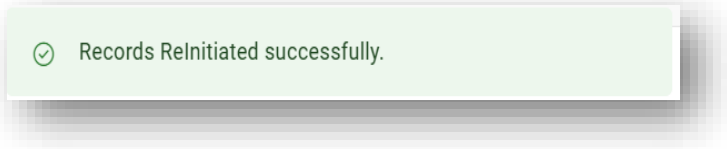


Figure 160 - Reinitiate Mapping

5. Selected configuration reinitiated successfully.

1.5.6.5 Schedule Configuration

To schedule the performance job, provider user needs to follow below steps:

1. On the Performance screen, in grid Action menu.
2. Click **Schedule Configuration** ( ) against the configuration that needs to be scheduled.

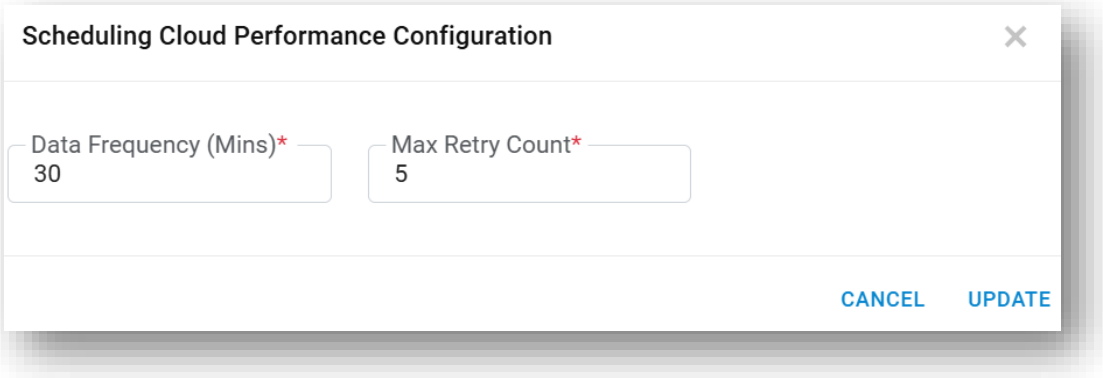


Figure 161 - Schedule Configuration

3. Enter Data Frequency (Mins) and Max Retry Count.
4. Click **Update**.
5. A success message will appear.

1.5.7 Email Tracking

This module helps provider user to manage emails that get triggered as notification for various events like VM Provisioning, VM Customization (Change Size, Disk, Start, Stop), Decommission, Custom Task Execution.

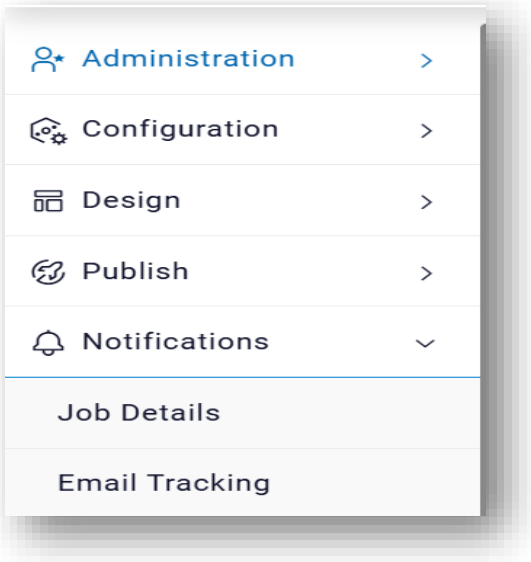


Figure 162 – Email Tracking

1. On the main menu bar, click **Notification** and then click **Email Tracking**.

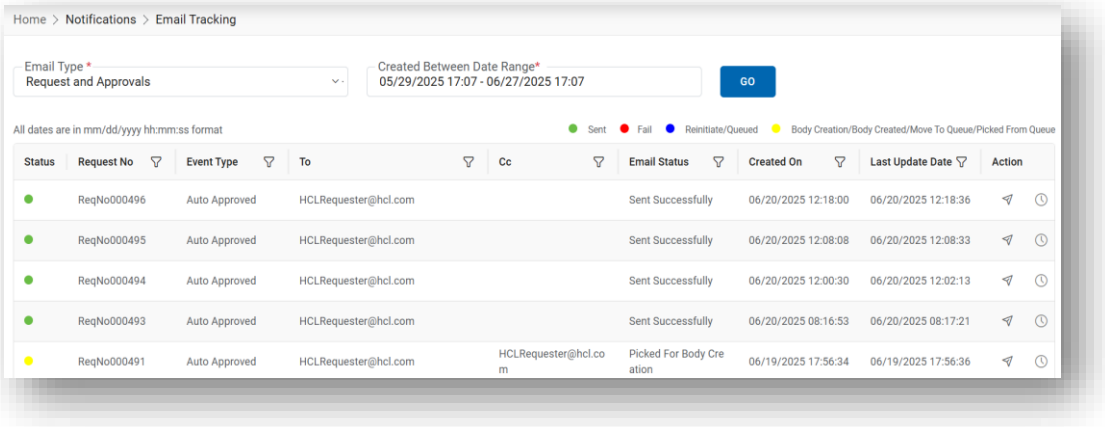


Figure 163 – Email Tracking

2. Refer to the below table to understand the fields mentioned in the above figure:

Table 16 – Email Tracking

Field	Description
Email Type	Type Of Email - Either Approval, Final Intimation or Other
Created Between Date Range	Start Date Range to End Date Range

3. This has following sections:

- View Email
- History

1.5.7.1 Email Tracking List

Through this tab, provider user can view mails which have been triggered by HCL BigFix CLM for various events. To view, provider user needs to follow the below steps,

1. Click View Email.

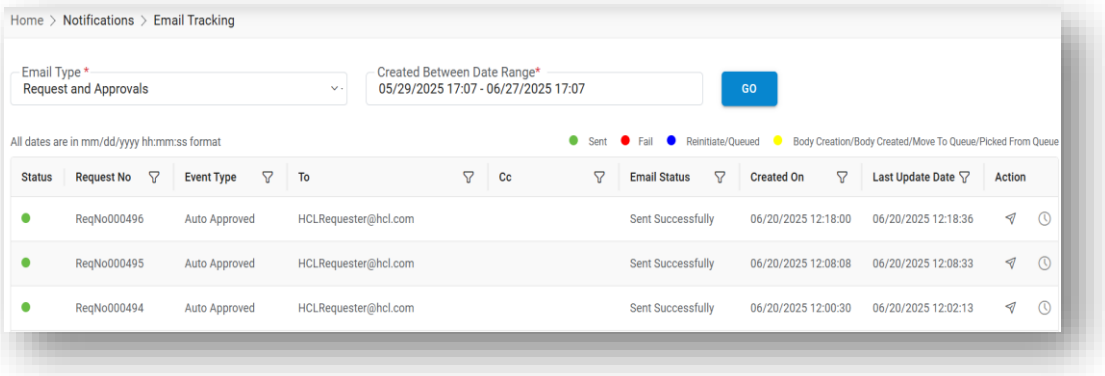


Figure 164 - View Email Tracking

2. Refer to the below table to understand the fields mentioned in the above figure:

Table 17 - View Email Tracking

Field	Description
Email Type	Type Of Email - Either Approval, Final Intimation or Other
Created Between Date Range	Start Date Range to End Date Range

3. Select Email Type.
4. Choose Created Between Date Range.
5. Click **Go.**

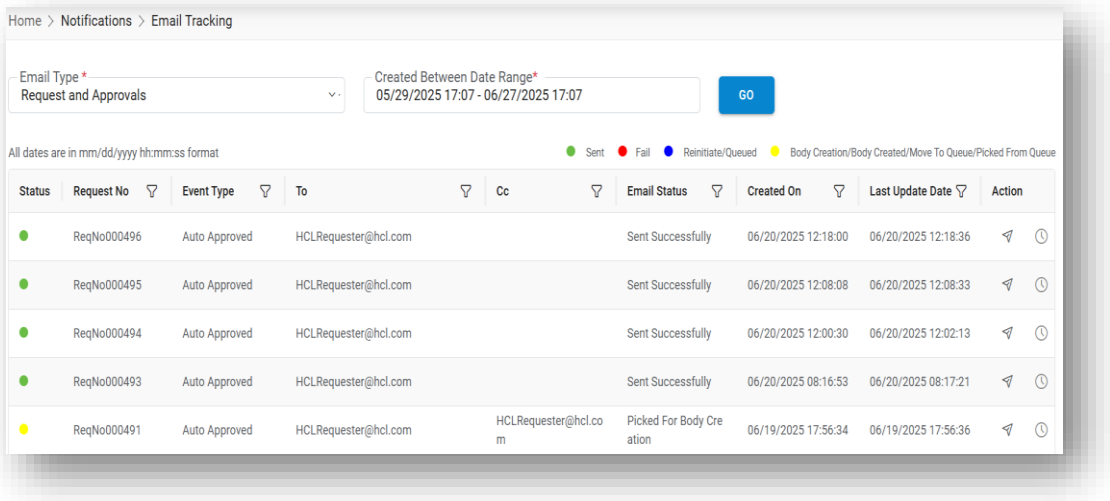


Figure 165 - View Email Tracking (Cont.)

6. Refer to the below table to understand the fields mentioned in the above figure:

Table 18 - View Email Tracking Grid

Field	Description
Request No	Type of Email Either Approval, Final Intimation or Other
Email State	Current Status of The Email.
Event Type	Activity Done Under HCL BigFix CLM Areas Like Approval, Cancel Etc.
Last Updated Date	Last Updated Status of Email
Mail Sent Date	The Date on which Email Sent.
To/CC	Email Recipients
Action	Action On the Email Sent.

7. It also comprises of following actions:

- **Mail Resend** ( ): To resend an already sent email.
- **History** ( ): To check the history of an email.

1.5.7.2 Mail Resend

To resend an already sent email, in case of failure or to get another copy of an already sent email, provider user needs to follow the below steps:

1. Click **Mail Resend** ( ).
2. A confirmation message screen appears.

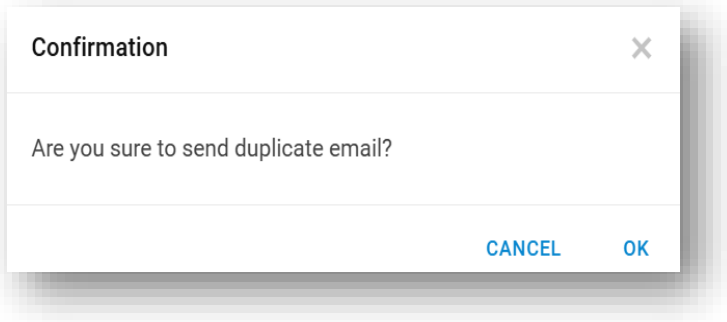


Figure 166 - Confirmation Message (Resend Mail)

3. Click **OK** to resend and **Cancel** to close the screen.
4. A success message appears.

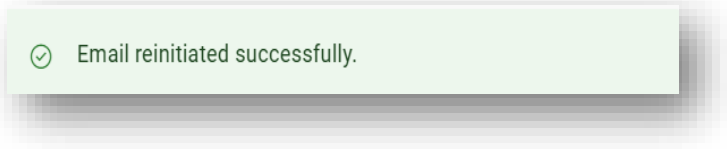


Figure 167 - Success Message (Resend Mail)

1.5.7.3 History

To view the history of an email, provider user needs to follow the below steps:

1. Click **History** ( ).

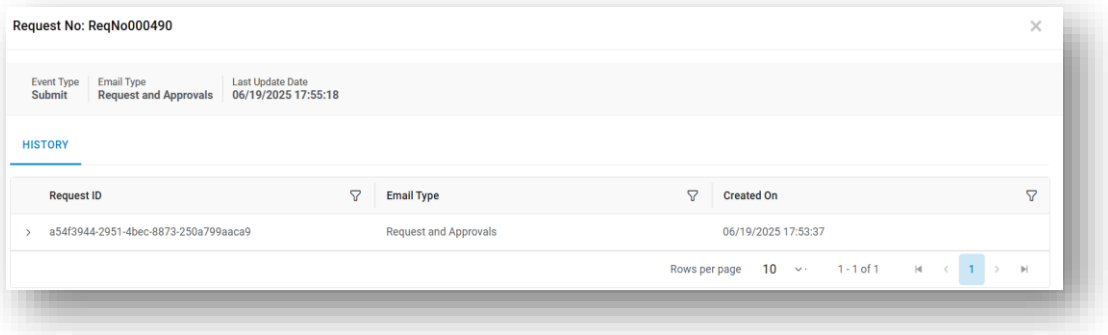


Figure 168 - History Email Tracking

2. Click **Expand icon**(>) to view the detailed logs.

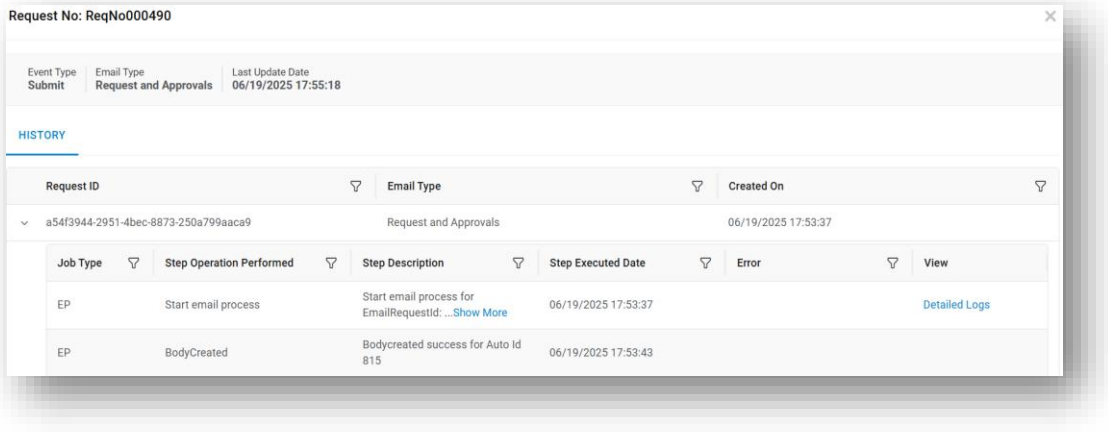


Figure 169 - History Email Tracking (Cont.)

3. Refer to the below table to understand the fields mentioned in the above figure:

Table 19 - Email Tracking History

Field	Description
Job Type	Type of the Job
Step Operation Performed	Steps /operations performed to send an email
Step Executed Date	Date at the time of steps executed
Error	Error details
View	To view detailed log

4. Click on **Detailed Log Link** (Detailed Logs) to check the log in detail.

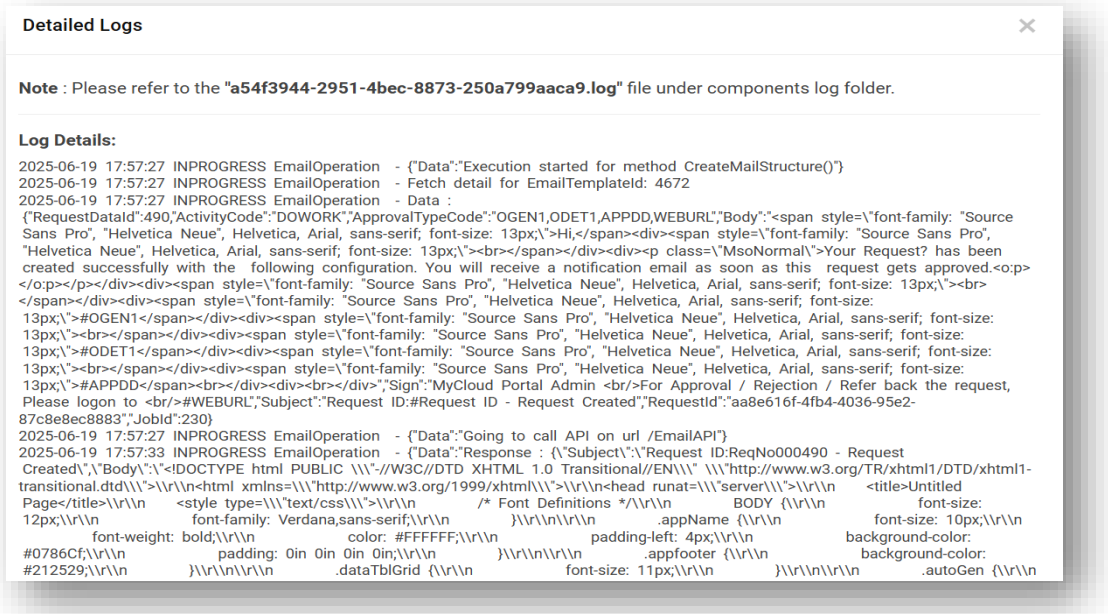


Figure 170 - Detailed Log History (Cont.)

1.5.8 Custom Script

This module helps provider users to manage user defined (custom) scripts in HCL BigFix CLM.

1. In the menu, click on Design, then click Custom Script.

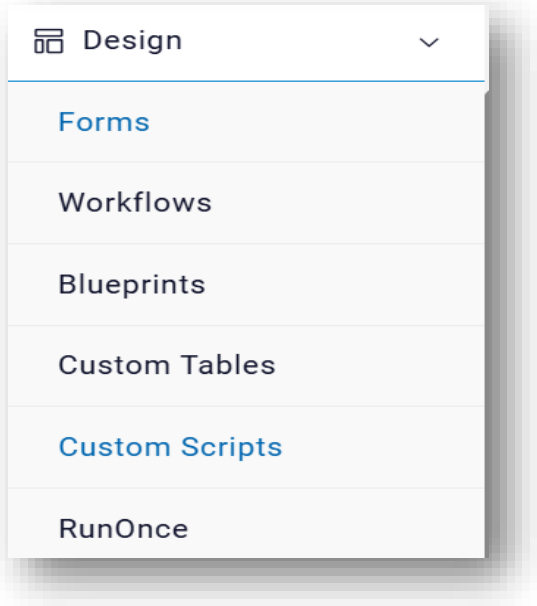


Figure 171 – Custom Scripts

2. Below screen appears.

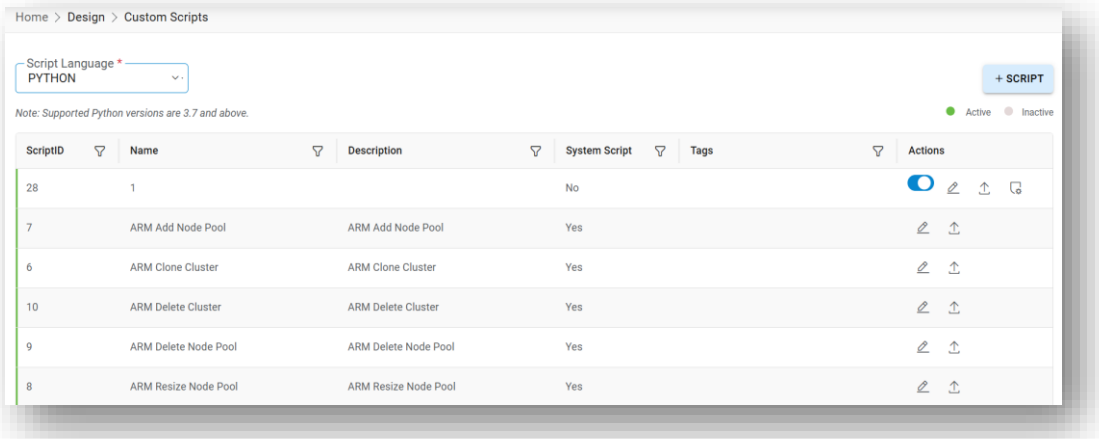


Figure 172 - Custom Script

3. This has the following actions:

- View Script
- Create Script

1.5.8.1 View Custom Script

To view the existing Custom Scripts, provider users need to follow the below steps:

1. Click **Script** Language from dropdown.
2. Below screen appears:

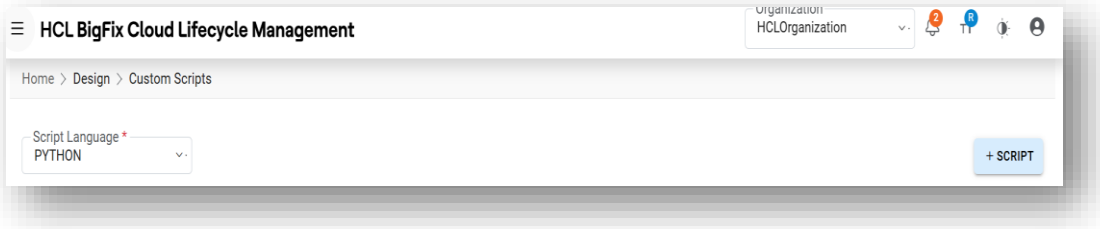


Figure 173 - Custom Script

3. Select Organization and Script Language.

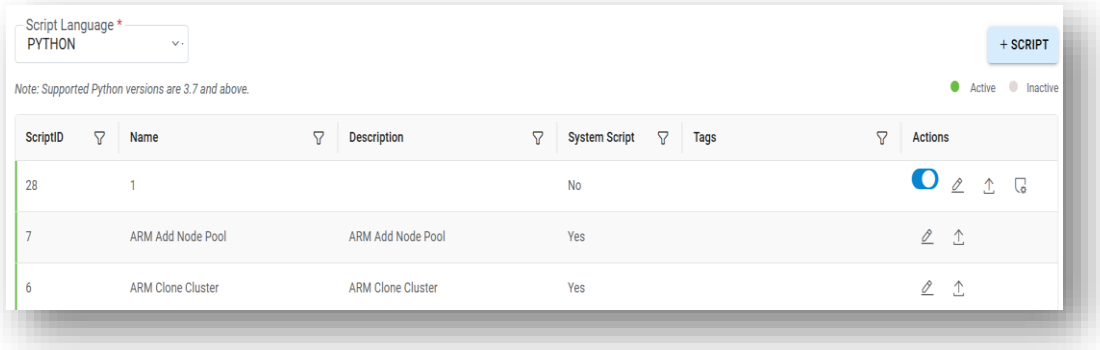


Figure 174 - Custom Script (Cont.)

4. View Script Has Following Actions:

- **Edit** ( ): This Helps to Modify The Existing Custom Scripts
- **Export JSON** ( ): This Helps to Export The Existing Custom Scripts
- **Change Status** ( ): This Helps to Toggle The Existing Custom Script Status
- **Add To Repository** ( ): This Helps to Add The Script In The Master Data

1.5.8.2 Edit Custom Script

To modify /update existing custom scripts, provider user needs to follow the steps below:

1. Click **Edit** ( ).
2. It will route the provider user to the Popup for **Update Script** tab, where user can update **Description**, Script, Script Name and Tags.

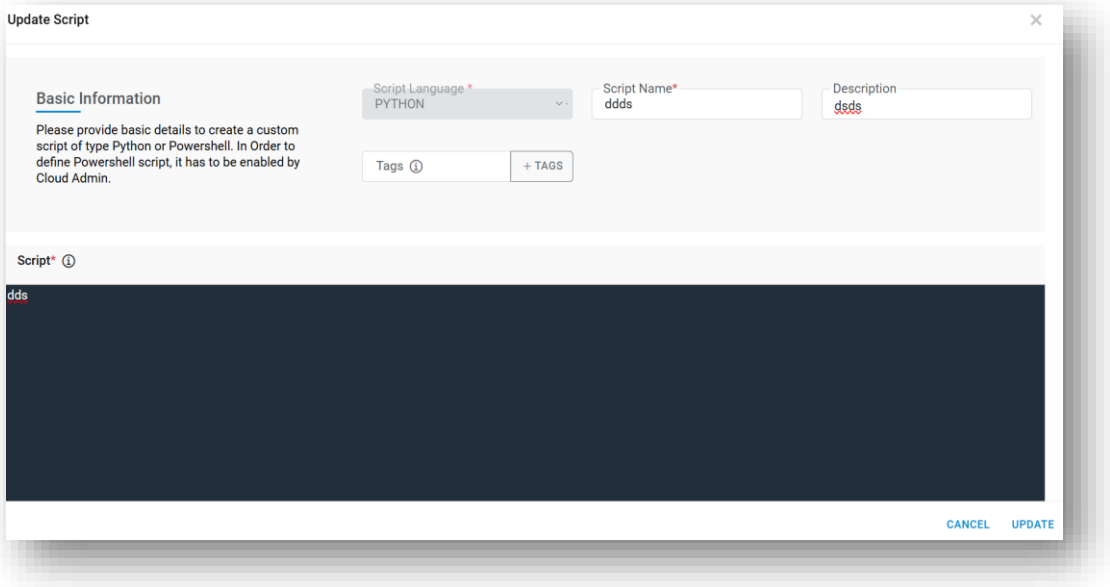


Figure 175 - Edit Custom Script

3. Click **Update**

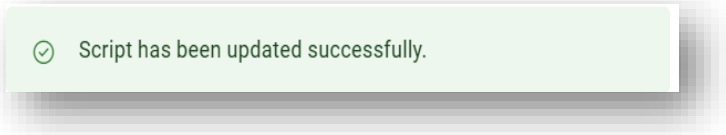


Figure 176 - Success Message Custom Script

1.5.8.3 Change Status

To modify /update existing custom scripts status, provider user needs to follow the below steps:

1. Click Change Status ( ).
2. A confirmation message appears on the screen.

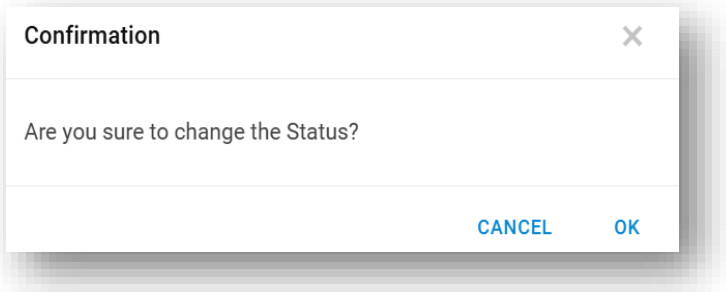


Figure 177 - Confirmation Message

3. Click **OK** to confirm.
4. A success message appears on the screen.

1.5.8.4 Add to Repository

To add existing custom scripts in repository, perform the below steps. This action is applicable only for system scripts.

1. Click on the **Add to Repository** ( ).
2. A confirmation message appears.

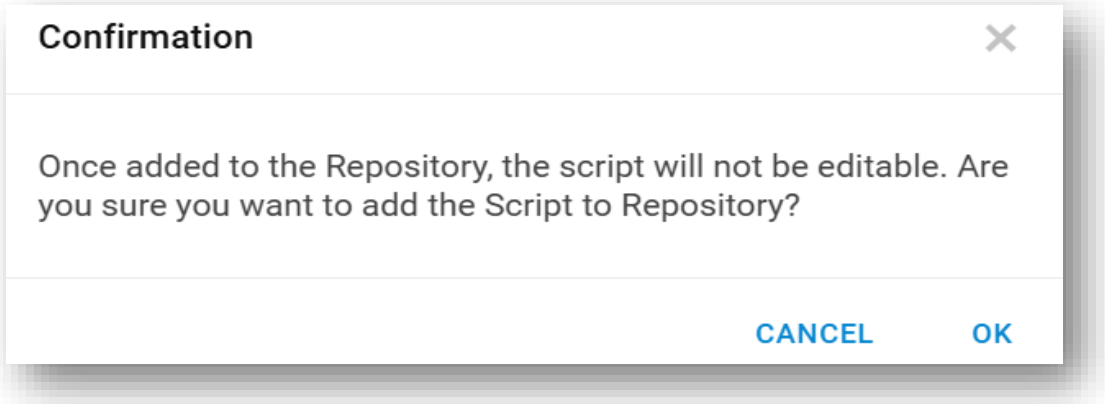


Figure 178 - Confirmation Message

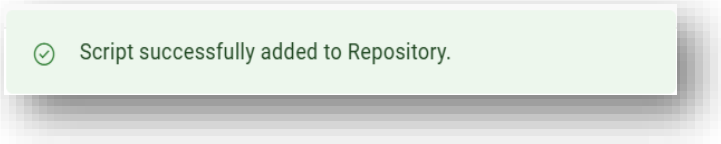


Figure 179 - Success Message

1.5.8.5 Export JSON

To export existing JSON Custom Scripts, the provider user needs to follow the below steps. This action is applicable only for system scripts.

1. Click on the **Export JSON** icon ( ).

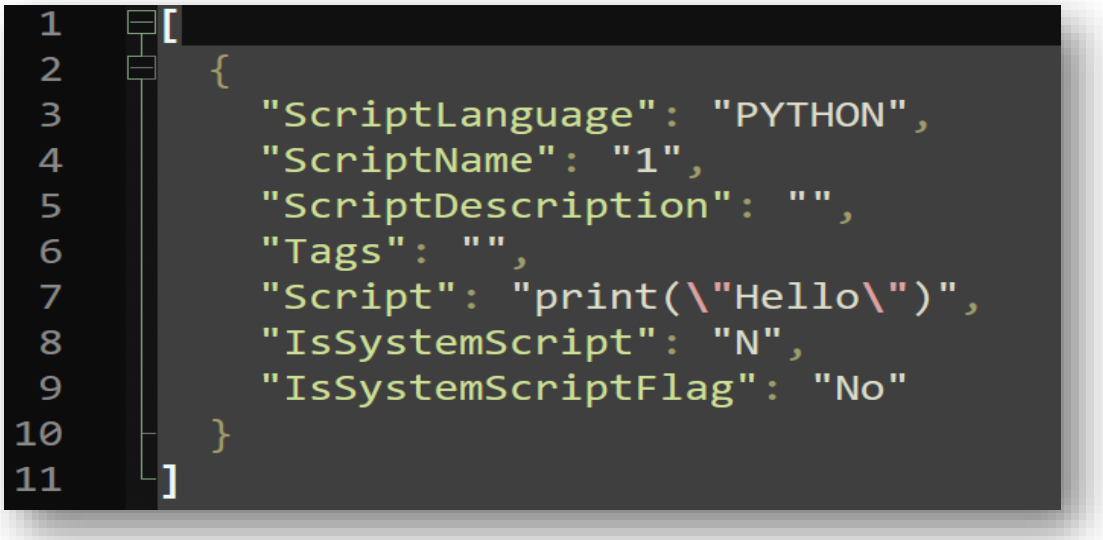


Figure 180 - Export JSON

1.5.8.6 Create Custom Script

To create a new custom script, provider user needs to follow the below steps:

1. Select Script Language.
2. Click on the **+Script** button.
3. The below screen appears:

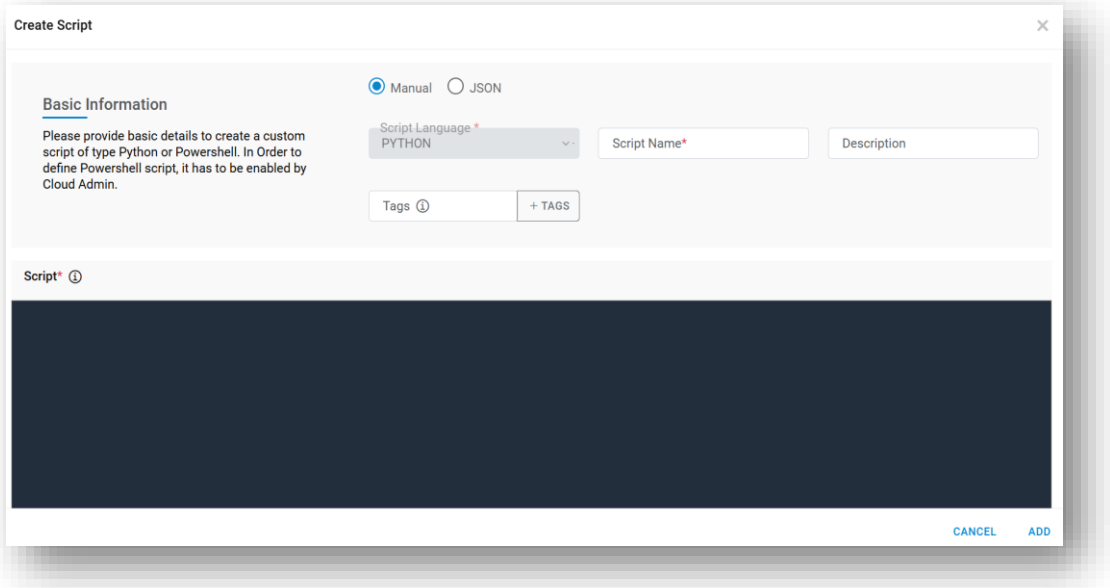


Figure 181 - Create Custom Script

4. Refer the below table to understand the fields mentioned in the above figure:

Table 20 – Create Custom Script

Field	Description
Input Mode	**Manual**: Create script using HCL BigFix CLM. **JSON**: Import existing JSON.
Tags	A Tag is simply a character string added to a **Tags** field in a resource, such as RBAC subscription. Tags will be used to define scope of permission. Objects with same tag will be able to access same tagged resources.
Script Language	Supported Languages HCL BigFix CLM (PowerShell and Python)
Script Name	Unique Name of The Script
Description	Description of the Script
Write Script Here	Write User Defined Script

5. Select Input Mode and Language.
6. Enter Name, Description, Tags, and Script.
7. Click **Add**.

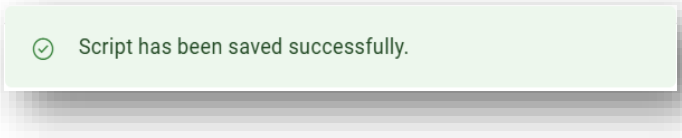


Figure 182 - Success Message Create Script

1.5.9 Action/Scripts

This module helps provider users to schedule the custom scripts. The module will have scripts which were already created in HCL BigFix CLM under the custom script section.

1. On the main menu click Configuration -> Schedules -> click Action/Scripts.

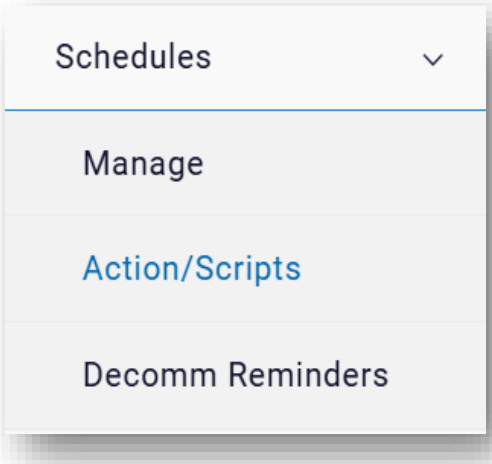


Figure 183 – Action/Scripts

2. The below screen appears.

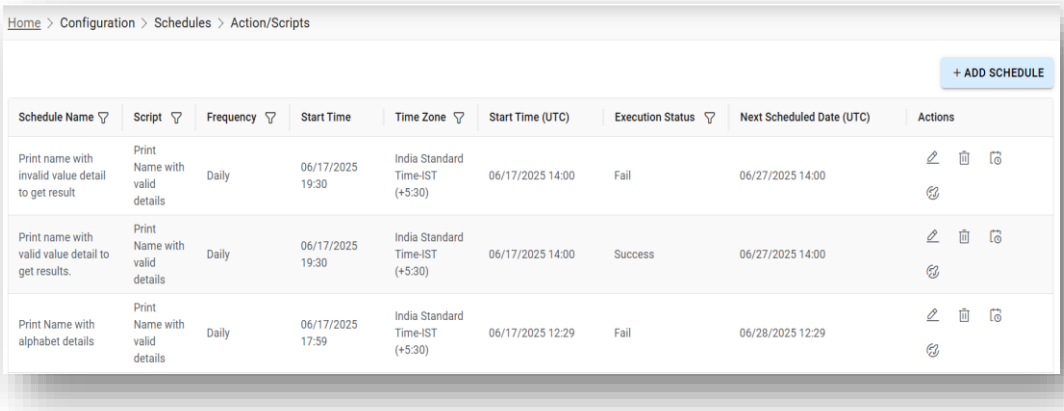


Figure 184 – Action/Scripts

3. It has following tabs:

- View Schedule
- Add Schedule
- Schedule History

1.5.9.1 View Action/Scripts

To view the schedule of existing scripts, provider user needs to follow the below steps:

1. On Action/Scripts Screen.
2. Below screen appears.

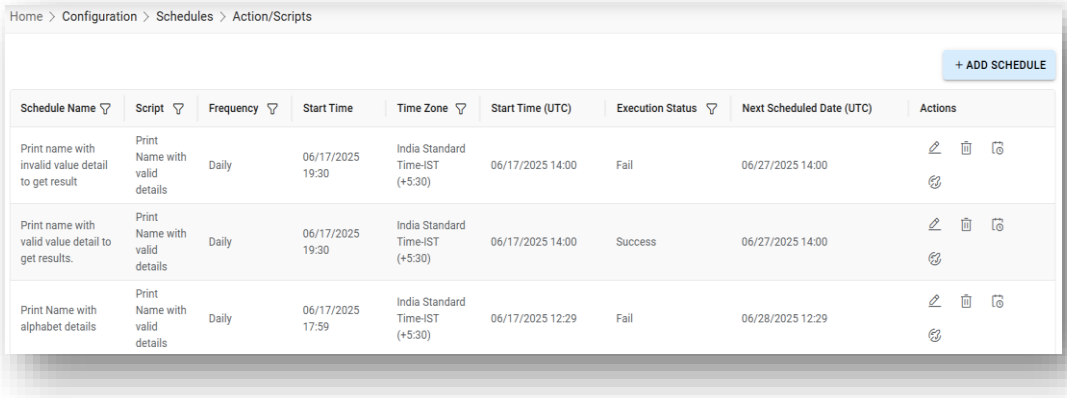


Figure 185 - Script Schedule

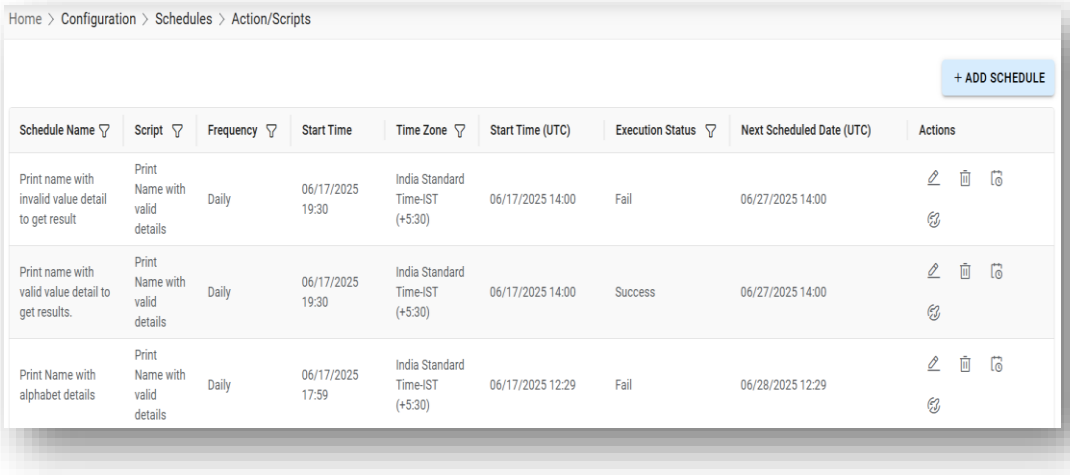


Figure 186 - Script Schedule (Cont.)

3. Refer the below table to understand the fields mentioned in the above figure:

Table 21 - Scripts Schedule

Field	Description
Script	Name of the Script
Name	Unique name of the Scheduled Script
Description	Description of the Script
Frequency	Intervals at which the script can be scheduled
Start Time and Time Zone	From when the script to start and on which time zone
Action	User can take actions like Edit, Delete, and View History
Execution Status	Current Status of the Scheduled Script
Next Scheduled Date	The Date and Time when the schedule will execute in future

4. View Script has following actions:

- **Edit** ( ) : To update /modify the schedule of existing scripts.
- **Delete** ( ) :To delete any schedule of existing scripts.
- **History** ( ) : To view the execution history of a script.
- **Execute Now**( ) : To execute the schedule immediately.

1.5.9.2 Edit Action/Scripts

To update/ modify any schedule of an existing script, provider user needs to follow the below steps:

1. Click **Edit** ( ).
2. It will route the provider user to a Pop Up.

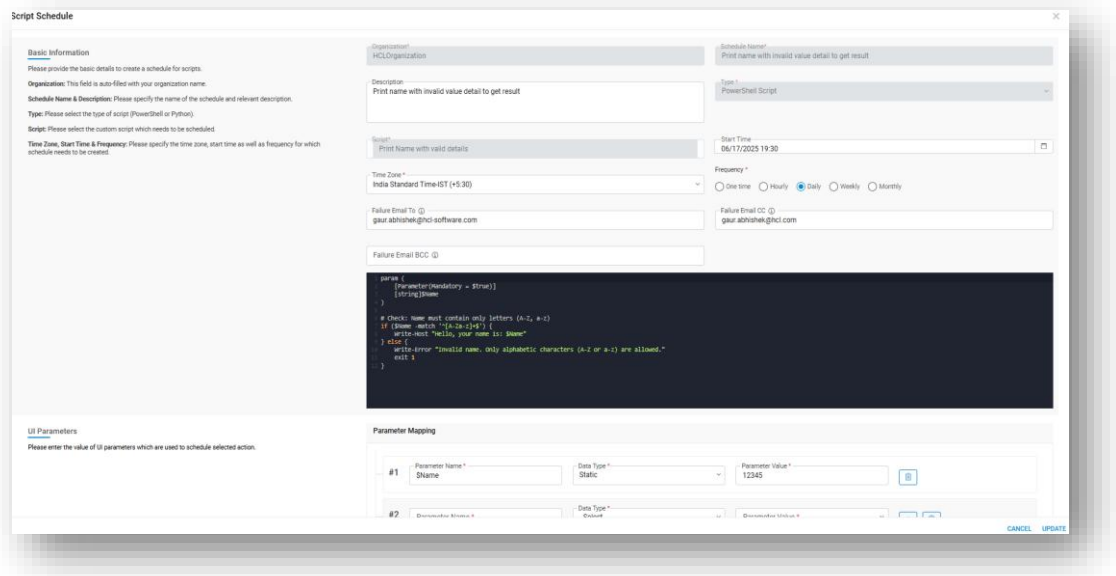


Figure 187 - Script Schedule (Edit.)

3. Modify the fields as per requirements.
4. Click **Update** or **Cancel** to discard the changes. Confirmation messages appear (in case of daily jobs)
5. Click **OK**. A success message appears.

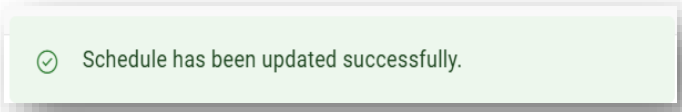


Figure 188 - Success Message Script Schedule (Edit.)

1.5.9.3 Delete Action/Scripts

To delete a schedule, provider user needs to follow the below steps:

1. Click **Delete** ( ).

2. A confirmation message appears.

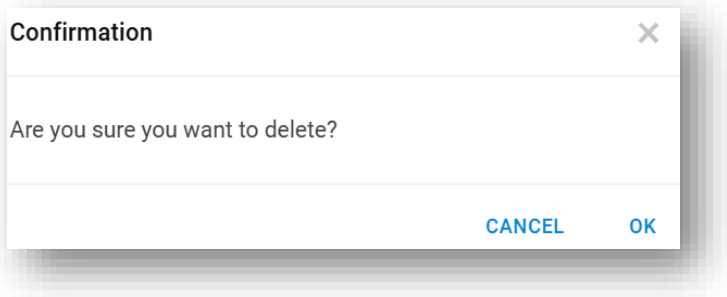


Figure 189 - Confirmation Message Script Schedule (Delete.)

3. Click **OK** to confirm.

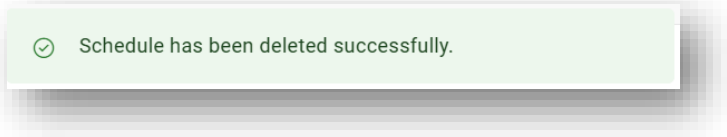


Figure 190 - Success Message Script Schedule (Delete.)

1.5.9.4 Schedule History

To view the execution history of a script, provider user needs to follow the below steps:

1. Click **History** ( ).
2. The below screen appears.

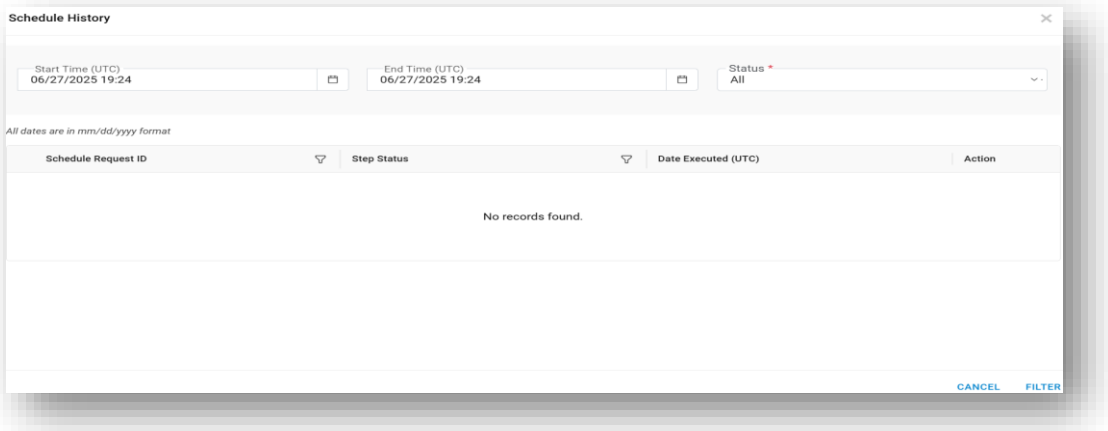


Figure 191 – Schedule History

3. Choose the Start Date (UTC).
4. Choose the End Date (UTC).
5. Choose the **Status**.
6. Click **Filter**.
7. The below screen will appear with detailed execution history of a script.

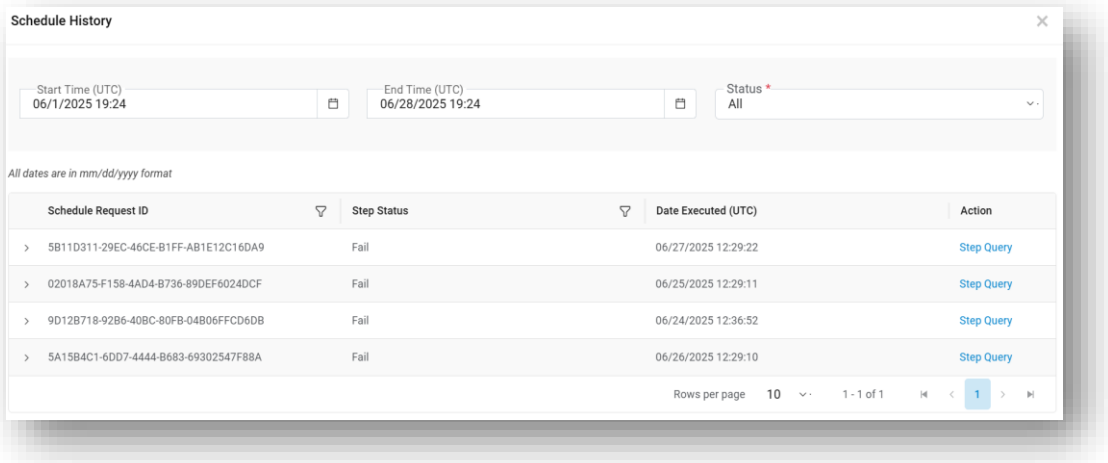


Figure 192 - History

1.5.9.5 Execute Now

To execute schedule now for a script, provider user needs to follow the below steps.

1. Click on the **Execute Now** action.
2. The below message appears.

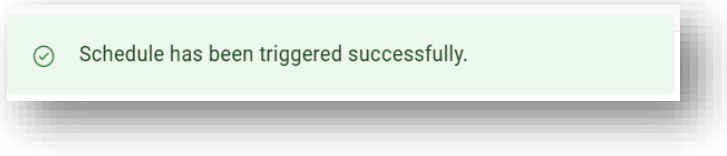


Figure 193 - Manage Script Schedule

1.5.9.6 Add Action/Scripts

To add a new schedule for a script, provider user needs to follow the below steps.

1. Click the +**Add Schedule** tab.
2. The below screen appears.

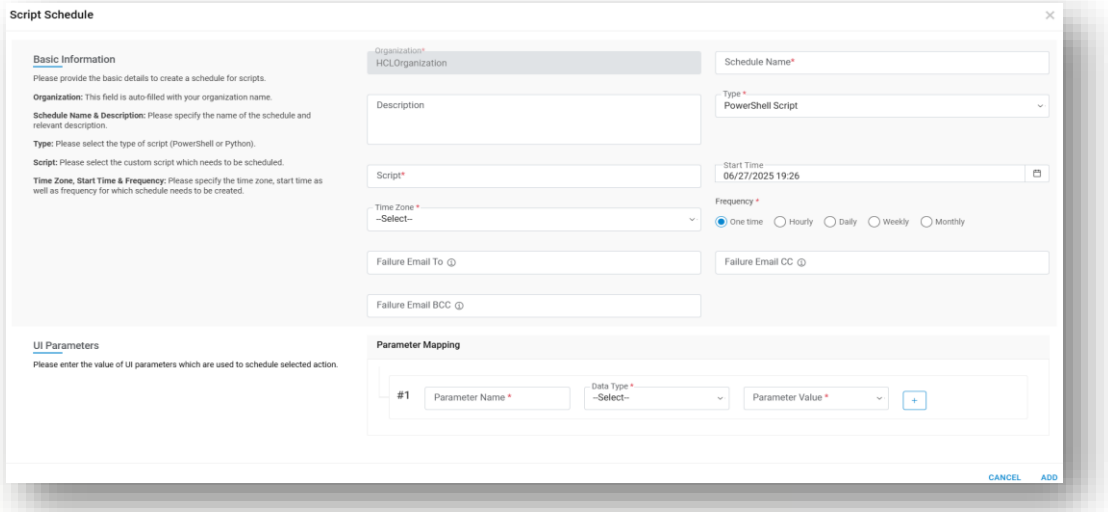


Figure 194 - Create Script Schedule

3. Refer to the below table to understand the fields mentioned in the above figure:

Table 22 -Add Script Schedule

Field	Description
Organization	Name of the HCL BigFix CLM organization
Name	Unique name of the scheduled script
Description	Description of the script
Script	Custom script name.
Frequency	Interval at which the script needs to be scheduled
Start Time and Time Zone	Time from when the script needs to be executed and in which time zone.
Parameter Name	To add dynamic parameter in the script, user can add the name of the parameter through this option.
Data Type	Type of value to that parameter. It can be SQL function, secret key, or static.
Parameter Value	Value of the respected parameter name.
Failure Email To	This field will be used to send "To" Email notification, in case of Task Failure. Please use comma (,) to add multiple emails in this fields.
Failure Email CC	This field will be used to send "CC" Email notification, in case of Task Failure. Please use comma (,) to add multiple emails in this fields.
Failure Email BCC	This field will be used to send "BCC" Email notification, in case of Task Failure. Please use comma (,) to add multiple emails in this fields.

4. Choose Organization, Script & Time Zone.
5. Enter Name & Description.
6. Choose Active, Frequency.
7. Enter **Parameter Name**, **Data Type**, and **Value**. Click **Add** to add in the script.
8. Click **Add**.
9. A success message appears.

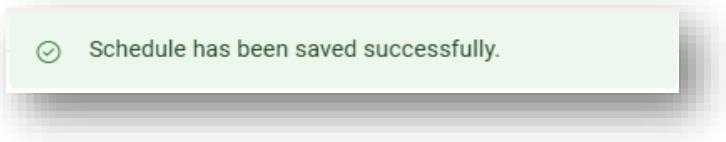


Figure 195 - Success Schedule

1.5.10 Amazon Cost Explorer

This section details the steps to configure the AWS cost explorer.

1. On the main menu bar, click **Configuration**, then click Insights and then click **Amazon Cost Explorer**.

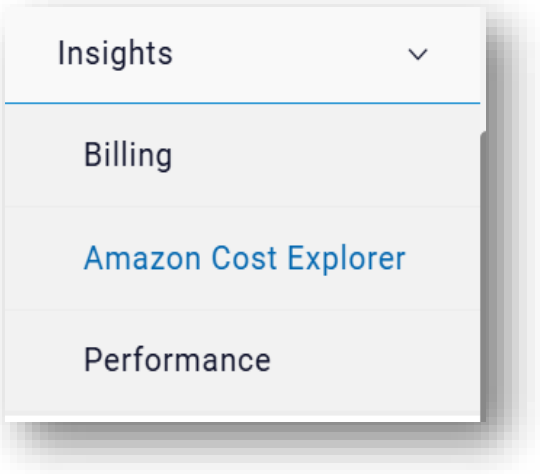


Figure 196 – Amazon Cost Explorer

2. It has the following options:

- Add Configuration
- View Configuration

1.5.10.1 Add Amazon Cost Explorer Configuration

To add configuration, provider user needs to follow the below steps:

1. On the Amazon Cost Explorer screen, click **+Configuration** button.

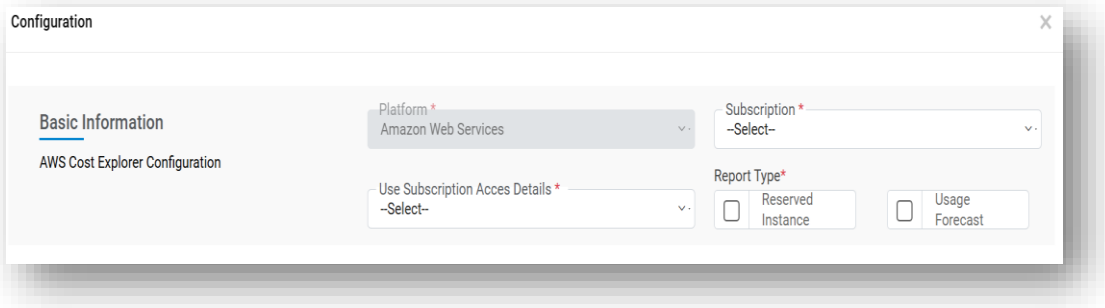


Figure 197 - Add Amazon Cost Explorer Configuration

2. Refer to the below table to understand the fields mentioned in the above figure:

Table 23 - Add Amazon Cost Explorer Configuration

Field	Description
Platform	The field lists down the cloud service provider
Subscription	Lists down the endpoints that were created
Use Subscription Access Details	Select this dropdown as: - **Yes**, if you want to use the same access details as of the subscription, instead of adding new. - **No**, if you want to enter new account access details like account ID,

	access key & secret key.
Report Type	Type of the report, which the user wants for this configuration

3. Select **Platform**.
4. Select Subscription.
5. Select **Use Subscription Access Details** (By default, it is Yes).
6. Select Report Type.
7. Click **Save**.
8. A success message box appears as below:

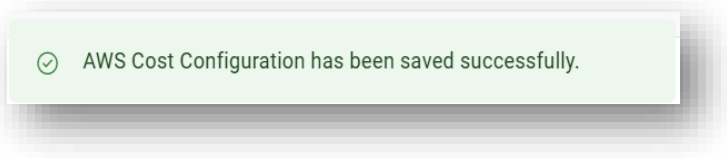


Figure 198 - Add Amazon Cost Explorer Configuration (Cont.)

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

9. The configuration is added successfully.

1.5.10.2 View Amazon Cost Explorer

This section lists out all the configurations that have been created by the provider user.

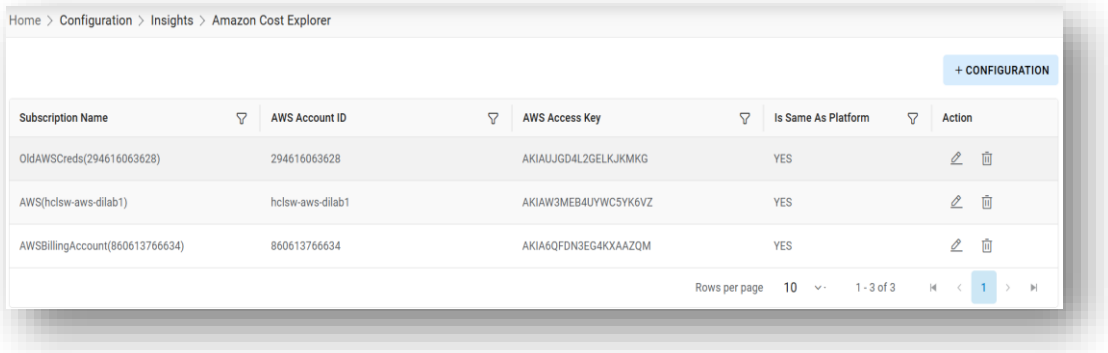


Figure 199 - View Amazon Cost Explorer

It also comprises of following actions:

- **Edit** ( ): To modify the details of existing configurations.

1.5.10.3 Edit Amazon Cost Explorer Configuration

To edit/ modify the existing configuration, provider user needs to follow the below steps:

1. Click **Edit** ( ) against the configuration that needs to be edited.

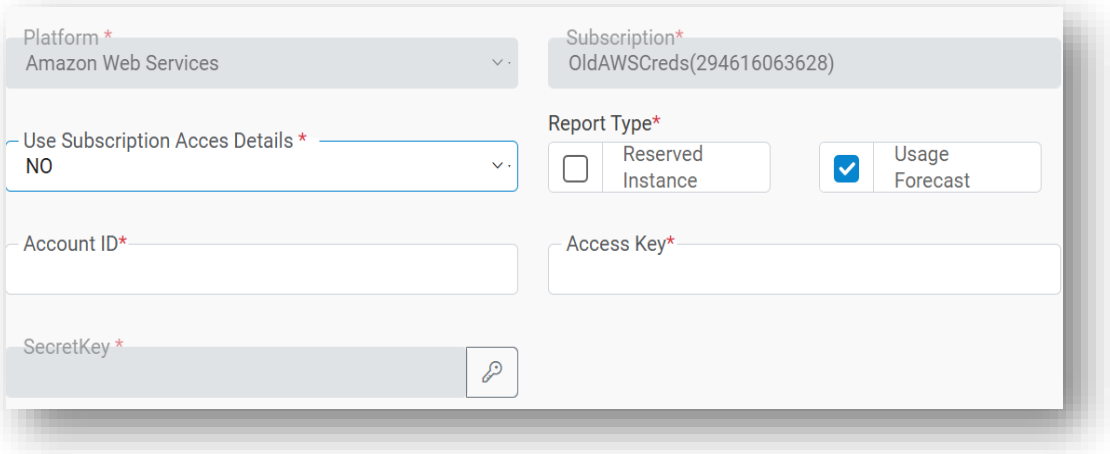


Figure 200 - Edit Configuration

2. Select **Platform**.
3. Select Subscription.
4. Select Use Subscription Access Details as Yes/No.

- **Yes** – The access details of subscription will be used.
- **No** – The user can edit Account ID, Access Key & Secret Key

5. Select Report Type.
6. Click **Update** to save the changes.
7. A success message box shown as below:

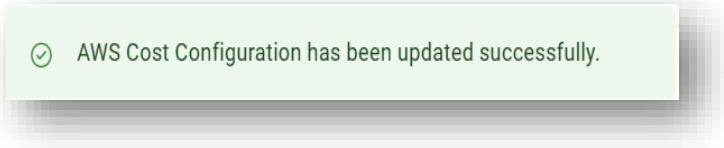


Figure 201 - Edit Configuration

1.5.10.4 Delete Amazon Cost Explorer Configuration

To delete the existing configuration, provider user needs to follow the below steps:

1. Click **Delete** ( ) against the configuration that needs to be deleted.
2. A confirmation message appears.

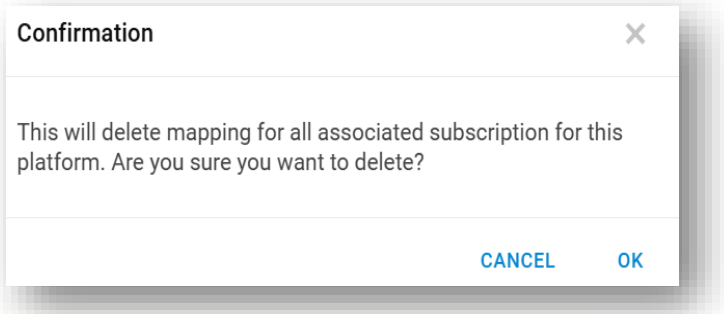


Figure 202 - Confirmation Message

3. A success message appears.

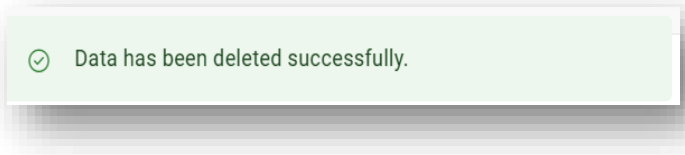


Figure 203 - Success Message

1.5.11 Objects

Objects are native resources that are managed through HCL BigFix CLM and synced from underlying infrastructure which get assigned to end users by provider user.

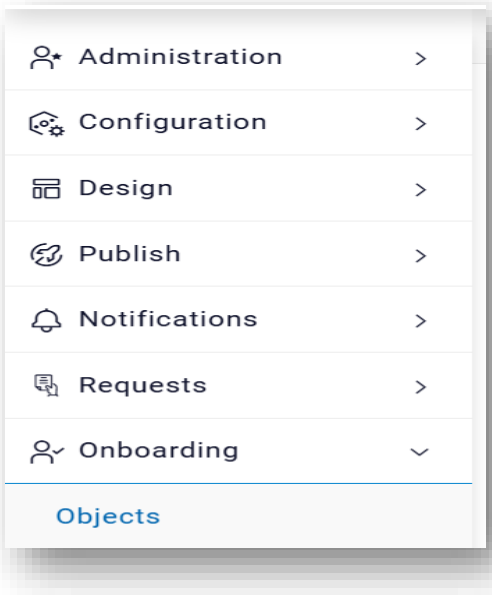


Figure 204 – Objects

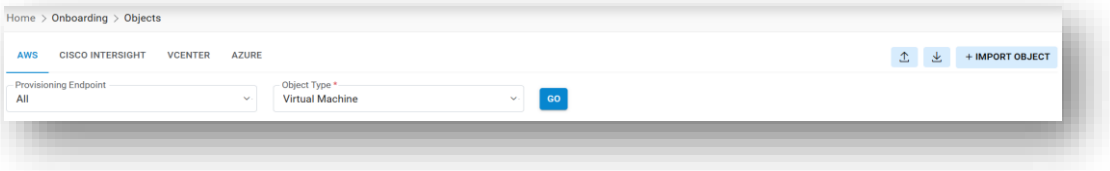


Figure 205 - Import Objects

1.5.11.1 View Objects

To view objects for specific customers, provider needs to follow the steps below:

1. On the main menu bar, click **Onboarding** and then click **Objects**.
2. Select Organization and Platform from tab.
3. Select Provisioning Endpoint and Object Type.
4. Click **Go**.

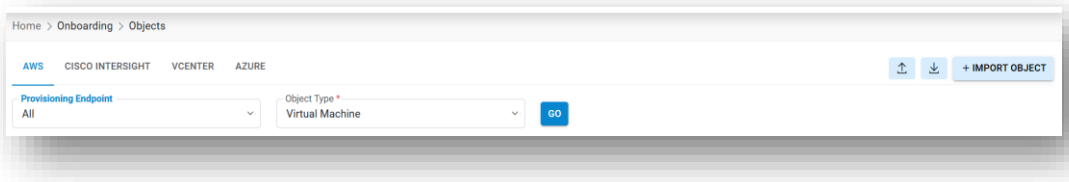


Figure 206 - View Objects

5. The below screen appears.

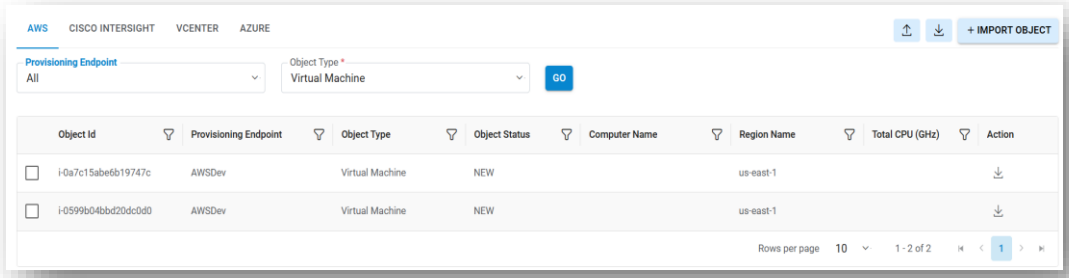


Figure 207 - View Objects (Cont.)

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

1.5.11.2 Import Objects

To import any object, provider user needs to follow the below steps:

1. Click **Import** in Action column of grid ( ).
2. The below pop-up will appear on the screen.

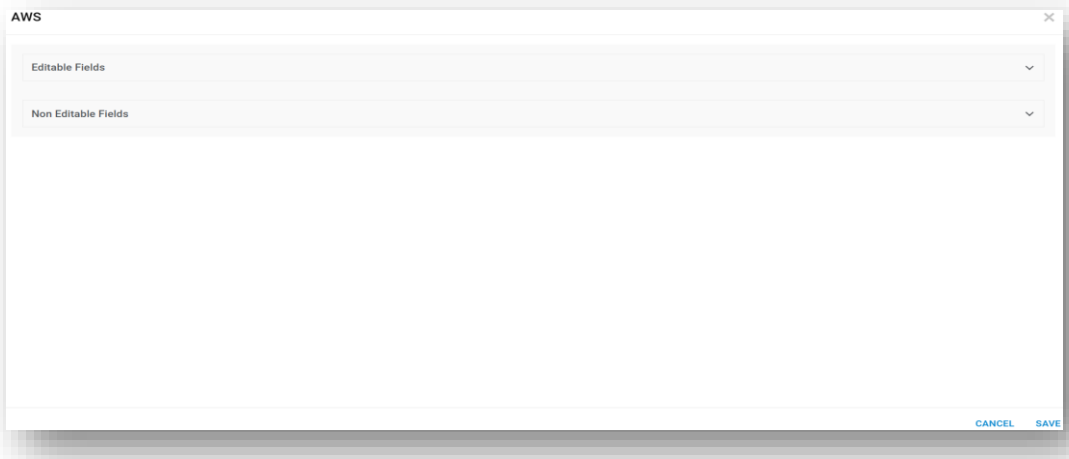


Figure 208 - Import Objects

3. Click **Expand icon** (>) to expand to enter all the mandatory fields to import CI.
4. Master configuration of CI columns has been done from **CI Columns Configuration** screen.

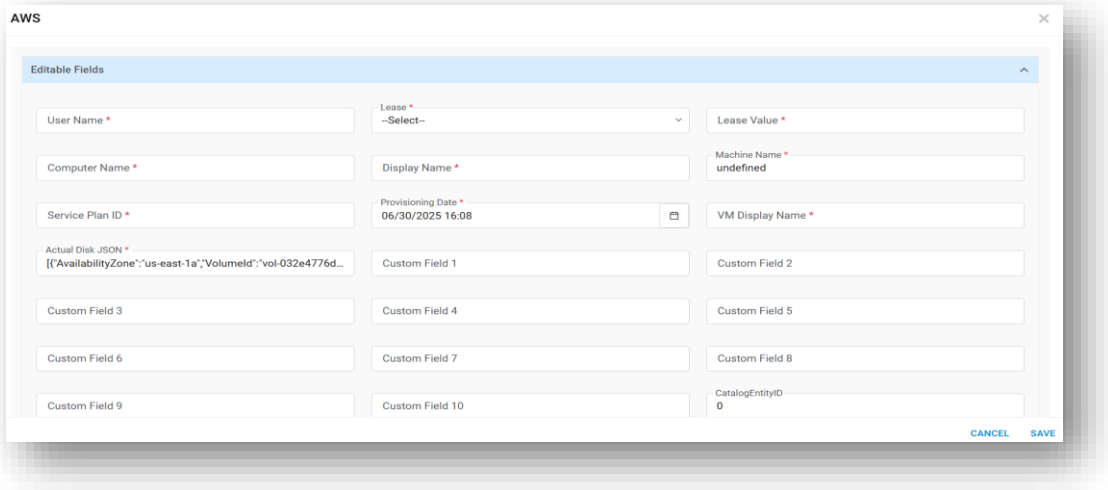


Figure 209 - Import Objects

5. Click **Save.**

1.5.11.3 Upload Objects

1. To upload the CI from HCL BigFix CLM screen, click on the **Import Object** button.

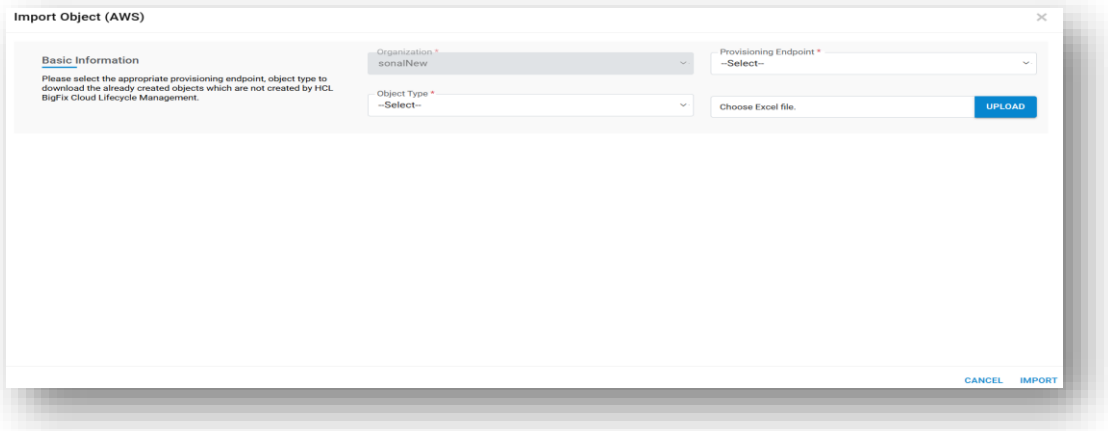


Figure 210 - Import Objects

2. Select Organization, Platform, Provisioning Endpoint, and Object Type.
3. Choose Upload File.

1.5.12 Reports

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

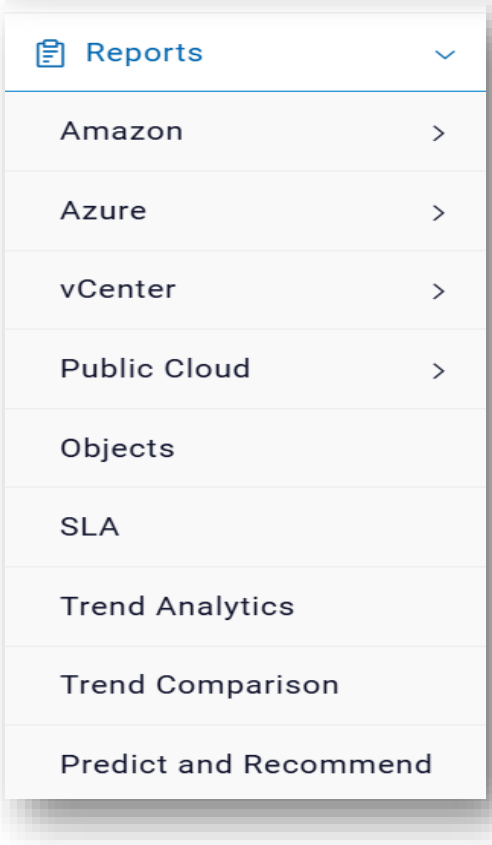


Figure 211 – Reports

2. The drop-down appears with the following options:

- **Billing:** Displays the resource usage and consumption report associated with cost. User can further drill down the reports, extending from subscription level to resource level.
- **Resource Detail**: Shows the data of underlying infrastructure resources synced with HCL BigFix CLM.
- **Request Task Management**: Provide the detailed task wise execution status of requests placed by an end-user.
- **ITSM Request Tracking:** Displays the ITSM task execution status associated with each request.
- **Request Tracking**: To track request and its tasks status associate with each request.
- **Amazon Monthly Billing Analysis**: Displays AWS resource usage and consumption report based on months.
- **Annual Billing Analysis**: Displays annual consumption of public cloud resources.
- **Service Usage Report**: This report displays the usage of various Azure services.
- **Service Billing:** This report displays the usage of various Amazon services.
- **Objects Report**: Provider User can track CI object using this report.
- **SLA Report**: This report displays the SLA status associated with each task and the time frame in which it is completed.
- **vCenter Dashboard Report**: This report displays vCenter related Cluster, Host, Data Store, VM and Resource Pool Information in graphical, textual and numerical format.

- **vCenter Performance Report**: This report of vCenter which shows hierarchal data in textual and graphical format.
- **Billing Analyzer:** This report displays billing information for specific cloud platform and subscription based on months.
- **Predict & Recommendation:** Enables cost optimization and resource utilization by analyzing the past usage patterns & recommending the most optimal resource types on AWS and Azure.

1.5.12.1 Annual Billing Analysis

This report gives a comparison of expenses of cloud subscription for the last 12 months. Tag filters can be used to narrow down search.

To view the billing analysis report, provider user needs to follow the below steps:

1. On Menu click **Reports,** then click **Public Cloud** and select Annual Billing Analysis.

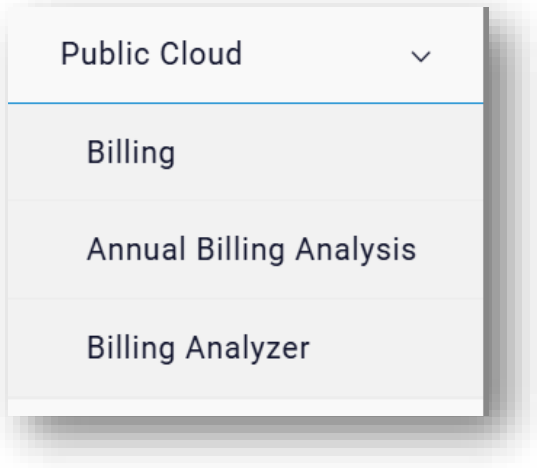


Figure 212 – Annual Billing Analysis

2. Select Provider, Platform, Subscription, Tag Name, and Tag Value from drop-down.
3. Click Go.

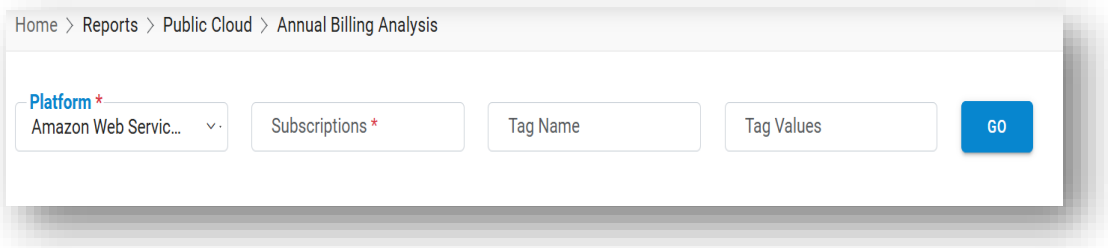


Figure 213 - Annual Billing Analysis

4. The following screen appears:

Figure 214 - Annual Billing Analysis (Cont.)

1.5.12.2 Azure Service Usage Report

This report gives service wise billing for all Azure accounts or specific Azure account for specific months' range. Filters can be used to narrow down search.

To view the Azure service usage report, provider user needs to follow the below steps:

1. On Menu click Reports, the click Azure and select Service Usage.

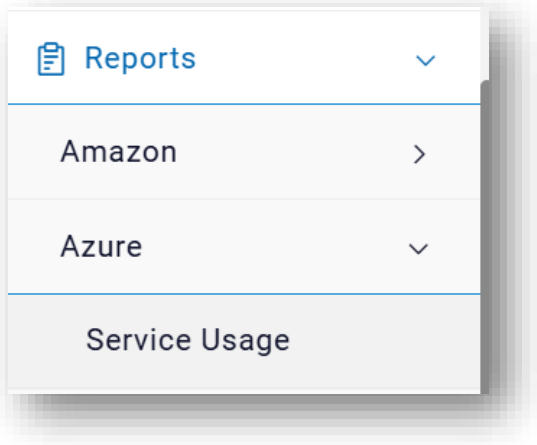


Figure 215 – Azure Service Usage

2. Select Subscription.
3. Select From Months and To Months.
4. Click Go.

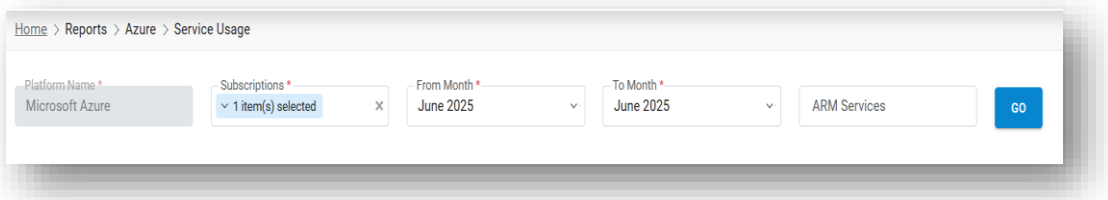
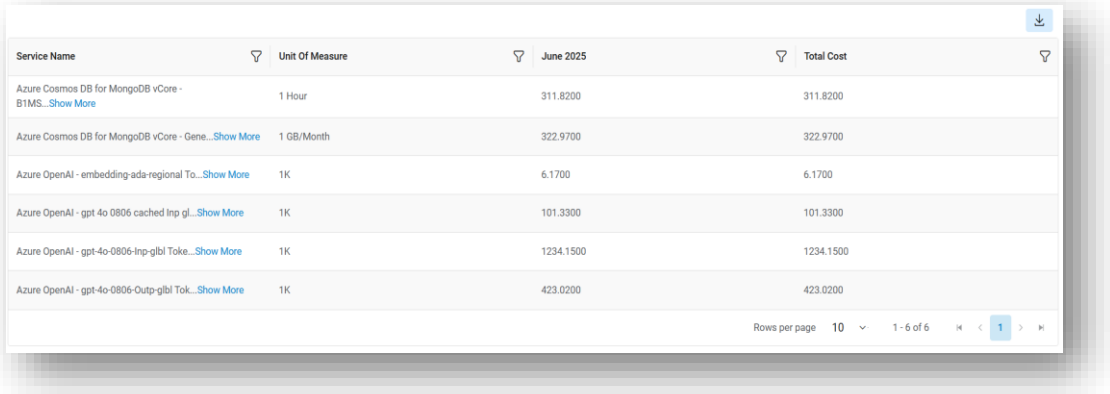


Figure 216 - Azure Service Usage Report

5. The following screen appears:



Service Name	Unit Of Measure	June 2025	Total Cost
Azure Cosmos DB for MongoDB vCore - B1MS...Show More	1 Hour	311.8200	311.8200
Azure Cosmos DB for MongoDB vCore - Gene...Show More	1 GB/Month	322.9700	322.9700
Azure OpenAI - embedding-ada-regional To...Show More	1K	6.1700	6.1700
Azure OpenAI - gpt 4o 0806 cached Inp gl...Show More	1K	101.3300	101.3300
Azure OpenAI - gpt-4o-0806-Inp-glbl Toke...Show More	1K	1234.1500	1234.1500
Azure OpenAI - gpt-4o-0806-Outp-glbl Tok...Show More	1K	423.0200	423.0200

Rows per page 10 1 - 6 of 6 1

Figure 217 - Azure Service Usage Report (Cont.)

1.5.12.3 Amazon Service Usage

This report gives service wise billing for all AWS accounts or specific AWS account. Filters can be used to narrow down search.

To view the amazon service report, provider user needs to follow the below steps:

1. On Menu, click Reports, then click **Amazon and** then select Service Usage.

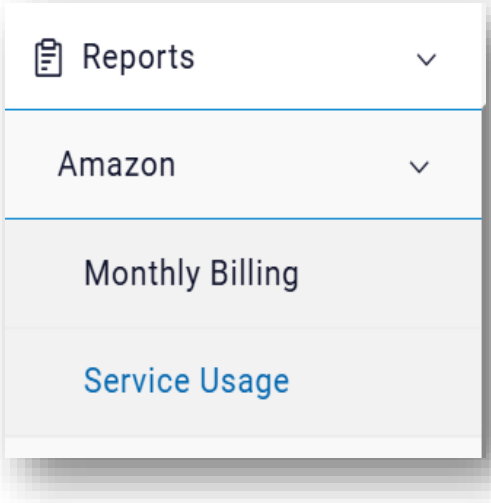


Figure 218 – Amazon Service Usage

2. Select Subscription.
3. Select **To Months**.
4. Click Go.

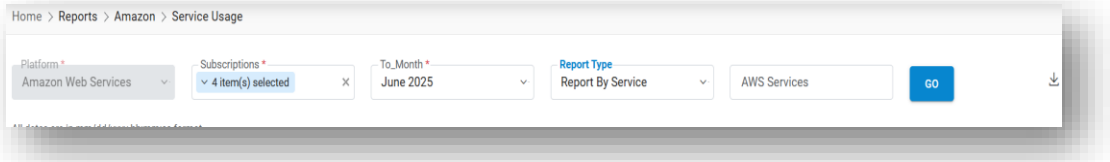


Figure 219 - Service Usage

5. The following screen will appear:

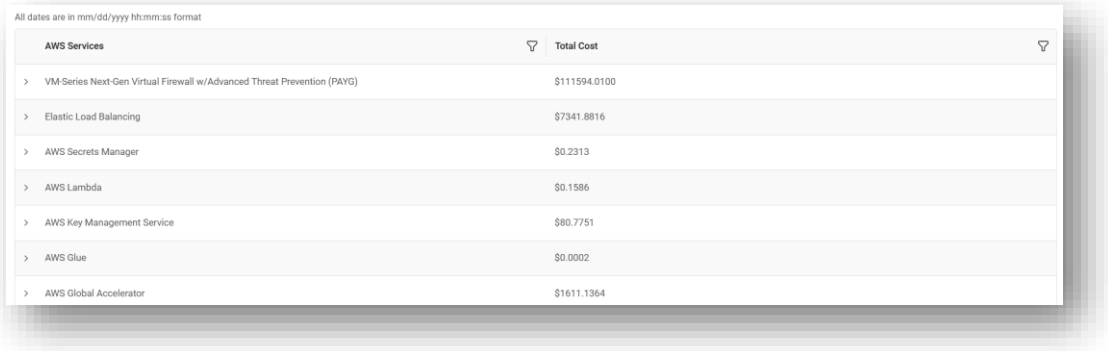


Figure 220 - Service Usage (Cont.)

6. Click **Expand icon** (>) to expand the selection.
7. The data will appear in tabular format.

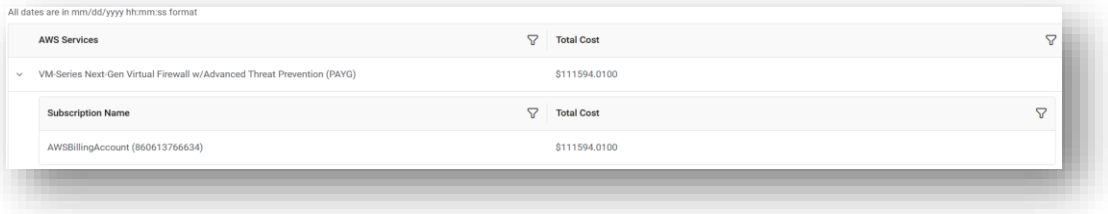


Figure 221 – Service Usage (Contd.)

1.5.12.4 Billing

This report gives a list of the billed usage details. User can drill down the data up to resource level. Filter's options are also available to narrow downs the data.

To view the **Billing** report, provider user needs to follow the below steps:

1. On Menu click Reports, then click **Public Cloud** and select **Billing**.

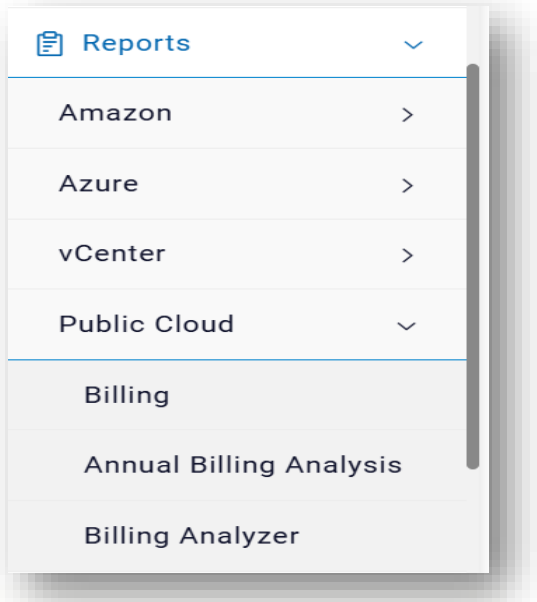


Figure 222 – Billing

2. Select Platform & Subscription.

3. Select **Months** and **Year**.
4. Select **Tags**.
5. Click Go.
6. The following screen appears.

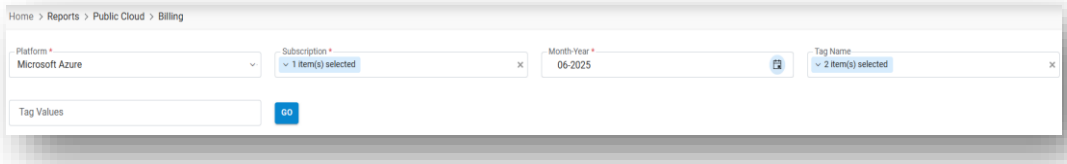


Figure 223 - Billing

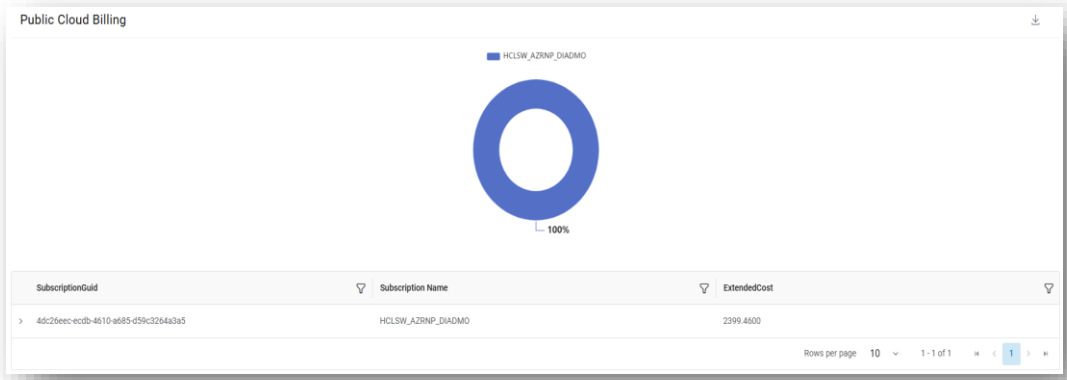


Figure 224 - Billing (Cont.)

7. On clicking of **Expand** (>) button, it displays account information.
8. The following screen appears.

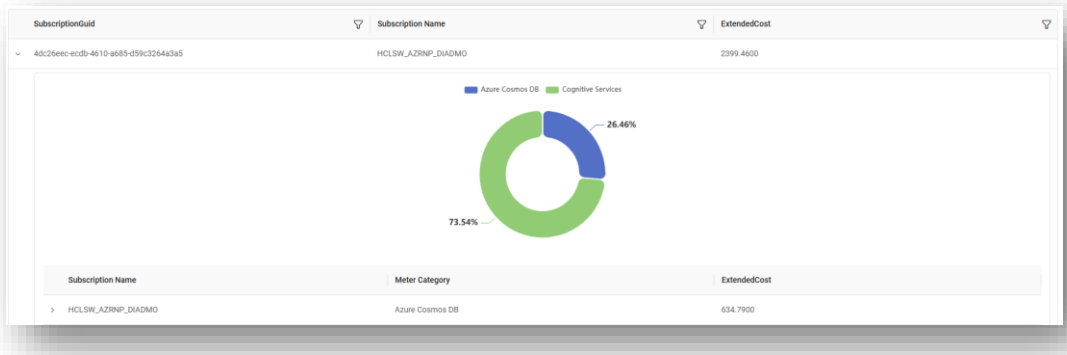


Figure 225 - Billing (Cont.)

9. On clicking of **Expand** (>) button, it displays product information.
10. The following screen appears.

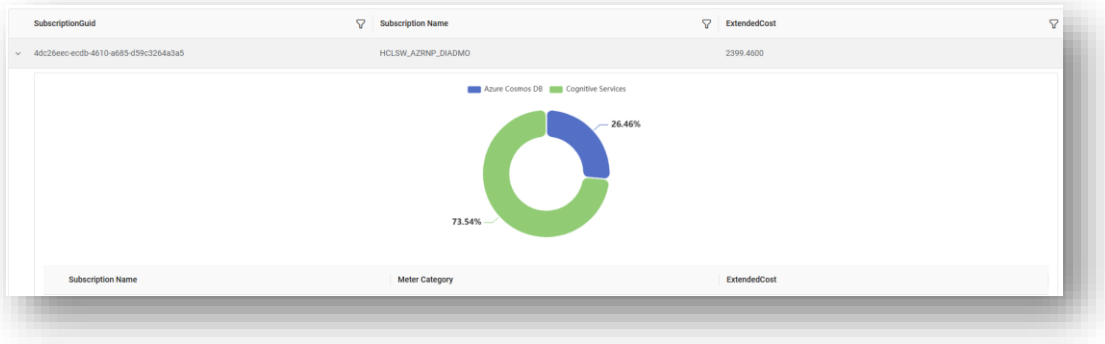


Figure 226 - Billing (Contd.)

11. On clicking of **Expand** (>) button, it displays usage information.
12. The following screen appears.

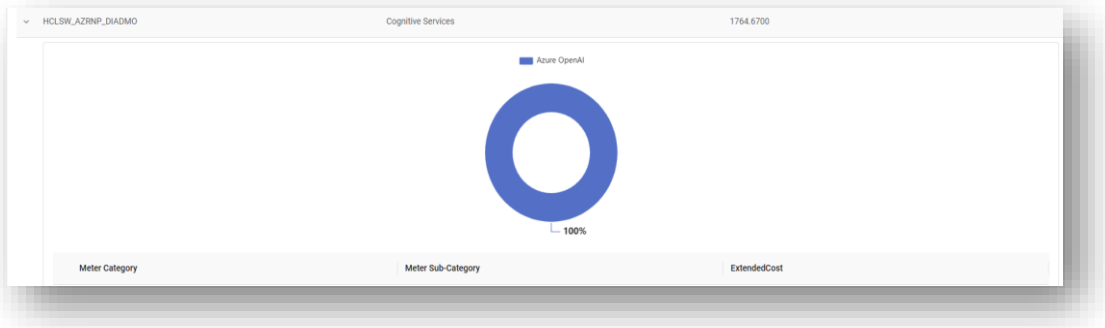


Figure 227 - Billing

1.5.12.5 Objects Report

To view the CI report, provider user needs to follow below steps:

1. On menu, click **Reports** and then click **Objects**.

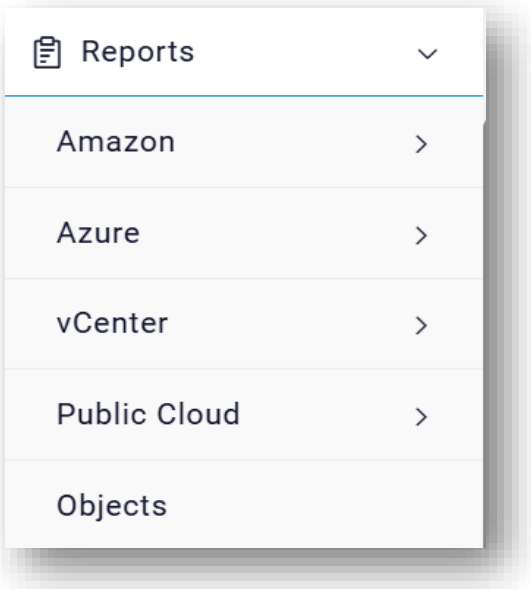


Figure 228 – Objects

2. The below screen appears.

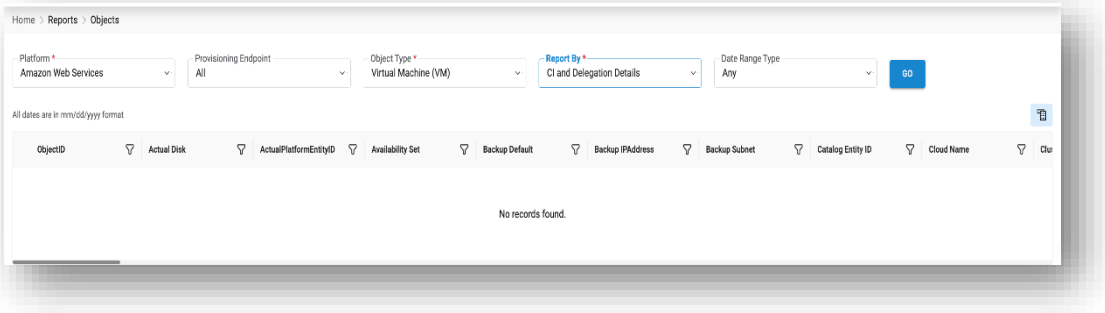


Figure 229 - Objects Report

Fields marked with (*) are mandatory to fill. Reset will enable the cloud filters.

3. Select Organization, Platform & Environment\Endpoint.
4. Select Object Type, CI Status, Date Range Type.
5. Click Go.

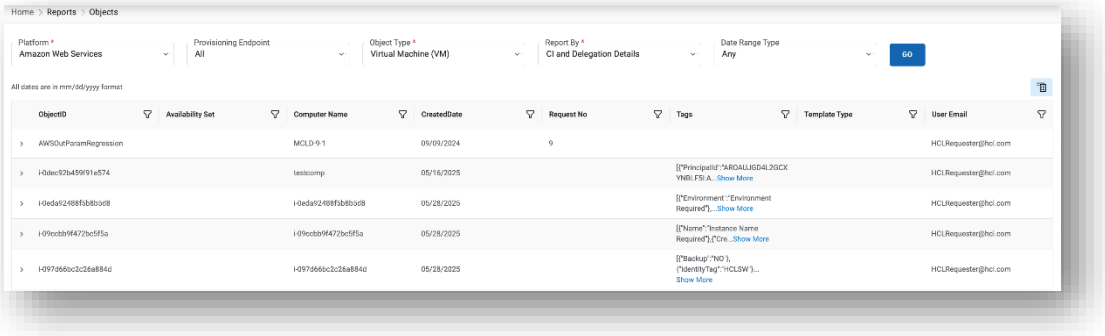


Figure 230 – Object Report

6. Click to **Expand** (>) to see the request wise details of an object.

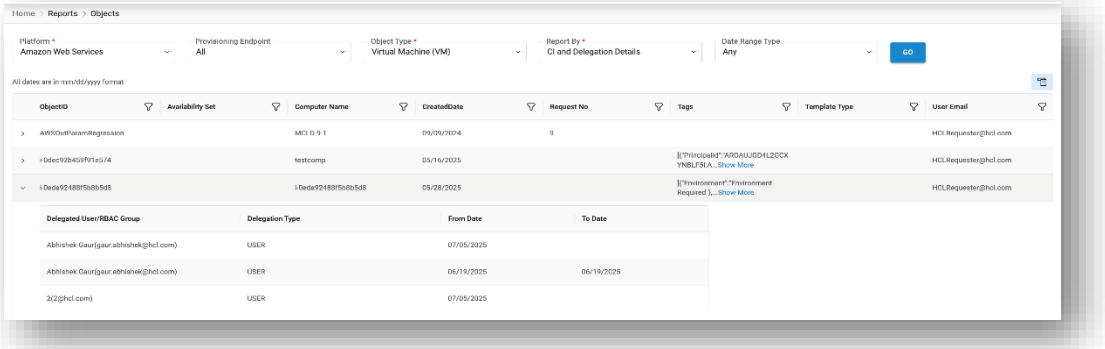


Figure 231 – Object Report (Cont.)

7. Click on Request No. to view the Request Details.

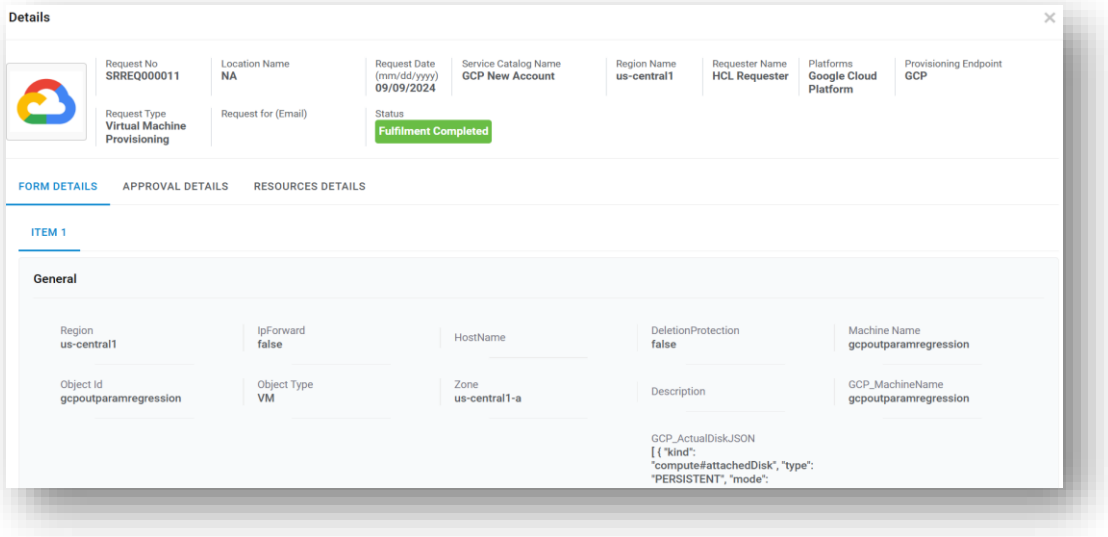


Figure 232 - Object Report (Cont.)

8. Click on **Configure CI Columns** ( ). This column setting configuration is user specific.

- **Default Case**: In case no columns settings are done, by default all CI columns will appear.

  A screen apprears as below.

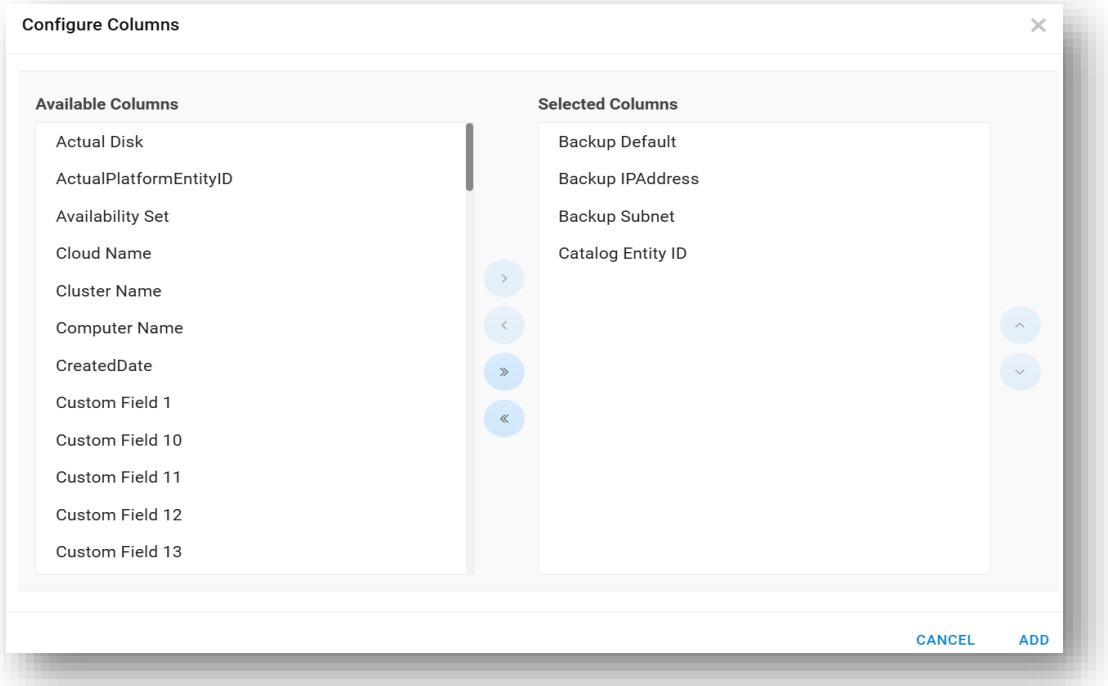


Figure 233 – Objects Report (Cont.)

- **Available Columns:** Displays list of all the available CIs.
- **Selected Columns:** Displays list of all the CIs that have been selected to configure in the report.

  This screen also compromises of some actions,

- **Swap All Right ( ):** Move/swap all the available CIs under selected columns.
- **Swap Right( ):** Move selected CIs under selected column.
- **Swap Left( ):** Move/shift selected CIs to the left side (selected to available).

- **Swap All Left ( ):** Move/swap all the selected CIs under available columns.

Above actions are applicable for available columns and selected columns

9. To change the order of display of the selected columns, provider user can use the following options.

- **Move Up ( ):** Move selected columns up
- **Move Down( ):** Move selected columns down

10. Click **Save**.
11. A success message appears.

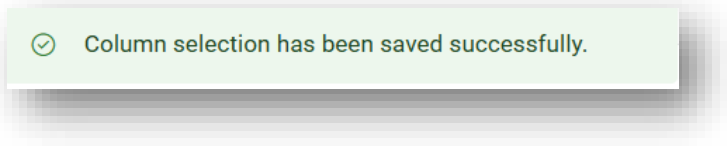


Figure 234 – Objects Report

12. Provider user can export the report data either in JSON or CSV.
13. Click the Download Report button.
14. Select Export Type.
15. Select type of file you need to download.

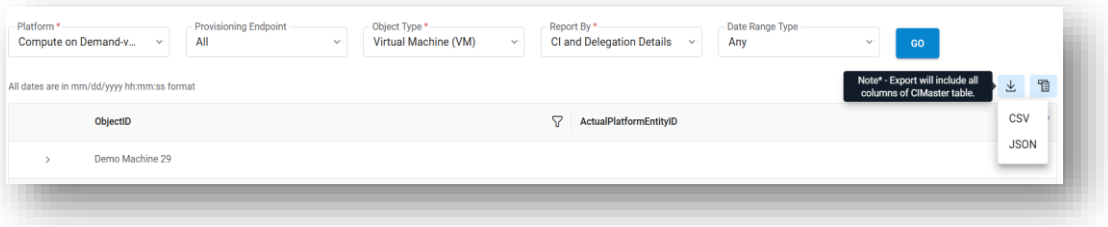


Figure 235 - Objects Report

16. Below report appears, after download.

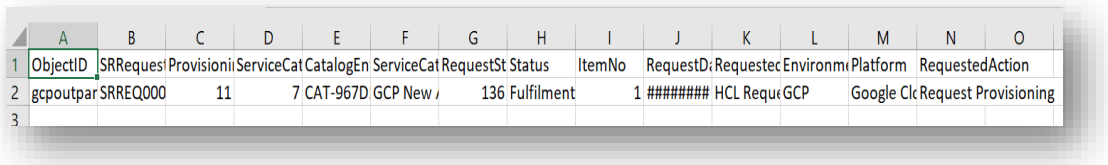


Figure 236 - Objects Report

1.5.12.6 Inventory

To view the **Inventory** report, provider user needs to follow the below steps:

1. Click on **Resource** from the menu and then select **Inventory.**

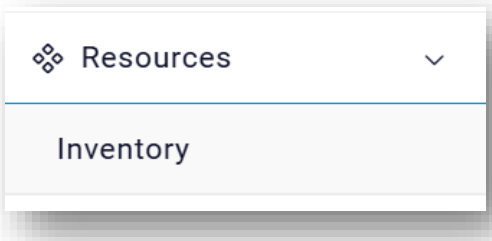


Figure 237 – Inventory

2. The following screen appears.

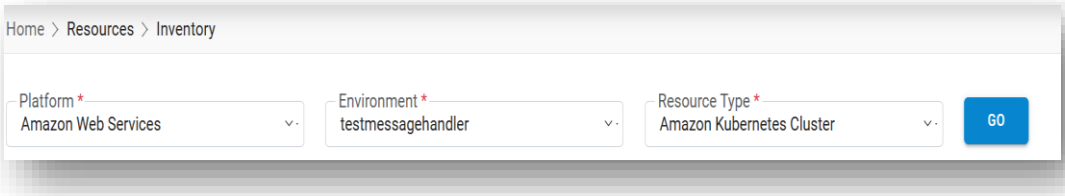


Figure 238 – Inventory Detail

3. Select **Platform**.
4. Select Provisioning Endpoint.
5. Select Resource Type.
6. Click **Go**.

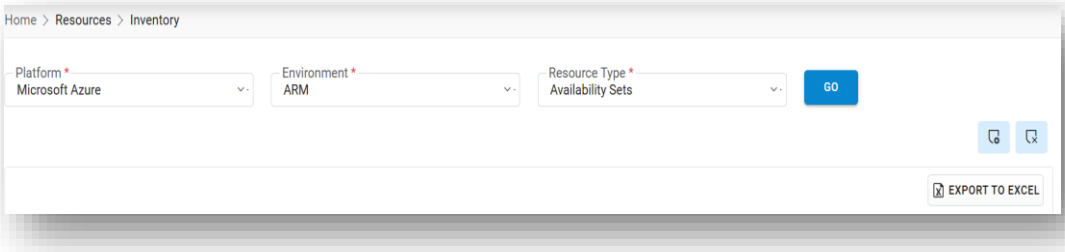


Figure 239 – Inventory Detail (Cont.)

7. Reports are displayed in a tabular form.

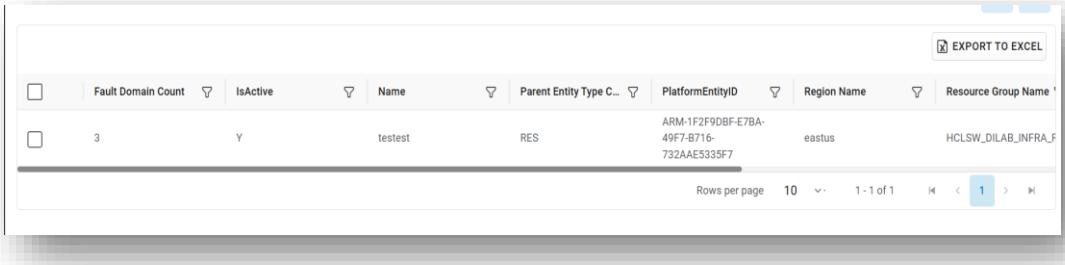


Figure 240 - Inventory Detail (Cont.)

1.5.12.7 Manage Request

This report lists the task level details against a request item. Users can also take actions on task. Task status with different color codes will appear on screen. Users can filter records based on available filters.

To view the Manage **Request** report, provider user needs to follow the below steps:

1. On the Menu click **Request** and then click **Manage Requests**.

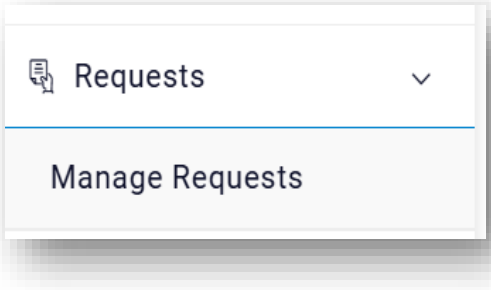


Figure 241 – Manage Requests

2. The following screen appears.

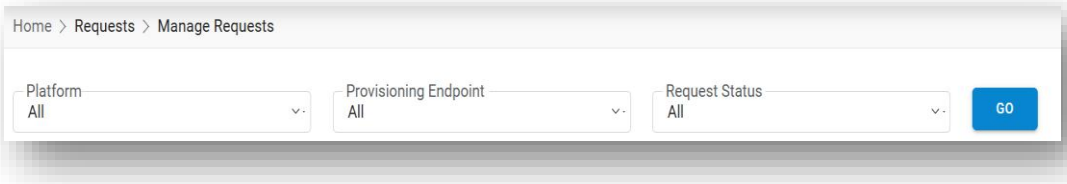


Figure 242 – Manage Requests

3. Select Organization.
4. Select Platform & Provisioning Endpoint.
5. Select Request Status.
6. Click Go.

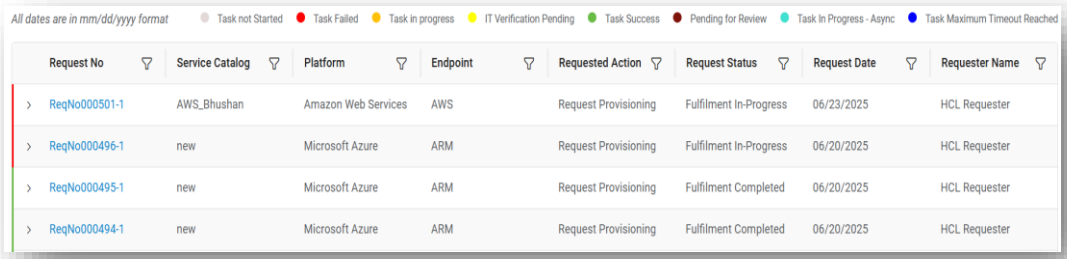


Figure 243 – Manage Requests (Cont.)

7. Reports are displayed in a tabular form.
8. Click **Expand** (>) against a request if a user wishes to take an action.

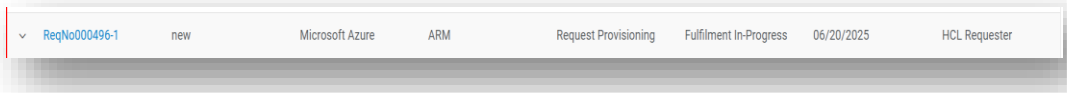


Figure 244 – Manage Requests (Cont.)

9. Details are displayed in a tabular form.

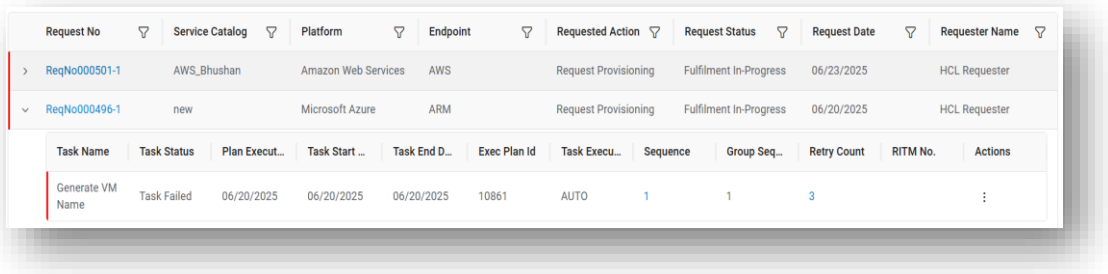


Figure 245 – Manage Requests (Cont.)

10. To mark a task as **Completed**, click **Complete**.

1.5.12.7.1 Restart Task

1. To restart a task, click on **Restart Task** from Expanded grid Action Menu.

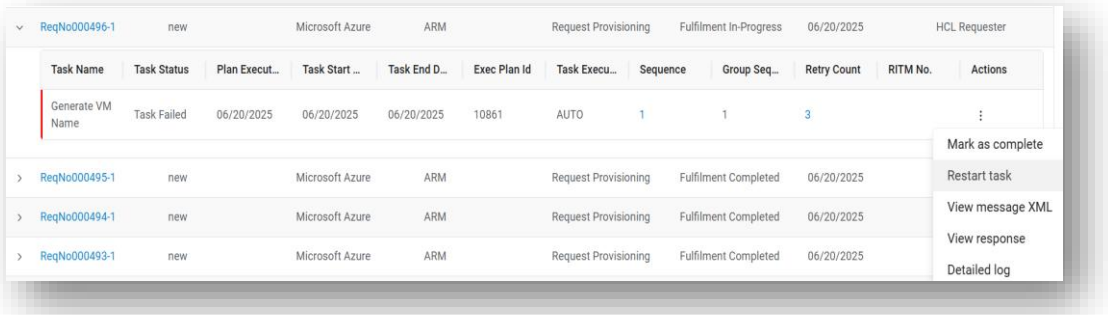


Figure 246 - Restart Task

2. Click **OK**.

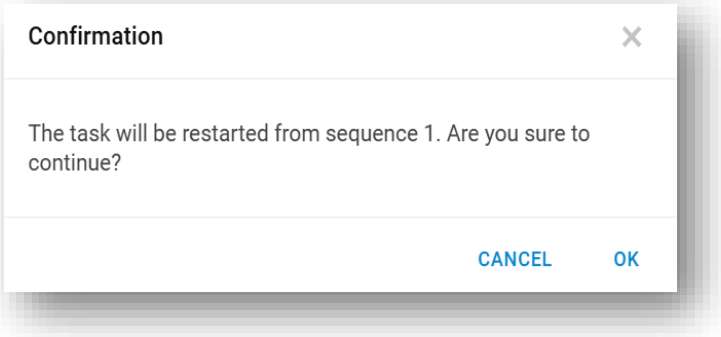


Figure 247 - Restart Task (Cont.)

3. The task is restarted successfully.

1.5.12.7.2 View Message XML

1. To validate requested XML, click **View Message XML**.
2. A pop-up appears.

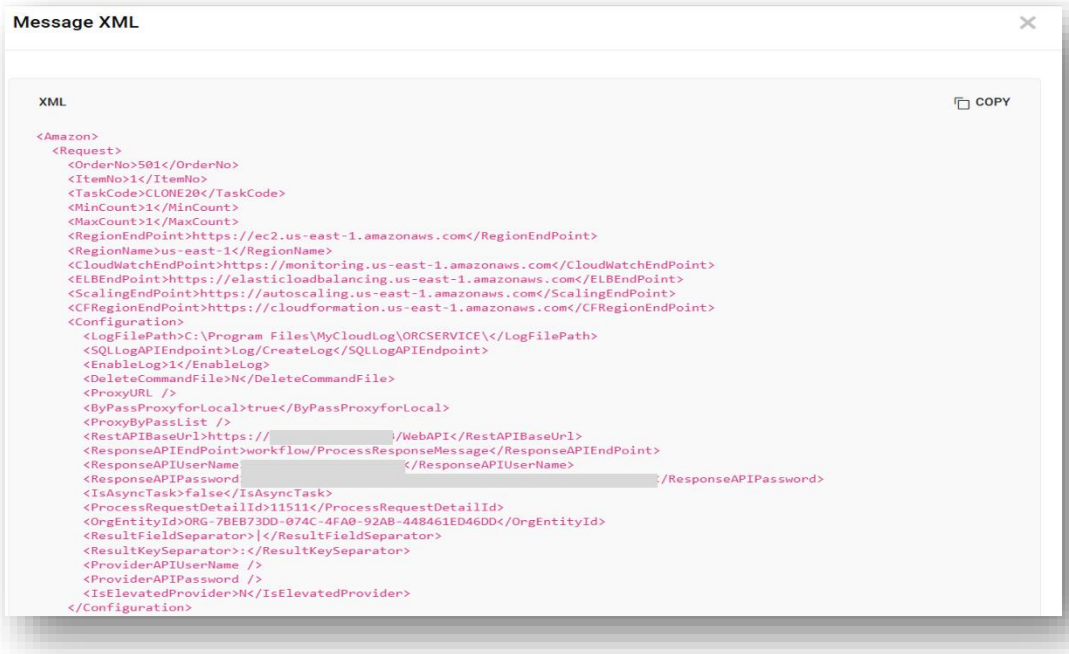


Figure 248 – Manage Request (XML)

1.5.12.7.3 View Response

1. To validate response XML, click on **View Response**.
2. A pop-up appears.

Figure 249 – Manage Requests (XML) (Cont.)

To check the status of the task, click on **Sequence**. To check the error detail of the task, click on **Detailed Logs**.

In request Task management there is new column External Tool which is configured by key" EnableExternalToolId" by provider admin.

To set value "Y" of this key admin user can enable to show external tool id in request task management screen for provider.

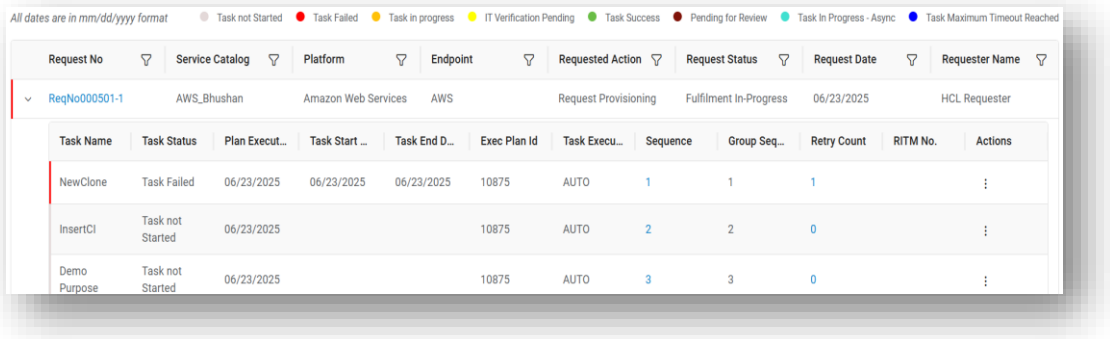


Figure 250 – Manage Requests

1.5.12.8 ITSM Status Tracking

To view the ITSM Status Tracking Report, provider user needs to follow the below steps:

1. Click ITSM Status Tracking under Notification in the main menu.

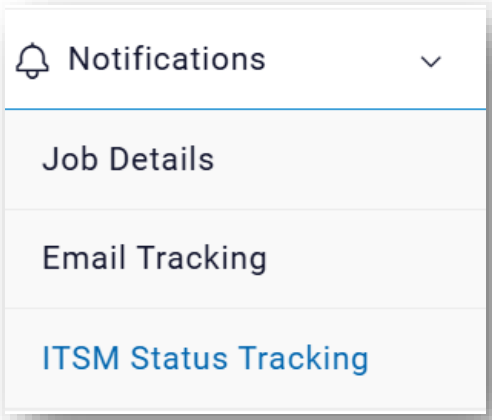


Figure 251 – ITSM Status Tracking

2. The following screen appears.

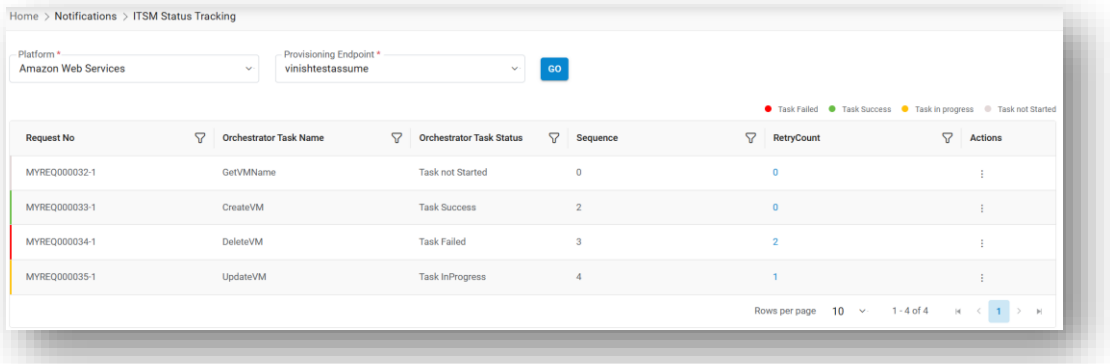


Figure 252 - ITSM Status Tracking

3. Select Organization & Platform.
4. Select Provisioning Endpoint.
5. Click Go.

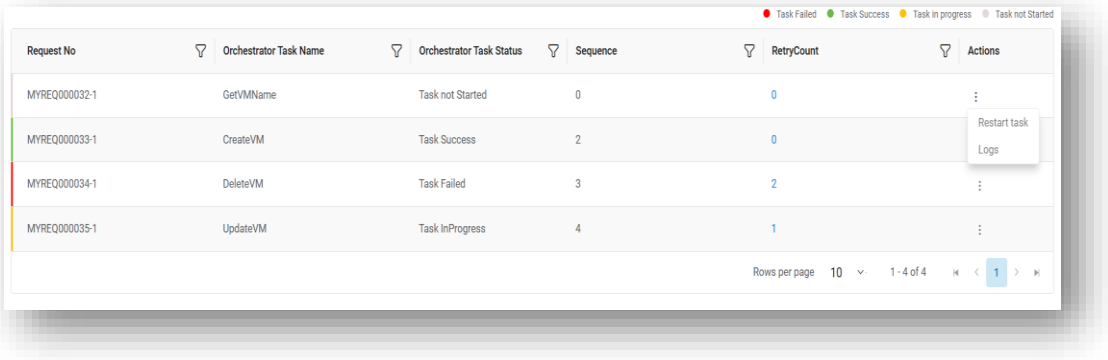


Figure 253 - ITSM Status Tracking (Cont.)

1.5.12.8.1 Restart Task

1. To **Restart** a task, select Restart Tak in grid Action Column menu.

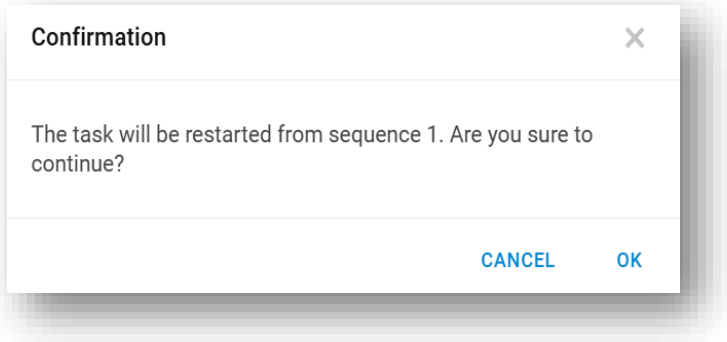


Figure 254 - ITSM Status Tracking (Cont.)

2. The task gets restarted.

To check the error details of the task, click on **Retry Count Hyperlink**.

1.5.12.9 Monthly Billing

This report gives details of the monthly bill for AWS. Data is the line item of AWS Usage Bill. Tags filters can be used for search specific tagged resources.

To view the Amazon Billing Analysis Report, provider user needs to follow the below steps:

1. On Menu click Reports, then click Amazon and select Monthly Billing.

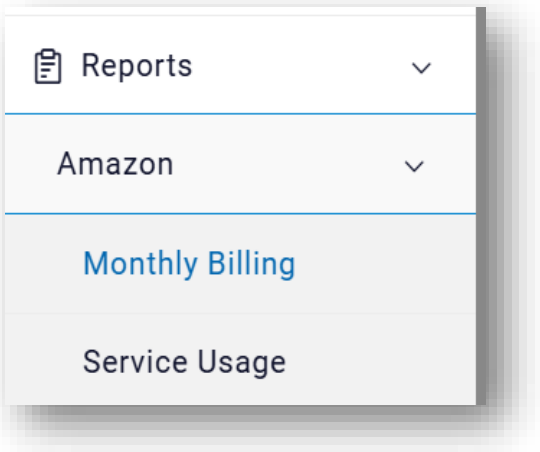


Figure 255 – Monthly Billing

2. The following screen appears.

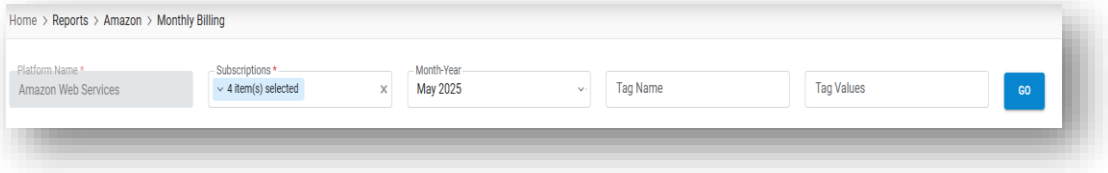


Figure 256 - Monthly Billing

3. Select Platform, Subscription, Tag Name, Tag Value, and Month from drop-down.
4. Click Go.
5. The following screen appears. Provider user can see the **Monthly Billing Report** as shown in the below figure:

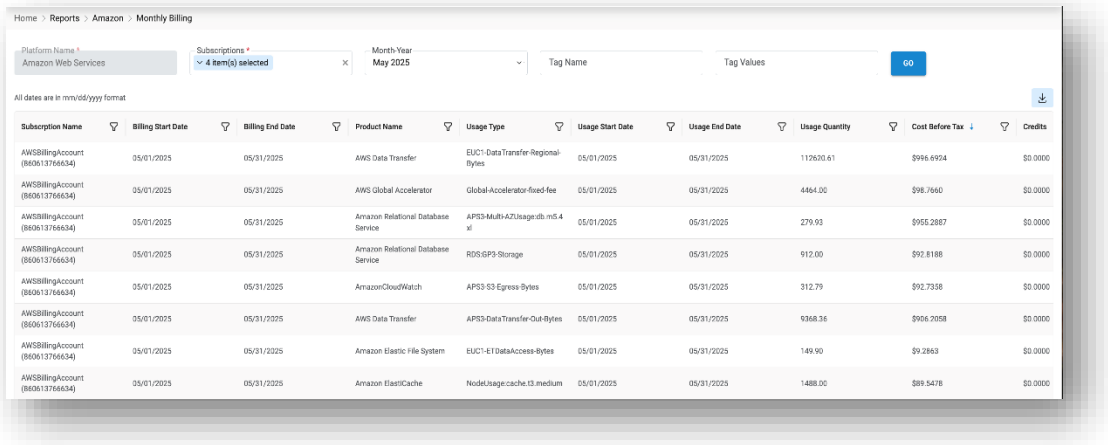


Figure 257 - Monthly Billing Analysis (Cont.)

1.5.12.10 SLA

To view **SLA Report**, Provider user needs to follow the below steps:

1. On Menu click Reports, then Click **SLA.**

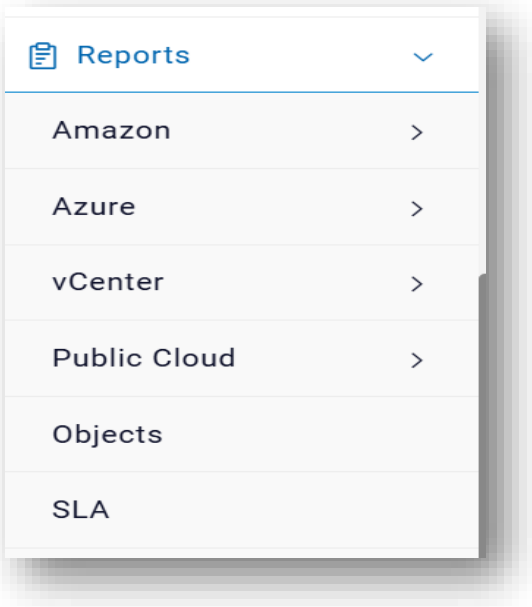


Figure 258 – SLA

2. The following screen appears.

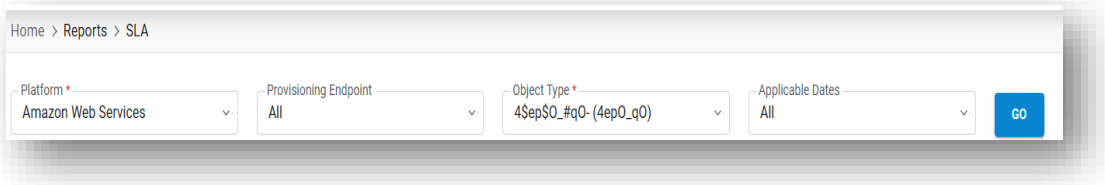


Figure 259 – SLA

3. Select Organization, Platform, and Provisioning Endpoint.
4. Select Applicable Dates, From Date, To Date, and Status.
5. Select Object Type.
6. Click Show Report.
7. The following screen appears:

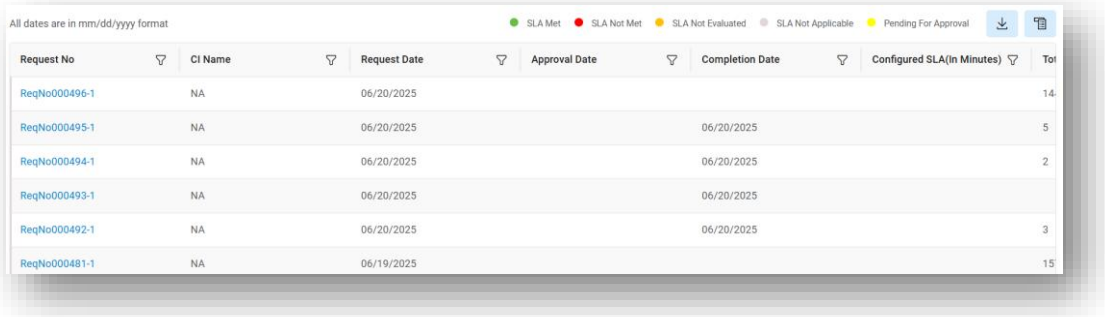


Figure 260 – SLA

1.5.12.11 Dashboard

This report shows complete health of vCenter. This report has multiple widgets for different vCenter resources for their respective performances. All resources can be drilled down with the lowest level of performance information.

To view the **Dashboard** report, provider users need to follow the below steps:

1. On the Menu click **Reports** then click vCenter and select Dashboard.

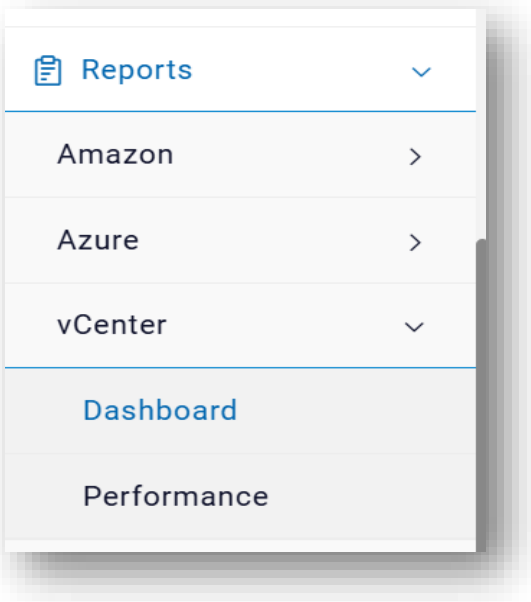


Figure 261 – Dashboard

2. The following screen appears.

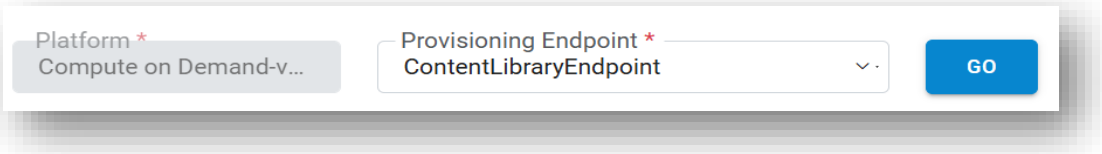


Figure 262 - Dashboard (Cont.)

3. Select **Platform** and **Environment** from dropdown.
4. Click Go.
5. The dashboard appears containing multiple widgets. The description of each widget is as follows:

- **vCenter Summary:** Highlights the overall summary of vCenter environment**.**

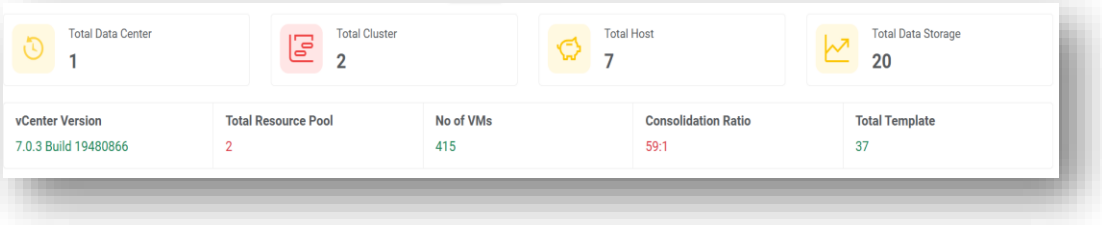


Figure 263 - Dashboard (Cont.)

- **OS Wise Distribution Detail:** This section displays number of VMs based on OS.

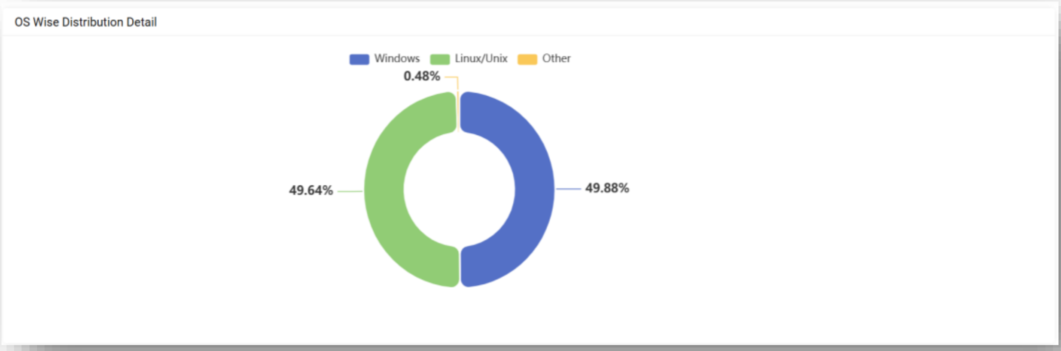
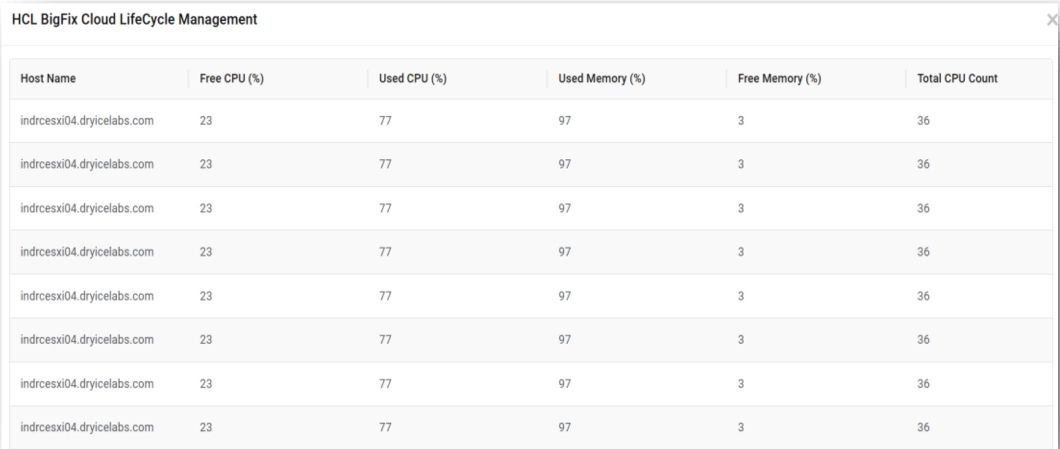


Figure 264 - Dashboard (Cont.)

- **Cluster Utilization:** This section displays the details of cluster and their utilization.

Figure 265 - Dashboard (Cont.)

6. Click the bar chart for further details (of Hosts).



HCL BigFix Cloud LifeCycle Management

Host Name	Free CPU (%)	Used CPU (%)	Used Memory (%)	Free Memory (%)	Total CPU Count
indrcesxi04.dryicelabs.com	23	77	97	3	36
indrcesxi04.dryicelabs.com	23	77	97	3	36
indrcesxi04.dryicelabs.com	23	77	97	3	36
indrcesxi04.dryicelabs.com	23	77	97	3	36
indrcesxi04.dryicelabs.com	23	77	97	3	36
indrcesxi04.dryicelabs.com	23	77	97	3	36
indrcesxi04.dryicelabs.com	23	77	97	3	36
indrcesxi04.dryicelabs.com	23	77	97	3	36

Figure 266 - Dashboard (Cont.)

- **Top 30 Host With CPU Utilization Detail:** This section displays the details of host and their utilization based on CPU utilization.

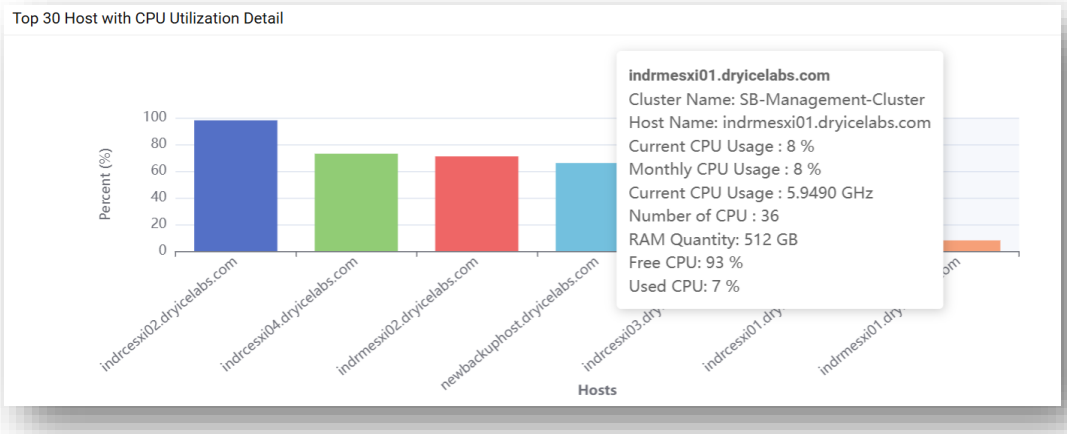


Figure 267 - Dashboard (Cont.)

7. Click the **bar chart** for further details.

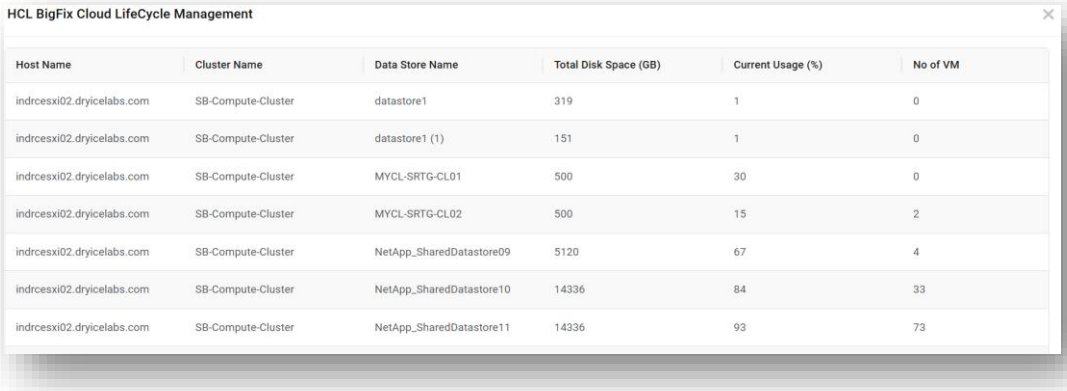


Figure 268 - Dashboard (Cont.)

- **Top 30 Host With Memory Utilization Detail:** This section displays the details of host and their utilization based on memory utilization.

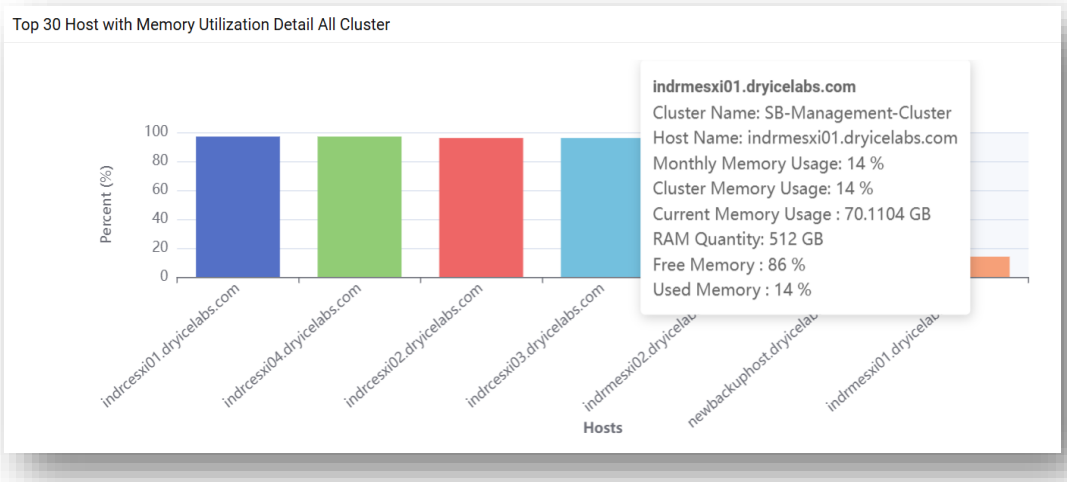
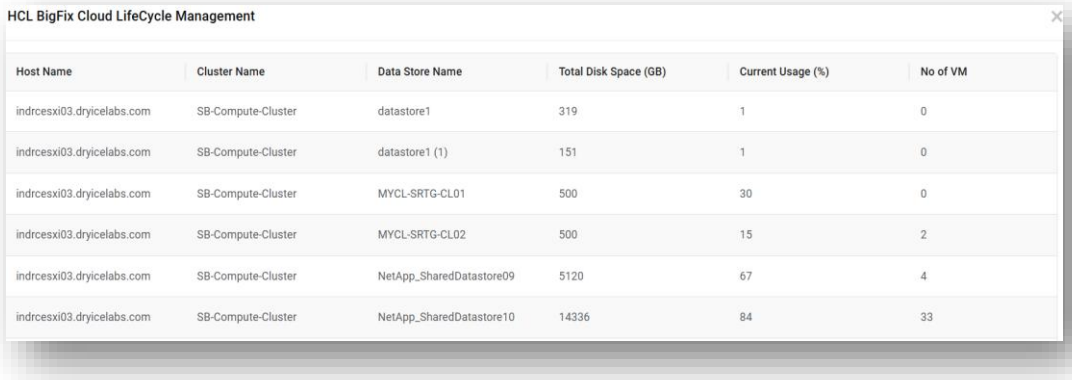


Figure 269 - Dashboard (Cont.)

8. On clicking of bar chart, popup window will open which displays host details.



Host Name	Cluster Name	Data Store Name	Total Disk Space (GB)	Current Usage (%)	No of VM
indrcesxi03.dryicelabs.com	SB-Compute-Cluster	datastore1	319	1	0
indrcesxi03.dryicelabs.com	SB-Compute-Cluster	datastore1 (1)	151	1	0
indrcesxi03.dryicelabs.com	SB-Compute-Cluster	MYCL-SRTG-CL01	500	30	0
indrcesxi03.dryicelabs.com	SB-Compute-Cluster	MYCL-SRTG-CL02	500	15	2
indrcesxi03.dryicelabs.com	SB-Compute-Cluster	NetApp_SharedDatastore09	5120	67	4
indrcesxi03.dryicelabs.com	SB-Compute-Cluster	NetApp_SharedDatastore10	14336	84	33

Figure 270 - Dashboard (Cont.)

- **Top 30 Data Storage Detail:** This section displays the details of datastorage and its utilization.

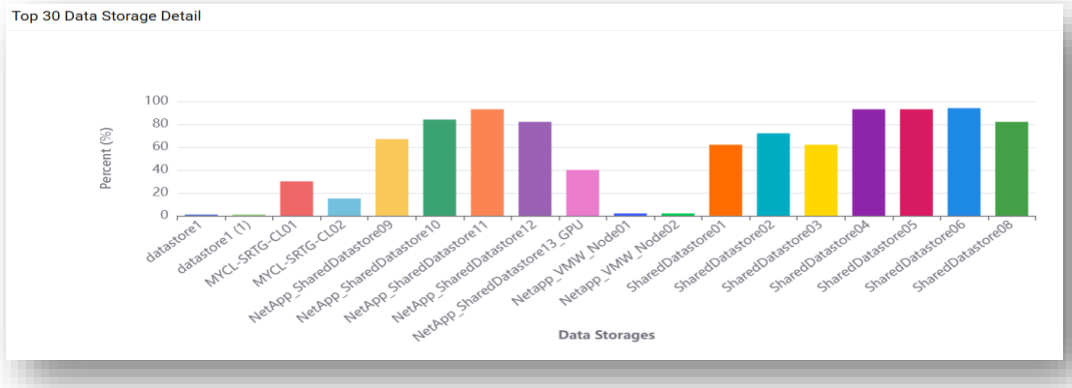


Figure 271 - Dashboard (Cont.)

- **Resource Pool:** This section displays the details (utilization) of resource pool and its clusters.

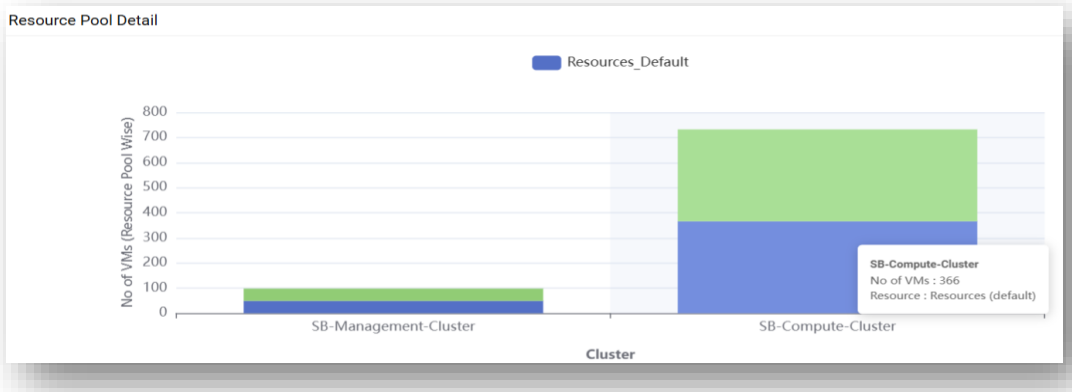


Figure 272 - Dashboard (Cont.)

- **Cluster, Host And Data Store Detail:** This section displays the details of cluster, host and data store and their utilization for last 30 days.

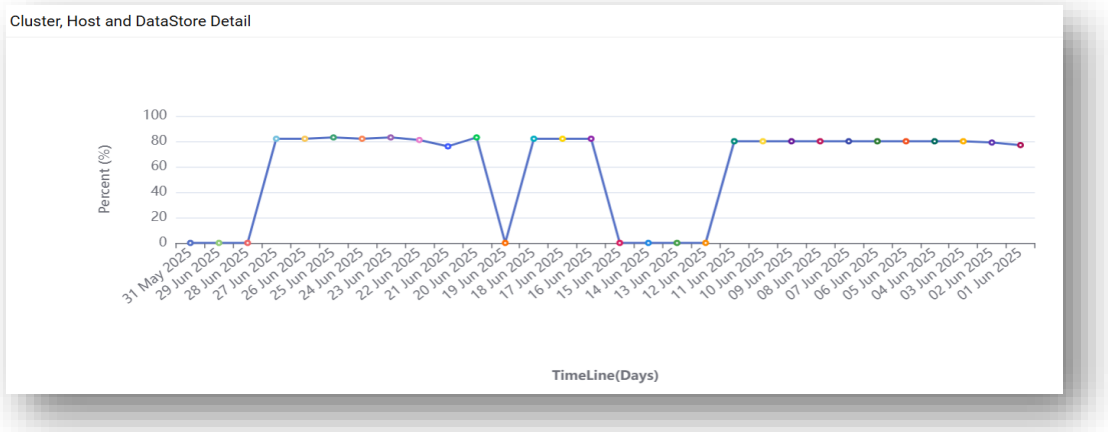


Figure 273 - Dashboard (Cont.)

1.5.12.12 Performance

This report shows the nested visualization of vCenter. Starting from topmost datacenter level, users can view the data to lower-level resources like datastore.

To view the **vCenter Performance Report**, provider user needs to follow the below steps:

1. On the Menu, click Reports, then click vCentre and select Performance.

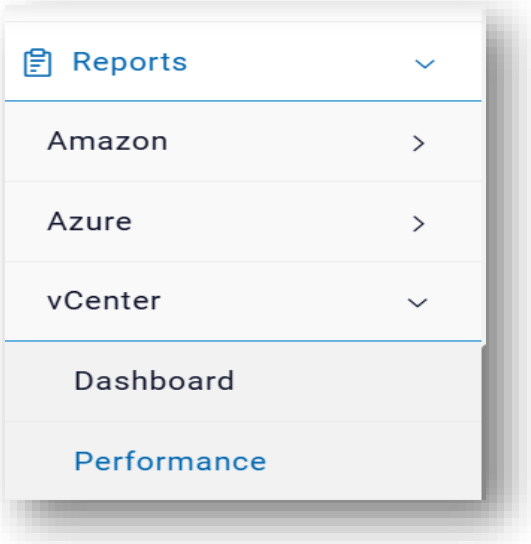


Figure 274 – Performance

2. The following screen appears.

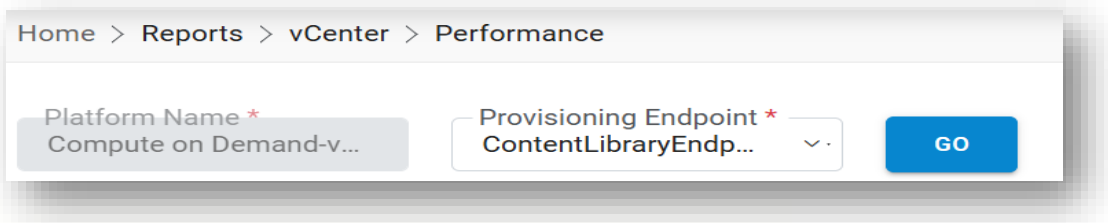


Figure 275 - Performance (Cont.)

3. Select Platform, and Provisioning Endpoint from dropdown.

4. Click Go.
5. The following screen appears:

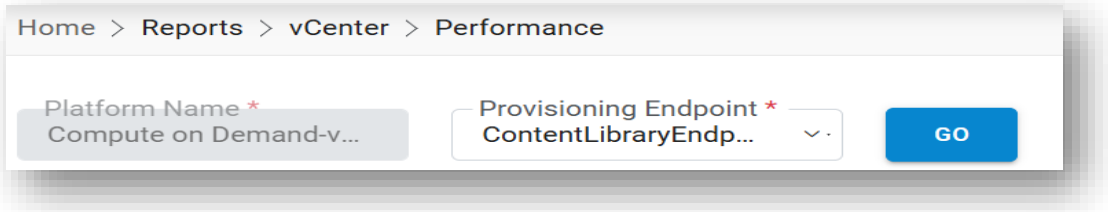


Figure 276 - Performance (Cont.)

6. On clicking **Expand** (>) button, data store's information will be displayed in textual and graphical representation.
7. The following screen appears:

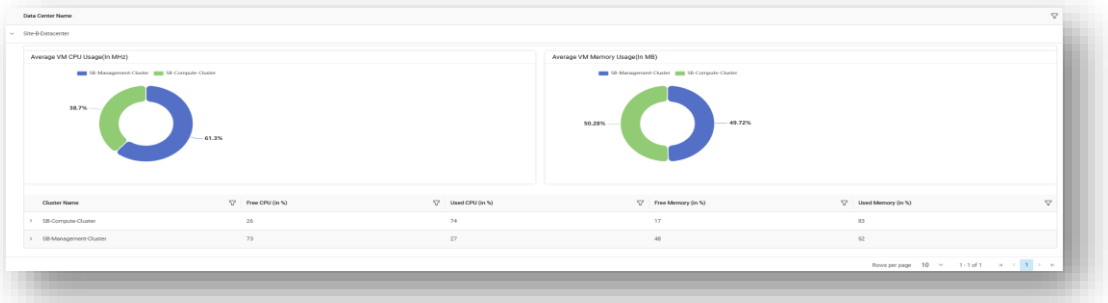


Figure 277 - Performance (Cont.)

8. On clicking **Expand** (>) button, cluster related information will be displayed.
9. The following screen appears:

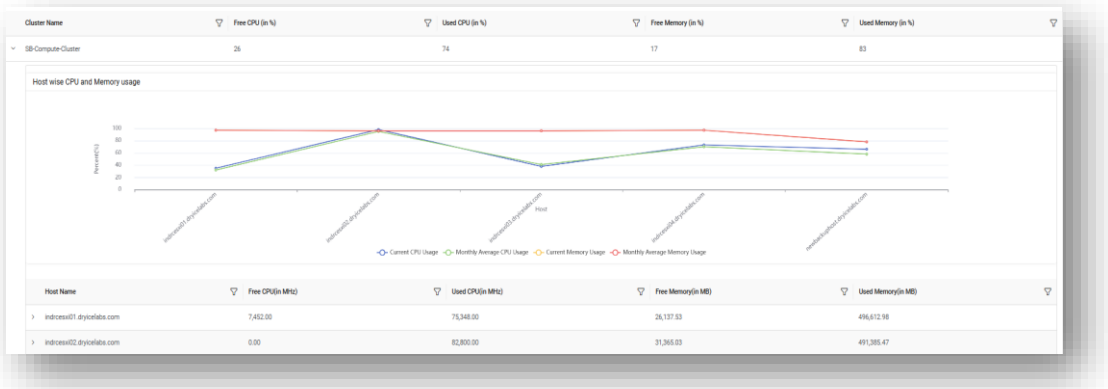


Figure 278 - Performance (Cont.)

10. On clicking of **Expand** (>) button, host related information will be displayed.
11. The following screen appears:

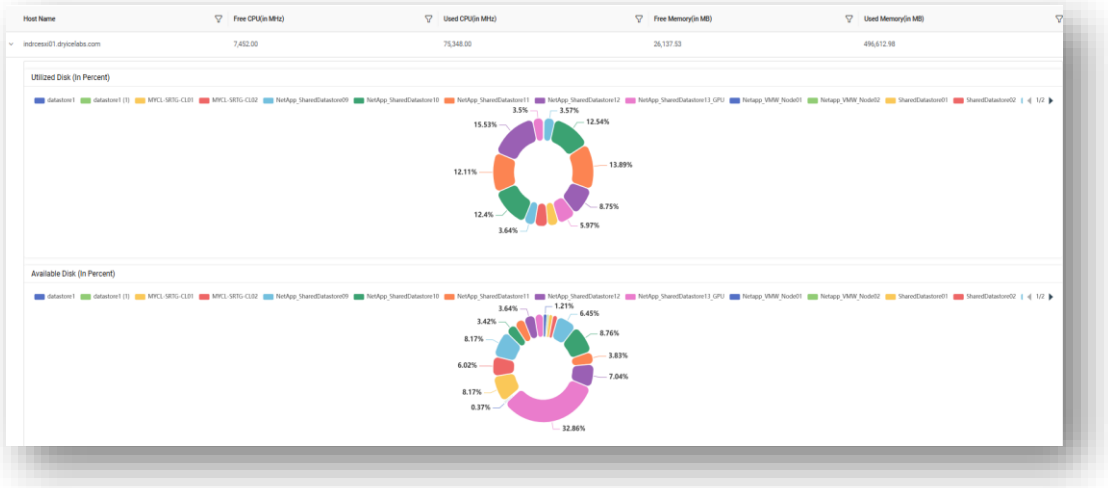


Figure 279 - Performance

1.5.12.13 Billing Analyzer

To view the **Billing Analyzer Report**, provider user needs to follow the below steps:

1. On the Menu click **Reports**, then click **Public Cloud** and select Billing Analyzer.

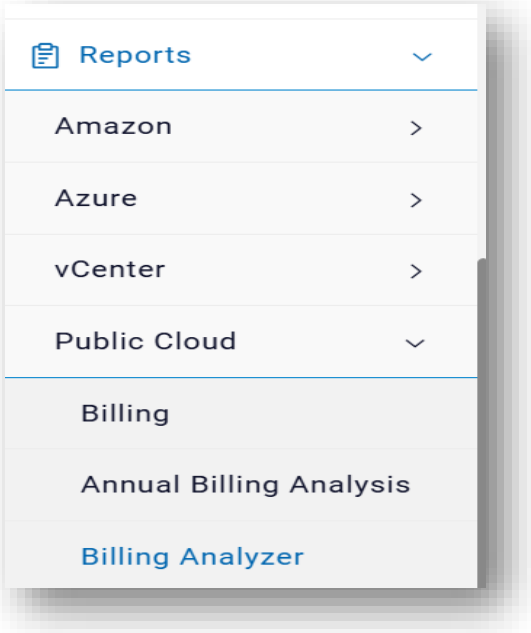


Figure 280 – Billing Analyzer

2. Select Platform, Month, Subscription, Tag Name, and Tag Value.
3. Click Go.

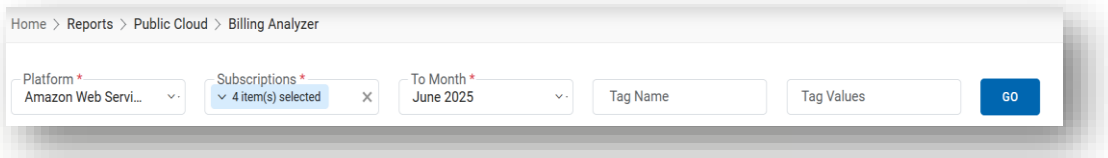


Figure 281 - Billing Analyzer

4. The following screen appears:

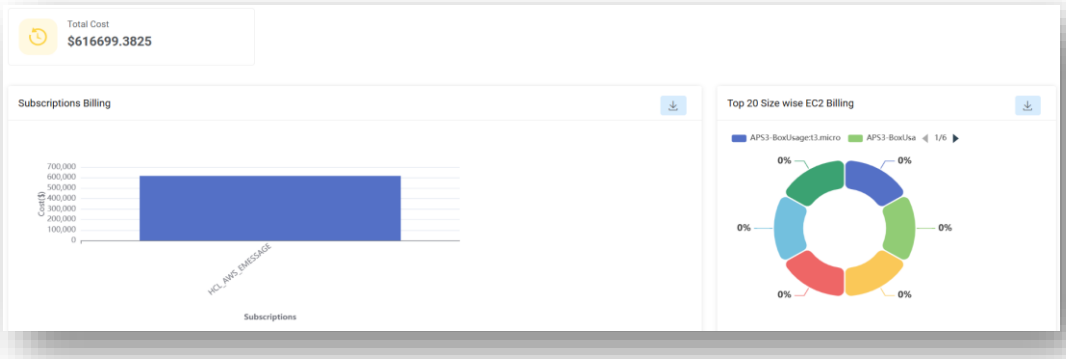


Figure 282 - Billing Analyzer (Cont.)

Figure 283 - Billing Analyzer (Cont.)

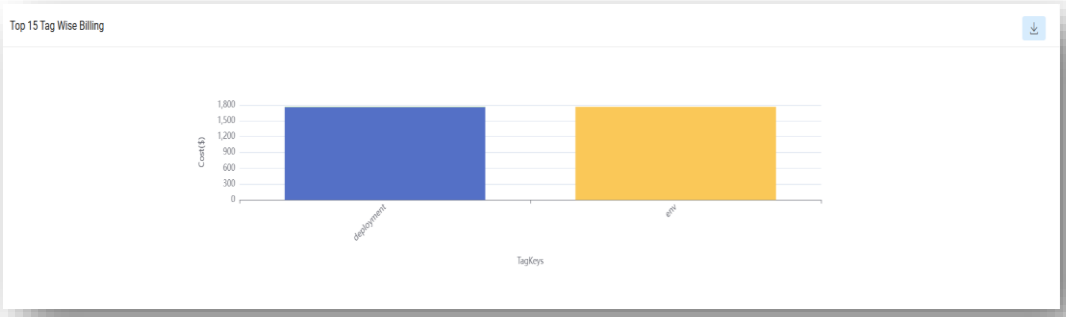


Figure 284 - Billing Analyzer (Cont.)

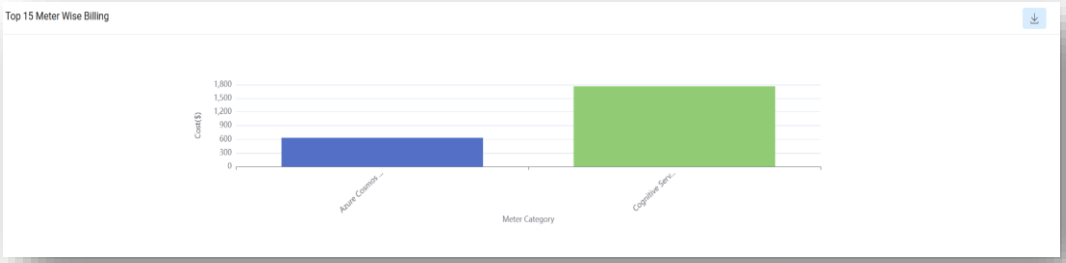


Figure 285 - Billing Analyzer (Cont.)

1.5.12.14 Predict and Recommend

This enables cost optimization and resource utilization by analyzing the past usage patterns & recommending the most optimal resource types on AWS and Azure.

For Example, Amazon EC2 Reserved Instances (RI) provides a significant discount (up to 72%) compared to on-demand pricing and provide a capacity reservation when used in a specific availability zone. Based on this provider user can reserve its resources for future and avail benefits in terms of cost.

1. On the menu, click Reports, then click Predict and Recommend.

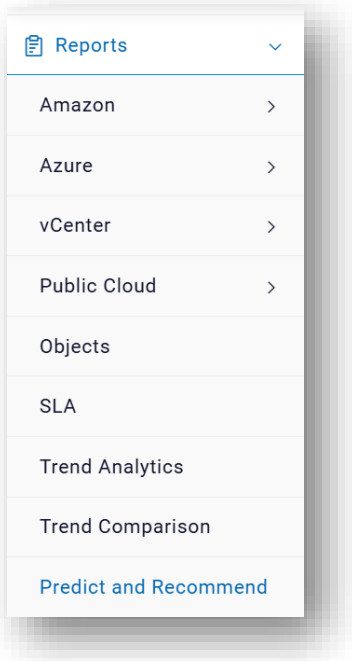


Figure 286 – Predict and Recommend

2. The below screen appears.

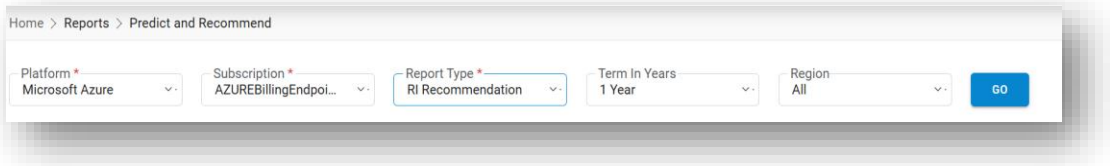


Figure 287 – Predict and Recommend

3. Refer the below table to understand the fields mentioned in Figure 289 – Predict and Recommend:

Table 24 – Predict and Recommend

Field	Description
Organization	HCL BigFix CLM unique name for organization
Platform	The field lists down the cloud service providers
Subscription	Name of the endpoint (subscription of cloud service provider)

Report Type (AWS)	Forecasting or RI recommendation
Report Type (Azure)	RI recommendation
Term In Year (Azure) – RI Recommendation	For example, 1 year or 3 years
Region (Azure) – RI Recommendation	List of available regions
Granularity (AWS)-Forecasting	Frequency daily or monthly
Term In Year (AWS) – RI Recommendation	For example, 1 year or 3 year
Payment Option (AWS) – RI Recommendation	All upfront, partial upfront, no option
Service Type -(AWS) – RI Recommendation	Type of services offered

4. Select Organization, Platform, and Subscription.
5. Based on platform (AWS/AZURE) report type will vary. For ARM choose **RI Recommendation**.
6. Select Time in Years and Region.
7. Click Go.

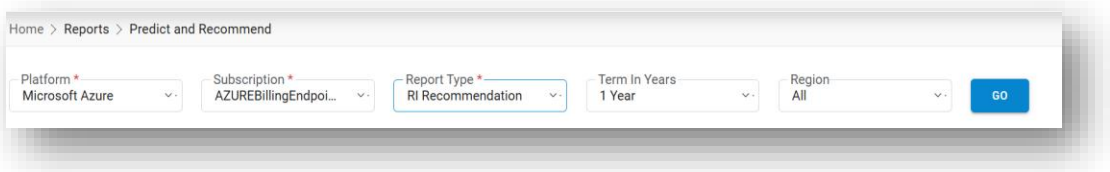


Figure 288 – Predict and Recommend

(*) Are mandatory fields. Reset will enable cloud filters.

8. A screen appears as below and displays the total forecast amount/cost and daily forecasting prediction in the form of bar chart.

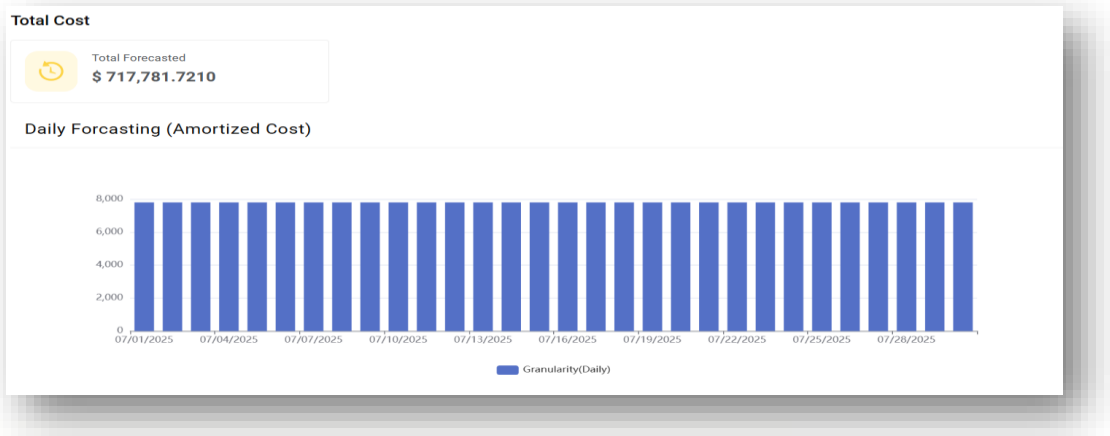


Figure 289 – Predict and Recommend

9. Hover the mouse on the bar chart and detailed forecast prediction will be shown as below:

Figure 290 – Predict and Recommend

10. In case the report type is RI Recommendation (AWS), below screen appears:

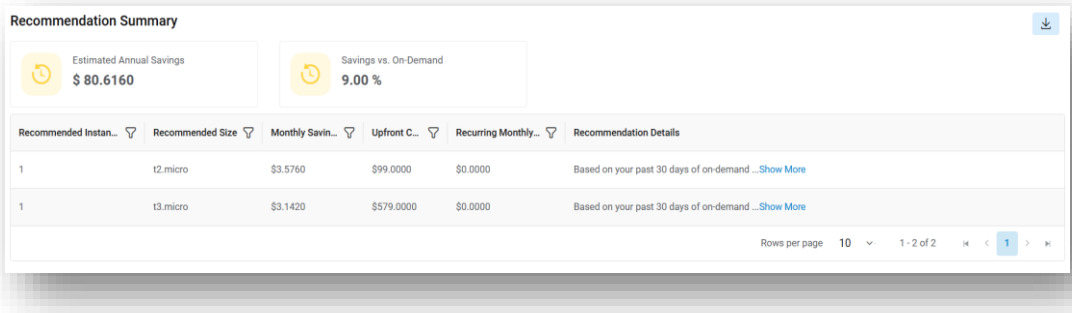


Figure 291 – Predict and Recommend

11. Refer the below table to understand the fields mentioned in the above figure:

Table 25 – Predict and Recommend

Field	Description
Recommended Instances	No. of recommended instances
Recommended Size	Size of AWS instance
Monthly Savings	Name of the endpoint (subscription of cloud service provider)
Upfront Cost	Cost associated to it
Recurring Monthly Cost	Recurring Monthly Cost
Recommendation Details	Recommendation details

1.5.13 Decommission Reminder

Through this section, provider user can configure reminder mails when decommissioning date is approaching.

1. On the main menu bar, click **Configuration** then Schedules then click **Decommission Reminder**.

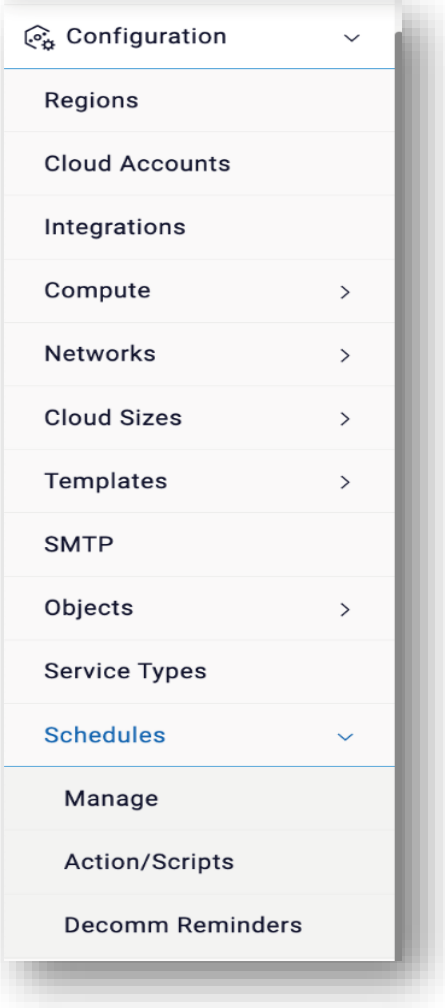


Figure 292 – Decommission Reminder

2. The section has following options:

- Create Decommission Reminder
- View Decommission Reminder

1.5.13.1 Create Decommission Reminder

To add reminder, provider user needs to follow the below steps:

1. On the Decommission Reminder screen, click +Reminder button.

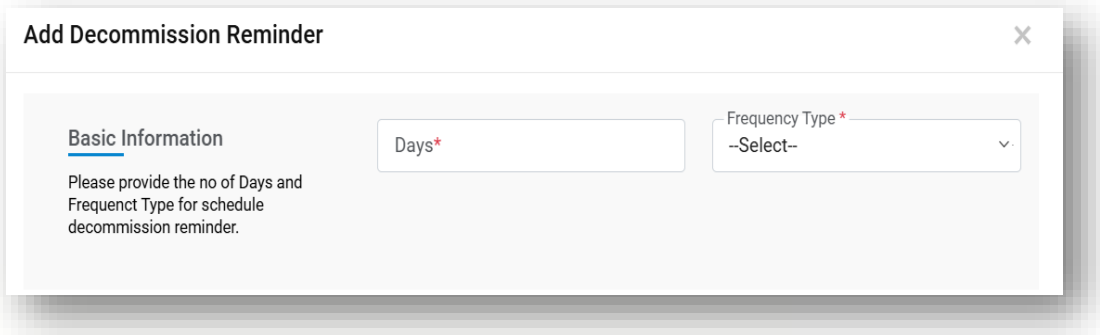


Figure 293 - Create Decommission Reminder

2. Refer below table for reference:

Table 26 - Create Decommission Reminder

Field	Description
Organization	Name of the organization (business units/ divisions in organizations)
Days	Date filed which shows that machine will be decommissioned after days.
Frequency	In which frequency, the machine will be decommissioned

3. Select Organization.
4. Enter **Days**.
5. Select Frequency.
6. Click **Add** or **Cancel** to discard changes.
7. A success message box will appear.

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

1.5.13.2 View Decommission Reminder

Through This Section, Provider User Can View All the Existing Reminder Mails For A Specific Organization.

1. On Decommission Reminder screen.
2. Select the **Organization**.
3. A screen appears as below:

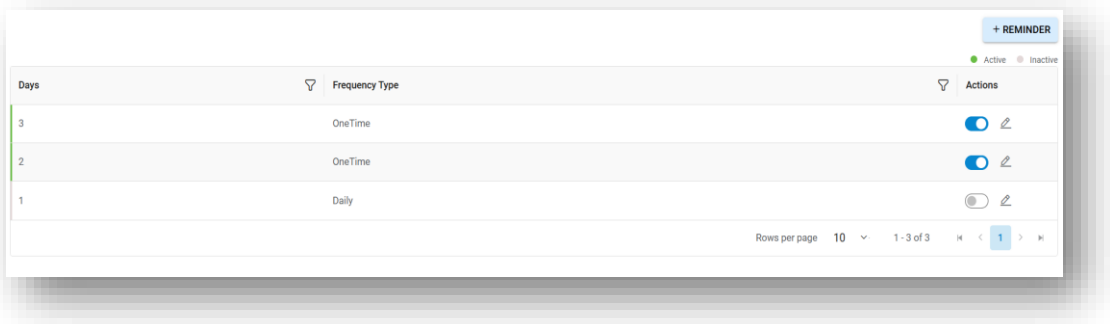


Figure 294 - View Decommission Reminder

4. It also comprises of following actions:

- **Edit** ( ): To modify the details of existing reminder.
- **Change Status** ( ): Toggle the status of existing reminder.

1.5.13.3 Edit Decommission Reminder

To edit/ modify the assigned reminder, provider user needs to follow the below steps:

1. Click **Edit** ( ) to modify the desired details.
2. Click **Update** to save the changes.

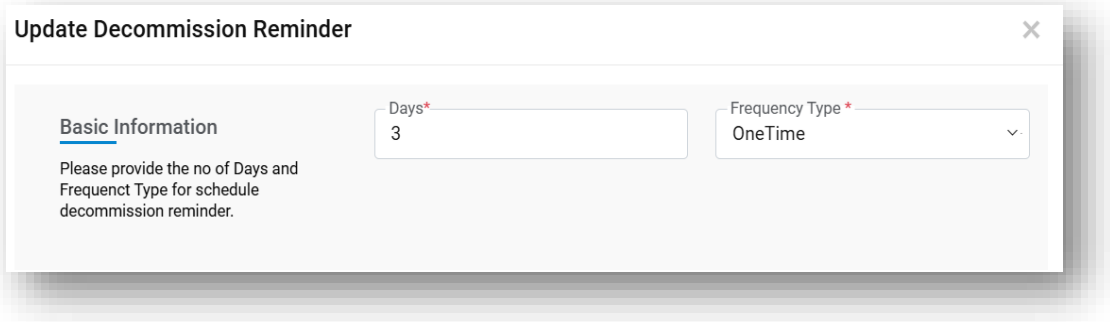


Figure 295 - Edit Decommission Reminder

3. A Success Message Box will appear.

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

4. Click **OK**.

1.5.13.4 Change Status

To toggle the status of the assigned reminder, provider user needs to follow the below steps:

1. Click **Change Status** ( ) toggle the status of desired reminder.

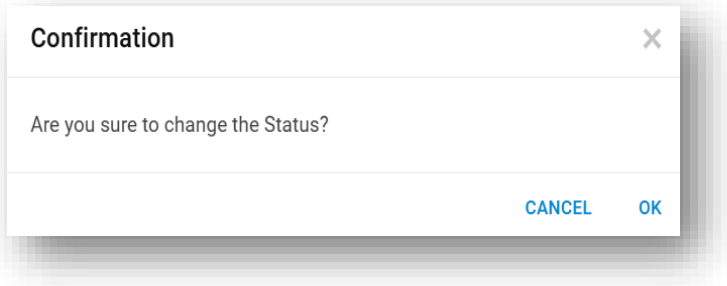


Figure 296 - Confirmation Message

2. A Success Message Appears.

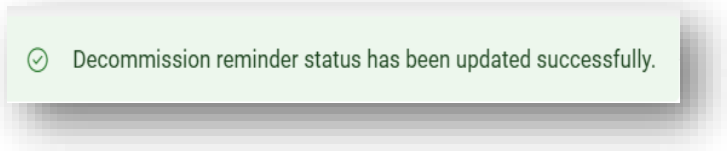


Figure 297 - Success Message

1.5.14 Properties

Through this section, provider users can configure CI columns to import objects.

1. On the main menu bar, click **Configuration** and then click Object, then **Properties**.

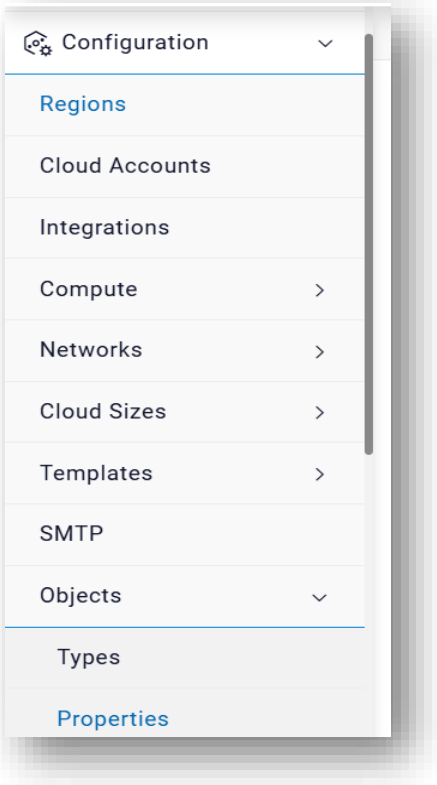


Figure 298 – Properties

2. The below screen will appear.

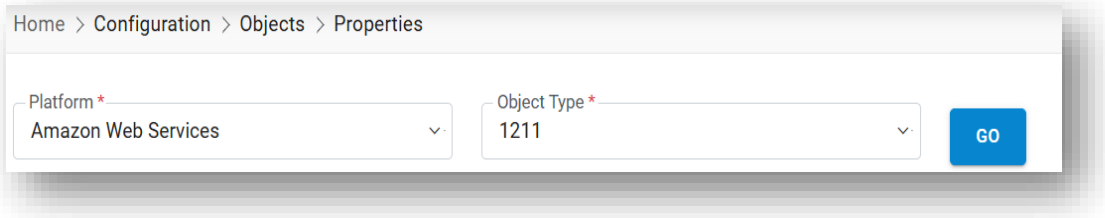


Figure 299 - Properties

- Select Platform and Object Type.
- Click Go.

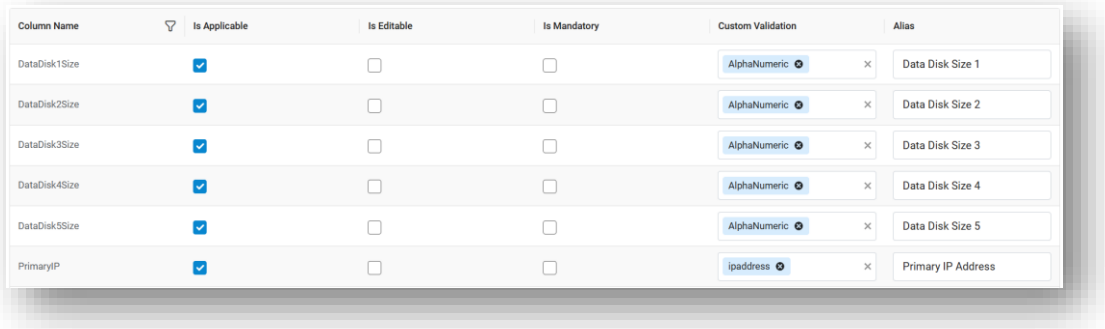


Figure 300 – Import Properties (Cont.)

3. All the Properties will be displayed on the screen.

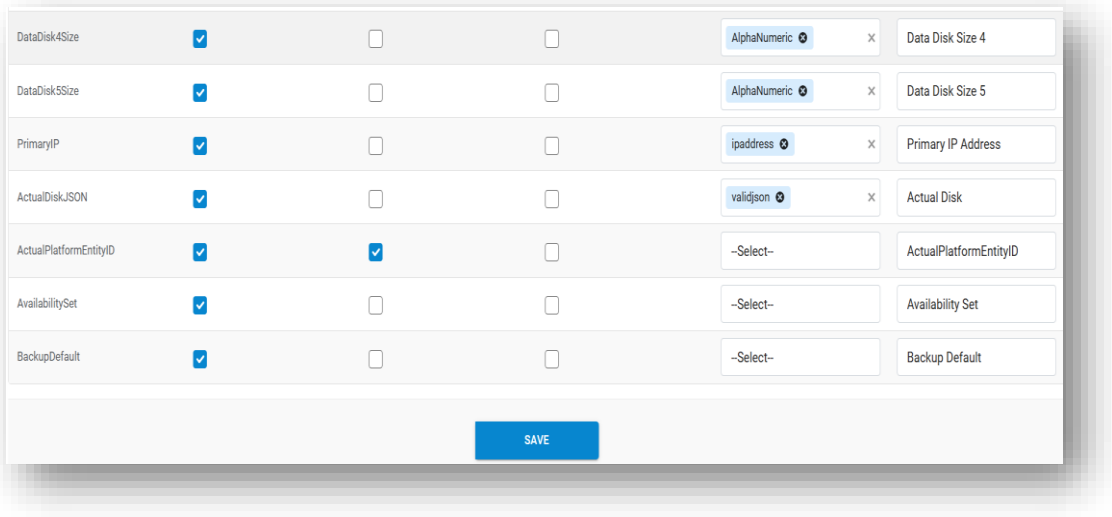


Figure 301 – Import Configuration (Cont.)

4. Click **Save.**
5. A success message will appear.

1.5.15 Manage

Through this module, the user can **Schedule Action**(s) on **Object**(s) in an organization. Pre-requisites of using my schedules:

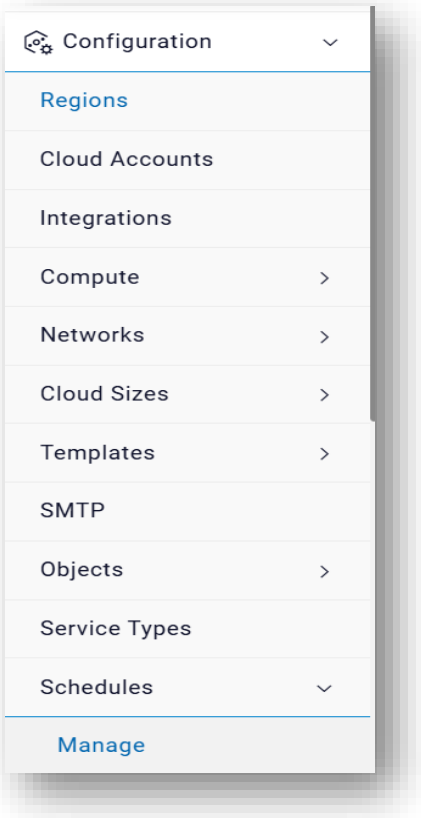


Figure 302 – Manage

1. Organization should have enabled "**Action Scheduling Enabled**" in the organization module.
2. At least one action should be active for respective object.

3. UI associated with action should not have approval associated with it.
4. Controls used in UI should be textbox and hidden controls only.
5. It has the following options:

- View Schedules
- Create Schedules
- Schedule History

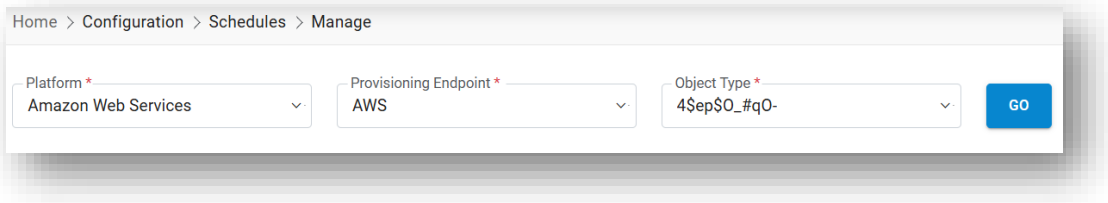


Figure 303 – Manage Home Screen

1.5.15.1 Create Manage

To create a schedule of an action in an organization, login user needs to follow the steps below:

1. Click on the +**Schedule** button.

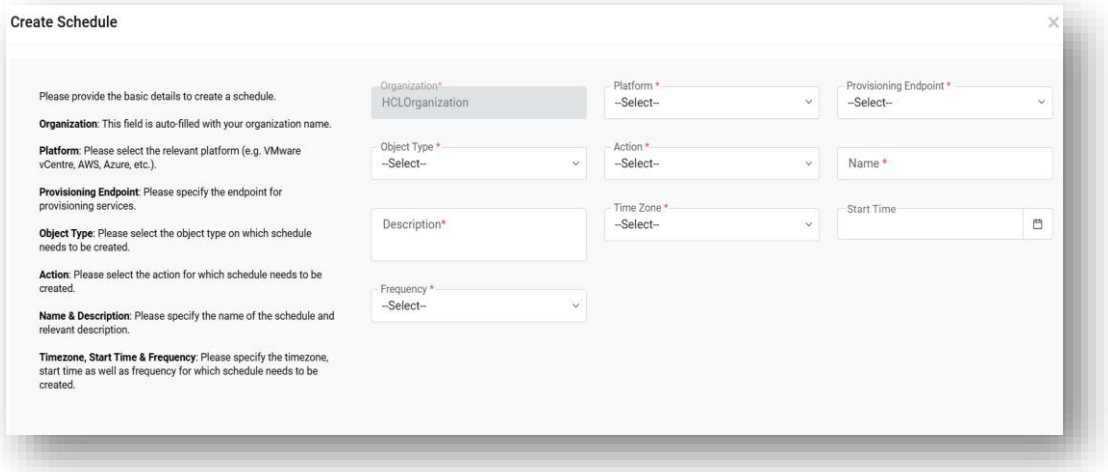


Figure 304 - Create Manage

2. Refer the below table to understand the fields mentioned in the above figure.

Table 27 – Create Manage Fields

Fields	Description
Organization	Select the name of the organization (business units/ divisions in organizations)
Platform	The field lists down the cloud service provider.
Provisioning Endpoint	Displays the name of the environment (cloud endpoint)
Object Type	Name of the infrastructure resource.

Action	Displays the list of action(s) associated to object.
Name	This unique name of schedule action.
Description	Description of schedule action.
Time Zone	This field represents the time zone of start time.
Start Time	The field represents when to start/schedule the action.
Frequency	Interval at which the action can be schedules
Action Parameter(S)	List of parameters depends on selected action

3. Select Organization.
4. Select Platform and Provisioning Endpoint.
5. Select Object Type.
6. Select **Action**.
7. Enter the **Name** and **Description** of schedule.
8. Select Time Zone and Start Time.
9. Select **Frequency**.
10. Now map the **Parameters of Action**. Parameter Data Type supports two types:

- **Static** – User can provide the static value of a control.
- **SQL Function** – SQL function can be used to find the dynamic value of a control.

11. Click **Save**.

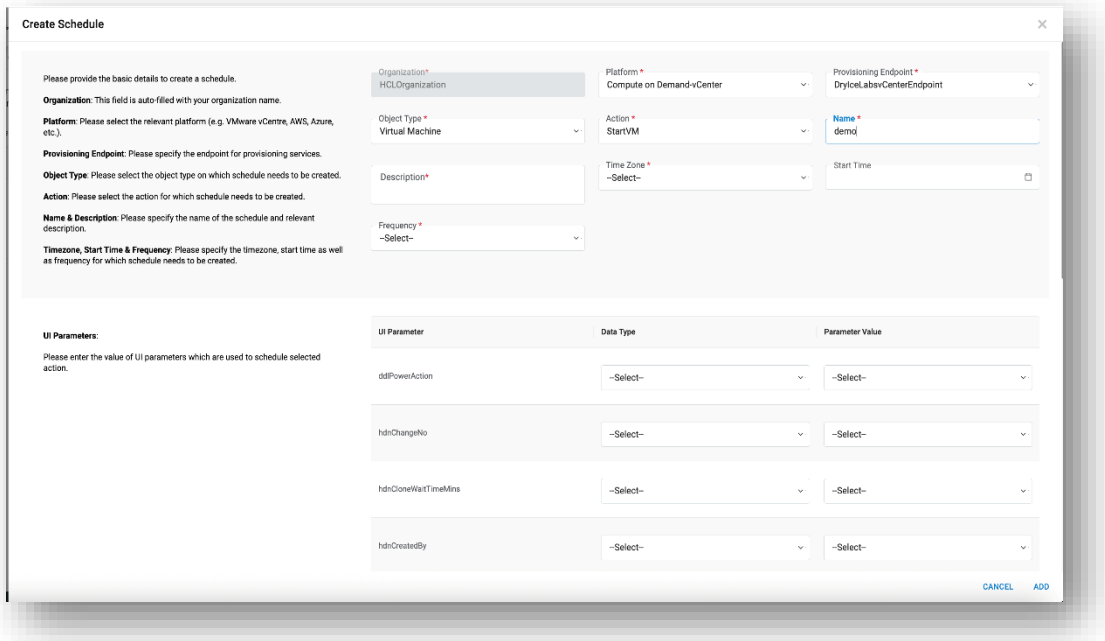


Figure 305 – Create Manage (Cont.)

All The Fields Marked with an Asterisk (*) Are Mandatory.

12. A Success Message Box Appears.

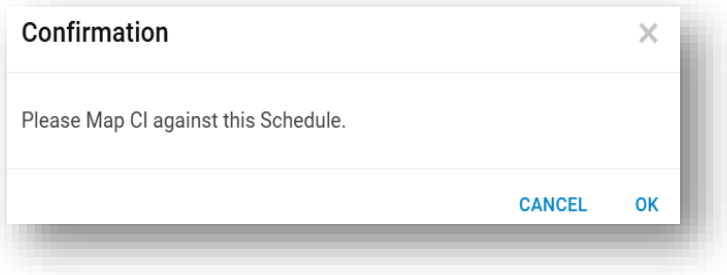


Figure 306 – Create Manage (Cont.)

13. Now click **OK**. A popup will open containing relevant object(s).
14. You can select the appropriate object(s), on which **Action** needs to be scheduled.

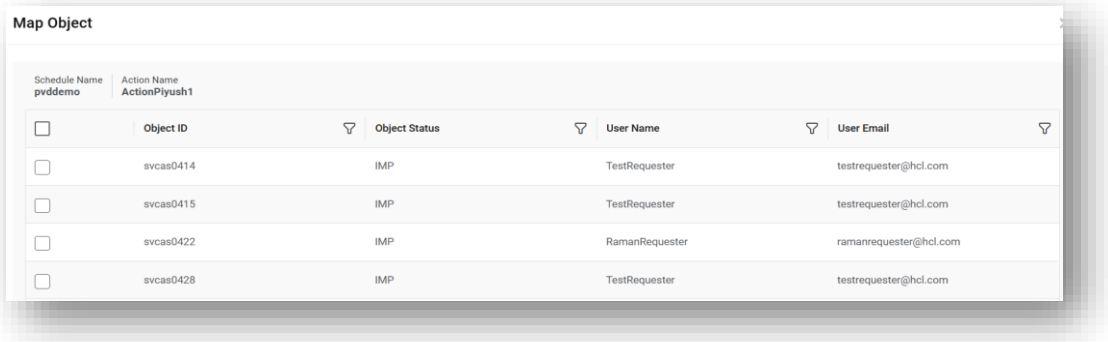


Figure 307 – Create Manage (Cont.)

15. Now click on **Map Button**.
16. A success message box appears.

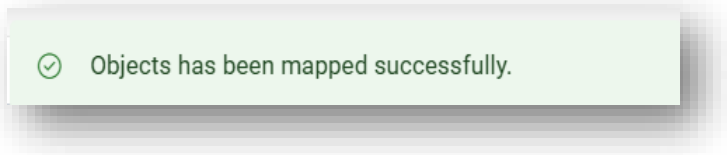


Figure 308 – Success Message

17. Action is scheduled successfully.

1.5.15.2 View Manage

This section lists all the schedules that have been created by an organization admin.

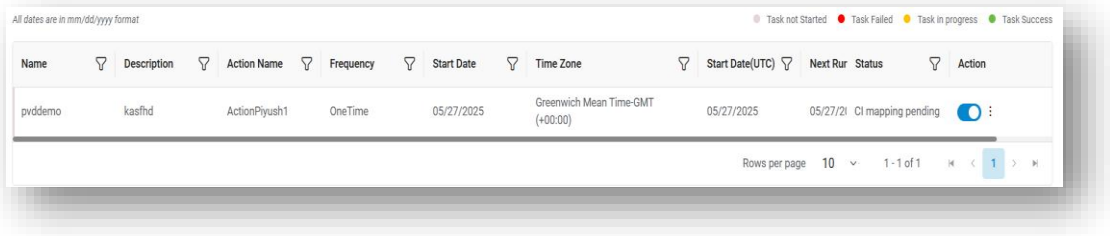


Figure 309 - View Schedules

Refer the below table to understand the fields mentioned in the above figure.

Table 28 – View Users Field

Fields	Description
Organization	Select the name of the organization (business units/ divisions in organizations)
Platform	The field lists down the cloud service provider.
Provisioning Endpoint	Displays the name of the environment (cloud endpoint)
Object Type	Name of the infrastructure resource.
Action	Displays the list of action(s) associated to object.
Name	This unique name of schedule action.
Description	Description of schedule action.
Action Name	Name of action for which schedule has been created
Frequency	Interval at which the action can be schedules
Start Date	The field represents when to start/schedule the action.
Time Zone	This field represents the time zone of start time.
Start Date (UTC)	The field represents when to start/schedule the action in UTC time zone
Next Run Date	The field represents next schedule time of the action
Status	The status of the schedule
Action	User to take actions like edit, change status, map objects, history, delete against the listed schedules

It also comprises the following actions:

- **Edit**: To modify the details of schedule.
- **Change Status**: To change the status of schedule.
- **Map Objects**: To Map Objects To Schedule.
- **History:** To Check The History Of Schedule.
- **Delete**: To Delete The Schedule.

1.5.15.3 Manage History

This section lists all the history of schedules actions.

To view the Schedule History, follow the below steps:

1. Click on Schedule History from menu options in the grid records.
2. The **Schedule History** popup will open.

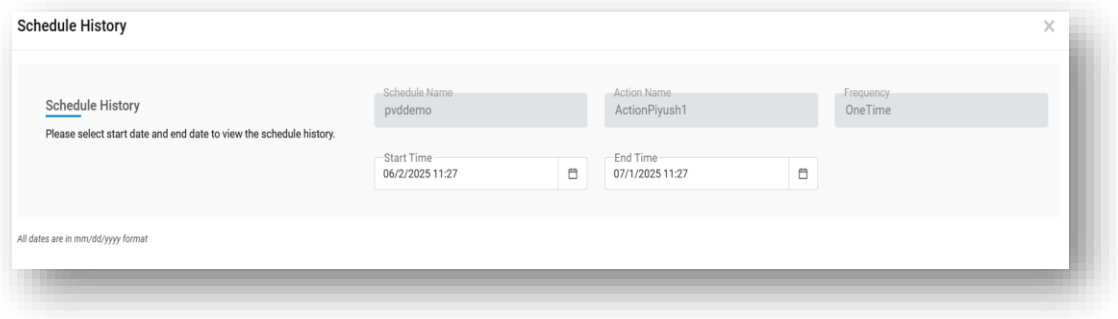


Figure 310 – Manage History

3. Refer the below table to understand the fields mentioned in the above figure.

Table 29 – Manage History Field

Fields	Description
Schedule Name	Refers to the unique name to be given for schedule action.
Action Name	Name of action for which schedule has been created
Frequency	Interval at which the action can be schedules
Start Date	Start time, to filter the history of schedules from this time
End Date	End time, to filter the history of schedules till this time
Status	InProgress, completed, failed filter status
Schedule Request ID	Unique GUID for the schedule instance.
Status	Status of the scheduled instance
Schedule Run Date	Run date of the scheduled instance
Request No.	Request tracking request number created by schedule request ID.
Object ID	Object ID, unique ID of the object on which action is performed.
Schedule Run Date	Run date of the scheduled instance
Execution Status	Status of the request execution

1.5.16 Logs

Through this module, user can view log(s) for components such as website and WebAPI.

1. Click on main menu, then select Platform and then click on **Logs**.

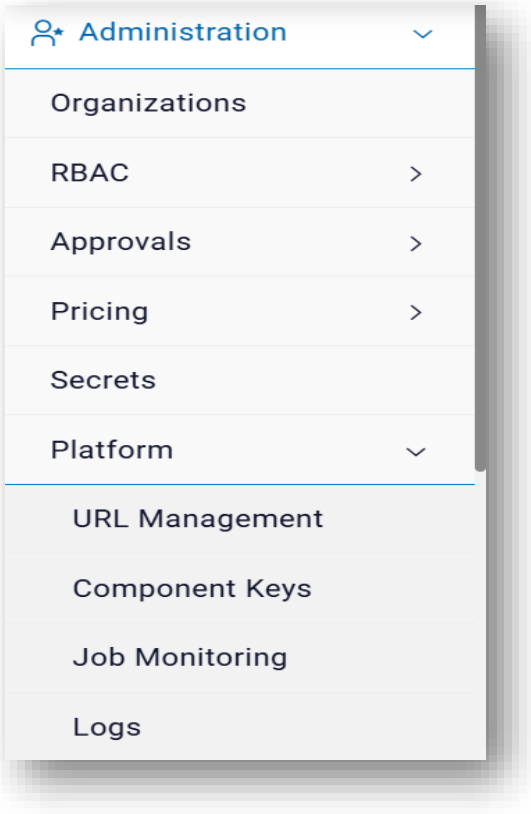


Figure 311 – Logs

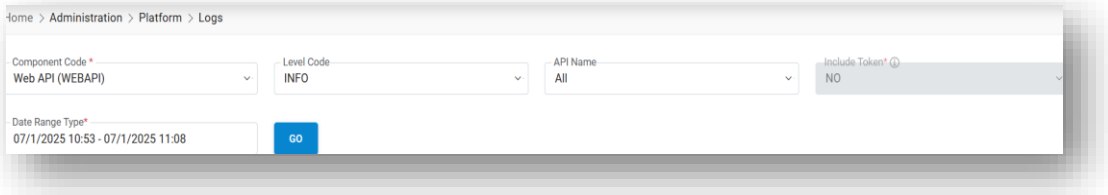


Figure 312 - View Logs Home Screen

2. Select Component Code, Level Code, From Date, and To Date.
3. Click **Go**.

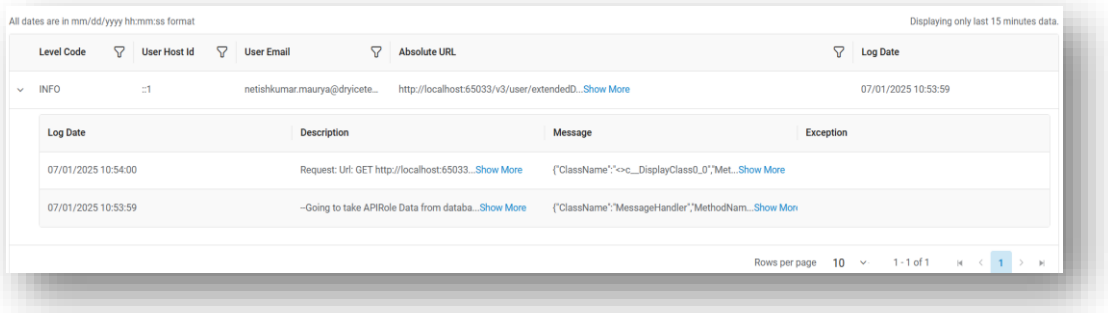


Figure 313 - View Logs (Cont.)

1.5.17 Reference

To understand more about HCL BigFix CLM provider users can navigate to help icon from menu bar.

It has following actions:

- Task Parameter

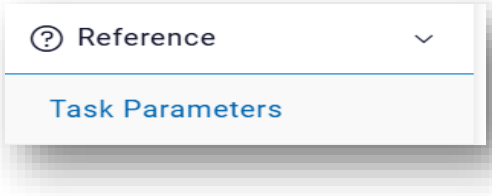


Figure 314 – Task Parameters

1.5.17.1 Task Parameters

This section guides the provider user while configuring manage generic tasks (under manage process workflow) by mapping parameters.

1. Select Platform, Generic Task, and Type.
2. Click Go.

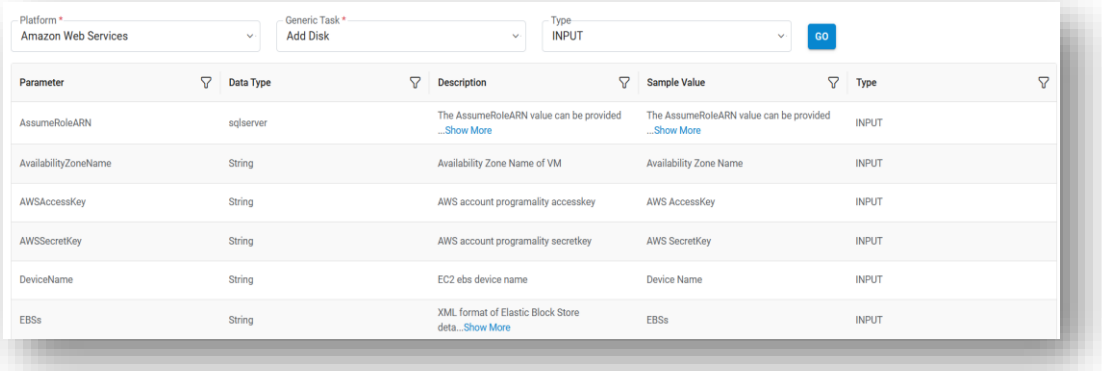


Figure 315 – Task Parameters

1.5.18 Secrets

Through this section, the provider user configures the key vault. Key Vault Configuration can be done by two ways.

- **CyberArk**: External tool to manage the confidential information.
- **HCL BigFix CLM Secret Manager**: HCL BigFix CLM Out of the Box tool to manage the confidential information.
- **Azure Key Vault**: Azure vault to manage secret information

1. On the main menu bar, click **Administration** and then click **Secrets.**

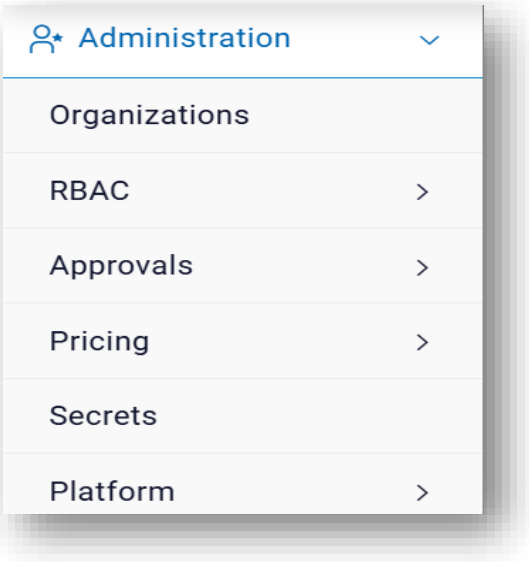


Figure 316 – Secrets

2. The following screen appears:

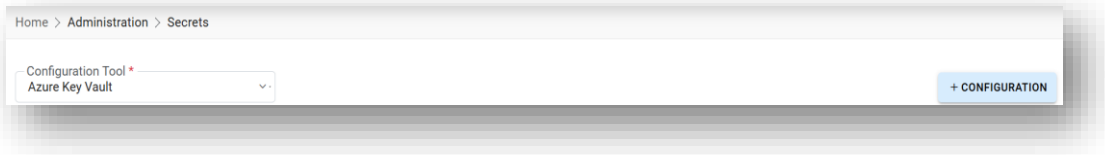


Figure 317 – Key Vault Configuration

3. It has following options:

- Add Secrets
- View Secrets

1.5.18.1 Add Secrets

To add configuration, the provider user needs to follow the below steps:

1. On the Secrets screen, click +Configuration tab.

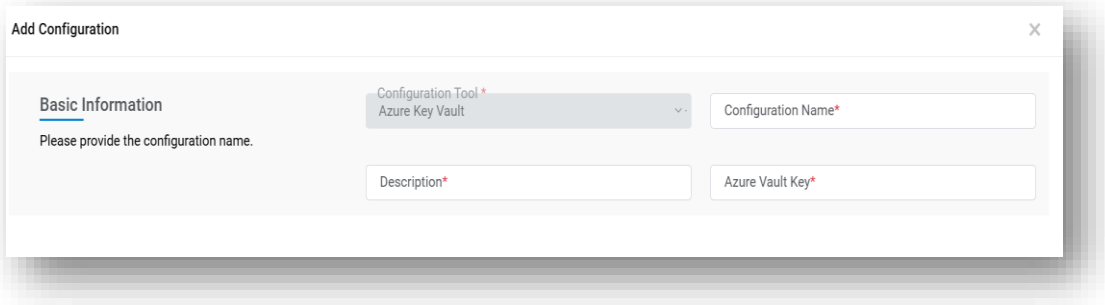


Figure 318 - Add Secrets

2. Refer the below table to understand the fields mentioned in the above figure:

Table 30 - Add Secrets

Field	Description
Configuration Tool	Select the configuration tool (CyberArk/ HCL BigFix CLM Secret Manager/ Azure Key Vault)
Configuration Name	The name of the configuration. Only hyphens and underscores are allowed in the middle of the text. Other special characters are not allowed.
Description	Description of the configuration

Configuration key fields may vary depending on the configuration tool.

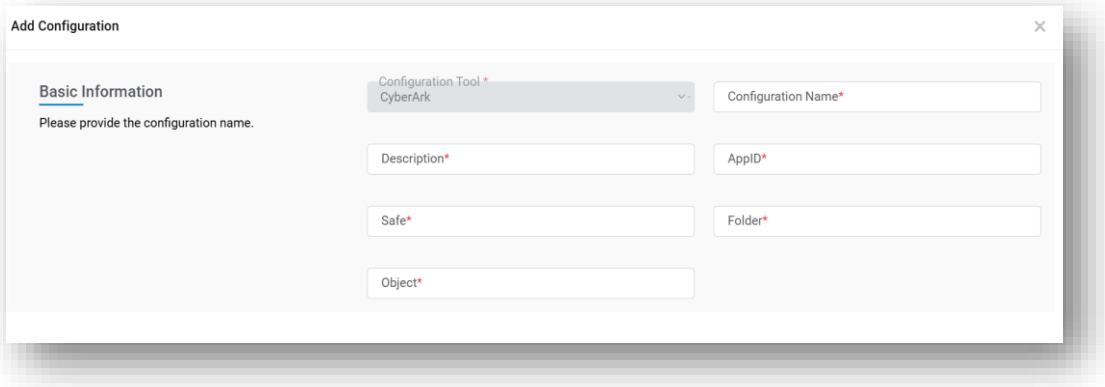


Figure 319 - Add Secrets (Cont.)

3. Click **Add**.
4. A success message box will appear.

1.5.18.2 View Secrets

This section lists out all the Key Vault Configurations that have been created by the provider user.

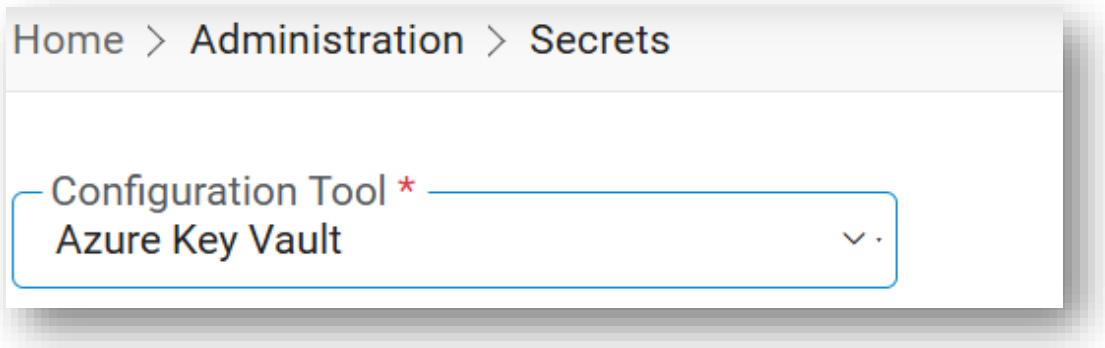


Figure 320 - View Secrets

1. Select Configuration Tool.

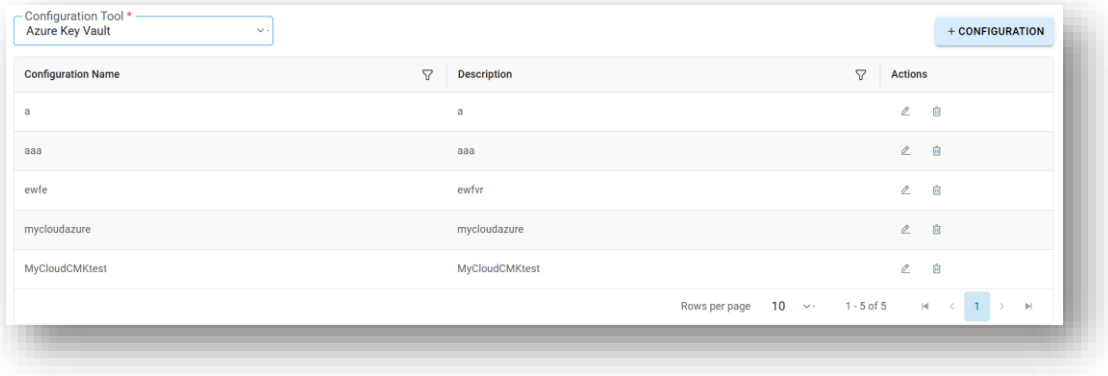


Figure 321 - View Secrets (Cont.)

2. Refer the below table to understand the fields mentioned in the above figure:

Table 31 - View Secrets

Field	Description
Configuration Name	Name of the configuration which is saved using the add configuration functionality.
Description	Description of the configuration

3. It also comprises of following actions:

- **Edit** ( ): To modify the details of existing configuration.
- **Delete** ( ): To delete the existing configuration.
- **Add Key** ( ): To add keys to existing configuration. (this feature is only applicable for HCL BigFix CLM secret manager configuration tool.) For detailed information, please **refer to section** Error! Reference source not found..

1.5.18.2.1 Edit Secrets

To edit/ modify the existing configuration, provider user needs to follow the below steps:

1. Click **Edit** ( ) against the configuration that needs to be edited.

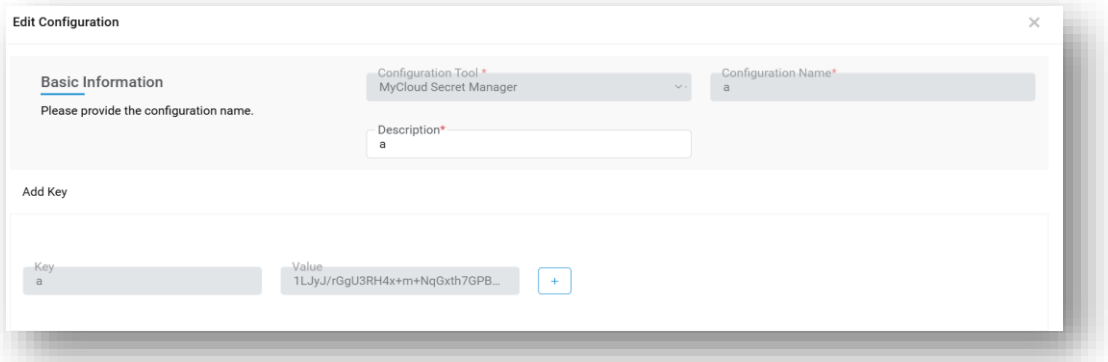


Figure 322 - Edit Secrets

Table 32 - Edit Secrets

Field	Description
Configuration Tool	Configuration tool is non-editable field.
Configuration Name	Configuration name is non-editable field.
Description	Description of the configuration

2. Update the required fields.
3. Click **Update** to save the changes.
4. A success message box will appear.

1.5.18.2.2 Delete Secrets

To delete the existing configuration, provider user needs to follow the below steps:

1. Click **Delete** ( ) against the configuration that needs to be deleted.
2. A confirmation message appears.

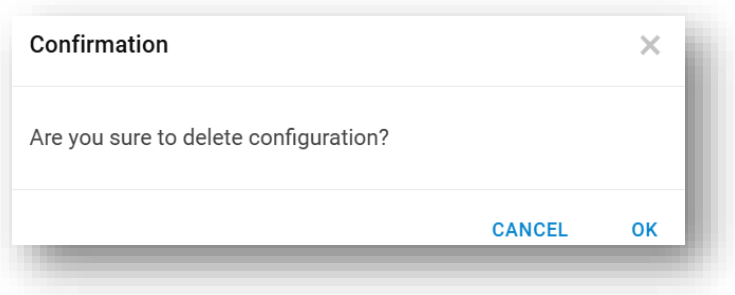


Figure 323 - Confirmation Message

3. Click **OK** to continue. A success message appears. Click **Cancel** to cancel the action.

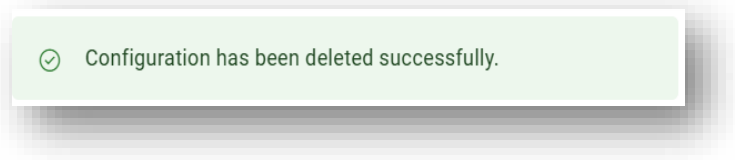


Figure 324 – Success

1.5.18.2.3 Add Key

To add any keys to the existing HCL BigFix CLM secret manager configuration, provider user needs to follow the below steps:

1. Click Configuration Tool as HCL BigFix CLM Secret Manager against the configuration that needs to be edited.
2. The following screen appears:

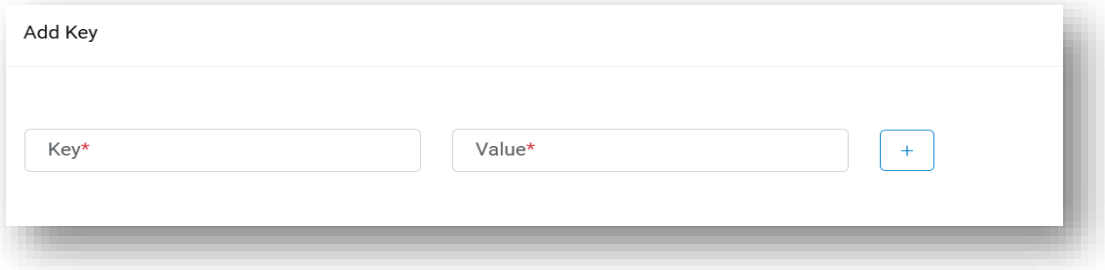


Figure 325 - Add Keys

3. Enter **Key** and **Value**.
4. Click **Add**.
5. User can edit and delete the keys based on the configuration.

1.5.19 Naming

Through this section, provider user can configure object names.

1. On the Main Menu bar, click Configuration, then select Objects and then click **Naming**.

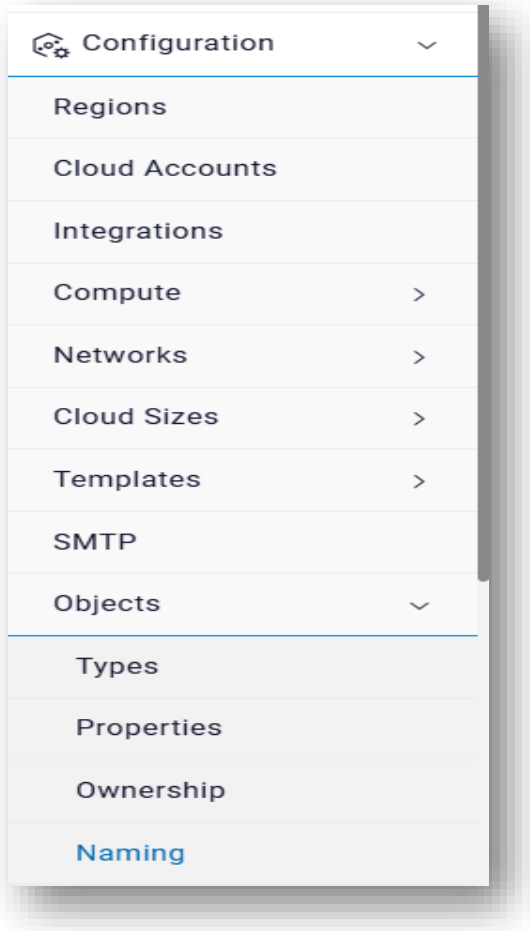


Figure 326 – Naming

2. The below screen will appear.

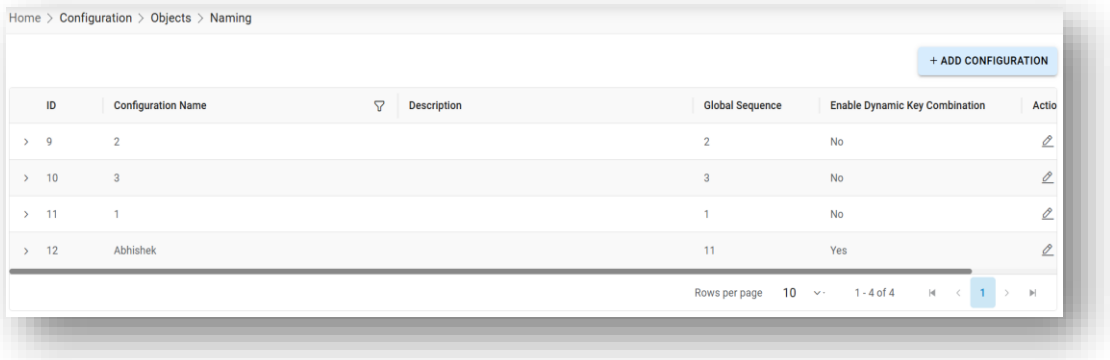


Figure 327 - Naming Home Screen

3. It has following options:

- Add Naming
- View Naming

1.5.19.1 Add Naming

To add Naming, provider user needs to follow the below steps:

1. On the Object Naming screen, click +Add Configuration button.

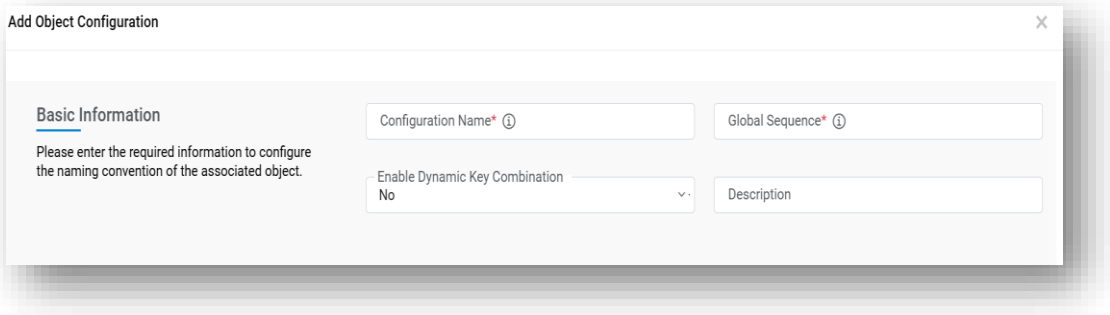


Figure 328 - Add Naming

2. Refer the below table to understand the fields mentioned in the above figure:

Table 33 – Add Naming

Field	Description
Organization	Select the name of the organization (business units/divisions in organizations)
Configuration Name	Name of the configuration. Provided that only hyphen and underscore are allowed in middle of text. Other special characters are not allowed.
Global Sequence	This value will be default for all type of keys combination and user can also override its value from manage key action.
Enable Dynamic Key Combination	This key is used to set the output of API based on configuration. If value is –

	• **Yes** -If key doesn't exist in the system against a configuration. New key will be created with initial sequence as global sequence. • **No** – If no key exist then error will be prompted stating that key not exist against configuration.
Description	Description of the configuration

3. Select Organization.
4. Enter Configuration Name, Global Sequence and Description.
5. Enter Enable Dynamic Key Combination.
6. Click **Add**.
7. A success message box appears as below:

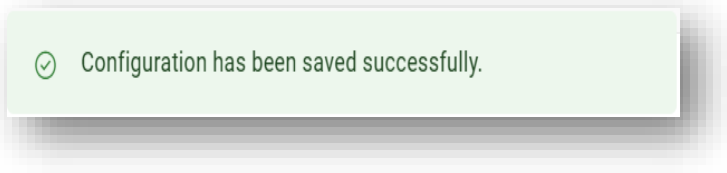


Figure 329 - Success Message

1.5.19.2 View Naming

This section lists out all the CI naming convention configurations that have been created by the provider user.

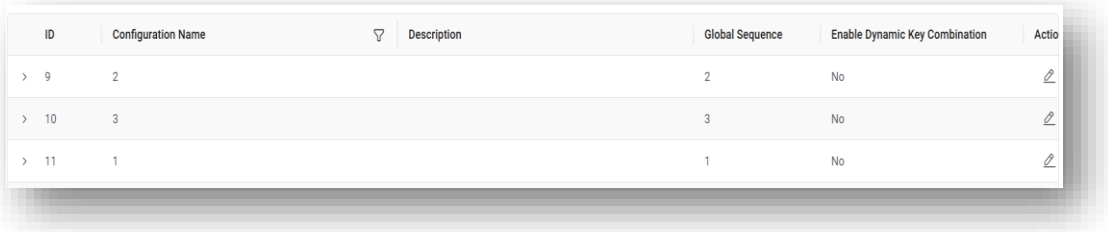


Figure 330 - Naming Home Screen

1. Select Organization.

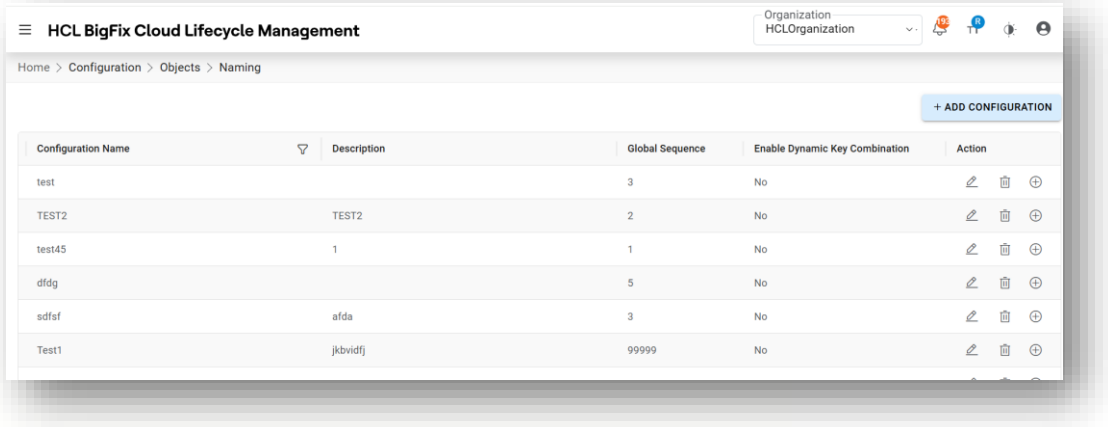


Figure 331 - View Naming

2. It also comprises of following actions:

- **Edit** ( ): To modify the details of existing configuration.
- **Delete** ( ): To delete the existing configuration.
- **Manage Keys** ( ): To manage keys of existing configuration.

1.5.19.2.1 Edit Naming

To edit/modify the existing configuration, provider user needs to follow the below steps:

1. Click **Edit** ( ) against the configuration that needs to be edited.

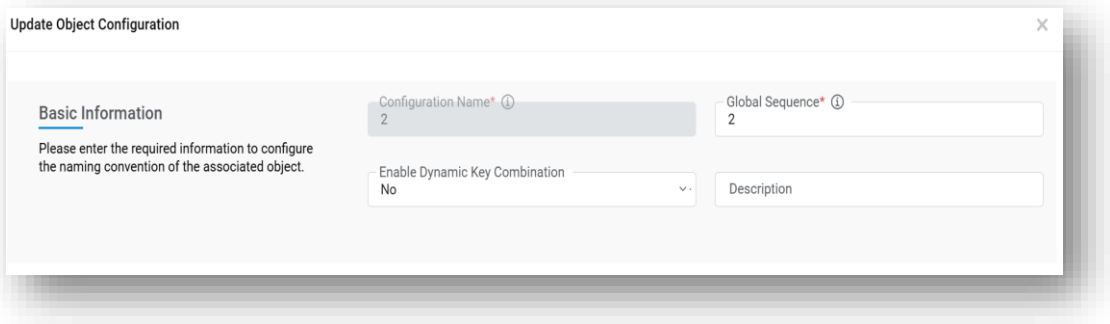


Figure 332 - Edit Naming

2. Edit Global Sequence, Enable Dynamic Key Combination, and Description.
3. Click **Update** to save the changes.

1.5.19.2.2 Delete Naming

To delete the existing configuration, provider user needs to follow the below steps:

1. Click **Delete** ( ) against the configuration that needs to be deleted.
2. A confirmation message appears.

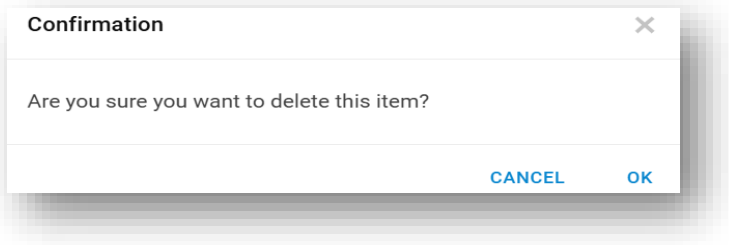


Figure 333 – Confirmation Message

3. Click **OK** to continue and **Cancel** to cancel the action.
4. A success message will appear.

1.5.19.2.3 Manage Keys

To manage keys in the existing configuration, provider users need to follow the below steps:

1. Click **Manage Keys** ( ) against the configuration that needs to be added or edited.
2. The below pop up will appear:

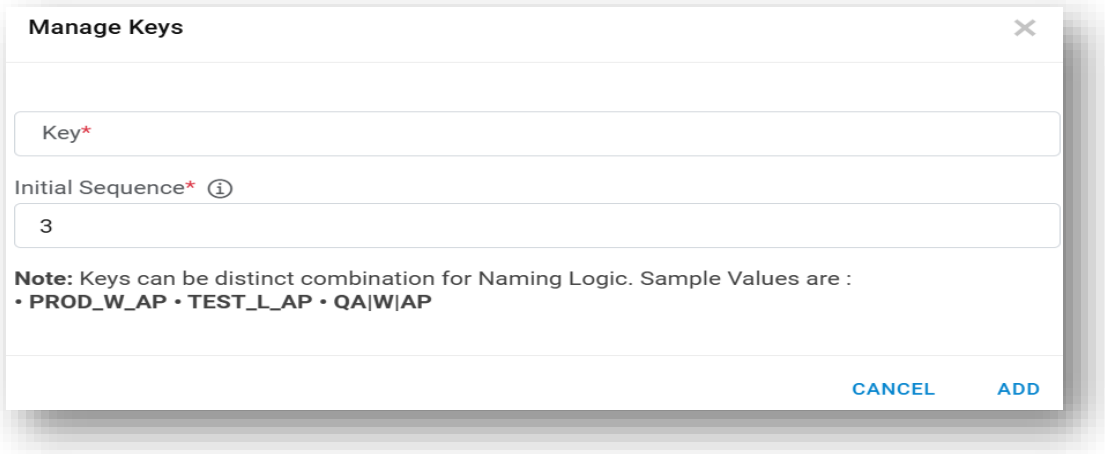


Figure 334 - Manage Keys

3. Enter Key and Initial Sequence.
4. Click **Add**.
5. Users can **Edit** and **Delete** the keys based on the configuration.
6. Keys can be a distinct combination for naming logic. Sample values are:

- PROD_W_AP
- TEST_L_AP
- QA|W|AP

1.5.20 Integrations

Through this section, provider users can manage GIT configuration.

1. On The Main Menu bar, click Configuration and then click Integrations, then select GIT pane.

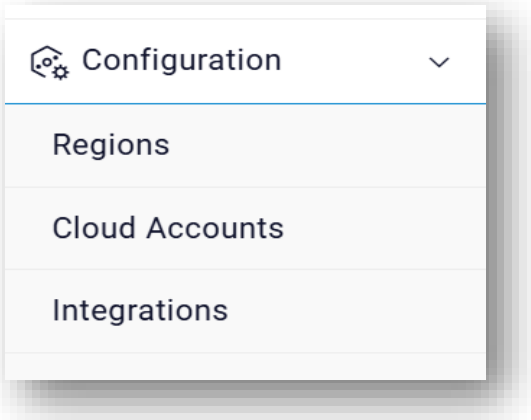


Figure 335 – Integrations

2. The below screen will appear.

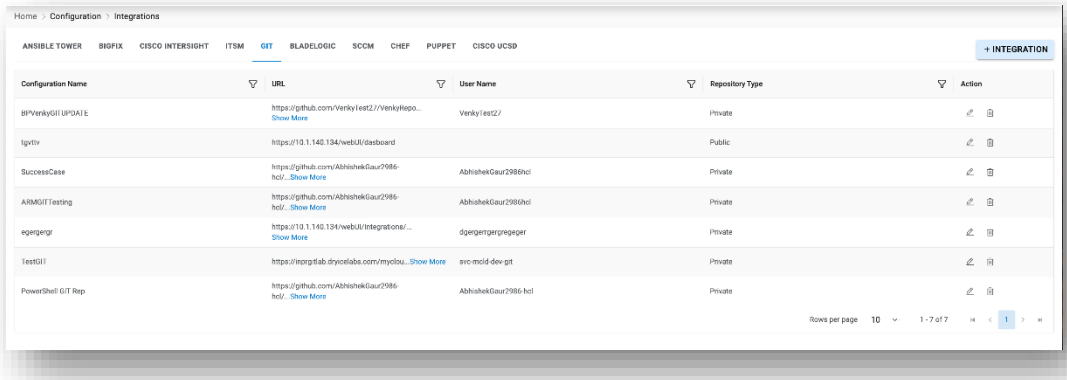


Figure 336 - Integrations

3. It has following options:

- Add Integration
- View Integration

1.5.20.1 Add Integrations

To add configuration, provider user needs to follow the below steps:

1. On the GIT Configuration screen, click +Integration Button and select GIT.

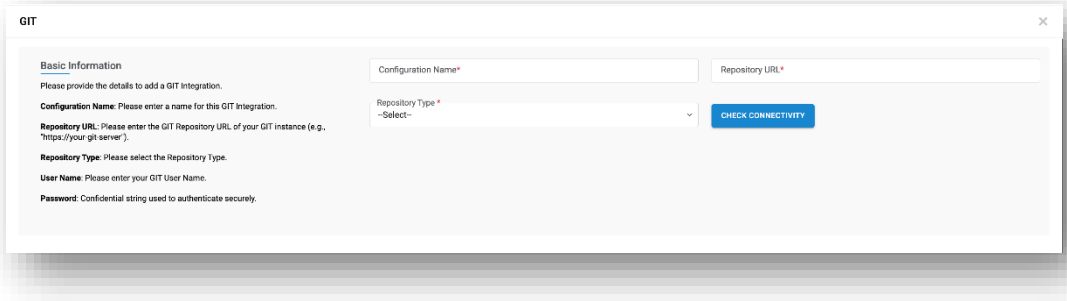


Figure 337 – Add Integrations

2. Refer the below table to understand the fields mentioned in the above figure:

Table 34 – Add Integrations

Field	Description
GIT Configuration Name	Unique name of the configuration.
Repository URL	Address of the GIT repository.
Repository Type	Type of the repository, public, or private
Username, Token	For repository type: private, user needs to add creds such as username and token.

3. Select GIT Configuration Name, Repository URL, Repository Type.
4. In the case of **'Private'** repository type, some additional fields appear.

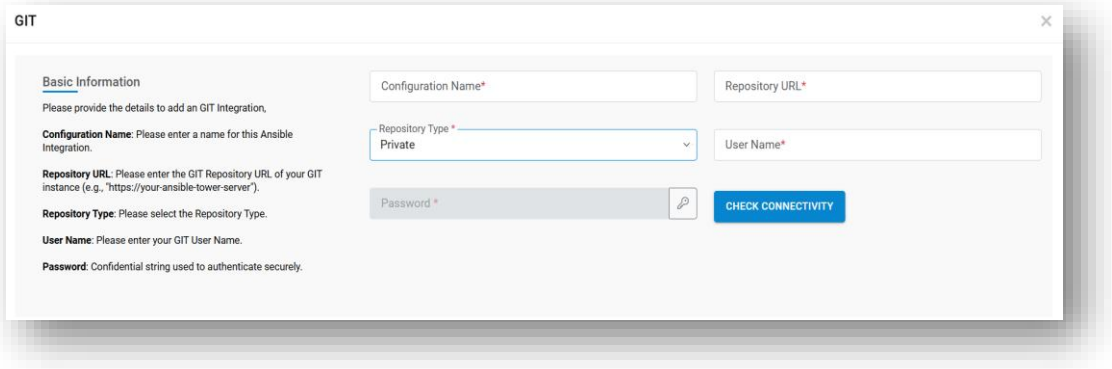


Figure 338 – Add Integrations (Cont.)

5. Enter Username and Token.
6. Click **Add**.
7. A success message box will appear.

1.5.20.2 View Integrations

This section lists out all the GIT configurations that have been created by the provider user.

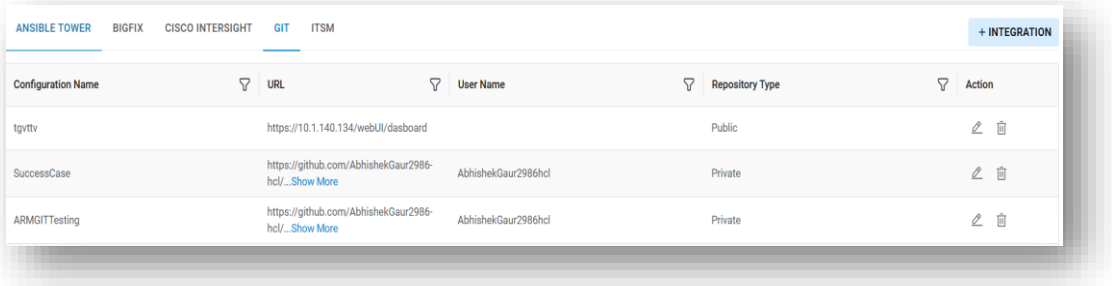


Figure 339 – View Integrations

1.5.20.2.1 Edit Integrations

To edit/ modify the existing configuration, provider user needs to follow the below steps:

1. Click **Edit** () against the configuration that needs to be edited.

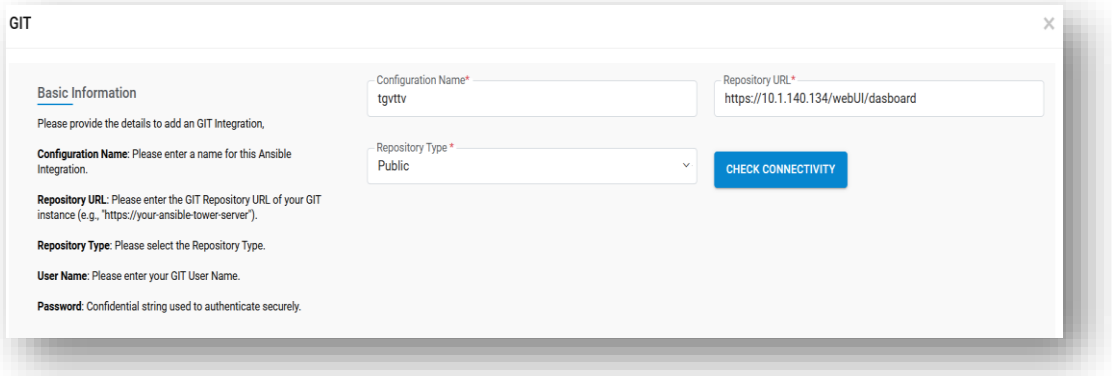


Figure 340 - Edit Integrations

2. Edit GIT Configuration Name, Repository URL, And Repository Type.
3. Click **Update**.

4. A success message will appear.

1.5.21 Public

This module helps provider users to allocate public cloud size allocation.

1. On the main menu, click on Configuration, then select Cloud Sizes and then click Public.

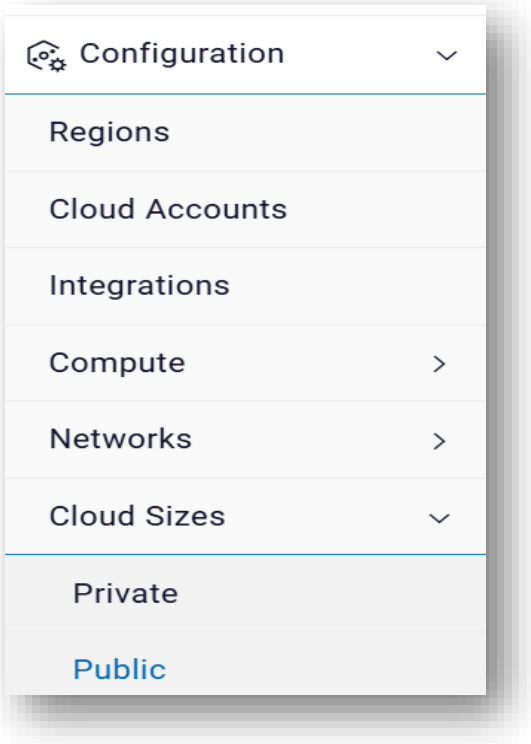


Figure 341 – Public

2. The below screen appears.

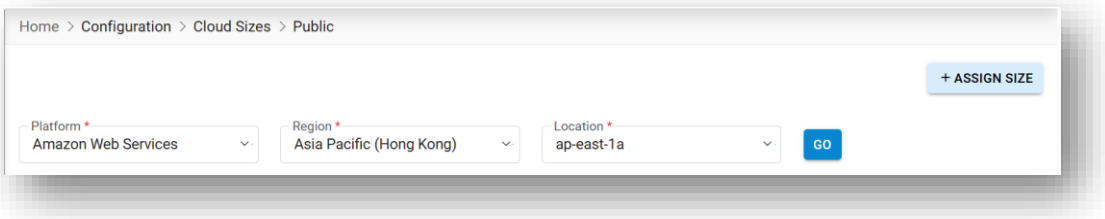


Figure 342 - Public

3. It has following options:

- View Public
- Assign Size

1.5.21.1 Add Public

To allocate public cloud size in an organization, user needs to follow the steps below:

1. Click on the **+Assign Size**.

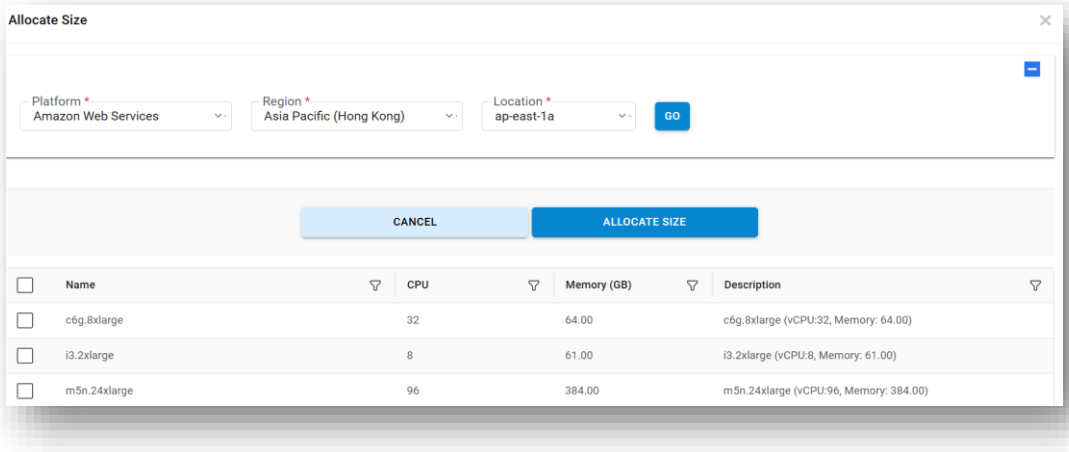


Figure 343 - Allocate Size

2. Select Organization, Platform, Region, and Location.
3. Click **Go**.
4. The screen below appears.

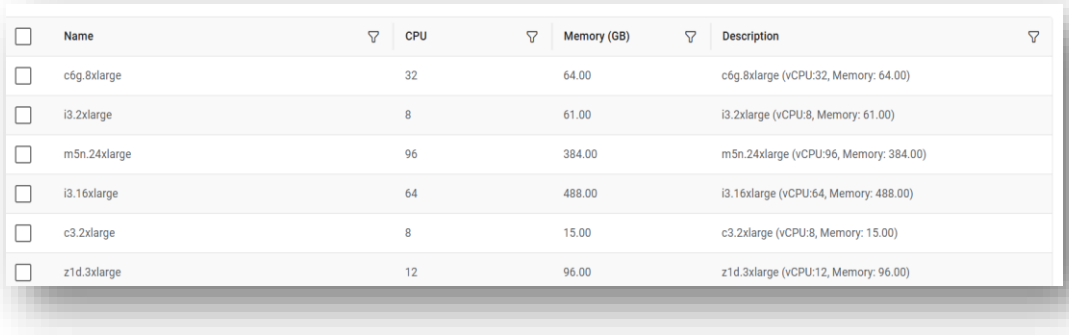


Figure 344 - Allocate Size

5. Select checkbox for the list of sizes.
6. Click Allocate Size.
7. The below message appears.

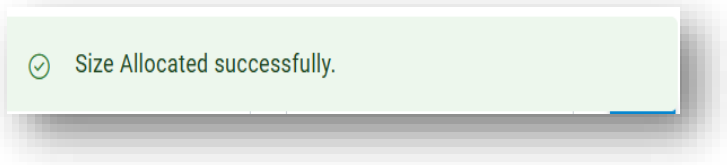


Figure 345 - Success Message

1.5.21.2 View Public

To view allocated public cloud size in an organization, user needs to follow the steps below:

1. Click on the Public Cloud Size Allocation.

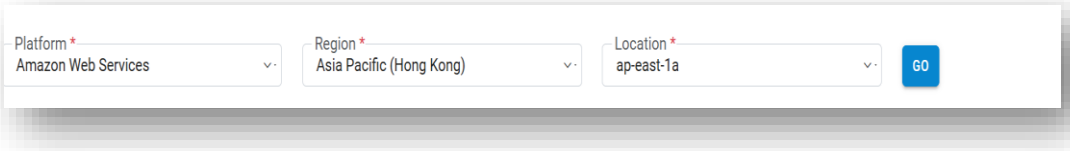


Figure 346 - View Public

2. Select Organization, Platform, Region, and Location.
3. Enter **Go**.

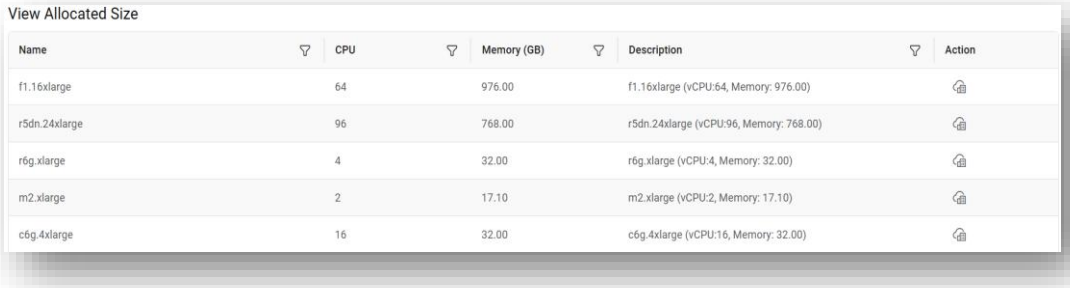


Figure 347 – View Public

4. User can **Deallocate** the size.
5. Click on **Deallocate** to the size from the icon against each record in grid Action Menu.
6. A confirmation message appears.

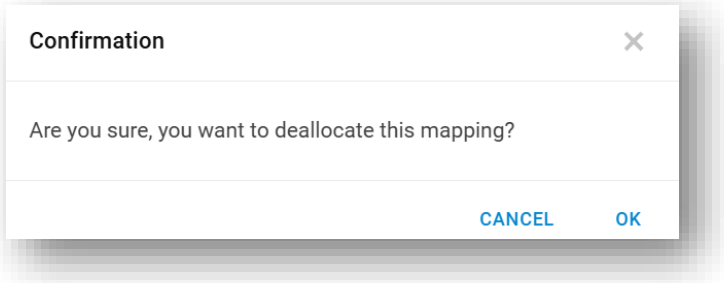


Figure 348 - Confirmation Message

7. Click **OK** to confirm.

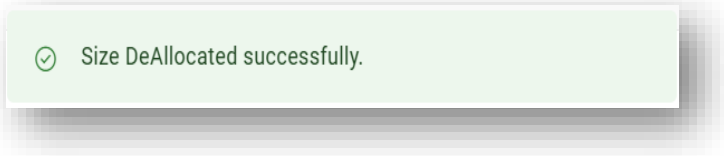


Figure 349 - Success Message

1.5.22 Private

Through this section, provider users can configure private cloud size.

1. On the main menu click on **Configuration**, then select Cloud Sizes, then **Private**.

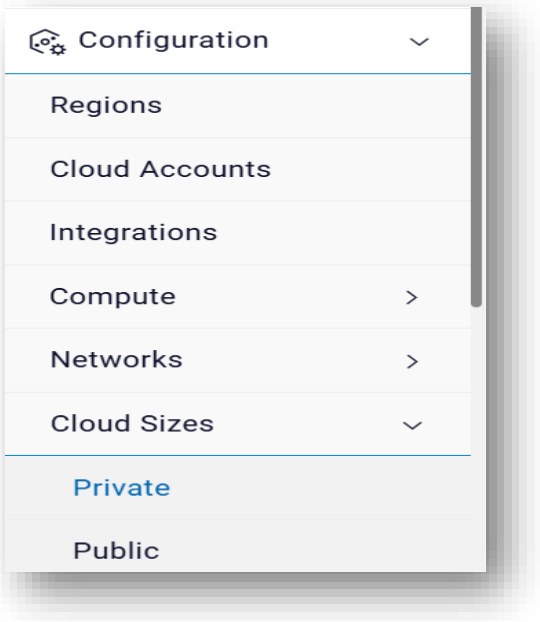


Figure 350 – Private

2. The below screen will appear.

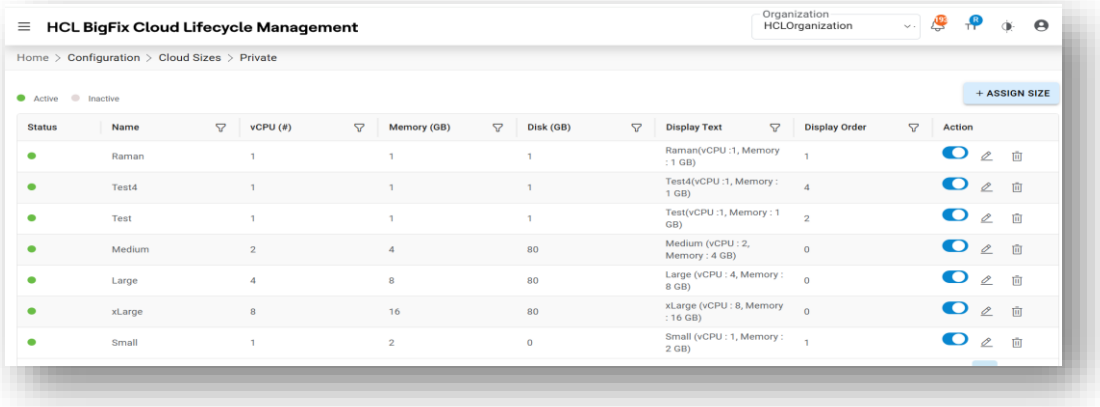


Figure 351 – Private

3. It has following options:

- View Size
- Add Size

1.5.22.1 Add Private

To add private cloud size in an organization, user needs to follow the steps below:

1. Click on the **+Assign Size**.

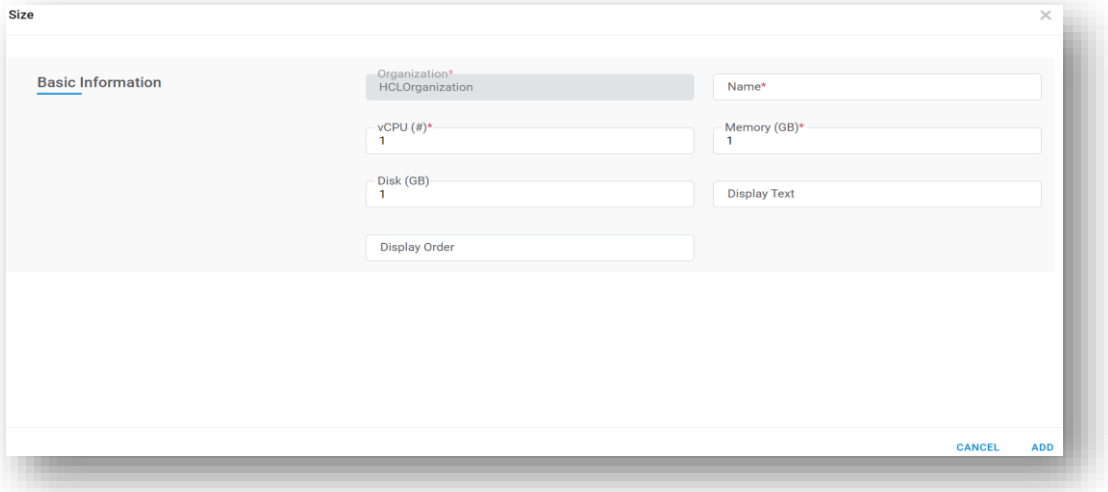


Figure 352 - Add Private

2. Select Organization.
3. Enter Name, vCPU (#), Memory (GB), Disk (GB), and Display Text.
4. Enter Display Order.
5. Click **Add**.

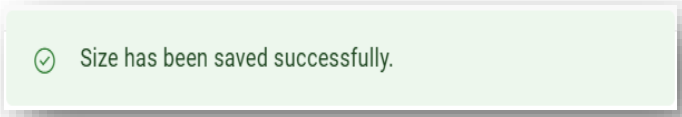


Figure 353 - Success Message

1.5.22.2 View Private

To view private cloud size in an organization, user needs to follow the steps below:

1. Click on Private.
2. Select Organization.

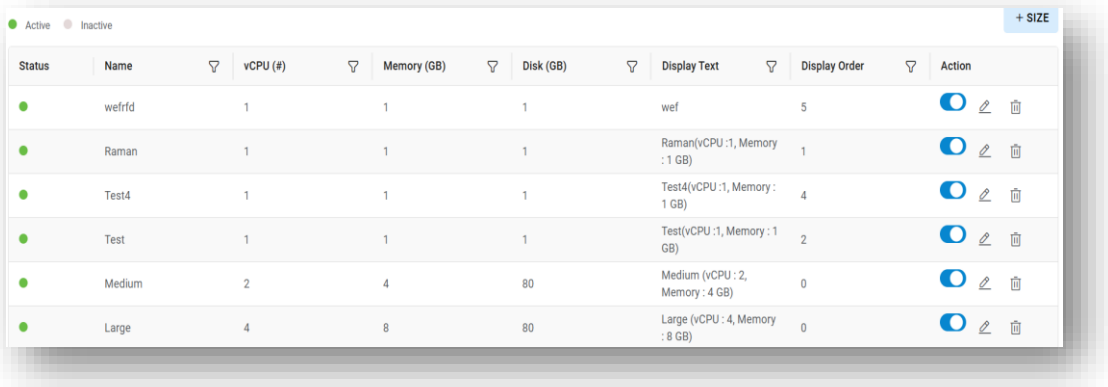


Figure 354 - Home Screen

3. It also comprises of following actions:

- **Edit** ( ): To modify the details of existing configuration.
- **Change Status ( ):** To change the status as Active on Inactive.

- **Delete** ( ): To delete the existing configuration.

1.5.22.2.1 Edit Private

To edit/ modify the existing configuration, provider user needs to follow the below steps:

1. Click **Edit** ( ) against the configuration that needs to be edited.

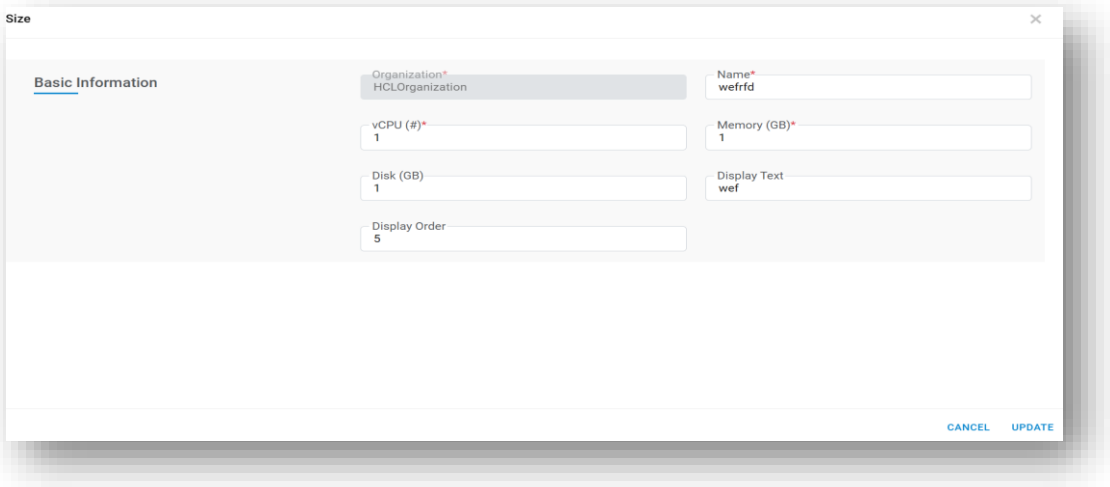


Figure 355 - Edit Private

2. Select Organization.
3. Enter Name, vCPU (#), Memory (GB), Size (GB), and Display Text.
4. Enter Display Order.
5. Click **Update**.
6. A success message appears.

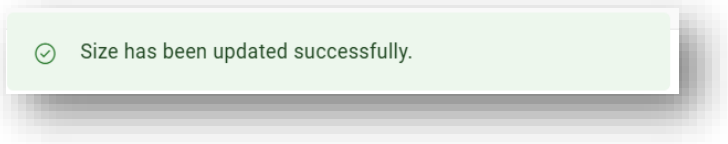


Figure 356 - Success Message

1.5.22.2.2 Change Status

To toggle the existing status of configuration, provider user needs to follow the below steps:

1. Click **Change Status** ( ) against the check that status needs to be changed.
2. A confirmation message appears.

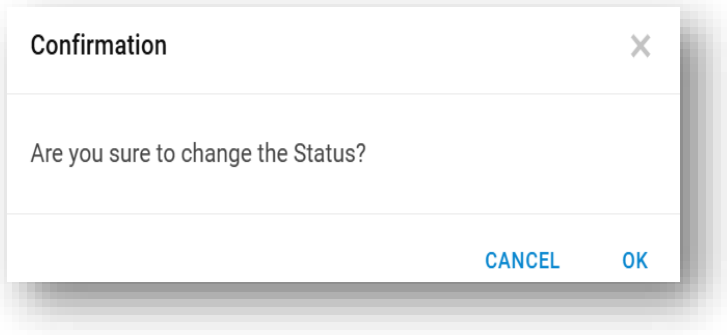


Figure 357 - Confirmation Message

3. Click **OK** to confirm.

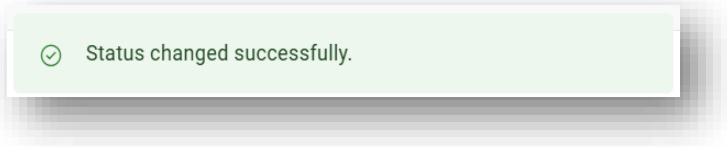


Figure 358 - Success Message

1.5.22.2.3 Delete Private

To delete the existing configuration, provider user needs to follow the below steps:

1. Click **Delete** ( ) against the check that needs to be deleted.
2. A confirmation message appears.

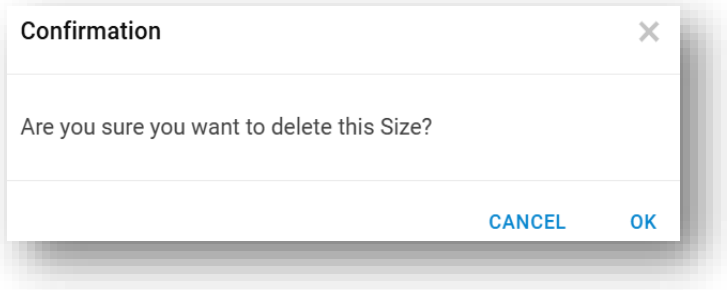


Figure 359 - Confirmation Message

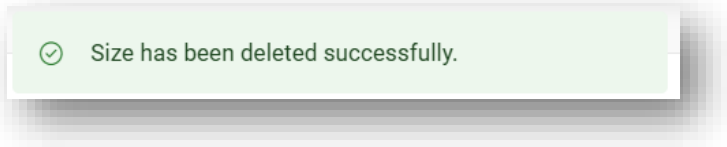


Figure 360 - Success Message

1.6 Blueprint Module

A blueprint is a package of deployable, reusable configuration and policies that implements and documents a specific solution. Blueprints enable users to design infrastructure, platforms, and application services by composing and connecting cloud resources with declarative configuration. Blueprints are designed to capture best practices for specific use cases, including appropriate resource groupings and policies. Once best practices are packaged into a blueprint, they can be shared internally within your

organization or distributed among certain groups to evangelize them more broadly. Because blueprints package multiple resources together to target specific use cases, they can provide sensible, contextual default configurations, which reduces the need to tune every option on each resource. This makes onboarding faster and reduces costs. This module describes how to create, edit, and deploy blueprints in HCL BigFix CLM. It is a drag and drop blueprint designer to support provisioning and post provisioning and has the following features covered.

- Support for GCP, Azure, AWS
- Support Ansible and Cisco Intersight for post provisioning task
- Ability to create infrastructure blueprint using Blueprint Designer
- Blueprint deployment and status tracking
- Out of Box (OOB) method to deploy blueprints in HCL BigFix CLM orchestrator
- View execution history and rerun functionality
- Downloads terraform files for blueprint
- History and drift view among multiple versions of blueprint
- Import/export functionality of blueprints

1.6.1 Blueprint

1.6.1.1 Accessing Blueprint

The **Blueprint Module** is managed by the provider user. To access the blueprint, the user needs to login as a provider user and follow the below steps.

1. Login into HCL BigFix CLM with **provider user** credentials.
2. On the main menu bar, click Design, then select the Blueprint from Menu.

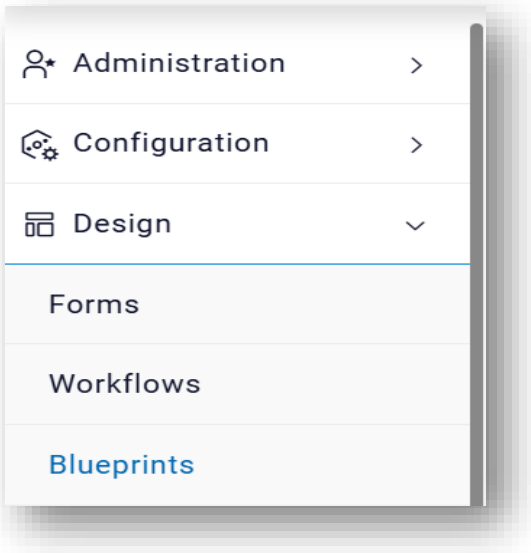


Figure 361 – Blueprint Menu

3. The Blueprint page appears.

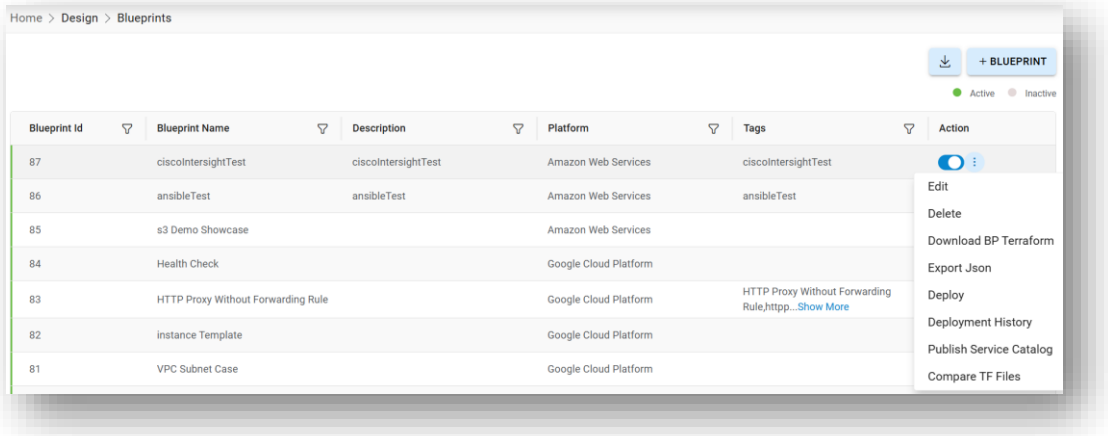


Figure 362 - Blueprint Page

4. The **Blueprint** page is the landing page for the blueprint module. This page has the options to create and list the blueprint. Under the list section, users have the options to import the blueprint and to view the deployment history, along with other actions. The manage blueprint page covers the following two areas of the blueprint module.

- Create New Blueprint
- Manage Existing Blueprints

1.6.1.2 Create New Blueprint

1. To create a new blueprint, click on the + Blueprint icon on **Blueprint** page. The user is directed to the **Blueprint** page.

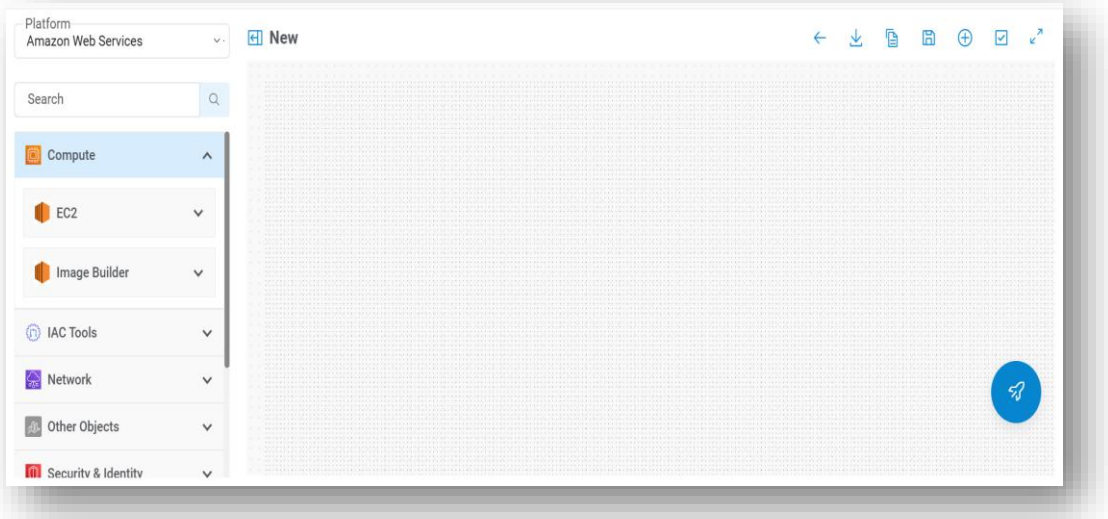


Figure 363 - Design Blueprint

The Design Blueprint page has the following functionalities:

- Cloud platform selection
- Blueprint object search bar
- Left object menu
- Middle diagram pane

- Right attribute window
- Deploy Blueprint (Icon)
- Action Buttons

1.6.1.2.1 Platform Selection

The Design Blueprint page has a platform selection dropdown where users can select the different configured cloud platforms supported by the Blueprint module.

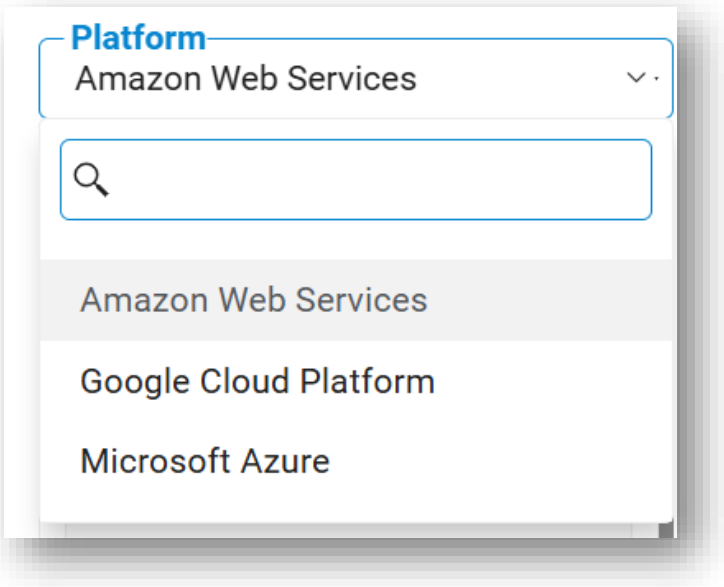


Figure 364 - Platform Selection

1.6.1.2.2 Blueprint Object Search Bar

The Design Blueprint page has the option to search for blueprint objects in the left menu. The left menu is filtered based on the input text in the search box.

1. To search, enter any filter value in the search box and click the **Search icon** ( ).

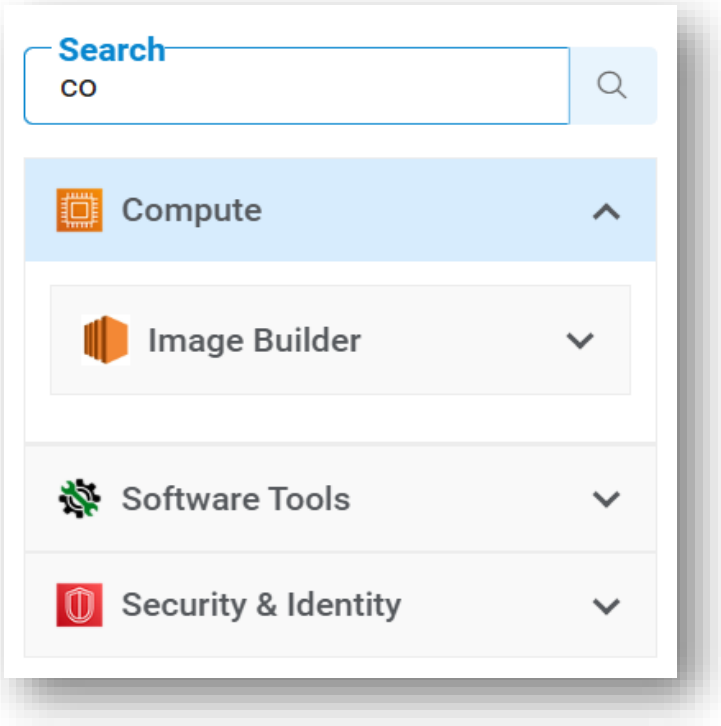


Figure 365 - Blueprint Object Search Bar

1.6.1.2.3 Left Object Menu

All the configured cloud resources (or objects) of the selected platform appear in the left menu on the **Design Blueprint** page. Cloud objects are arranged category-wise.

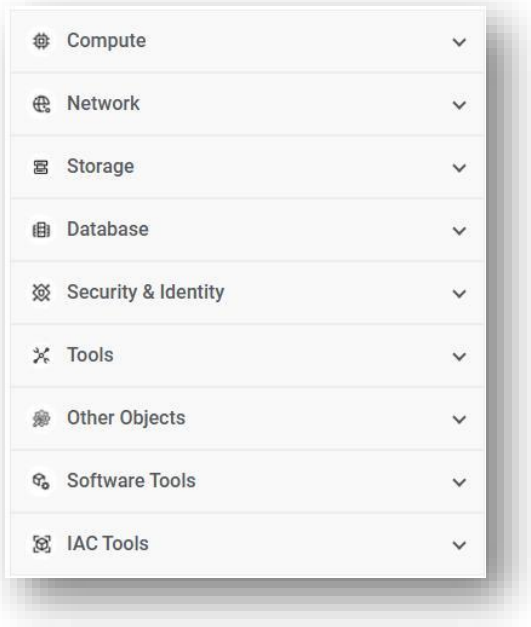


Figure 366 - Left Object Menu

To use the configured cloud objects, the user needs to take the following steps:

1. Click on desired **category**.
2. Click on desired **subcategory**.
3. Drag the **object** to the Middle Diagram Pane.

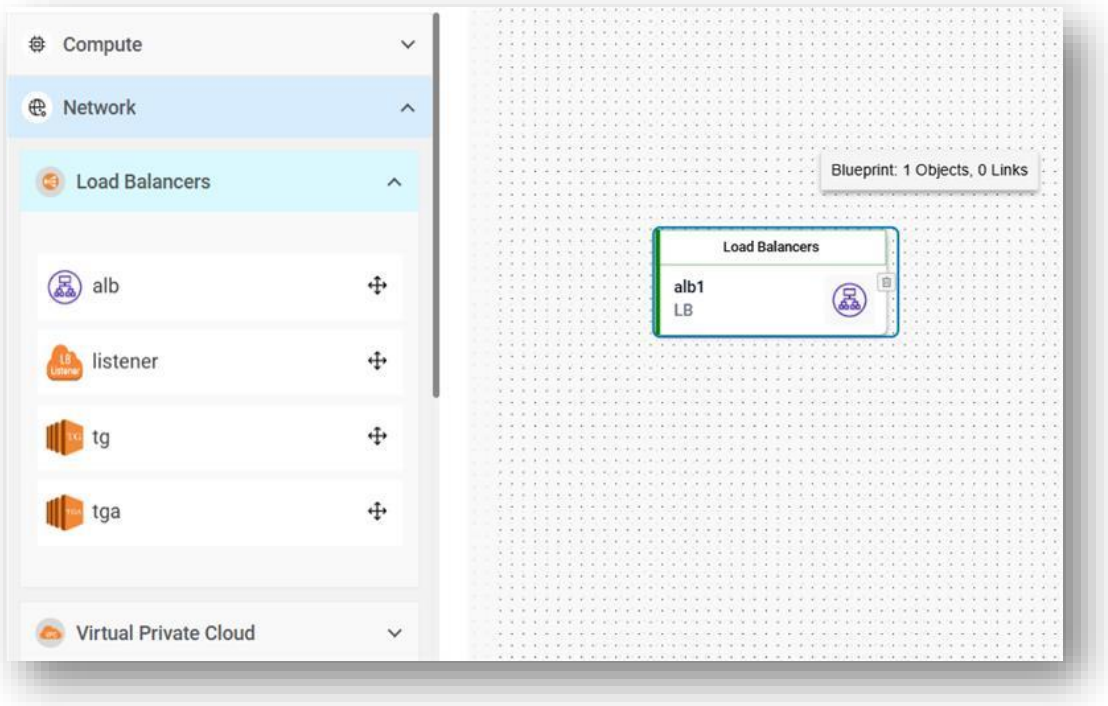


Figure 367 - Left Object Menu (Cont.)

1.6.1.2.4 Middle Diagram Pane

The middle diagram pane in the Design Blueprint page is the area where all the objects are dragged and the blueprints are designed. It is a designer pane where a user can drag objects and map them to other objects.

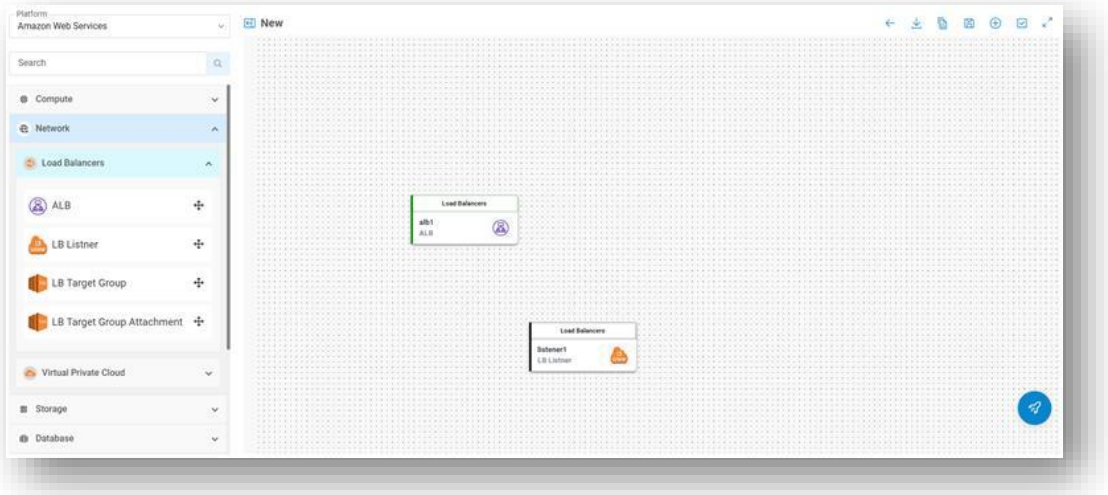


Figure 368 - Middle Diagram Pane

1.6.1.2.5 Right Attribute Pane

The right attribute pane appears on clicking any object in the diagram pane. It has an attribute list of the selected object. The cloud object attribute can be configured here for the selected object.

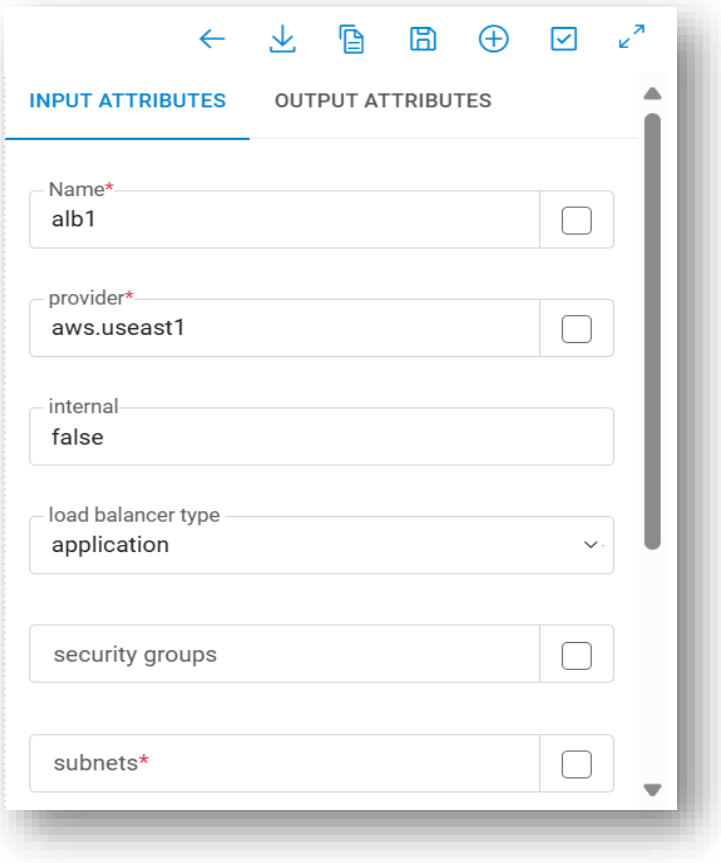


Figure 369 - Right Attribute Window

The right attribute window has two types of attributes. The user can configure both types of attributes by selecting the desired tab.

- **Input attributes**: This tab displays the input attributes for the selected object.

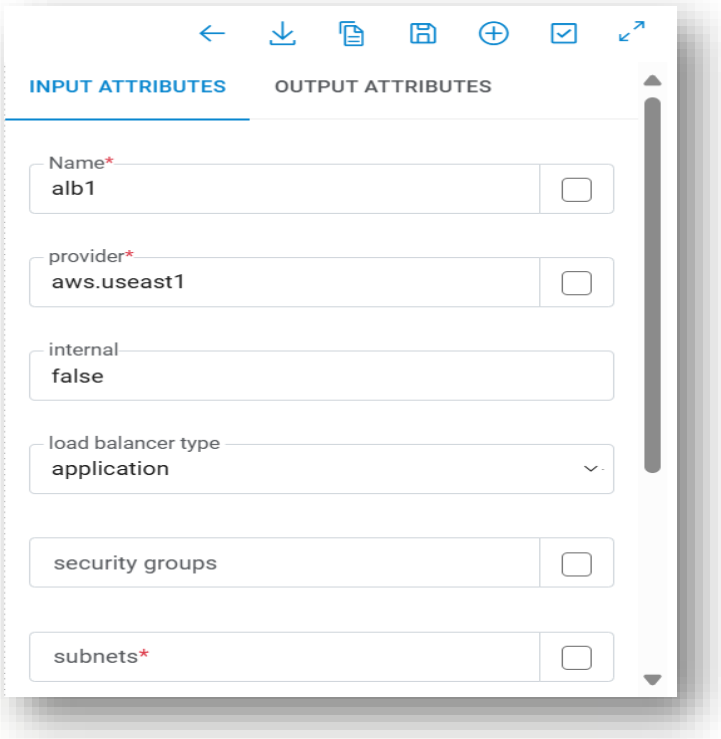


Figure 370 – Input Attributes

- **Output attributes**: This tab displays the output attributes for the selected object. There is a checkbox for the attribute name. If this is unchecked, the output property will not be used to capture the output of blueprint execution.

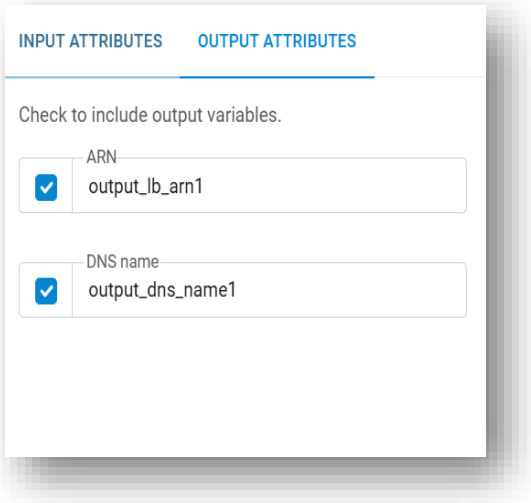


Figure 371 – Output Attributes

By default, the output property is output_subnet_id1 which is changeable. Ensure that the value is unique throughout the blueprint.

The attribute window has the following options for user input.

- Variable Mapping
- Provider Mapping
- Zone mapping
- Object Mapping/Multiple Object Mapping

1.6.1.2.5.1 Variable Mapping

The user has the option to map the variable to the object attribute which is configured to map variables. Variables can be created using Variables window from top menu. The list of variables shown for that attribute can be filtered by configuring mapping restrictions.

1. Click on the **attribute textbox** and type "var."

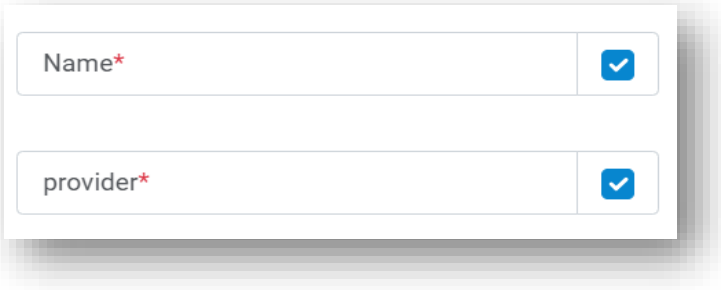


Figure 372 – Variable Mapping

2. Select the variables from the list.

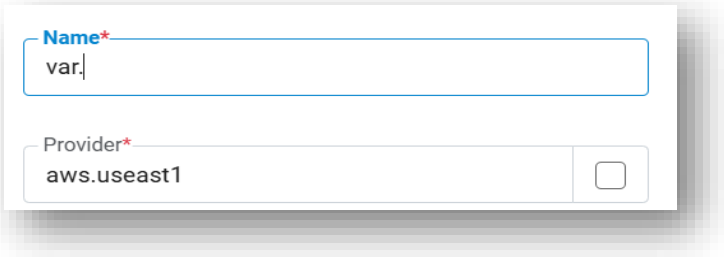


Figure 373 – Variable Mapping (Cont.)

1.6.1.2.5.2 Provider Mapping

The user has the option to map the provider to the object attribute which is configured to map providers. List of providers will be available based on the Cloud platform selected.

1. Click on the attribute textbox and type "**AWS.**" For **Amazon**, and "**google.**" For the **GCP platform**.
2. Select the **provider** from the list.

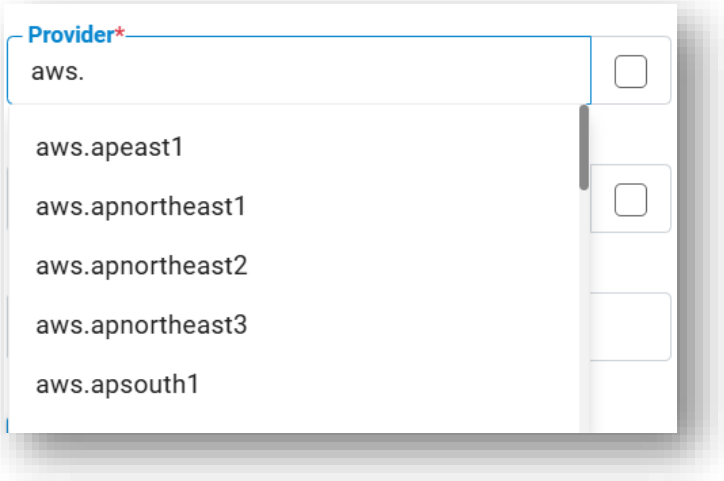


Figure 374 – Provider Mapping

1.6.1.2.5.3 Zone Mapping

The user has the option to map the zone (in case of AWS and GCP). The zone attribute is used to map the object. A list of zones is available based on the cloud platform selected.

1. Click on the **attribute textbox** and start typing the name of any zone. A list appears.
2. Select the desired zone from the list.

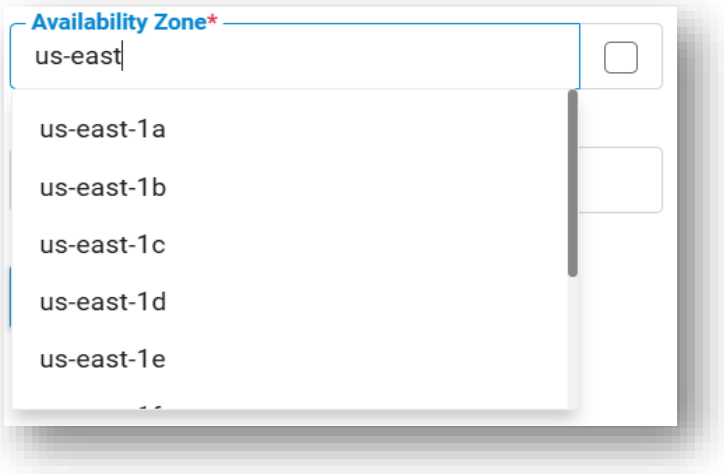


Figure 375 – Zone Mapping

1.6.1.2.5.4 Object Mapping/ Multiple Object Mapping

The Object Mapping option allows users to map either single object or collection of objects to the object attribute which is configured to map objects.

Single Object Mapping:

1. Click on the **attribute textbox** and type "**obj.**"
2. Select the object from the list.

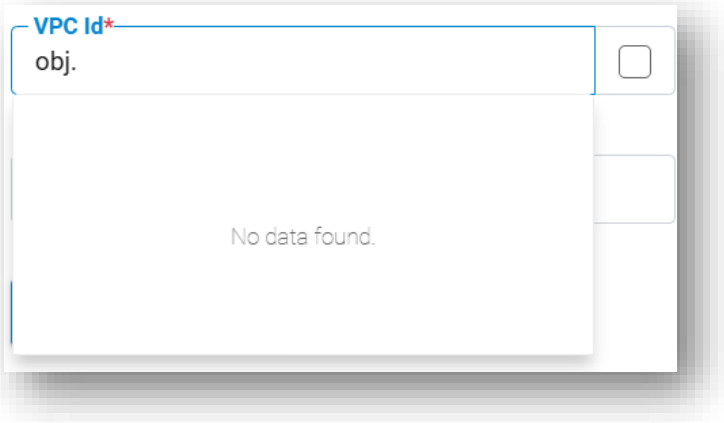


Figure 376 – Object Mapping

Multiple Object Mapping:

The Multiple Object Mapping option is used to map multiple objects to the object attribute which is configured to map multiple objects to it. There are three options available in multiple object mapping.

1. **Input object ID as text**: the user can input an existing object ID into the attribute field.

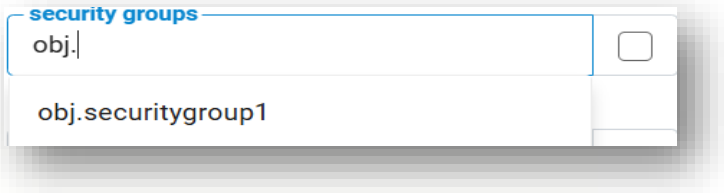


Figure 377 - Input object ID as Text

2. Select the object from list.

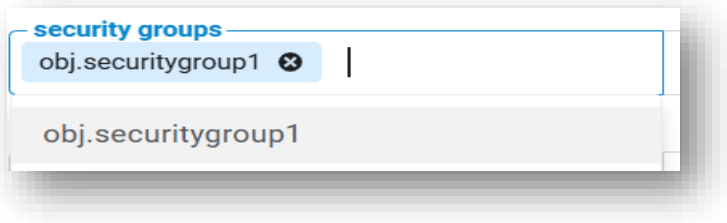


Figure 378 – Select the Object from List

3. Map variables to the attributes for providing the objects' name at a later stage:
4. For mapping variables, the user needs to click on the bind variables checkbox next to the attributes.

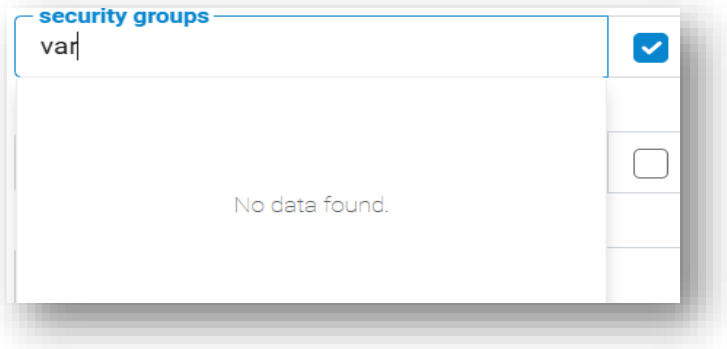


Figure 379 – Object Mapping Using Variables

1.6.1.2.6 Action Buttons

The icons on the top of the Design Blueprint page are the action buttons and are the short cuts for taking the following actions:

- Expand/Collapse
- Save Blueprint
- Variables
- Download TF (Terraform) File
- Validate Blueprint
- New Blueprint
- Back to Manage Blueprint
- Blueprint Name textbox (Title)

1.6.1.2.6.1 Expand/Collapse

Clicking on the Expand/collapse icon ( ) expands the Diagram Pane to cover the entire page. Clicking the icon again resizes the pane to its original position.

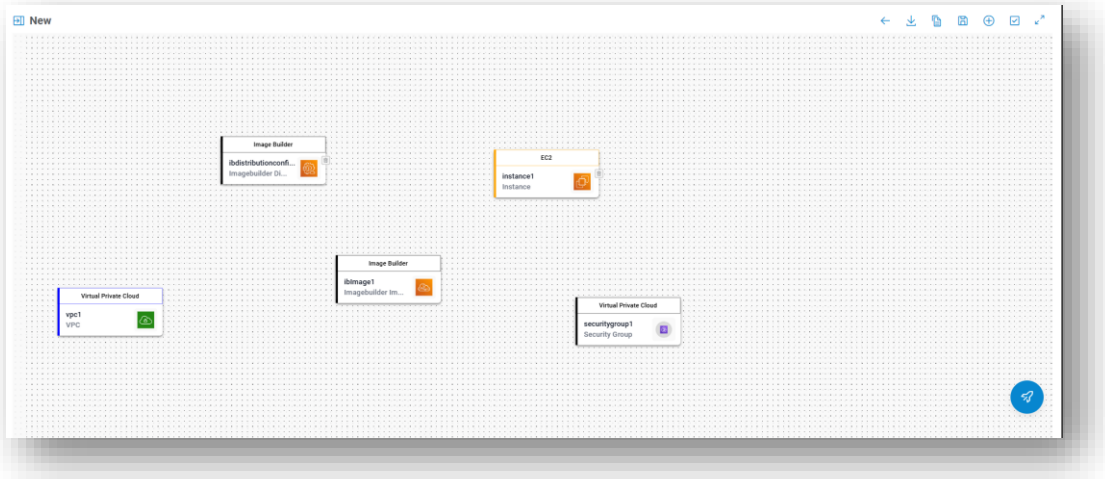


Figure 380 – Expand

1.6.1.2.6.2 Save Blueprint

Clicking the **Save Blueprint** icon ( ) saves the newly created blueprint.

1. Click the **Save Blueprint** icon ( ), the **Save Blueprint** dialog box appears.

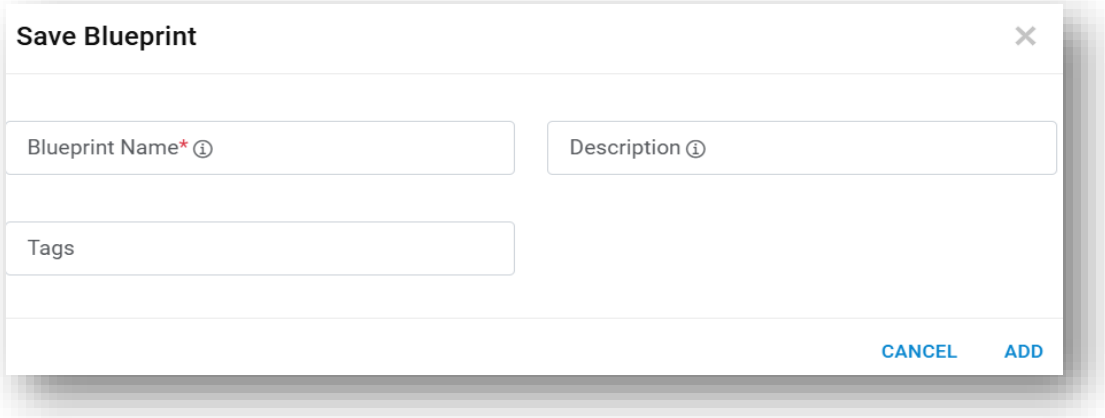


Figure 381 - Save Blueprint

2. The dialog box has the following fields that need to be populated:

- Blueprint Name
- Description
- Tags

3. Click **Save**. A success message appears:

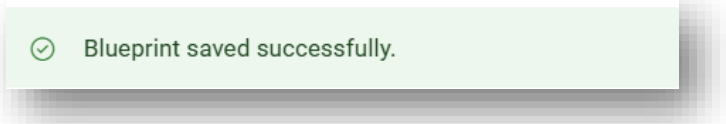


Figure 382 - Success Message

The '**Tags**' field in the Save Blueprint dialog box is to attach tags while saving the blueprint. These tags help users to search for an existing blueprint.

Create Variable:

To create a variable, take the following steps:

1. Click on **Variables** ( ) icon.
2. Click on **Add Variable** tab.

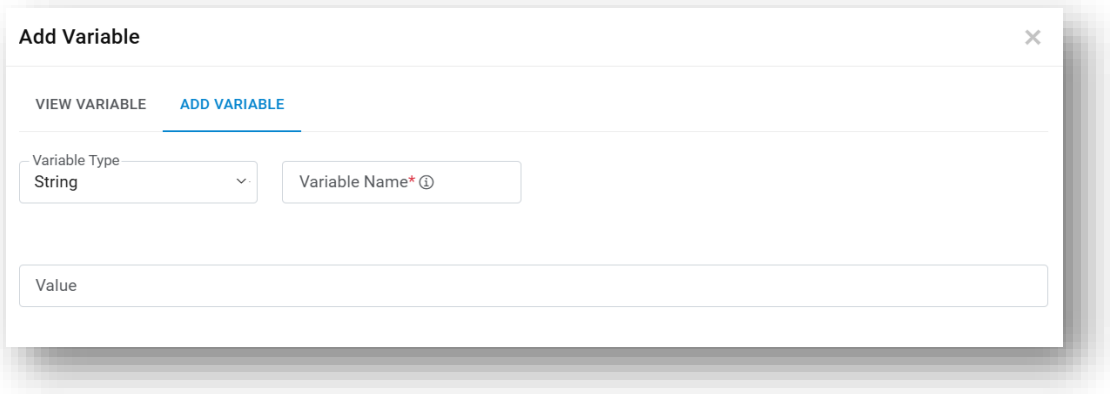


Figure 383 - Add Variable

3. Select the **Variable Type** from the dropdown.

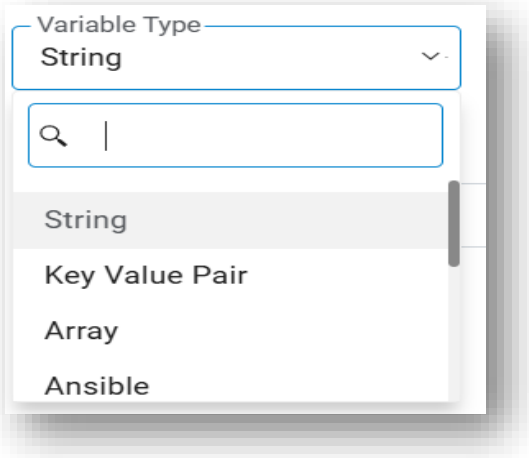


Figure 384 – Variable Type

4. Seven types of variables are available:

- **String**: This variable is used to map plain text values like IDs or any other input value to attributes.
- **Key Value Pair**: This variable is used to map the Tags type of input to any attributes. The value of this variable type is passed in "key=Value" format.

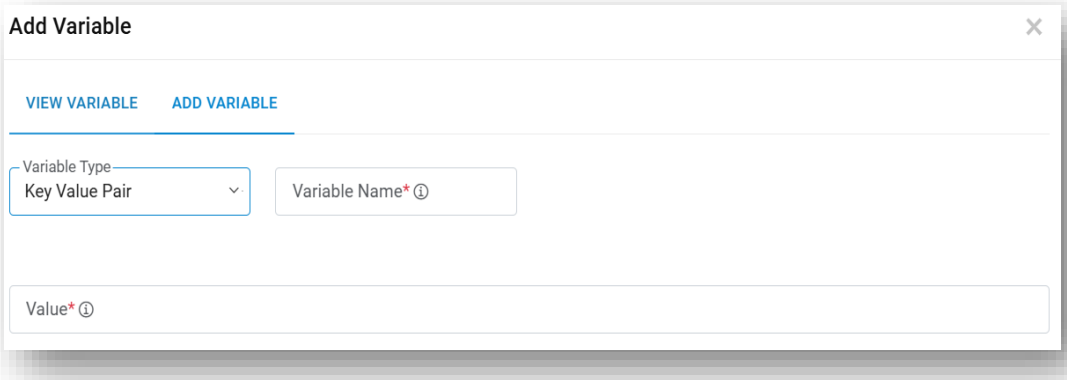


Figure 385 – Add Variable - Key Value Pair Variable

- **Array**: This variable is used to map array type of values to attributes.

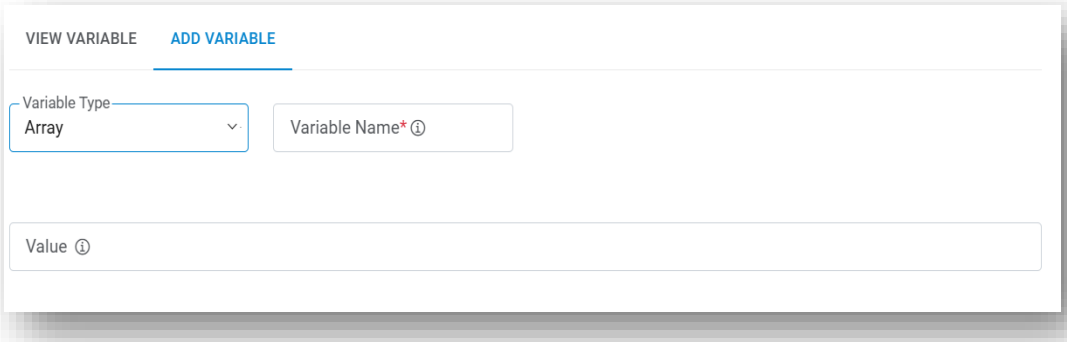


Figure 386 –Add Variable - Array Variable

- **Ansible**: This variable is used to map Ansible Extra Vars types of values to attributes.

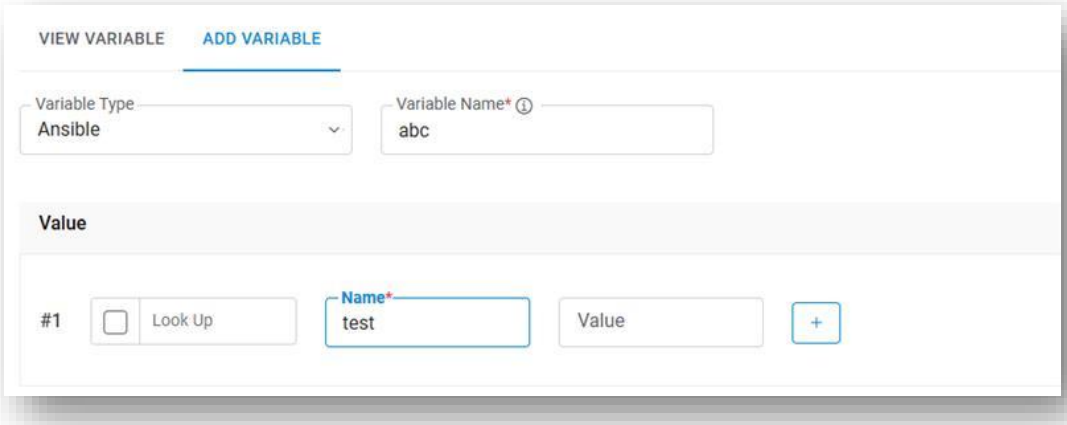


Figure 387 - Add Variable - Ansible Variable

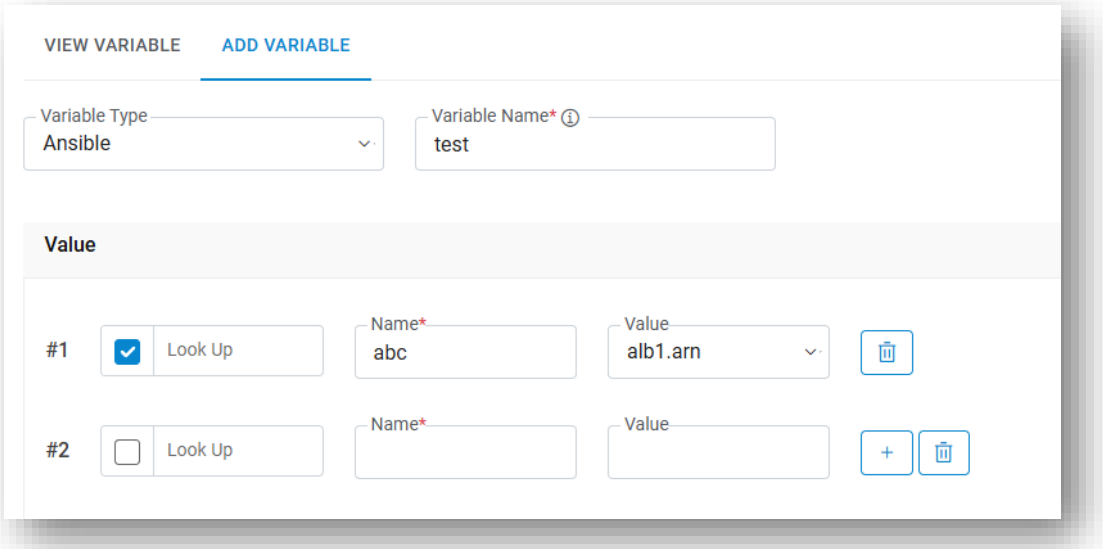


Figure 388 - Add Variable - Ansible Variable (Cont.)

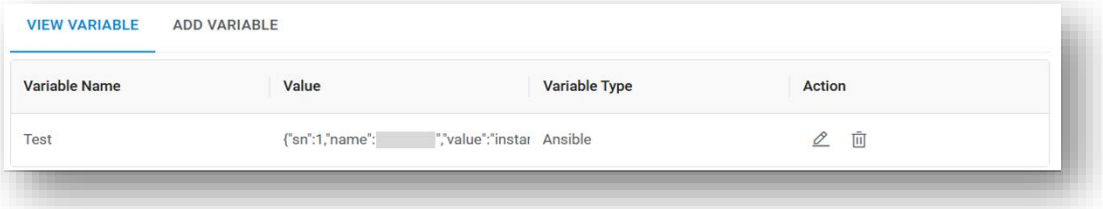


Figure 389 - Add Variable - Ansible Variable (Cont.)

- **Cloud Resource Name**: This variable is used to map the Cloud Resource (Object) Name attribute of an object. In other words, this type of variable is specially used for the name attribute of an object.
- **Region**: This variable is used to map default provider in case of AWS and GCP.

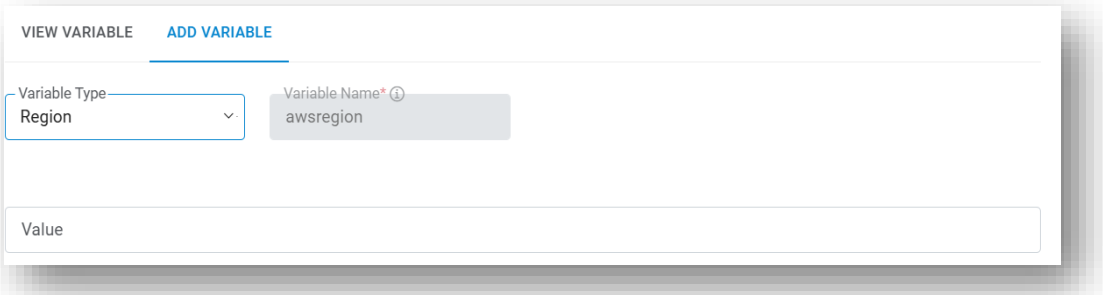


Figure 390 - Add Variable - Region Variable

- **Cisco Intersight Params**: This variable is used to map Cisco Intersight Params types of values to attributes.

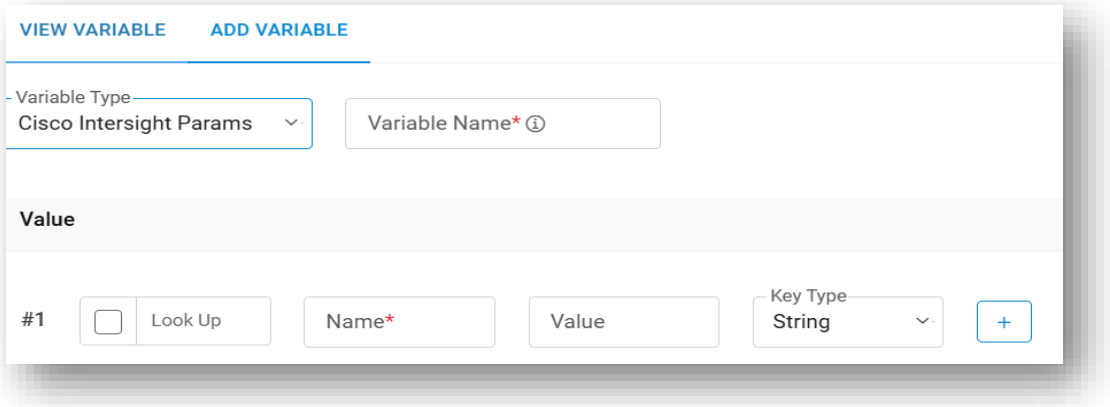


Figure 391 - Add Variable – Cisco Intersight Params Variable

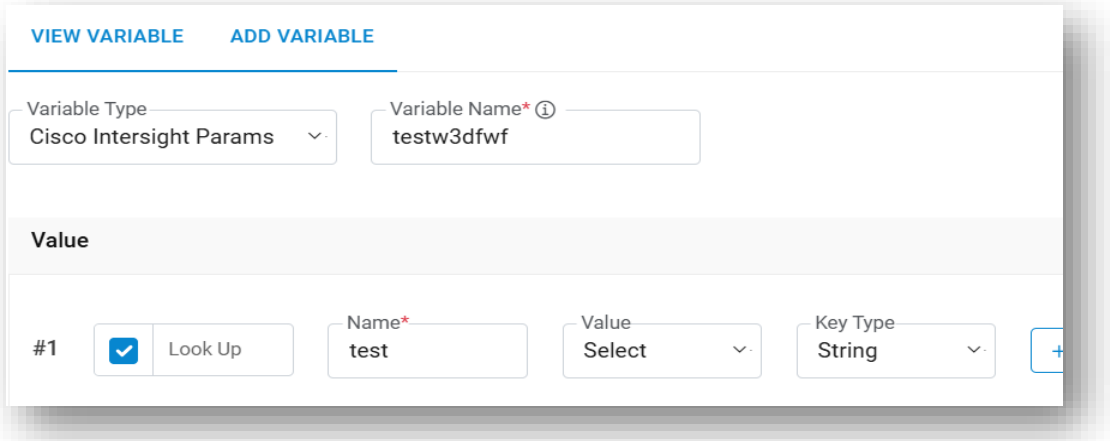


Figure 392 - Add Variable - Cisco Intersight Params Variable (Cont.)

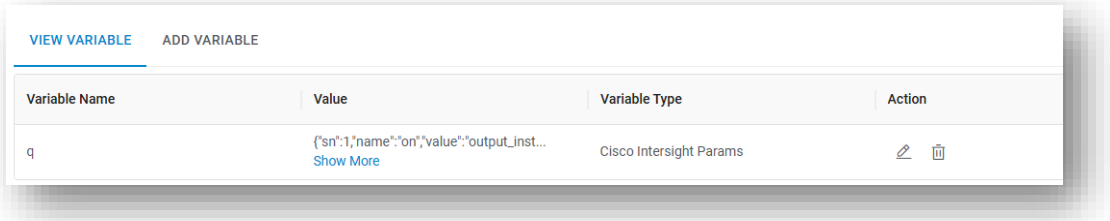


Figure 393 - Add Variable - Cisco Intersight Params Variable (Cont.)

5. Once the Variable type is selected, enter the **Variable Name** and **Value**.
6. Click on **Save** button. A success message appears:

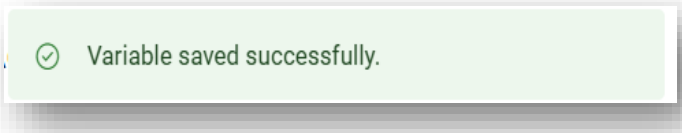


Figure 394 - Success Message

Edit Variable:

The Edit Variables option is available only for the unmapped variables. If the variables are mapped to the attributes the edit option does not appear. To edit a variable, perform the following steps:

1. Click on the **Variables** (⊕) icon.

2. Select the **Variable List** tab.
3. Click on the **Edit** ( ) icon corresponding to the variable to be edited.

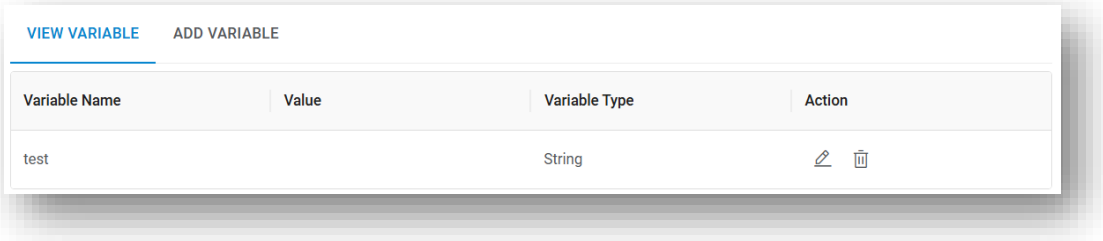


Figure 395 – Edit Variable

4. Change the **Value** and Click on **Update** button.

The **Variable Type** and **Name** are not editable.

Delete Variables:

The Delete Variables option is available only for the unmapped variables. If the variables are mapped to the attributes the delete option does not appear. To delete a variable, perform the following steps:

1. Click on the **Variables** ( ) icon.
2. Select the **Variable List** tab.
3. Click on the **Delete** ( ) icon corresponding to the variable to be deleted.

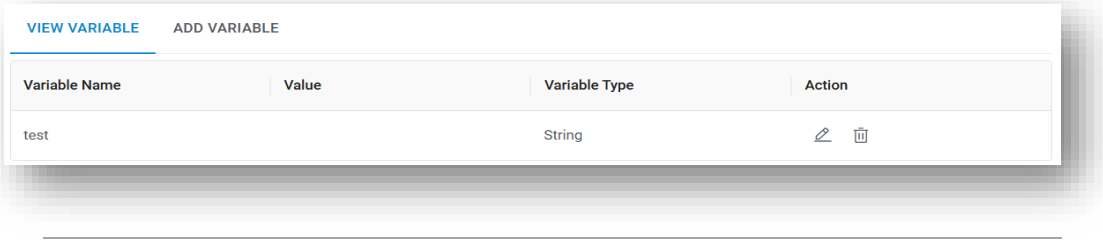


Figure 396 – Delete Variable

1.6.1.2.6.4 Download TF File

1. Click on **Download TF File** ( ) icon.
2. A zip file with the blueprint name is downloaded. The file contains the main.tf, variable.tf, and provider.tf files inside it.

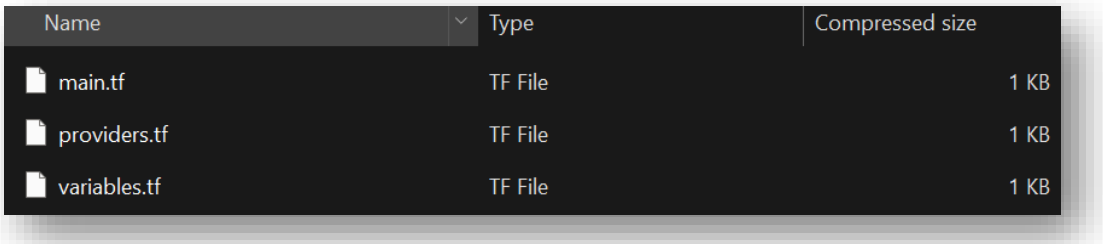


Figure 397 – Download TF File

1.6.1.2.6.5 Validate Blueprint

This option is used to validate the attribute data entered for each object on the blueprint diagram against the configured validation data for each attribute.

1. Click on **Validate attributes** ( ) icon.
2. A Validation Summary dialog box appears.

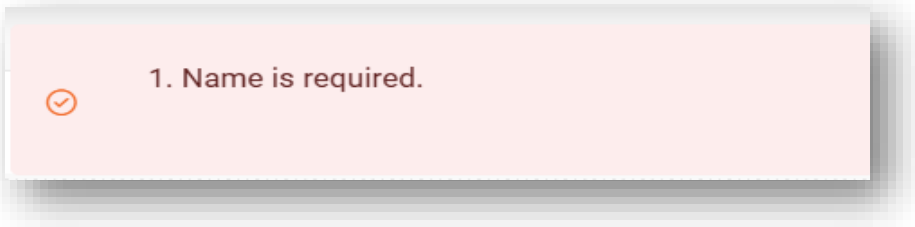


Figure 398 – Validation Summary

3. On successful validation, the following success message appears:

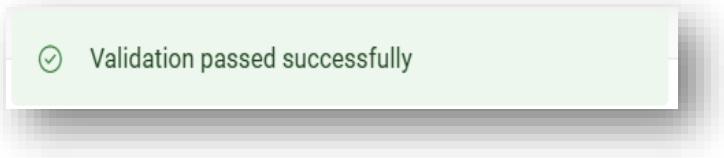


Figure 399 - Validation Success Message

1.6.1.2.6.6 New Blueprint

Clicking the **New Blueprint icon** ( ) opens a new blank blueprint window to create a new blueprint.

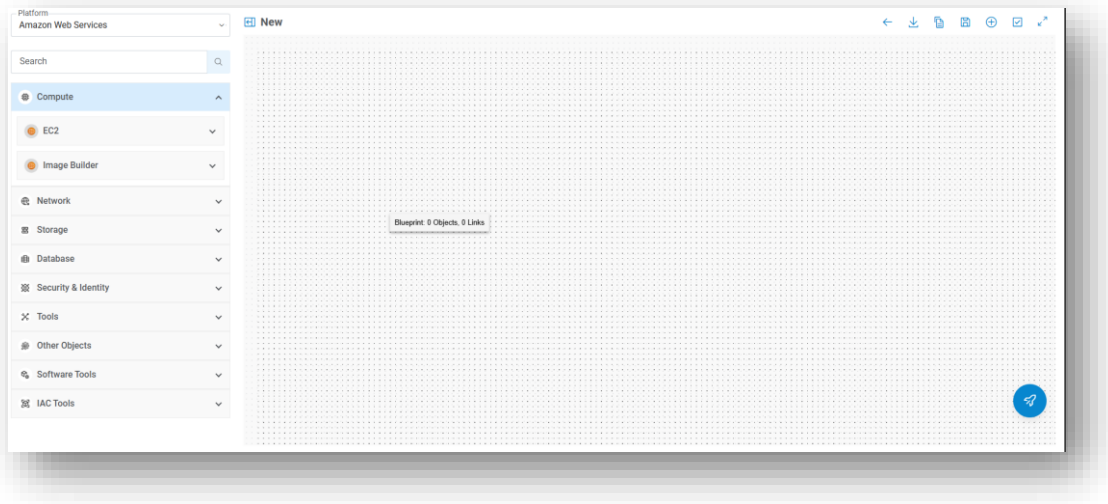


Figure 400 - New Blueprint

For a new blueprint, the default name is "**New**." Once the blueprint is saved with a name, that name appears as the blueprint title.

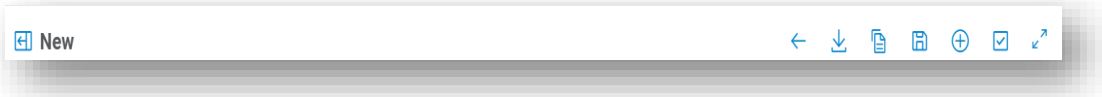


Figure 401 - Blueprint Title

1.6.1.2.6.7 Back to Manage Blueprint

Clicking on the **Back to Manage Blueprint** ( ) icon redirects users to the **Manage Blueprint** page.

1.6.1.2.7 Deploy Blueprint

The **Deploy Blueprint icon** ( ) on the bottom right allows users to deploy the blueprints through the Design Blueprint page.

For detailed information about the deployment process of blueprints, refer to Deployment from the Design Blueprint Page.

1.6.1.3 Blueprints

All the existing blueprints are listed on the Manage Blueprint page and are managed using the following options available on the page itself:

- View Blueprint
- Import Blueprint
- Deployment History

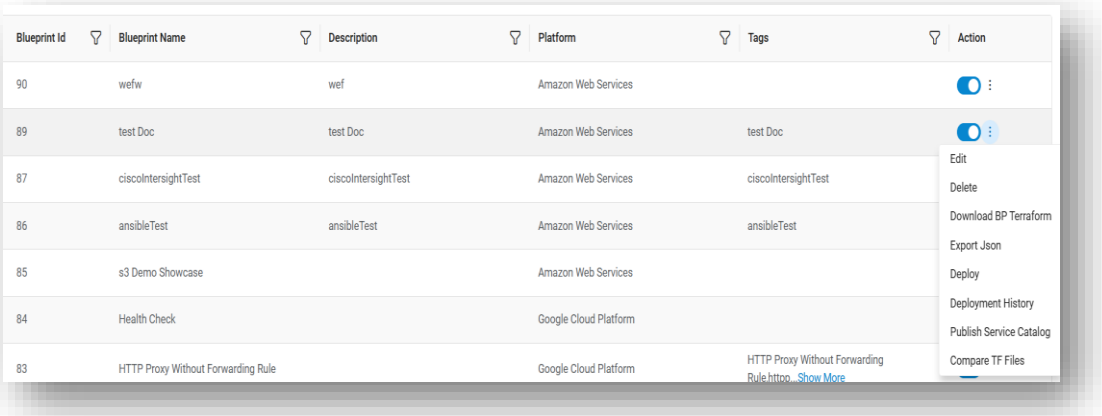


Figure 402 - Blueprint Page

1.6.1.3.1 View Blueprint

The View Blueprint tab lists all the existing blueprints and displays various options associated with each blueprint. The user can search for specific blueprints by using the filter option.

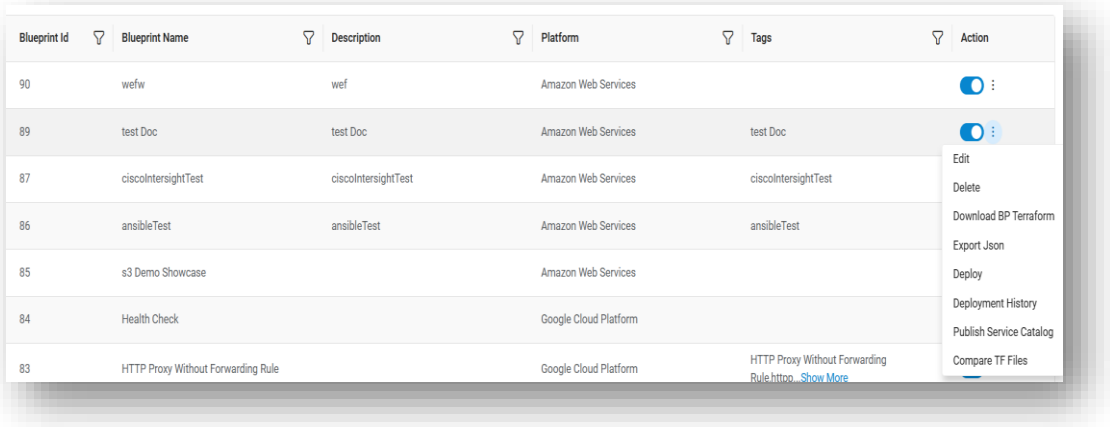


Figure 403 - View Blueprint

Refer the below table to understand the columns in the above figure:

Table 35 - View Blueprint Table Columns

Fields	Description
Blueprint ID	Displays the ID of the listed blueprint. This is used in process template for the execution of the Blueprint.
Blueprint Name	Displays the Name of the listed blueprint.
Blueprint Description	Displays the Description of the listed blueprint.
Platform	Displays the Platform of the listed blueprint.
Tags	Displays the tags associated with the listed blueprint.
Status	Displays the Active/Inactive status of the listed blueprint.
Action	Displays the actions that can be performed on the listed blueprints.

The search can be filtered by selecting the Platform and by providing Tags associated with the blueprints. By default, the page displays data for all the platforms.

The **Menu icon** (:) under the **Action** column displays the actions that can be performed on each blueprint.

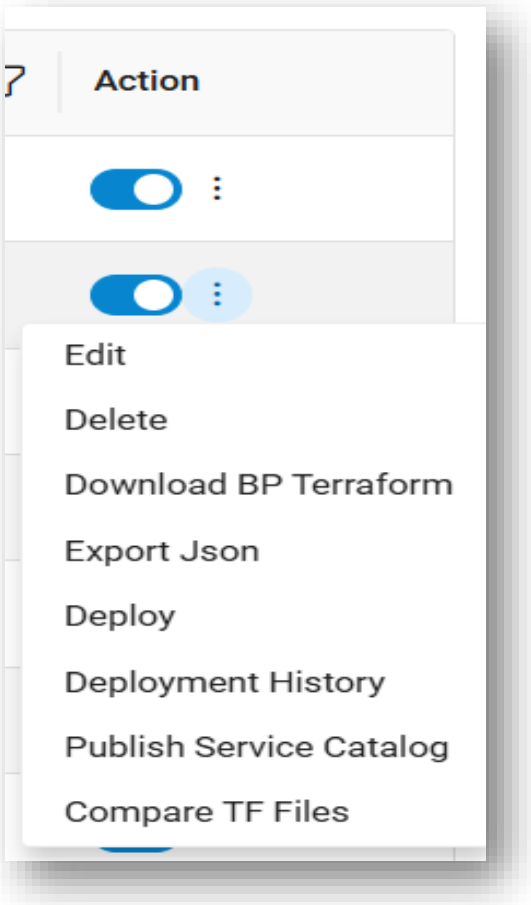


Figure 404 - Options in the Action Column

Below actions can be performed to manage an existing blueprint:

- Edit
- Change Status
- Download Blueprint Terraform
- Export JSON
- Deploy
- Deployment History
- Compare Blueprint Files
- Publish Service Catalog
- Compare TF Files

1.6.1.3.1.1 Edit

To edit a blueprint, follow the below steps:

1. From the list of the existing blueprints under the **View Blueprint** tab, click on the gear icon corresponding to the blueprint to be edited and the click the **Edit** icon.
2. It opens the **Design Blueprint** page in edit mode loaded with the selected blueprint in the diagram pane along with all the attributes and variables.

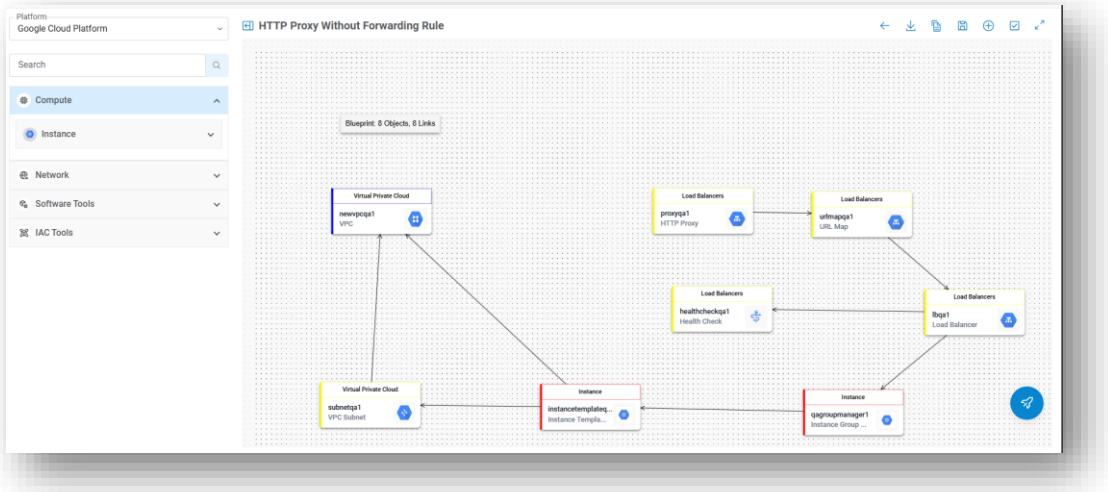


Figure 405 - Edit Blueprint

3. Make the required changes and click on the **Save** ( ) action button.
4. The **Update Blueprint** dialog box appears.

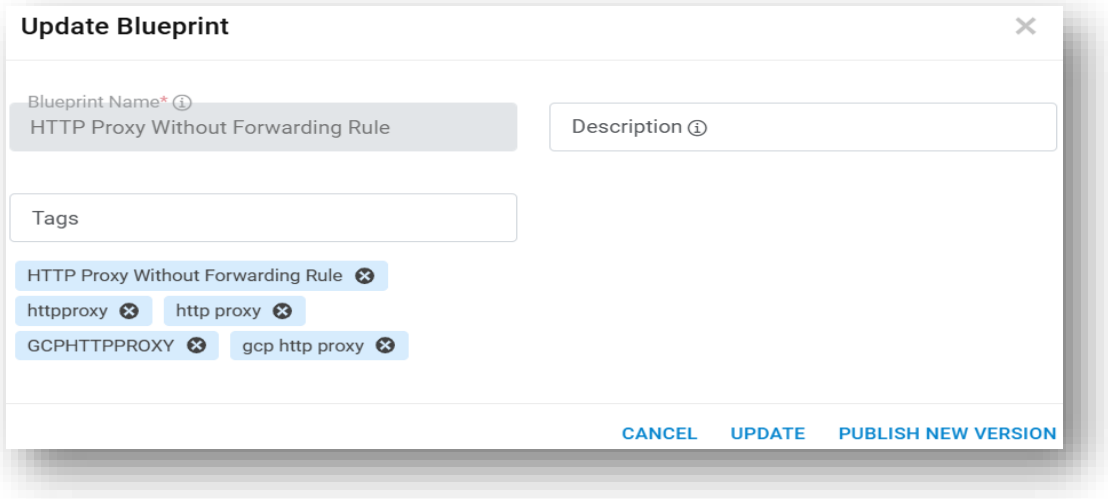


Figure 406 – Update Blueprint

5. On the **Update Blueprint** screen, users can add or remove tags while updating the blueprint. This can be used to search for the created blueprint with the help of tags attached to it under the **View Blueprint** tab.

Only **Blueprint Description** and **Tags** fields are editable here.

6. This dialog has two options for updating the blueprint.

- **Update**: Clicking on Update button updates the selected blueprint and displays the following success message:

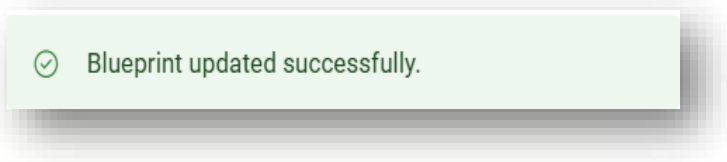


Figure 407 - Success Message for Update

- **Publish New Version**: Selecting this option creates a new version of the blueprint along with all the changes and saves it in the table with the new version number with column 'ispublished' as 'Y'. The old copy of the blueprint is marked 'ispublished' as 'N' in the table.

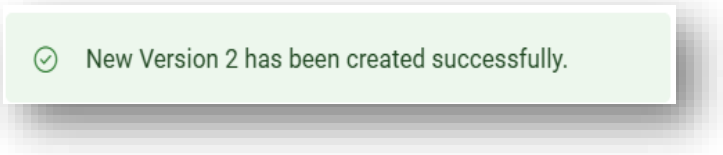


Figure 408 - Success Message for a New Version Update

1.6.1.3.1.2 Change Status

The option is to mark the listed blueprint status as **Active/Inactive**.

1. Click on the **gear icon** corresponding to the desired blueprint and then click **Change Status** icon ( ).
2. A confirmation dialog appears to confirm the action.

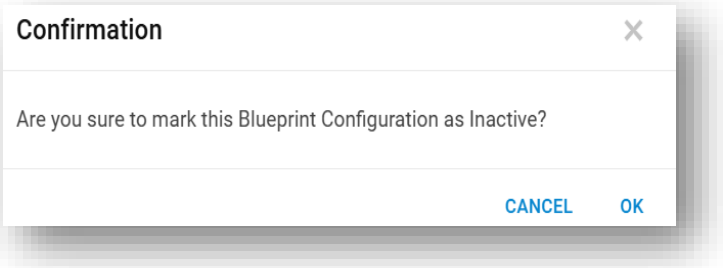


Figure 409 - Change Status Confirmation

3. On clicking **OK**, the status of the blueprint is changed to **Active** or **Inactive** and a success message appears as follows:

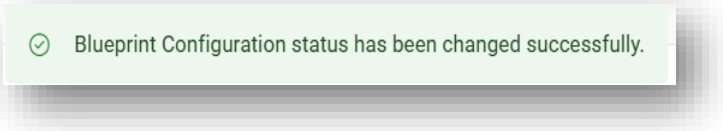


Figure 410 - Success Message for Status Change

- If the status is changed to "**Active,**" it is marked with a green color as shown in the following screen:

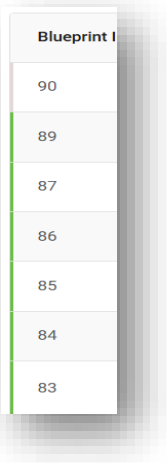
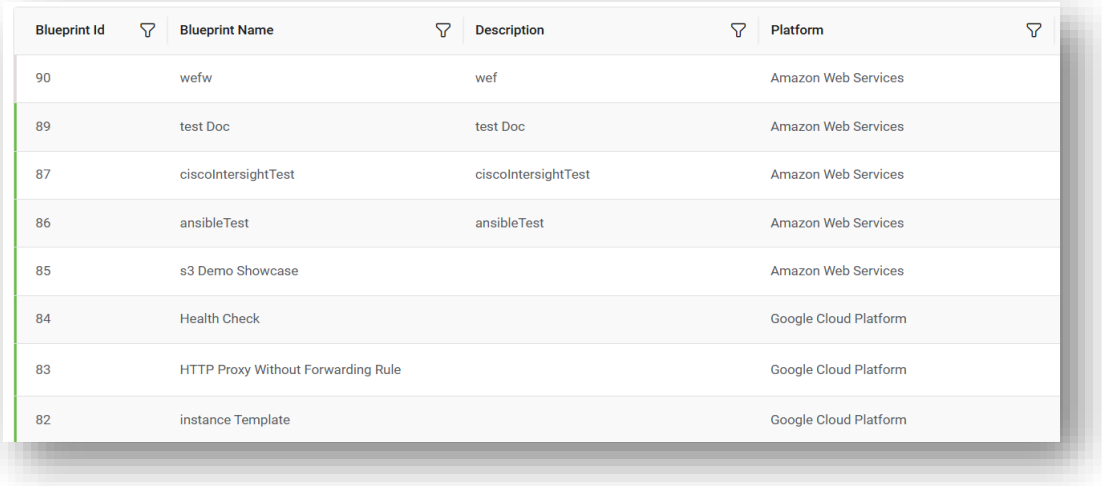


Figure 411 - Status Changed to 'Active'

- Similarly, if the status is changed to "**Inactive**," it is marked with a **red** color.



Blueprint Id	Blueprint Name	Description	Platform
90	wefw	wef	Amazon Web Services
89	test Doc	test Doc	Amazon Web Services
87	ciscoIntersightTest	ciscoIntersightTest	Amazon Web Services
86	ansibleTest	ansibleTest	Amazon Web Services
85	s3 Demo Showcase		Amazon Web Services
84	Health Check		Google Cloud Platform
83	HTTP Proxy Without Forwarding Rule		Google Cloud Platform
82	instance Template		Google Cloud Platform

Figure 412 - Status Changed to 'Inactive'

For an Inactive Blueprint, the Edit, Deploy and Deployment History options are not available under the Action tab.

1.6.1.3.1.3 Download Blueprint Terraform

This option is used to download the blueprint TF file.

1. Click on the **Download Blueprint Terraform** icon ( ) corresponding to the desired blueprint.
2. This downloads a zip file with the blueprint name.
3. For further steps to download Blueprint Terraform, please refer to **Download TF File**.

1.6.1.3.1.4 Export JSON

This option is used to export the blueprint JSON that can be imported later to any other environment.

1. To export the blueprint JSON, click on the **gear icon** corresponding to the blueprint and then click ( ) icon.
2. A single JSON file with the blueprint name is downloaded. It has blueprint data in JSON format.

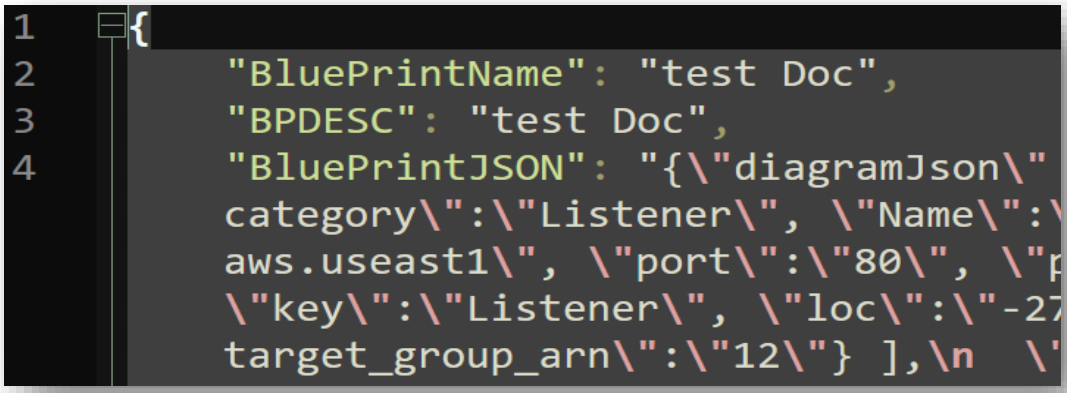


Figure 413 - Exported JSON File

1.6.1.3.1.5 Deploy

Another way of deploying a blueprint is by clicking the Deploy icon under the Action column on the View Blueprint page.

For detailed information about the deployment process of blueprints, refer to Deployment from the View Blueprint Tab.

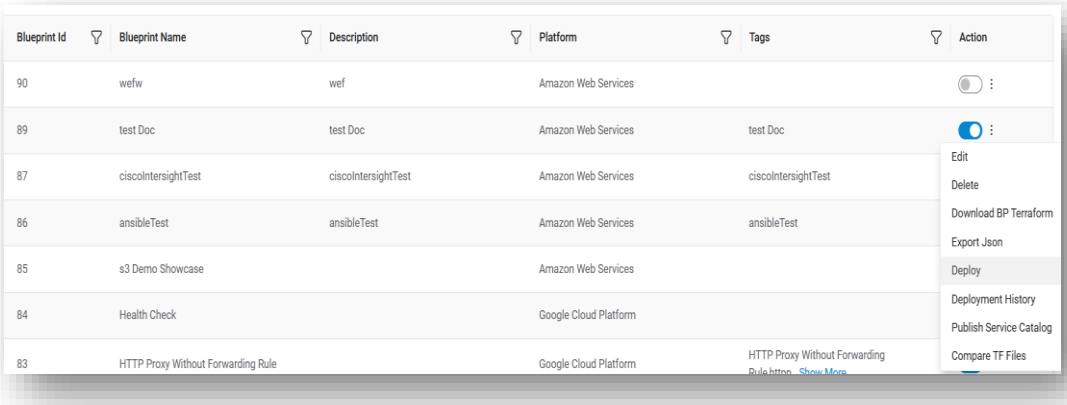


Figure 414 - Deploy Blueprint from View Blueprint Page

1.6.1.3.1.6 Deployment History

This option is used to view the deployment history of the listed blueprints. This option enables the user to view the Deployment History tab of the Manage Blueprint Page. The Deployment History tab cannot be directly accessed. It can be accessed through this action item of listed blueprints.

1. Click on the Gear Icon -> Deployment History icon .
2. This takes the user to the **Deployment History** tab where he/she can view the deployment history of the blueprint.

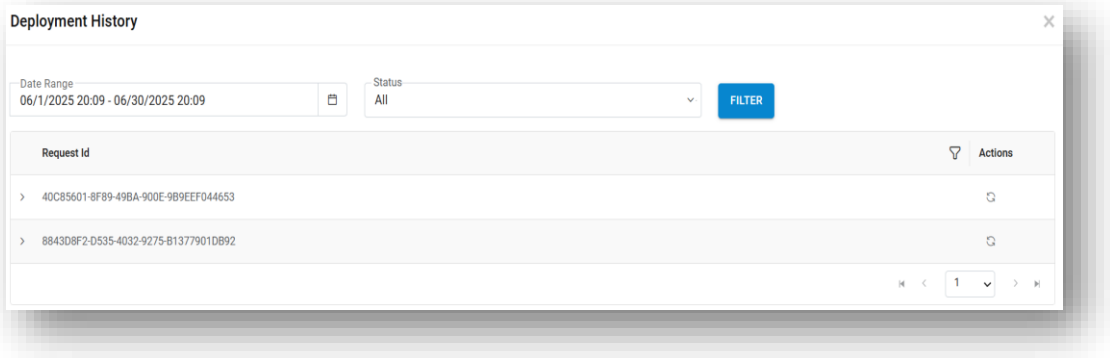


Figure 415 - Deployment History

3. The **Deployment History** can be filtered by specifying the **Start Date**, **End Date**, and **Status**, then clicking the **Filter** button.
4. Refer the below table to understand the columns in the above figure.

Table 36 - Deployment History Table Columns

Fields	Description
Request ID	Displays the Request ID of the blueprint deployment. On deployment of the blueprint, a request ID is generated.
Action	Displays the actions that can be taken against the listed deployment request ID. E.g.: Rerun.

5. On expanding the listed request ID by clicking on the plus icon ( ), a drill down table opens. This table displays the deployment request data. All the tasks created for Blueprint Deployment are listed under the given Request ID created for deployment. Tasks are grouped and listed under the Request ID created for deployment.

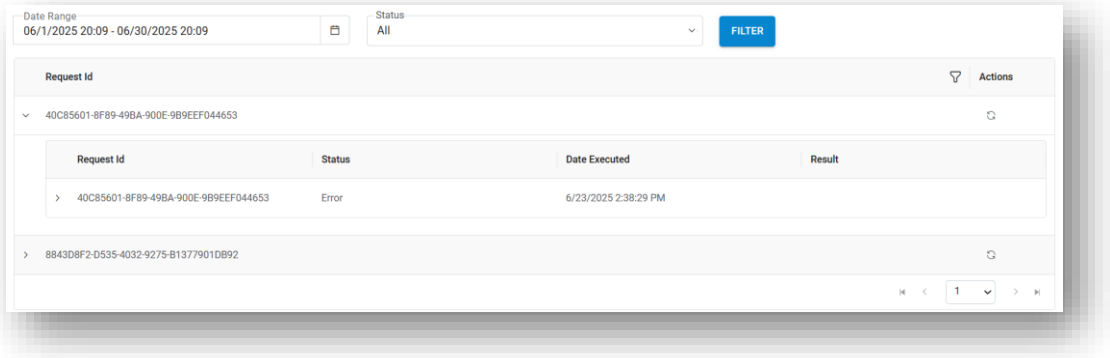


Figure 416 - Deployment History Drill Down

Refer the below table to understand the columns in the above figure:

Table 37 – Deployment History Drill Down Table Field

Fields	Description
Request ID	Displays the Request ID of the blueprint deployment. On deployment of the blueprint, a request ID is generated.
Status	Displays the status (Completed/inprogress/Error) of the blueprint deployment request.
Date Executed	Displays the Execution Date of the blueprint deployment request.
Result	Displays the Result of the blueprint deployment request.
Action	Displays the actions that can be taken against the listed deployment request ID. E.g.: Rerun.

6. Further expanding the listed Request Id by clicking again on the **icon** (>) opens the complete execution log of the blueprint deployment task.

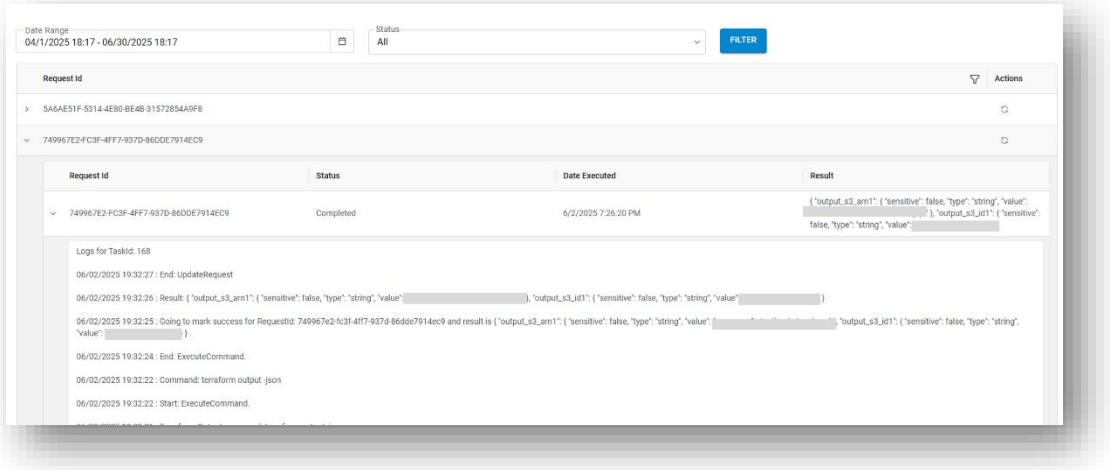


Figure 417 –Deployment Execution Log

7. One request can have multiple tasks that are listed in the drill down logs page as shown below:

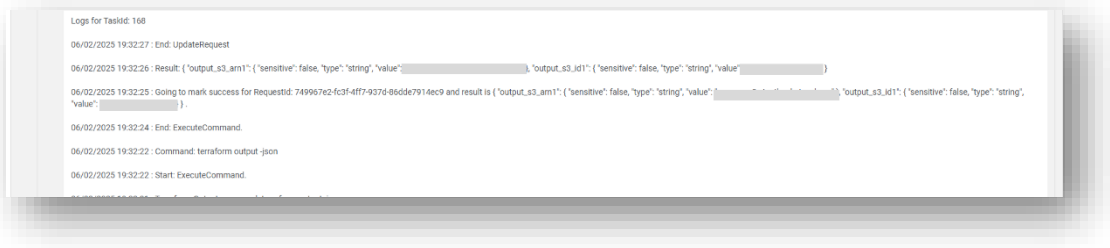


Figure 418 – Multiple Tasks Listed under Deployment History Drill Down

8. The **Re-Run** functionality allows users to re-run a deployment request multiple time. To re-run the deployment request, click on the **Re-Run** icon ( ) located under the **Action** column in the Deployment History table.

To learn more about the Re-Run Blueprint functionality, please refer to the section **Re-Run Blueprint.**

1.6.1.3.1.7 Delete Blueprint

The Delete icon under the Action column in the View Blueprint tab allows users to delete the listed blueprint.

1. Click on the **Delete** corresponding to the blueprint to be deleted.
2. A confirmation message appears as follows:

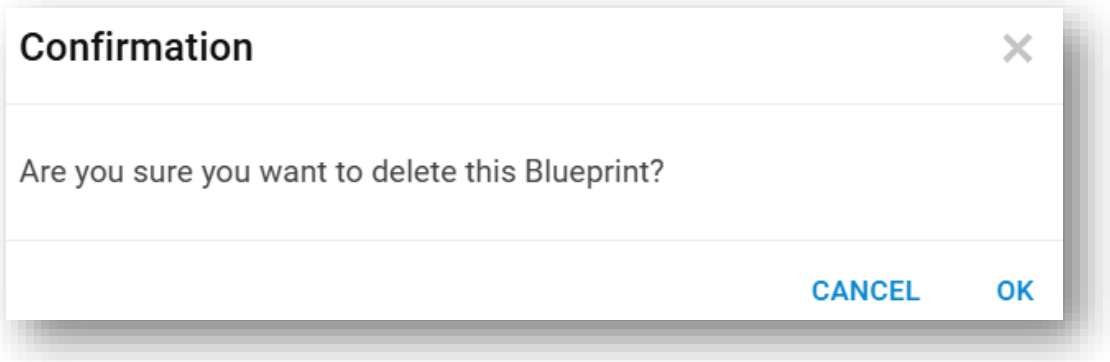


Figure 419 - Confirmation Message

3. Click **OK** to confirm. A success message appears as follows:

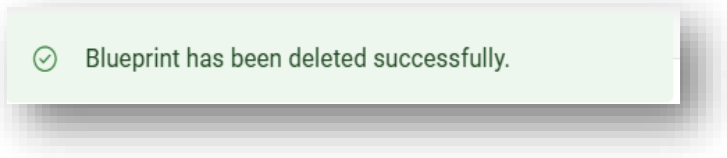


Figure 420 - Success Message

1.6.1.3.2 Import Blueprint

This tab allows the user to import the exported blueprint JSON. It is useful to migrate the created blueprint from one environment to another.

1. On the **Blueprint** page, click on the **Import Blueprint** tab.
2. Browse for the exported blueprint JSON file by clicking on **Choose a file** button.

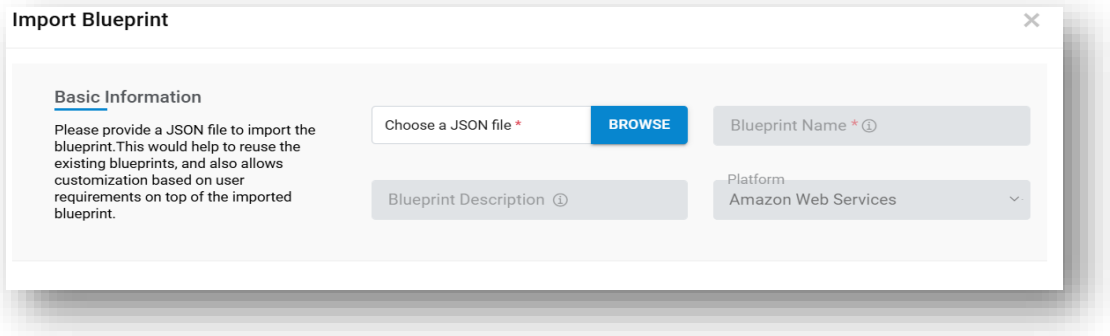


Figure 421 - Import Blueprint

3. The following dialog box appears and allows the user to choose the file:

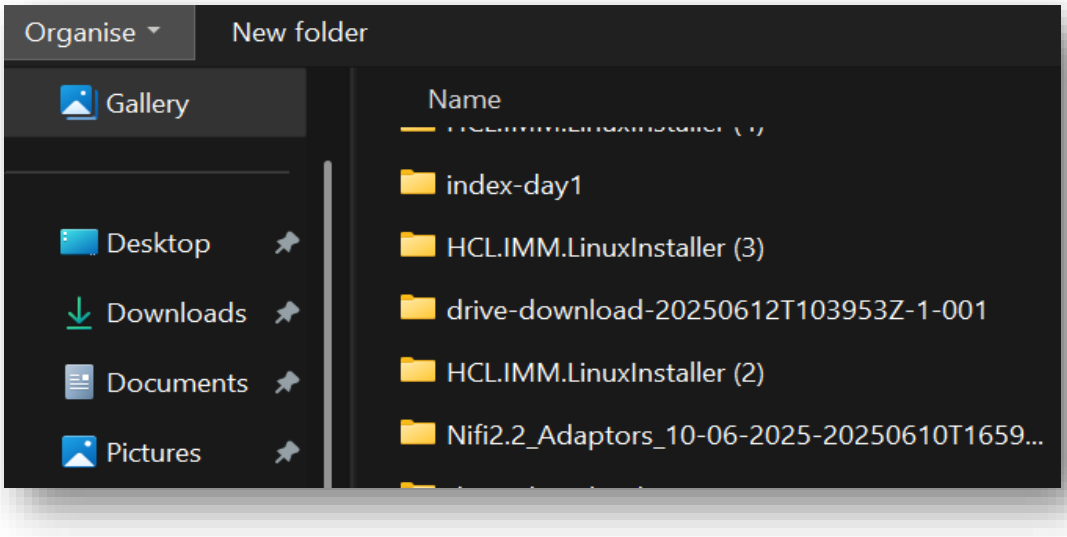


Figure 422 – Import Blueprint Choose File

4. Select the **Blueprint JSON** file.
5. The file gets uploaded for confirmation with the blueprint JSON data, Blueprint Name, Blueprint Description, and Platform.

For some files, the Platform field is disabled. This signifies that the platform for the imported document cannot be changed while importing the blueprint. It automatically detects and imports the blueprint of the listed platform.

6. Once the user clicks on the **Import button**, the blueprint gets imported successfully and starts appearing in the blueprint list on the View Blueprint page.

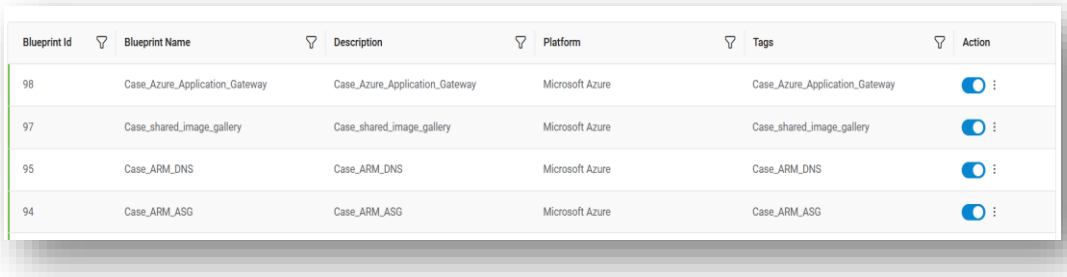


Figure 423 – Imported Blueprint listed in View Blueprint

1.6.1.3.3 Deployment History

The Deployment History tab is not directly accessible; however, it can be accessed via the Deployment History action item of listed blueprints in the View Blueprint section of the Manage Blueprint page.

For details, please refer to the **Deployment History** section.

1.6.1.4 Enabling Ansible in Blueprint

The Ansible objects are enabled in Blueprint using the Software Tools option in the Left Object Menu. This software tool is independent of Amazon, Azure, GCP, or VMware and holds the Ansible objects in the blueprint.

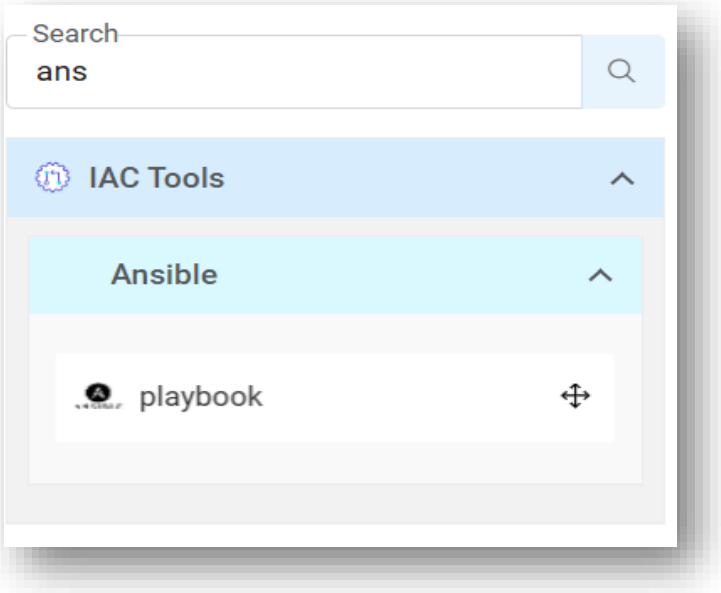


Figure 424 - Ansible Object

1. Drag Ansible object to **Diagram Pane** and create the use case.

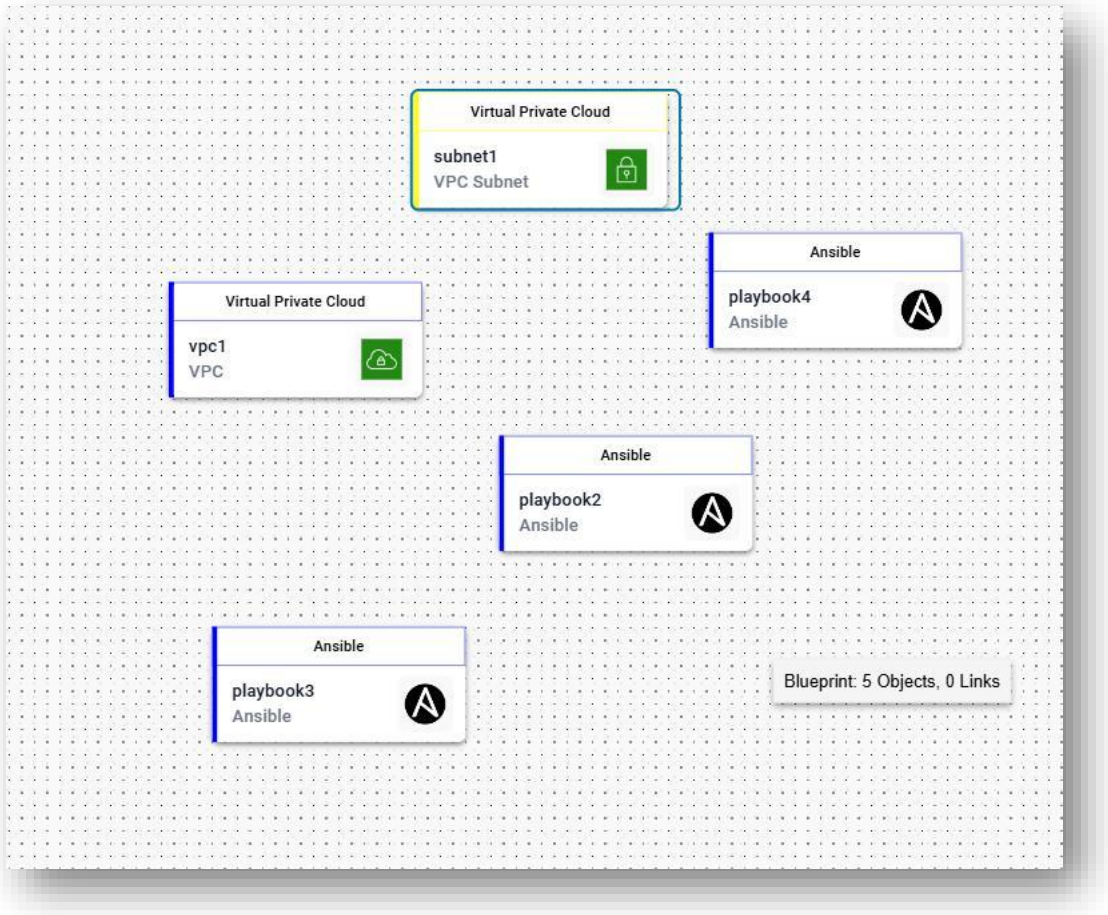


Figure 425 - Ansible Object on Blueprint Diagram

2. In the Right Attribute Panel, select the Input Attribute tab and populate the fields:

- **Name**: The name of the object/resource to identify the purpose of the runbook.

- **Execution Order**: The execution order attribute is used to refer to the execution order of the tasks executed during the deployment process explained under Point no. 3 of section Deployment History.
- **Runbook ID**: It is the id of the runbook provided by the user for post provisioning or day two task.
- **Extra Vars**: A new type of variable (Ansible) can be created from variables window. For the details about Ansible variables, please refer to the section Variables.

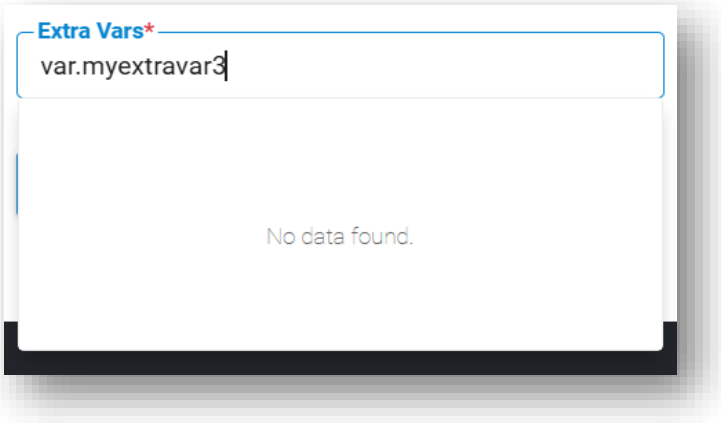


Figure 426 - Extra Vars in Ansible Object

3. Click on the **deploy blueprint icon** ( ). For details on how to deploy the Ansible type object from the Design Blueprint page, please refer to the section **Deployment from the Design Blueprint Page**.

1.6.1.5 Enabling Cisco Intersight in Blueprint

The Cisco Intersight objects are enabled in Blueprint using the **Software Tools** option in the Left Object Menu. This software tool is independent of Amazon, Azure, GCP, or VMware and holds the Cisco Intersight objects in the blueprint.

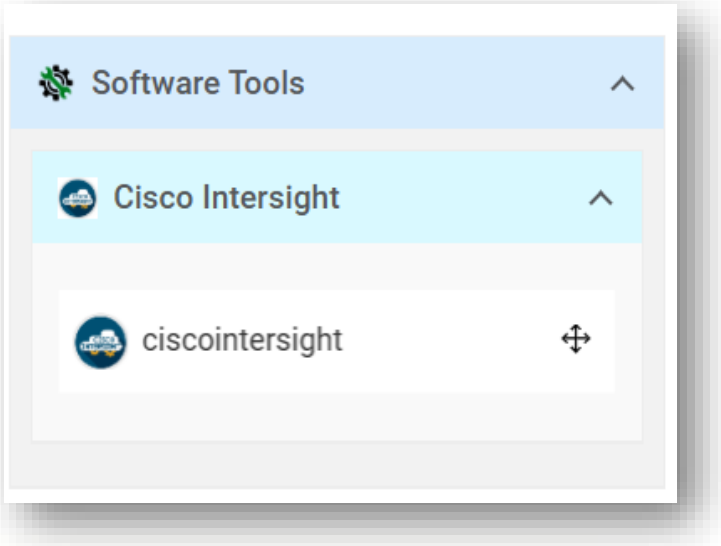


Figure 427 – Cisco Intersight Object

1. Drag **Cisco Intersight** object to **Diagram Pane** and create the use case.

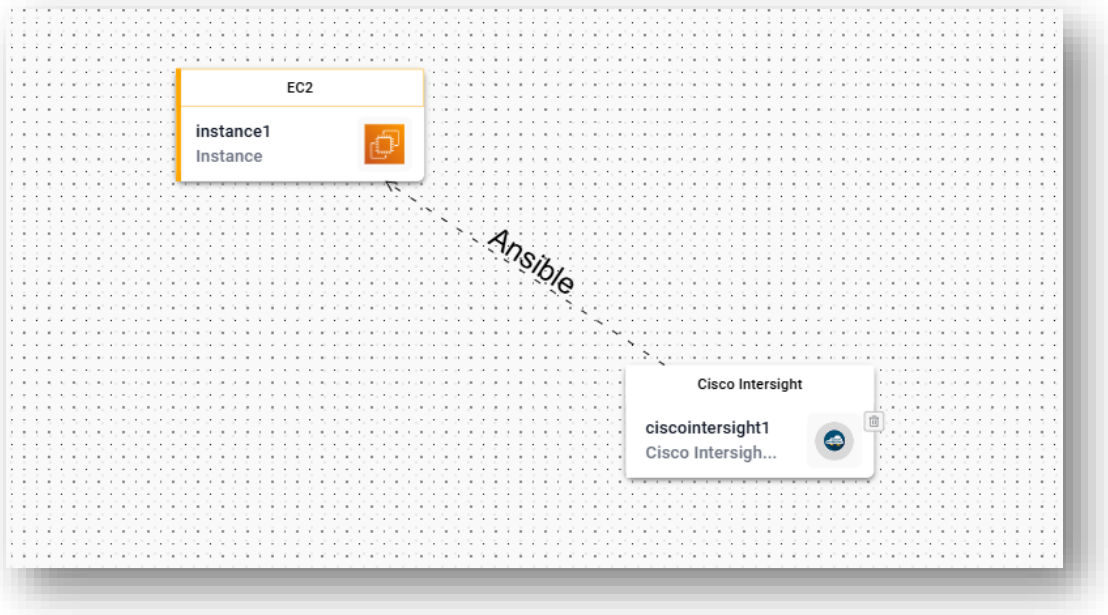


Figure 428 – Cisco Intersight Object on Blueprint Diagram

2. In the Right Attribute Panel, select the Input Attribute tab and populate the following fields:

- **Name**: The name of the object/resource to identify the purpose of the Cisco Intersight object.
- **Virtual Machine**: The Virtual Machine attribute is used to map the Instance.
- **Execution Name**: It is the Execution name for Cisco Intersight provided by the user for post provisioning or day two task.
- **Organization Moid**: It is the Organization Moid for Cisco Intersight provided by the user for post provisioning or day two task.
- **Workflow Moid**: It is the Workflow Moid for Cisco Intersight provided by the user for post provisioning or day two task.
- **Execution Order**: The execution order attribute is used to refer to the execution order of the tasks executed during the deployment process explained under Point no. 3 of section Deployment History.
- **Workflow Parameters**: A new type of variable (Ansible) can be created from variables window. For the details about Ansible variables, please refer to the section Variables.

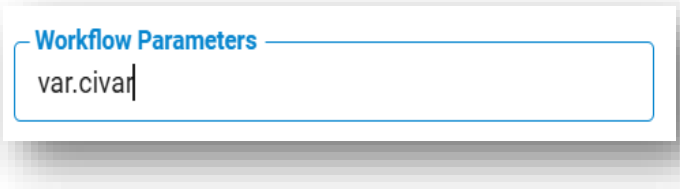


Figure 429 - Workflow Parameter in Cisco Intersight Object

3. Click on the **deploy blueprint icon** ( ). For details on how to deploy the Cisco Intersight type object from the Design Blueprint page, please refer to the section **Deployment from the Design Blueprint Page**.

1.6.2 Deploy Blueprint

There are three ways to deploy a blueprint:

- Deployment from the Design Blueprint page
- Deployment from the View Blueprint tab of the Manage Blueprint page
- Deployment from Process workflow

1.6.2.1 Deployment from the Design Blueprint Page

The Deploy Blueprint option on the Design Blueprint page is to deploy the created blueprint to do provisioning of the objects configured in the blueprint.

The deployment can be categorized into two types:

- Deployment without Ansible objects
- Deployment with Ansible objects

For deployment without Ansible Objects:

1. Click on the **Deploy icon** ( ) on the bottom right of the page.
2. The **Blueprint Deployment** window appears.

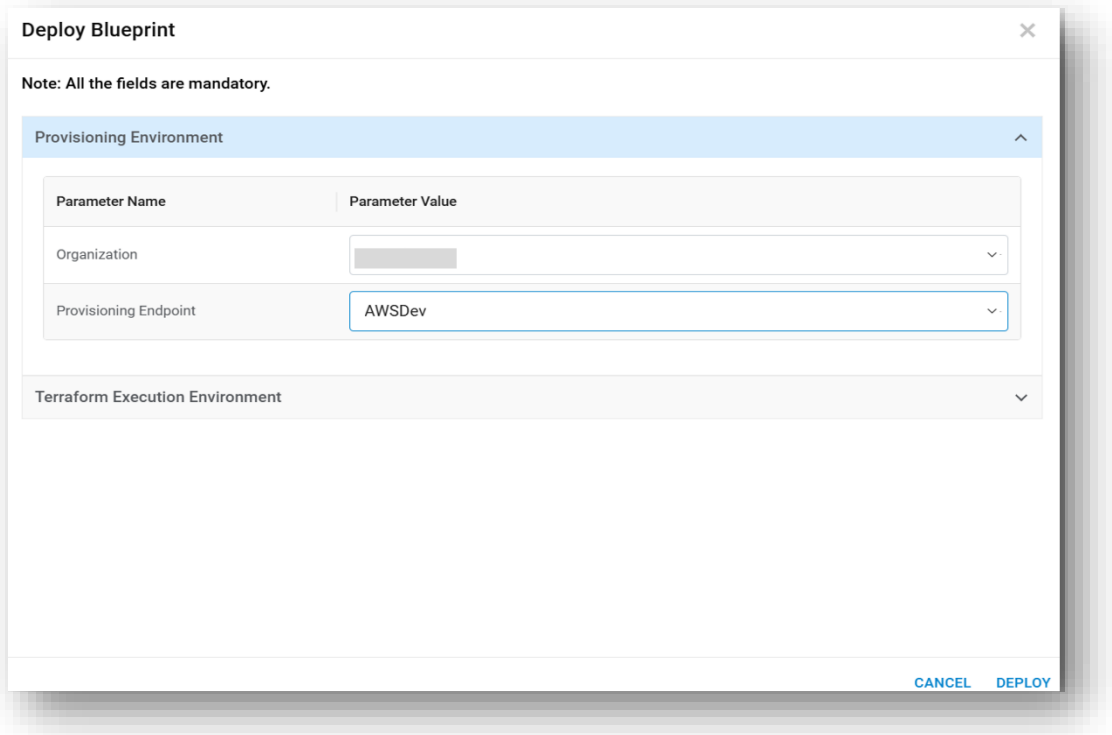


Figure 430 – Blueprint Deployment

3. The user has the option to change the mapped variable values if desired.
4. Select the Organization and Provisioning Endpoint.
5. Click on **Deploy** button.
6. A Provisioning window appears and shows the real-time provisioning logs.

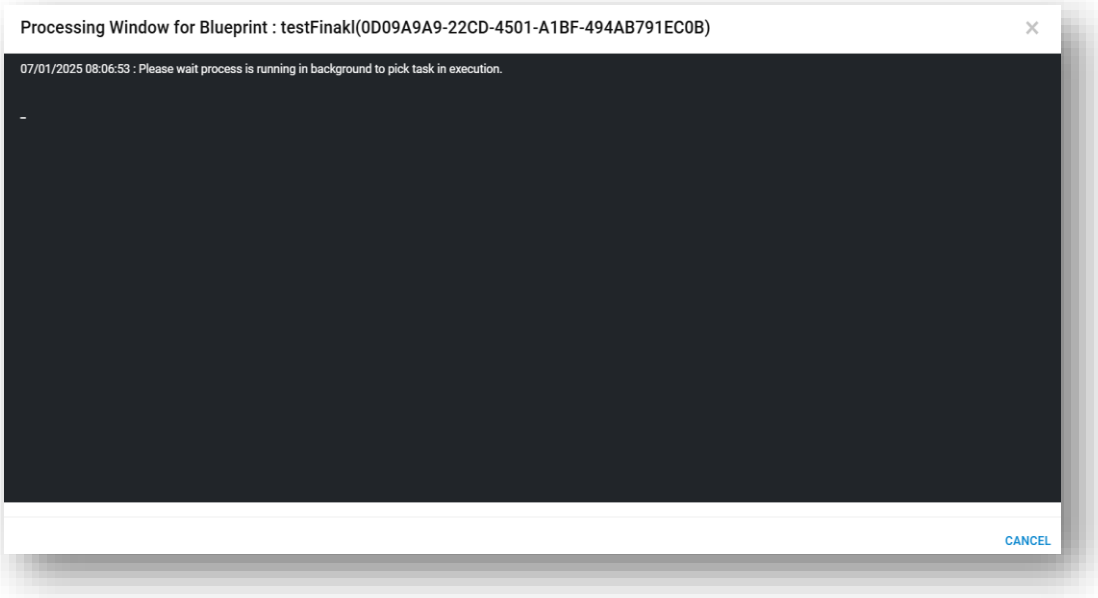


Figure 431 – Provisioning Window for Blueprint

7. On successful completion of provisioning, the output result is displayed in green color. The blueprint objects are successfully provisioned on the selected cloud platform.

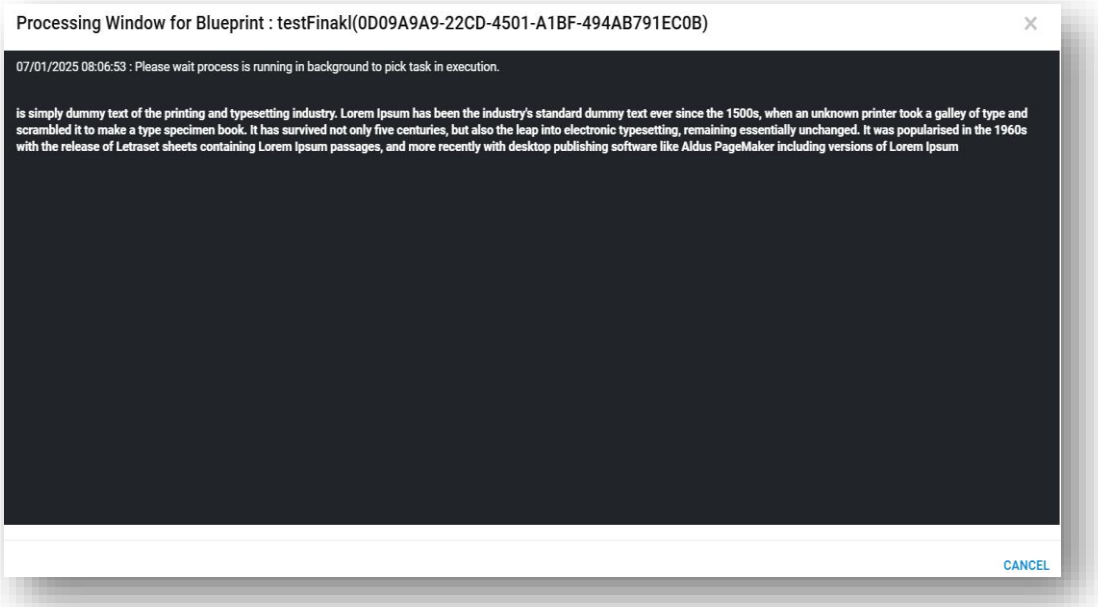


Figure 432 – Successful Provisioning of Blueprint Objects

8. In case of any error in processing, it shows it in red color.

For Deployment with Ansible Objects:

1. Click on the **Deploy icon** ( ) on the bottom right of the page.
2. The **Deployment** window appears.

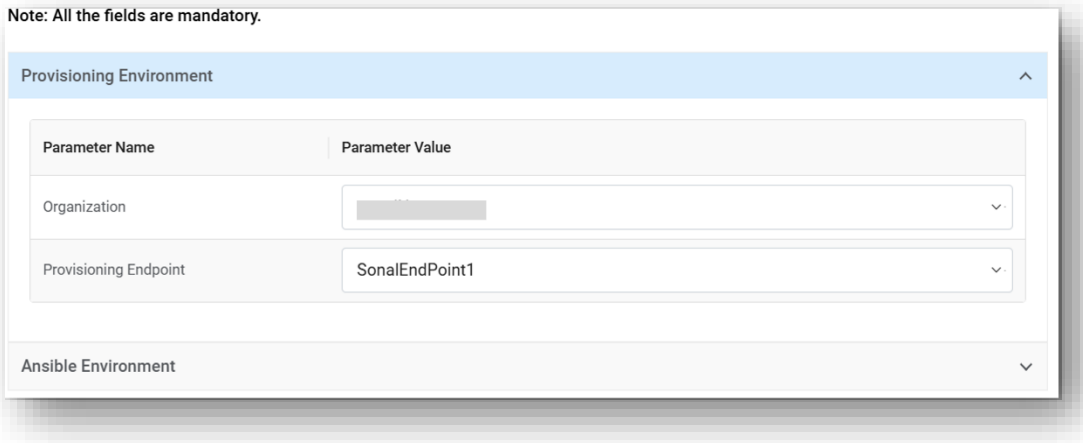


Figure 433 – Blueprint Deployment Window from Ansible Object

3. On the **Blueprint Deployment** window, the Ansible Extra Vars will be displayed under **Ansible Environment** section.

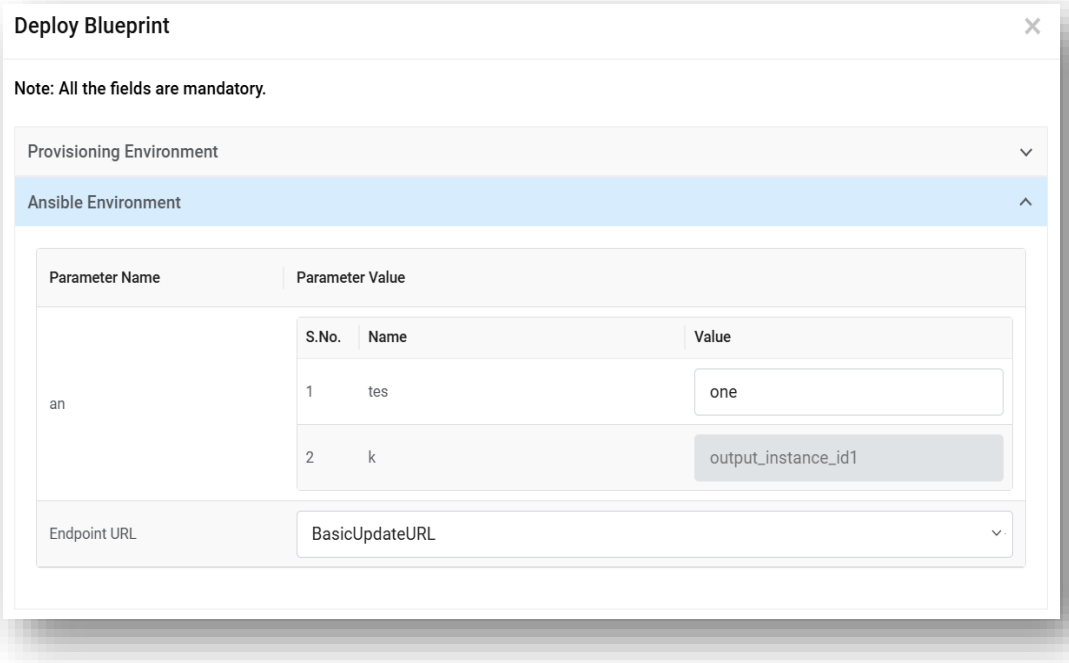


Figure 434 – Extra Vars in Ansible Object

4. Change the Extra Vars values if required.
5. Select the **endpointurl**, populate all the required fields, and click on **Deploy** button.
6. The further steps are same as described in the section Deploy Blueprint.
7. On successful deployment, the configured ansible task is run.

For Deployment with Cisco Intersight Objects:

1. Click on the **Deploy icon** ( ) on the bottom right of the page.
2. The **Deployment** Window appears.

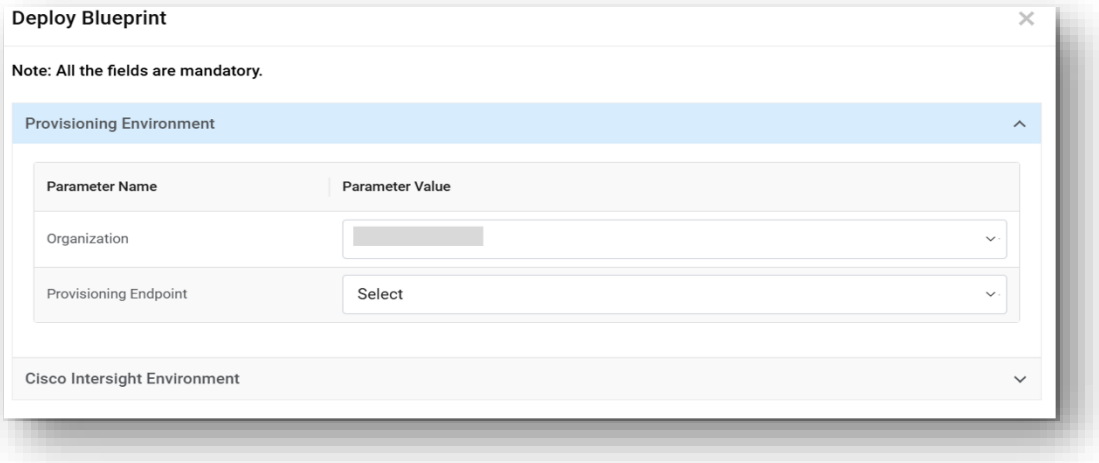


Figure 435 – Blueprint Deployment Window from Cisco Intersight Object

3. On the **Blueprint Deployment** window, the Cisco Intersight Workflow parameters will be displayed under **Cisco Intersight Environment** section.

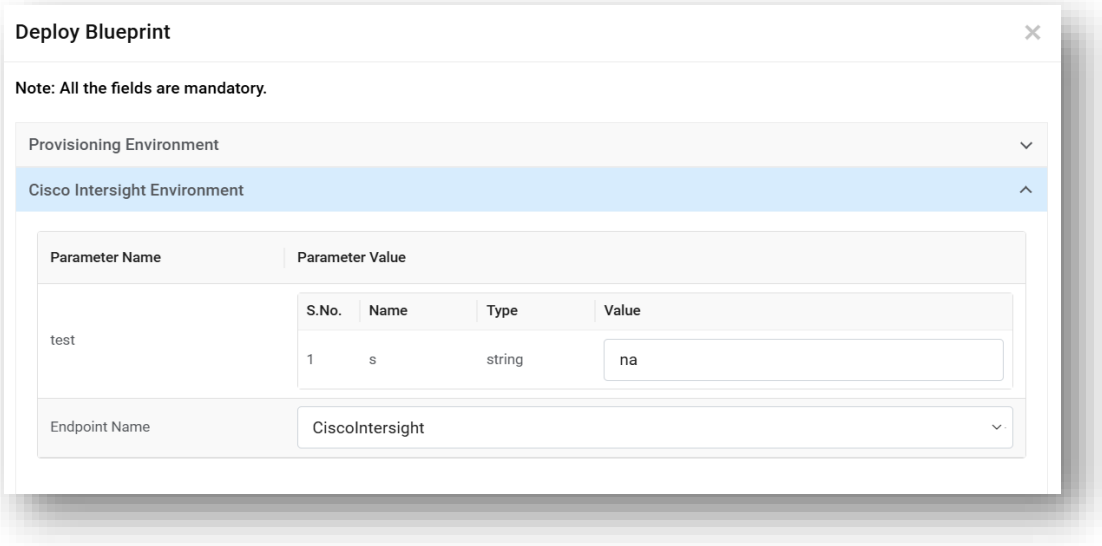


Figure 436 – Workflow Parameter in Cisco Intersight Object

4. Change the Workflow Parameter values if required.
5. Select the **endpointurl**, populate all the required fields, and click on **Deploy** button.
6. The further steps are same as described in the section Deploy Blueprint.
7. On successful deployment, the configured Cisco Intersight task is run.

1.6.2.2 Deployment from the View Blueprint Tab

Another way to deploy the blueprints is from the View Blueprint tab. The deploy button ( ) available on this screen allows users to deploy a blueprint from here. Clicking on the deploy button opens the deploy dialog box. Follow the similar steps as described in the section "Deployment from the Design Blueprint Page."

1.6.2.3 Deployment from Process Workflow

In this method, the blueprints are deployed through process workflow. The section "Execution of Blueprint by Creating UI and Process Template" contains detailed information on deployment from process workflow.

1.6.3 Re-Run Blueprint

This option is used to re-run the deployment request. By using Re-run, a user can again request the deployment of the same blueprint request and can change the existing machine attributes values which are mapped to variables. For the attributes which are not mapped with the variables, the user will not be able to change values on re-run.

If the deployment request is not decommissioned, this option does not create new cloud objects; it makes modifications to the existing cloud objects that were created during the deployment request.

If the deployment request has been decommissioned and then re-run is used, it creates the new cloud object mentioned in the deployment request.

The user cannot change the platform or environment in the case of re-run.

The Re-Run action does not appear in the case of an InProgress or Error status of the deployment request. It appears only in the case of the Success status of the deployment request.

For a new deployment, it creates the new request ID in the deployment history but for the re-run case, it runs the execution under the same request ID. It does not create the new request ID. It uses the same terraform state file for task execution.

1.6.3.1 Terraform State File

Terraform must store information about your managed infrastructure and configuration. This information/state is used by Terraform to map real-world resources to your configuration, to keep track of metadata, and to improve performance for large infrastructure.

This state is stored by default in a local file named "terraform.tfstate", but it can also be stored remotely, which works better in a team environment.

Terraform uses this local state to create plans and make changes to your infrastructure. Terraform performs a refresh prior to any operation to update the state with the actual infrastructure.

The primary purpose of Terraform state is to store bindings between objects in a remote system and resource instances declared in your configuration. When terraform creates a remote object in response to a change in configuration, it records the identity of that remote object against a particular resource instance and then potentially updates or deletes that object in response to future configuration changes.

Terraform stores information about your infrastructure in a state file. This state file keeps track of resources created by your configuration and maps them to real-world resources.

Terraform compares your configuration with the state file and your existing infrastructure to create plans and make changes to your infrastructure. When you run terraform apply or terraform destroy against your

initialized configuration, terraform writes metadata about your configuration to the state file and updates your infrastructure resources accordingly.

1. Click on **Re-Run** ( ) icon listed in the action column.
2. The **Blueprint Deployment** window appears.

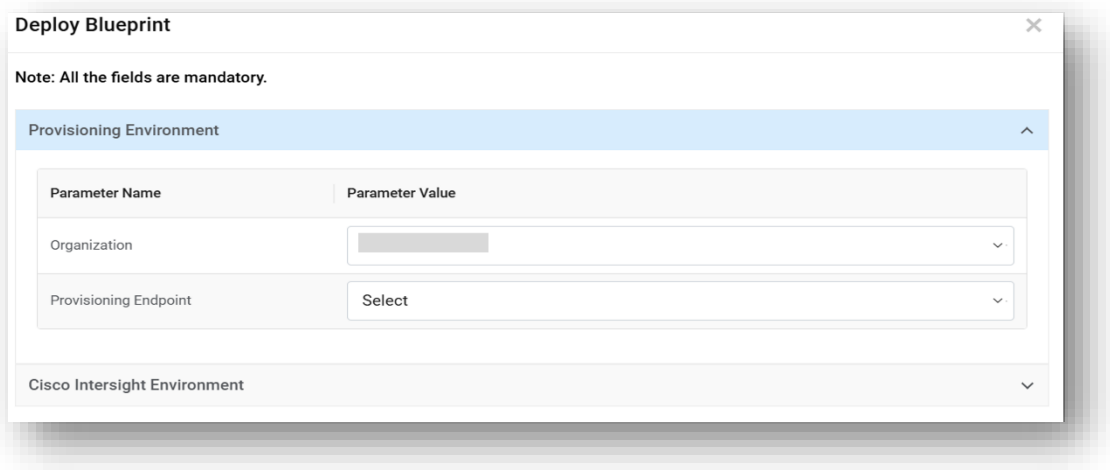


Figure 437 – Blueprint Deployment on Re-Run

3. The user has the option to change the variable values mapped to the object attributes.
4. Click on the deploy button and perform the similar steps as described in the section "Deployment from the Design Blueprint Page."

1.6.4 Execution of Blueprint by Creating UI and Process Template

The section covers information about the deployment of blueprint through process workflow. This is one of the three methods of blueprint deployment.

To deploy the blueprints through process workflow, the user first needs to create a new blueprint through the Design Blueprint page. (Refer to the section Create New Blueprint to create a new blueprint).

In the example below, the workflow blueprints are created for all three platforms. As already discussed earlier, the listed blueprint can be filtered by typing the tag name in the Tags section.

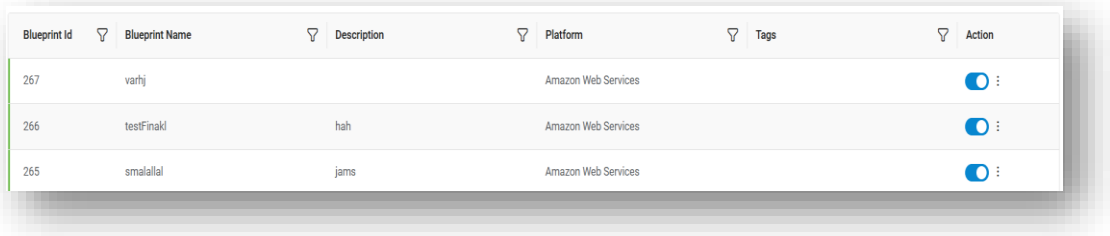


Figure 438 – Blueprint Created for Process Workflow

For executing the created Blueprint from Process Workflow, the user needs to do the following:

1. Create the **UI Template**.
2. Create the Process template.
3. Create the Cloud template.
4. Create **Catalog.**

5. Publishing the **Service Catalog**.
6. Execution of Blueprint through **Requester**.
7. Viewing the Request processing on the **Request Task Management**.

1.6.4.1 Forms

For processing requests from the process template, the user needs to create a UI template where any blueprints can be deployed. The user provides input attributes and after completing the deployment task the output attributes are returned. These output attributes are passed to the process workflow to run the tasks. So, the UI templates are the medium to pass these output values from blueprint deployment output to process workflow execution.

1. Click on Forms under Design from the main menu.

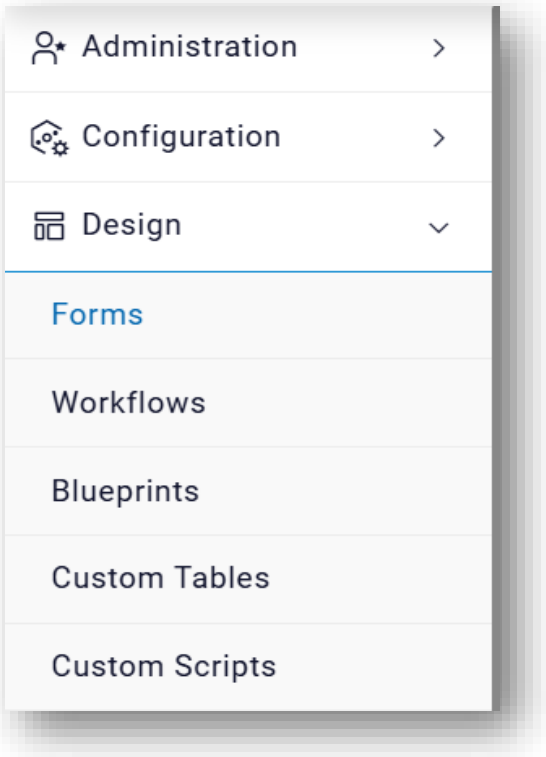


Figure 439 – Create UI Template Menu

2. Click +**UI Template** tab and create a UI template. For details on How to create a UI template, please refer to the section "**Manage UI Template ->Create UI Template**" in the *HCL BigFix CLM Configuration Guide – Provider Module – Part 1*.

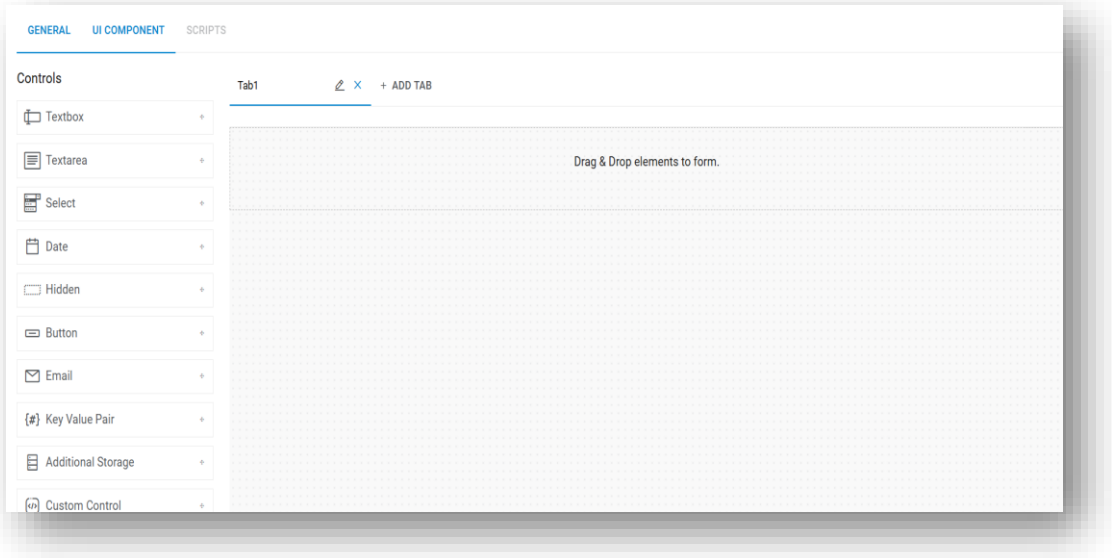


Figure 440 – UI Template Creation for Blueprint Deployment

The following five inputs have been created for the UI template as the blueprint to be executed expects these values form the user input:

- Key Value Pair

- Rbremarks1

- Rbremarks2

- Rbremarks3

- mapout

To pass the inputs to the process workflow through the UI template, the user needs to create all the input and output parameters in the UI template to map.

1.6.4.2 Create Process Template

After creating UI template, we need to create process template.

1. Click on Workflows under the Design from the main menu.

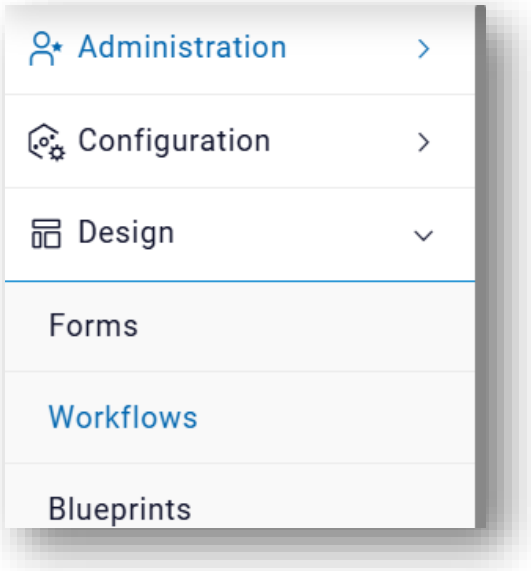


Figure 441 – WorkFlows

2. Click on **+Process Template** tab and create process template for the UI template. For details on How to create a Process template, please refer to the section "**Process Template -> Design Process Template**" in the *HCL BigFix CLM Configuration Guide – Provider Module – Part 1*.

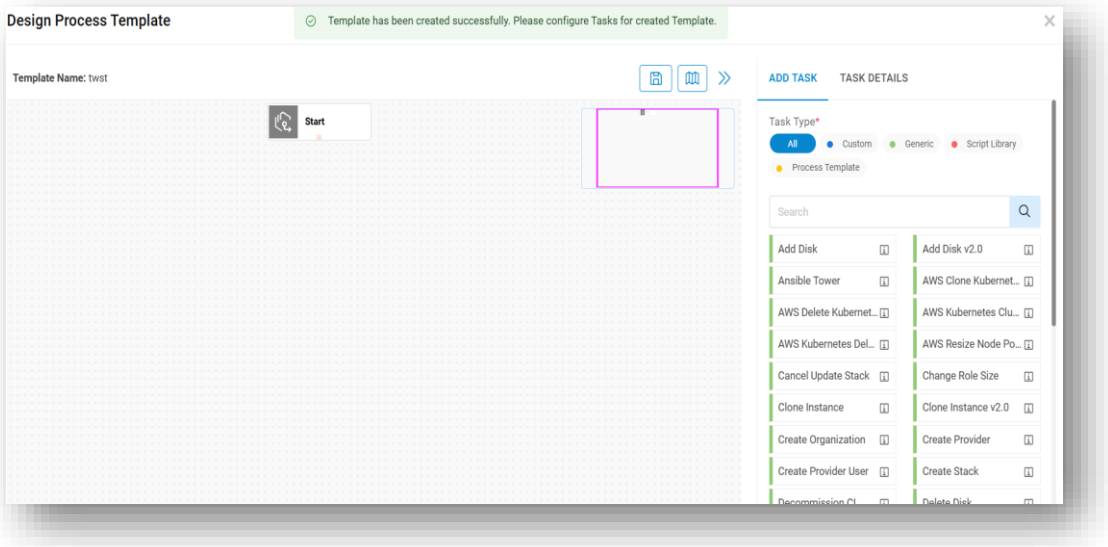


Figure 442 – Process Template Creation for Blueprint Deployment

3. Add the Task to Process template to be used to run the process workflow.
4. Here the DEPLOYBL tasks have been created for the execution of the blueprint. It is a generic type of task. Different tasks are created for different platform workflows.
5. Click on **Manage Task** action on the created task table list.

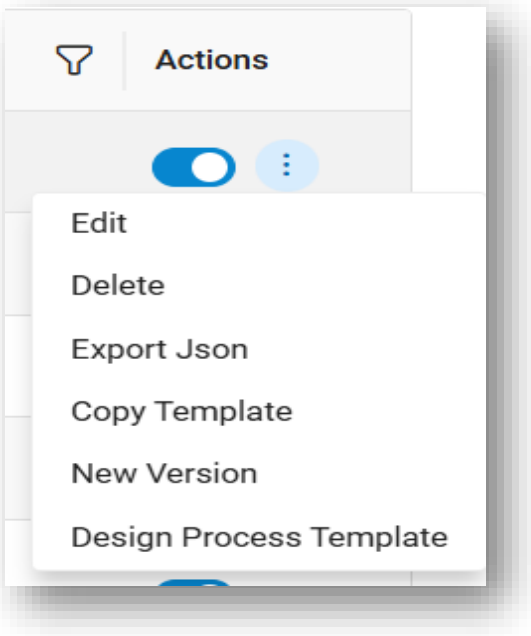
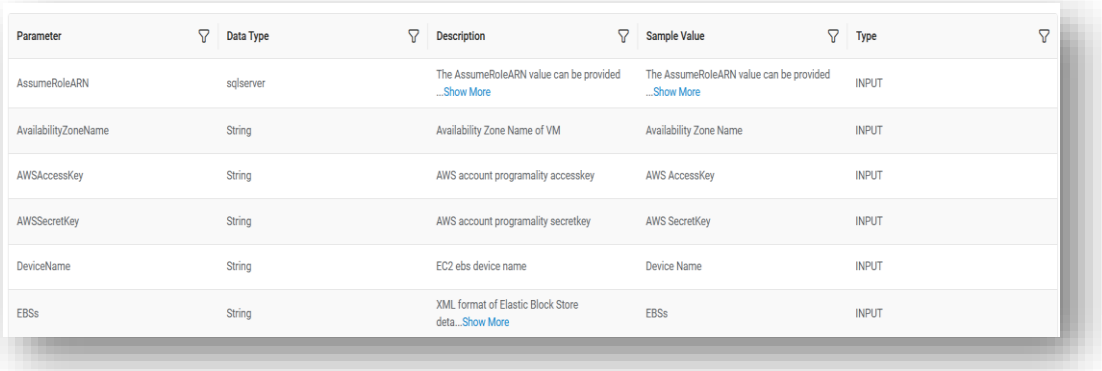


Figure 443 – Manage Task Action

6. The **Manage Task** window appears.



Parameter	Data Type	Description	Sample Value	Type
AssumeRoleARN	sqlserver	The AssumeRoleARN value can be provided ...Show More	The AssumeRoleARN value can be provided ...Show More	INPUT
AvailabilityZoneName	String	Availability Zone Name of VM	Availability Zone Name	INPUT
AWSAccessKey	String	AWS account programality accesskey	AWS AccessKey	INPUT
AWSSecretKey	String	AWS account programality secretkey	AWS SecretKey	INPUT
DeviceName	String	EC2 ebs device name	Device Name	INPUT
EBSs	String	XML format of Elastic Block Store deta...Show More	EBSs	INPUT

Figure 444 – Manage Task Action Window

7. Under the task, the user needs to map the input parameters to the process workflow. In the given example, there are four parameters mapped for the Deploy Blueprint task (deploybl) as shown in the above screenshot.
8. All the parameters can be managed by selecting an option from the dropdown menu.
9. **Blueprint ID**: This is the Blueprint ID created for deploying the blueprint from the process workflow. Refer to the **Table 35 - View Blueprint Table** Columns.
10. **Output Blueprint**: Created to capture the output parameter value. There should be the same value of the output attribute created on the UI for the value provided here. And if there is no output attribute created in the UI, it creates a new key with the provided output value here.
11. **Terraform variable:** It takes key value pair type variables. Click on the **Map Key Value** (Map Key Value) button to map the key value for this parameter.

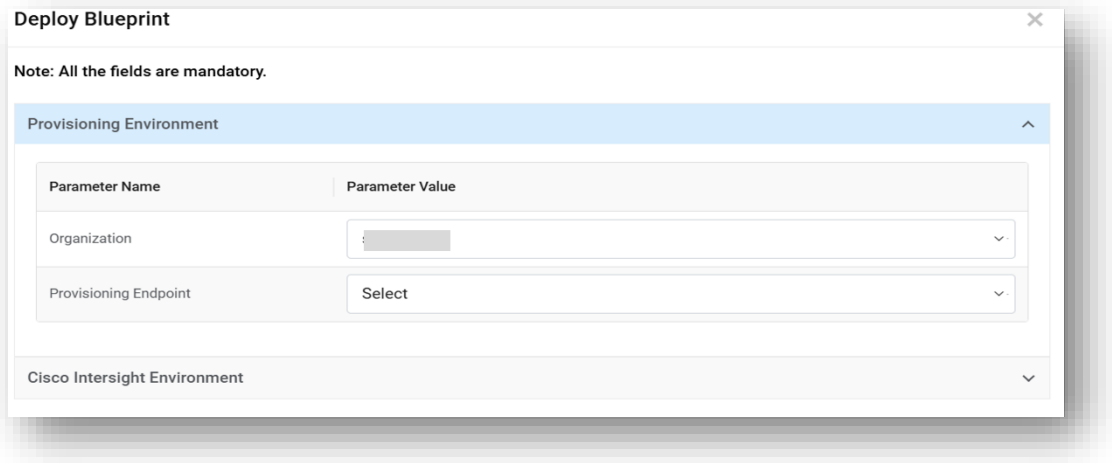


Figure 445 – Map Key Value of Manage Task Action

12. The above screen allows you to map the subscription details for which the blueprints are deployed by selecting the respective credentials of that environment. This window displays platform-wise parameters and subscription-wise parameters. For AWS, the access key and the security key are platform specific. The user needs to provide credentials to access the provisioning environment. For GCP, provide the project id and for ARM, provide four keys to access the environment.
13. The window also allows users to map the key-value pairs. The following pairs are available:

- Parameter Name
- Parameter DB Type
- Parameter Value.

14. In the case of Blueprint Deployment, the user needs to pass the Access Key and Security Key from the configured values during the execution but in case process workflow, he/she needs to pass it thorough predefined SQL functions. This value is used to decide on which subscription the user deploys the blueprint. This depends on the selected platforms such as AWS, ARM and GCP.
15. For Ansible, there is an option to configure Ansible variables by clicking on **Ansible Configuration** button (Ansible Configuration).

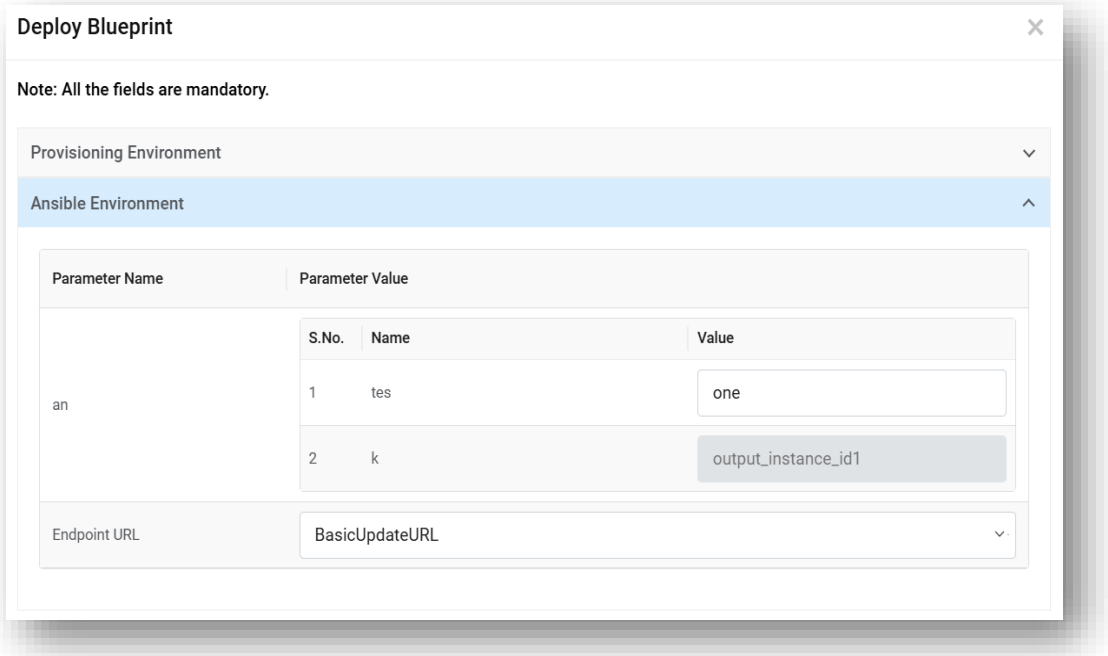


Figure 446 – Ansible Configuration of Manage Task Action

16. The user selects the Ansible endpoint, and all the key values mentioned in Ansible variables are listed here.

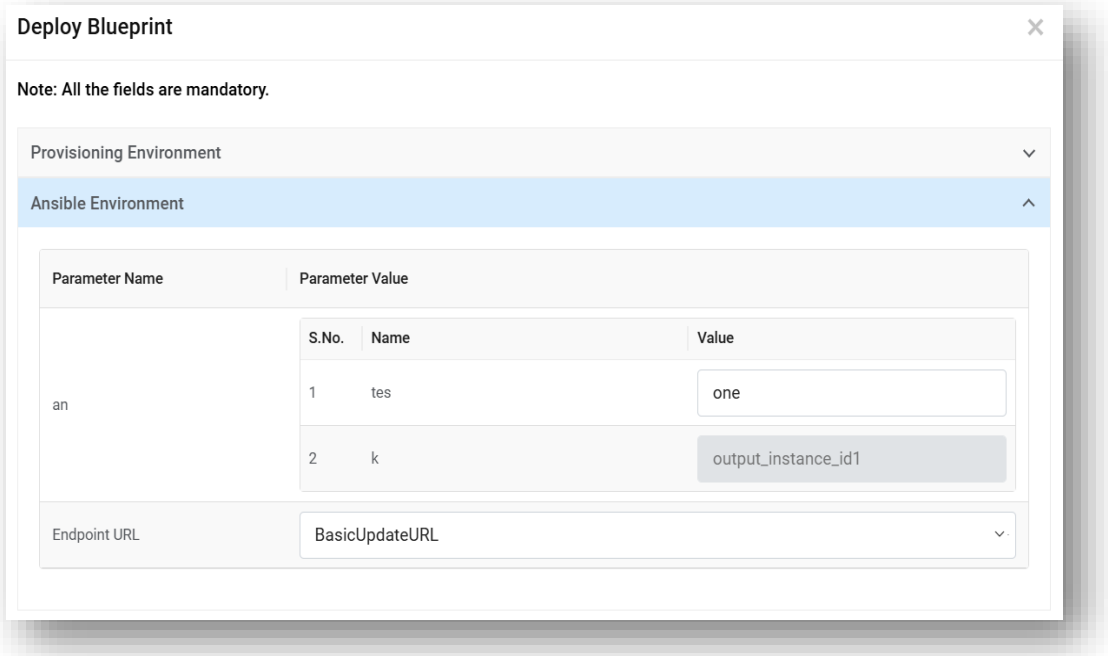


Figure 447 – Ansible Configuration of Manage Task Action (Cont.)

1.6.4.3 Create the Cloud Template

To process the requests from the process template, the user needs to create a cloud template.

1. Click on the Manage Cloud Template in the Workflow Management menu.

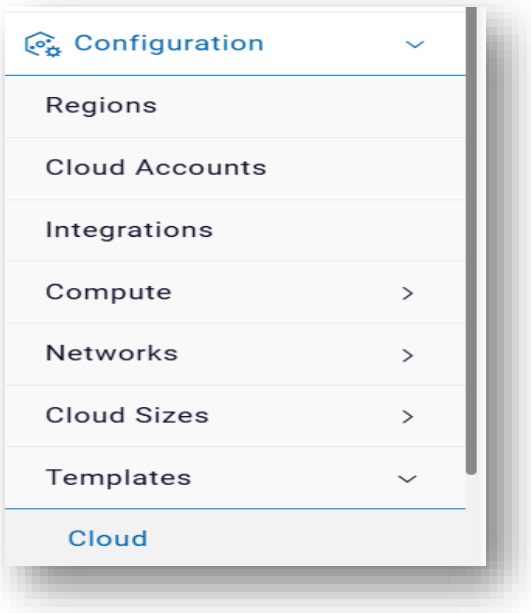


Figure 448 – Cloud Template Menu

2. Select the Platform.

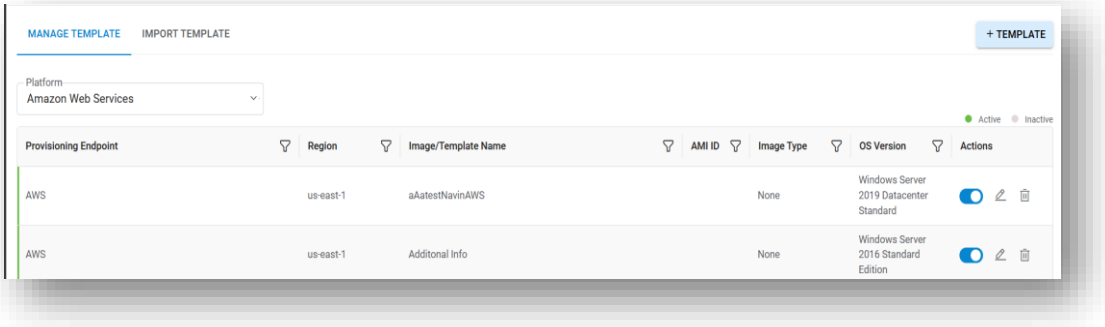


Figure 449 – Cloud Templates

3. Select the **Template** tab and create a cloud template. For details on How to create a Cloud template, please refer to the section "**Manage Cloud Template -> Create Template**" in the *HCL BigFix CLM Configuration Guide – Provider Module – Part 1*.

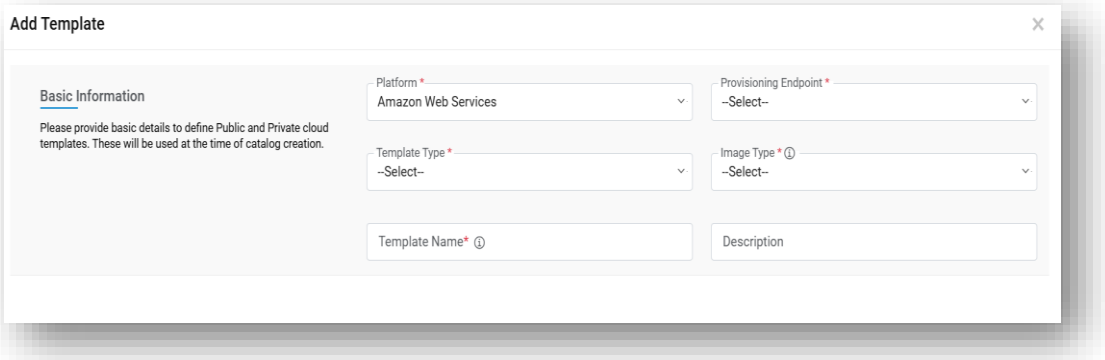


Figure 450 – Create Cloud Template

1.6.4.4 Create Catalog

To process the request from the process template, the user needs to create a catalog.

1. Click on Catalog in the Publish from the main menu.

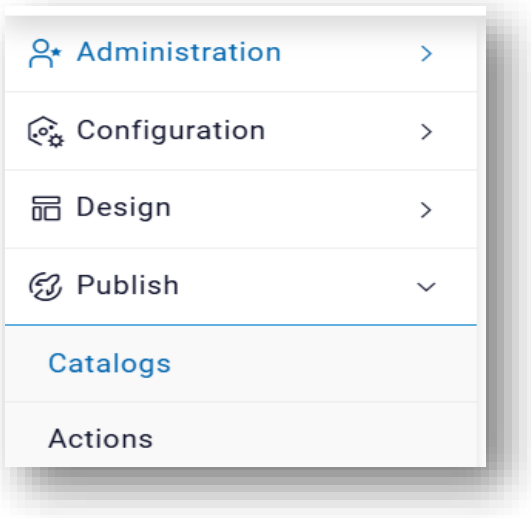


Figure 451 – Create Catalog Menu

2. Select the Platform.

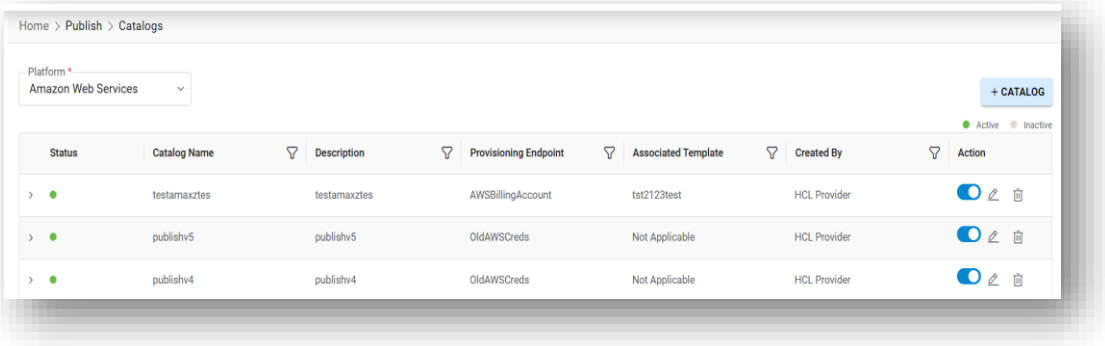


Figure 452 – Catalog

3. Create a Catalog from +**Catalog** tab. For details on How to create a catalog, please refer to the section "**Manage Catalog -> Create Catalog**" in the *HCL BigFix CLM Configuration Guide – Provider Module – Part 1*.

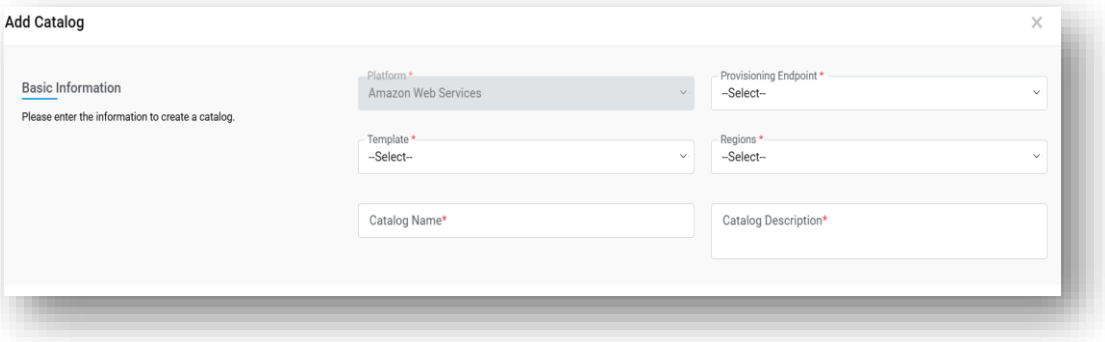


Figure 453 – Add Catalog (Cont.)

1.6.4.5 Service

To process the request from the process template, the user needs to create a catalog.

1. Click on Service in the Publish from the main menu.

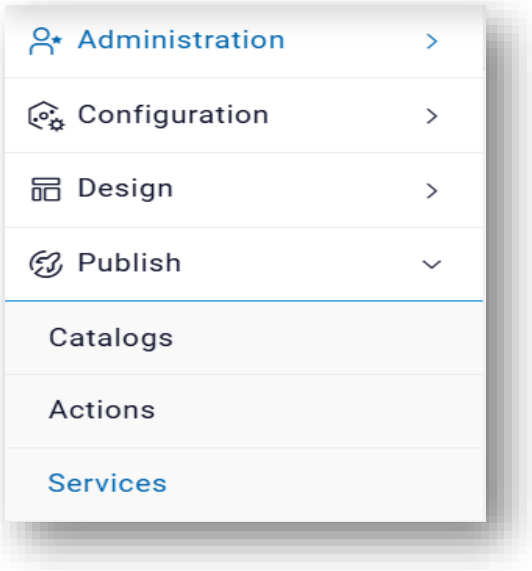


Figure 454 – Service

2. Select the Organization, Platform, and Provisioning Endpoint.

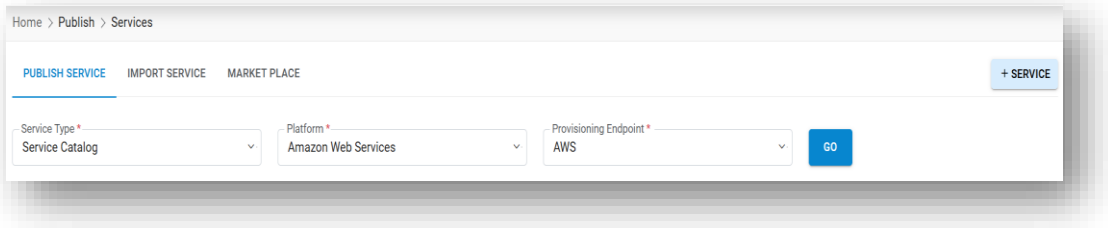


Figure 455 – Service

3. Create a **Service Catalog** from the +Service Button. For further steps to create a Service catalog, please refer to Section **- Publish Service Catalog** in the *HCL BigFix CLM Configuration Guide – Provider Module – Part 1.5.3.3*

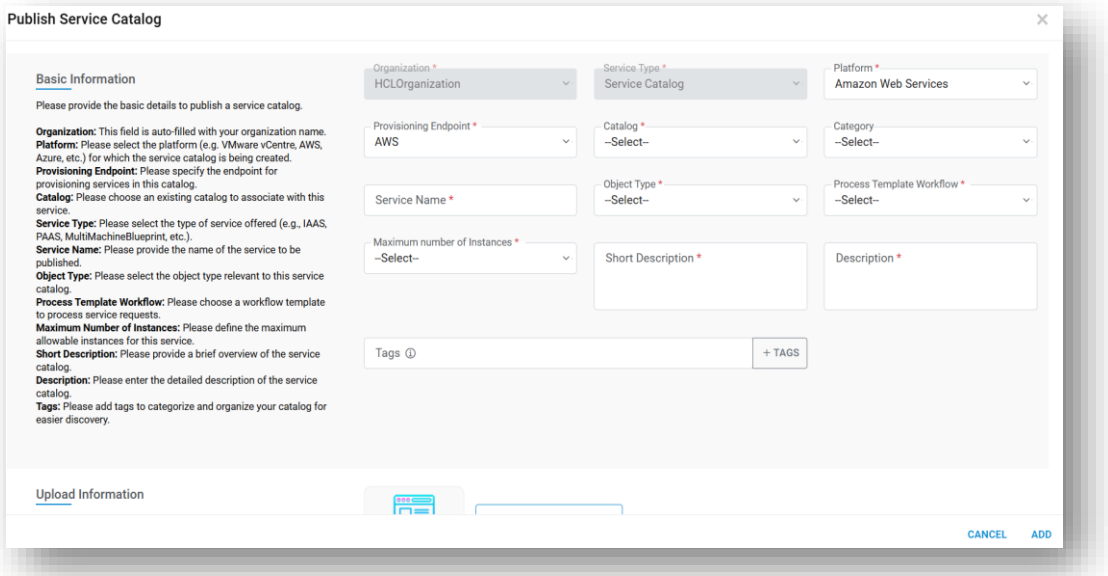


Figure 456 – Add Service (Cont.)

1.6.4.6 Execution of Blueprint through Requester

To create requests for workflow execution, the user needs to create a service catalog. This is done similarly to the existing UI and process template creation process. The following are the steps to explain one of the cases of deploying the blueprint through the process workflow.

1. Login to HCL BigFix CLM as a **Requester**.
2. Click on Request Service under the Catalog from the main Menu.

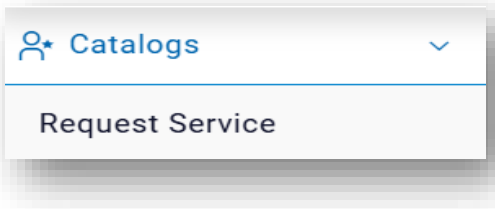


Figure 457 – Request Service Menu

3. Select the Environment Type, Purpose, and OS Type. Click on Proceed.

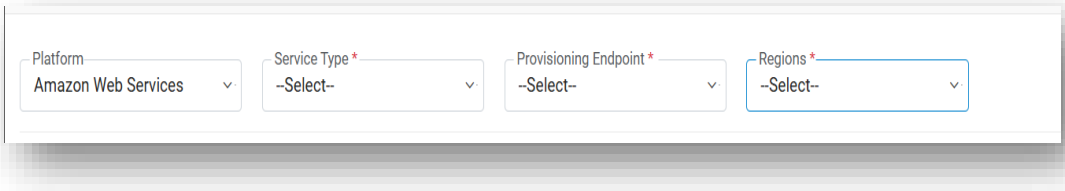


Figure 458 – Request Service

4. Select the **Platform** for which you want to create a request and click on **Proceed**.

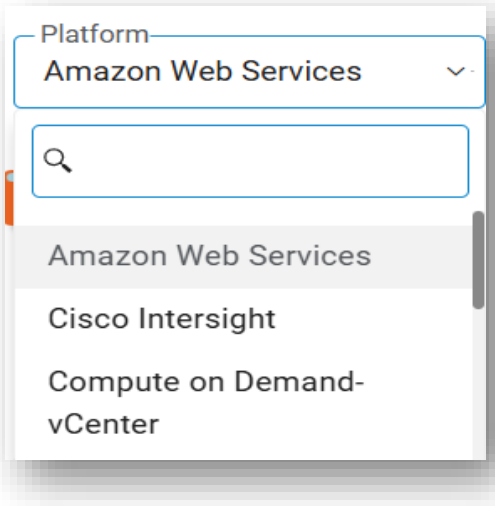


Figure 459 – Request Service (Cont.)

5. Click on the Created Service Request.

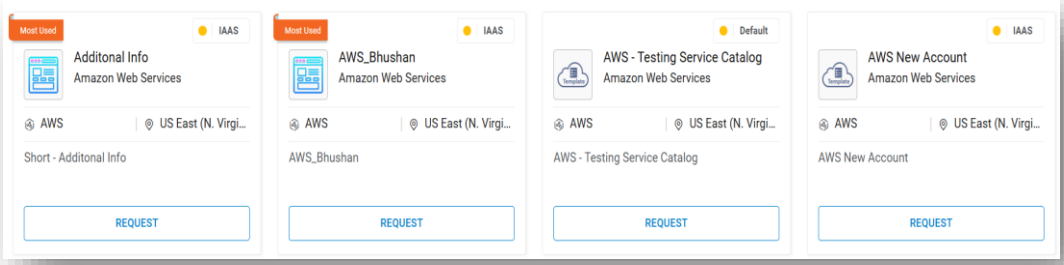


Figure 460 – Request Service (Cont.)

6. Select the Number of Instances and click Proceed.

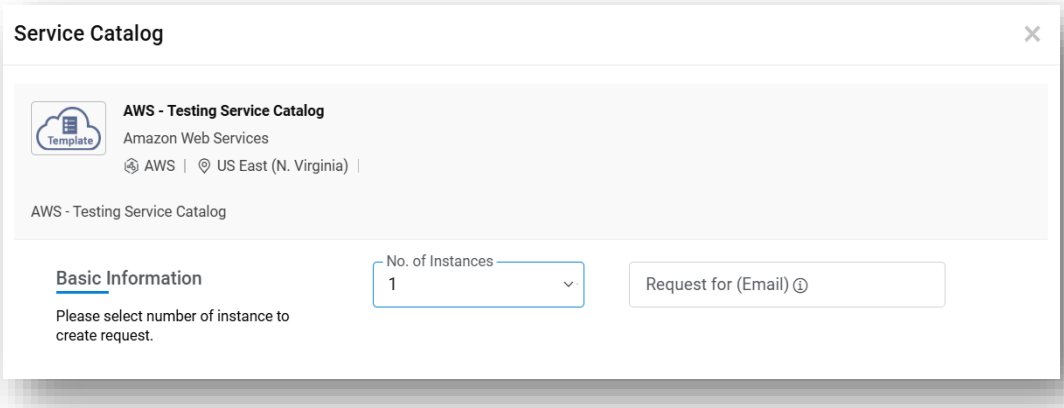


Figure 461 – Request Service (Cont.)

7. The UI template for requesting appears.

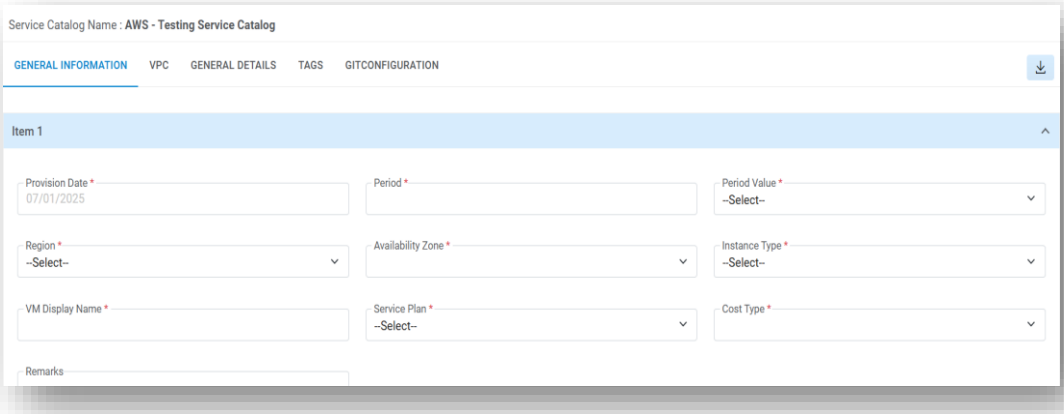


Figure 462 – Request Service (Cont.)

8. Input the values and click on **Submit** to raise a new request.
9. The request can be seen by clicking on **My Request** under **Request** from the main menu.

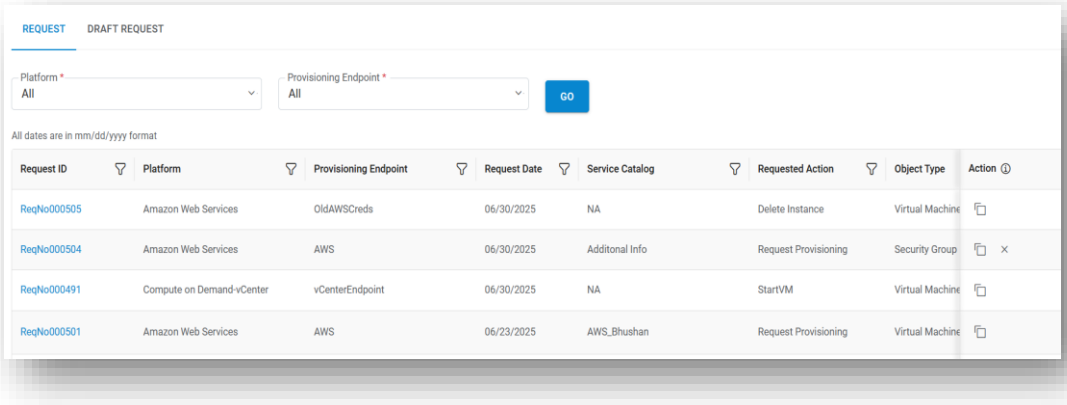


Figure 463 – Request Under My Request

10. Clicking on the request displays the further details related to the task.

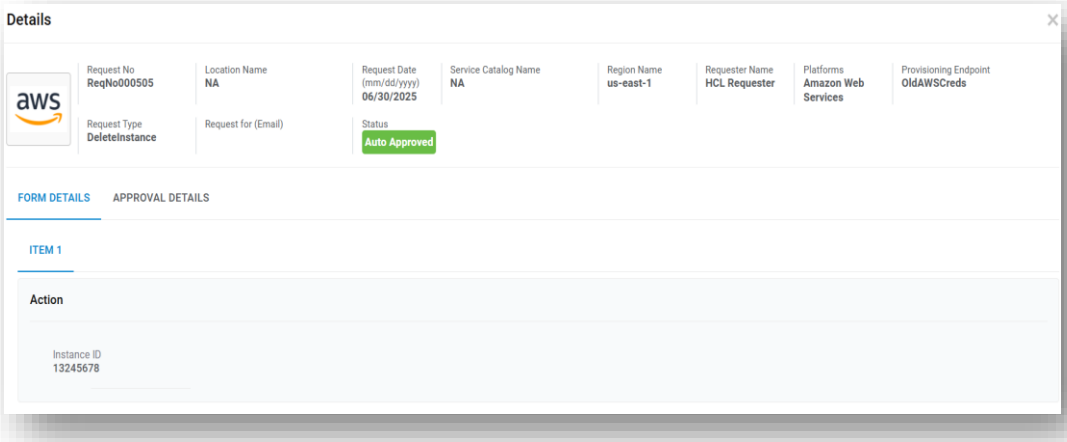


Figure 464 – Request under My Request (Cont.)

1.6.4.7 Viewing the Request Processing on Manage Request

To check the task execution status, the user needs to take the following steps:

1. Login to HCL BigFix CLM as a **Provider User**.
2. Click on Request Task Management under the My Report menu.

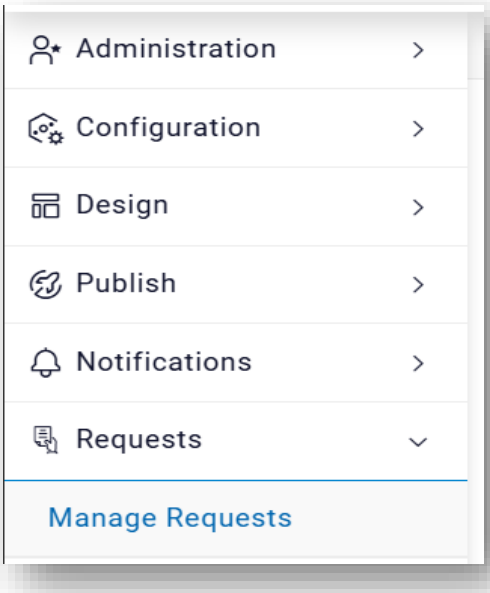


Figure 465 –Manage Requests

3. The **Manage Request** page appears, displaying the list of requests.

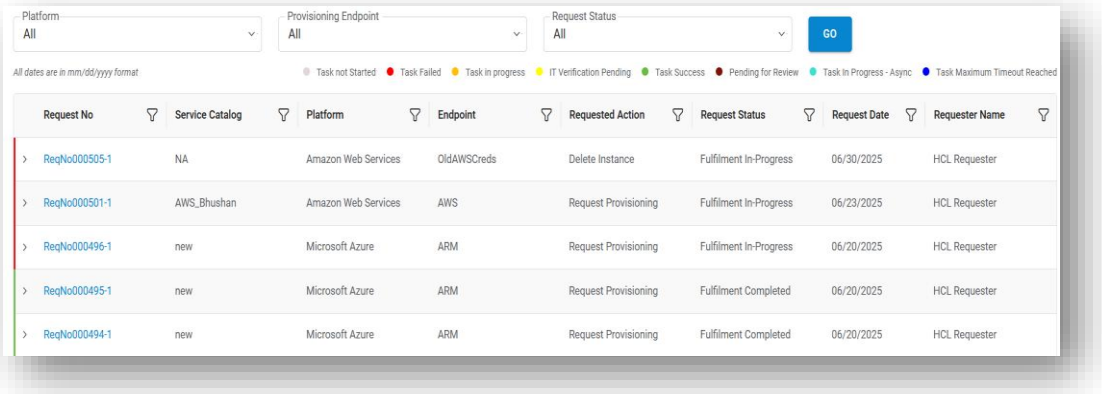


Figure 466 – Manage Requests (Cont.)

4. Expand your request by clicking on the **plus icon** (>).

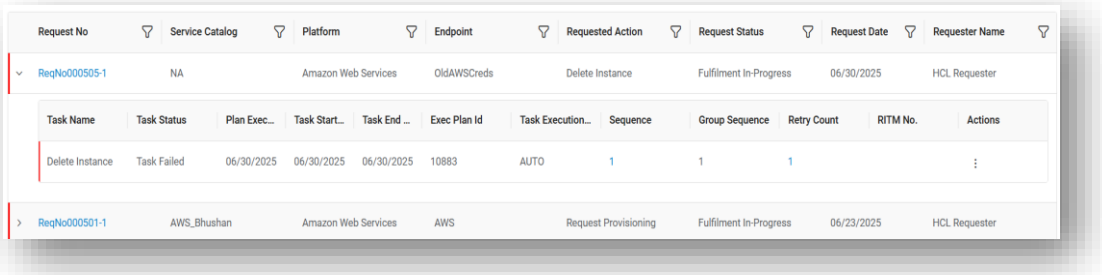


Figure 467 – Manage Requests (Cont.)

5. The Task execution list is displayed.
6. The user can view the Request XML of the task by clicking on the **View Message XML** under the action column.

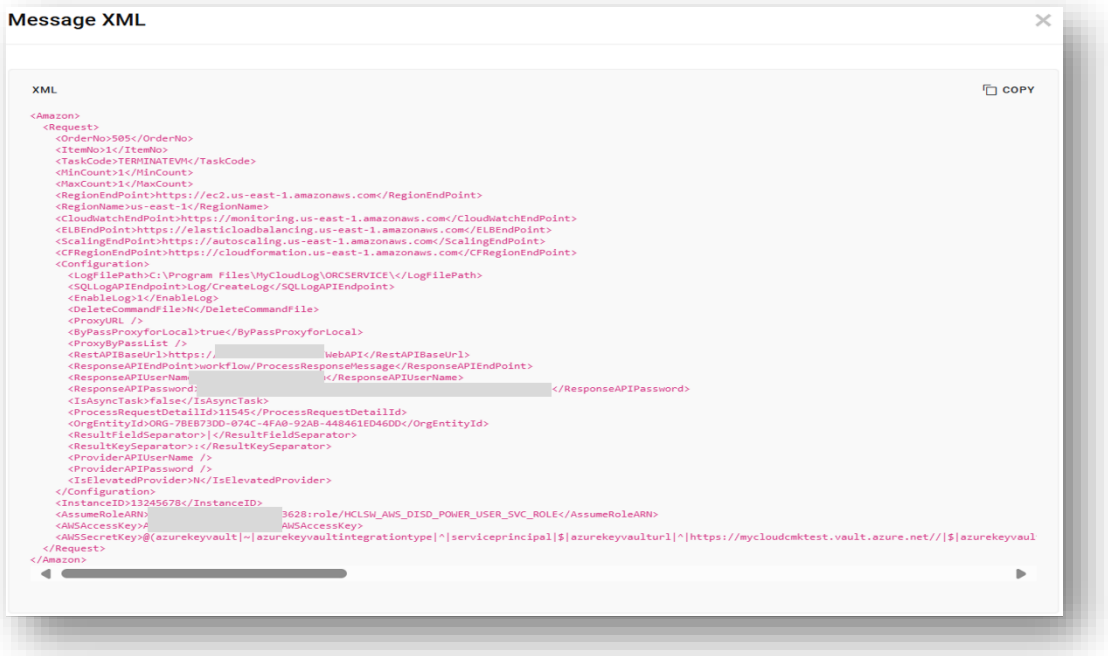


Figure 468 – Manage Requests (Message XML)

7. Click on the **View Response** under the action column to view the response.

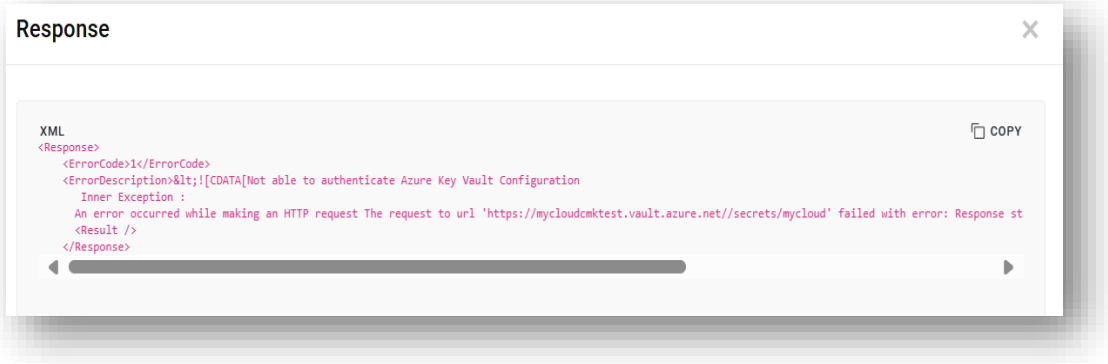


Figure 469 – Manage Requests (View Response)

8. To view the detailed logs, click on the **Detailed Log** in the action column.

Figure 470 - Detailed Logs

1.6.5 New Resource in Blueprint to Execute Terraform File from GIT Repository

A new resource onboarded with name "Execute terraform file" under software tools like in below diagram-

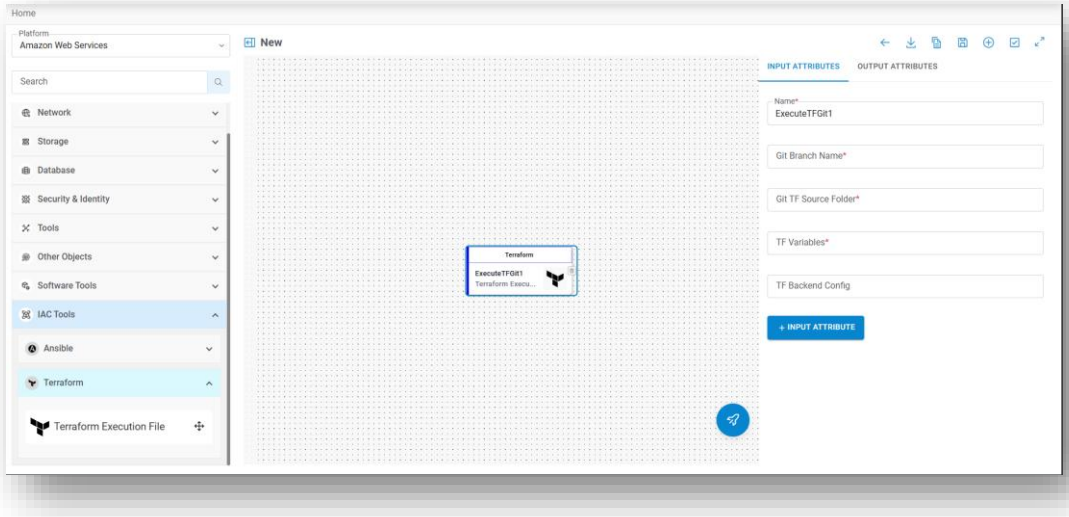


Figure 471 – Execute Terraform File from Git Repository

These new resources will have below attributes:

Table 38 – Input Attributes in Git Repository

Field	Description
Name	Name of Execution
Git Branch Name	Git Branch name
Git TF Source Folder	Folder name of that git branch
TF Variables	Variables are require to execute Git terraform files. With the help of ⊞ icon user can create variable of type "Git terraform variables" It is a key value pair of all variables used execute Git terraform files.

TF backend Config	These configurations will define the location to save state files created during terraform execution. With the help  icon user can define TF backend config. Variable type is "Terraform Backend config" on the change of variable type backend type will populate Possible values of backend type are: • For Amazon platform it is "S3" it will populate to save information of bucket to save state file created during terraform execution. • For ARM it is "blob" it will populate to save information of bucket to save state file created during terraform execution • For others it will be local.

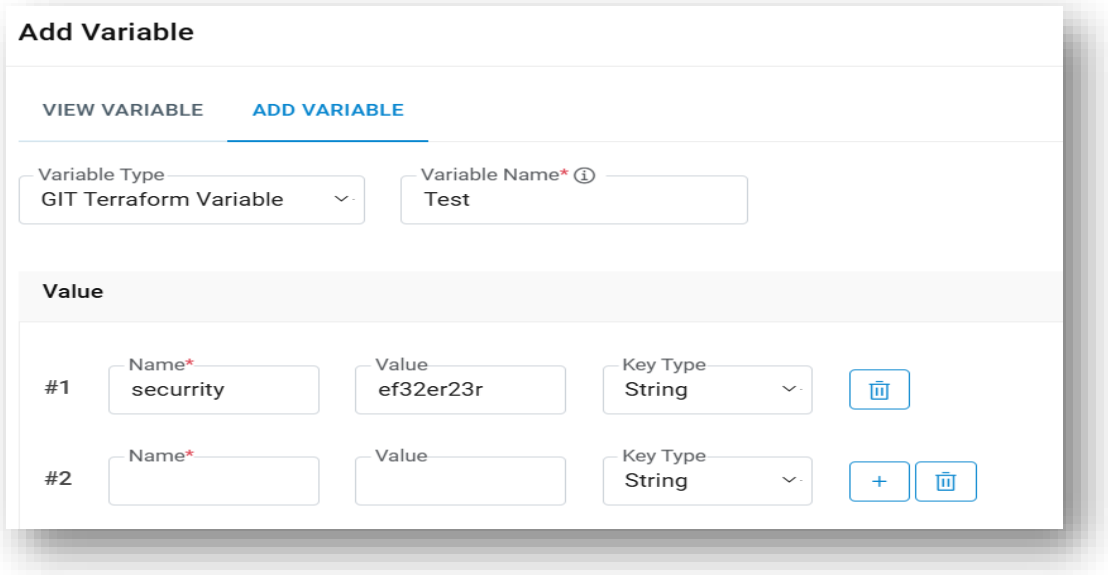


Figure 472 – Terraform Variables

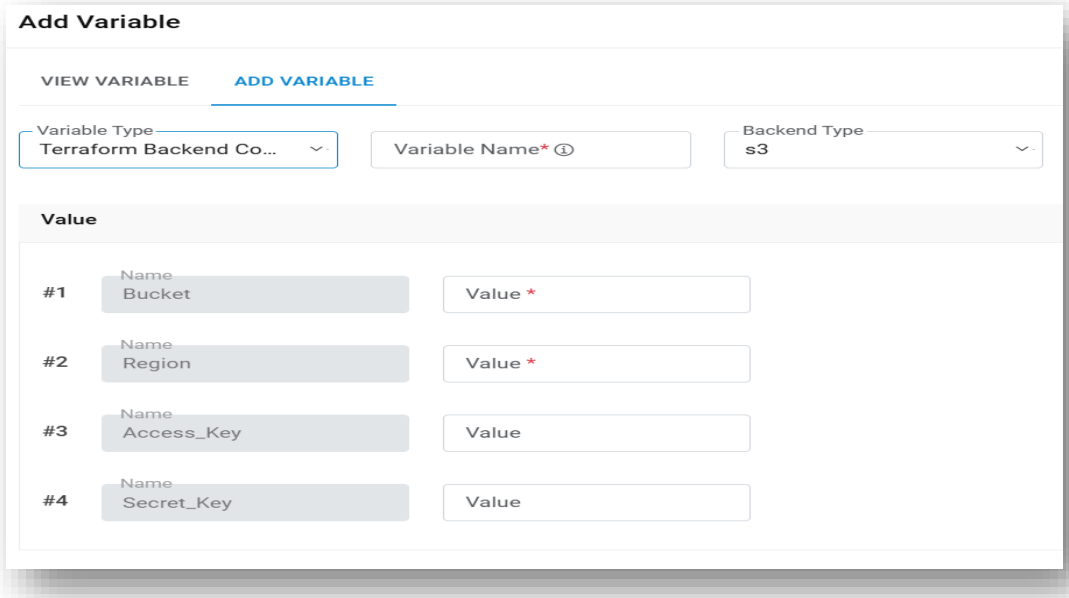


Figure 473 – TF Backend Config with S3 Backend Type

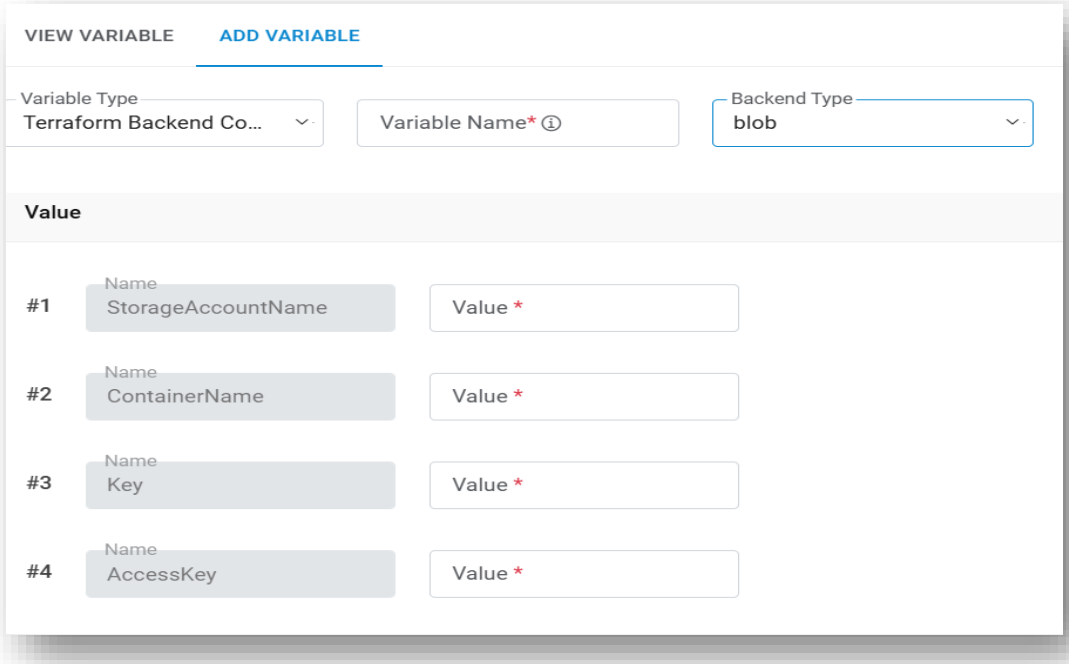


Figure 474 – TF Backend Config with Blob Backend Type

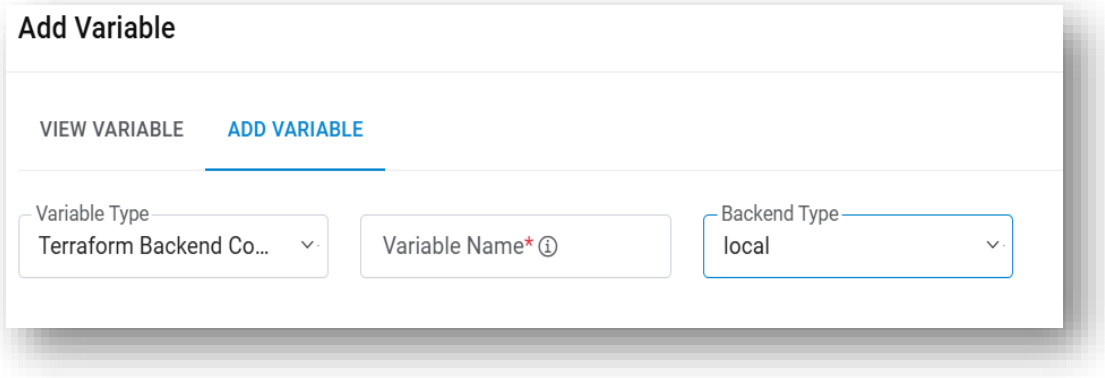


Figure 475 – TF Backend Config with Local Backend Type

After filling all the mandatory fields click on icon to save blueprint, below message appears-

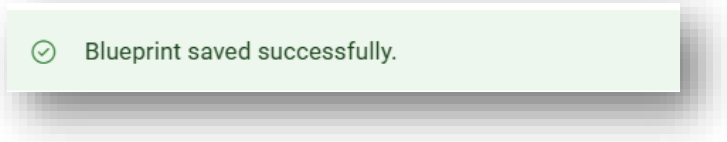


Figure 476 – Success Message

Once blueprint saved successfully then deploy blueprint as mentioned in section "Deploy Blueprint".

1.6.6 Provider Day 0 Journey

When the provider user login in HCL BigFix CLM application for the first time on the dashboard it sees the following popup:

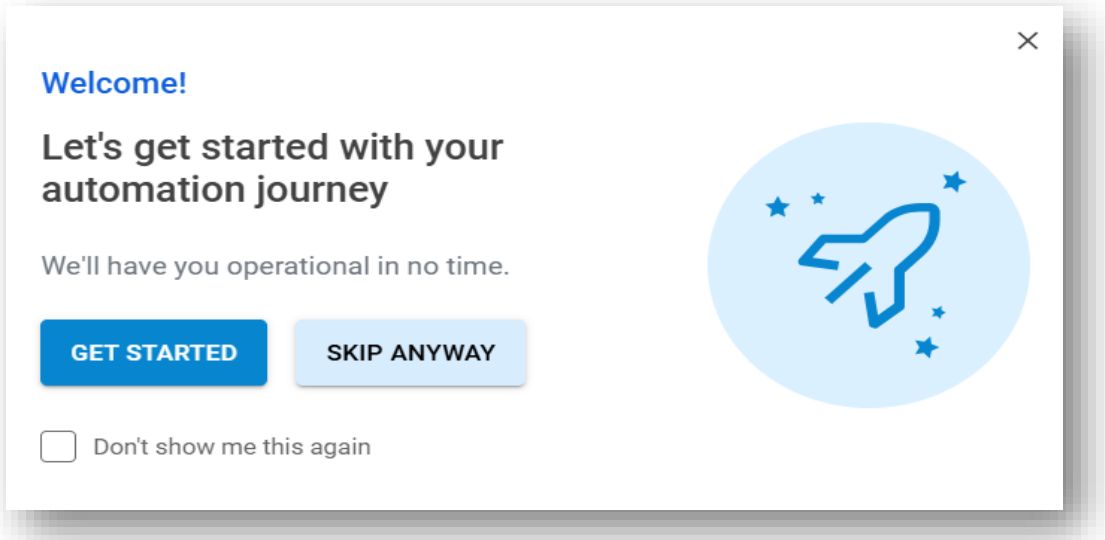


Figure 477 – Dashboard Popup

Users can click Get Started to start the demo or click Skip Anyway to skip for this time and if the user had already taken the demo then click on Don't show me this again, checkbox to never see this demo popup.

If the user clicks on Get Started, then the following page should be visible.

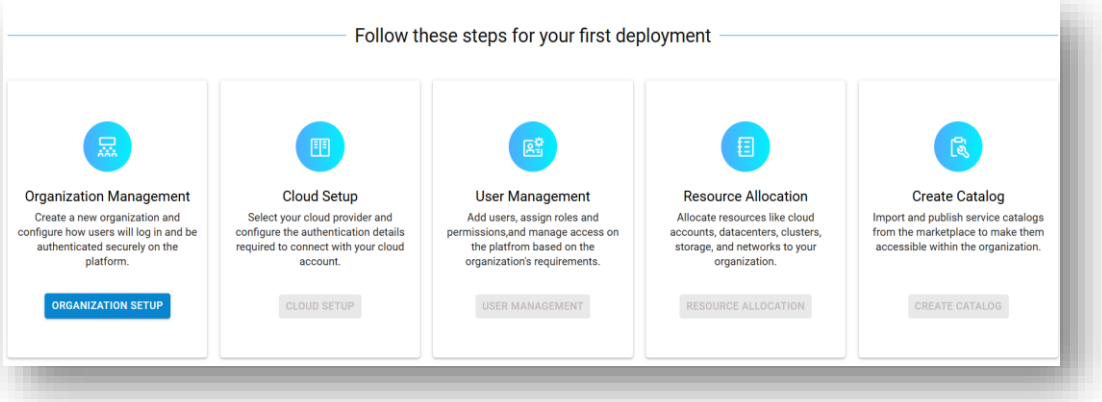


Figure 478 – Dashboard Cards

Click on the first card "Organization Management" button which is Organization Setup then the user will redirect to the following page to create and setup the organization.

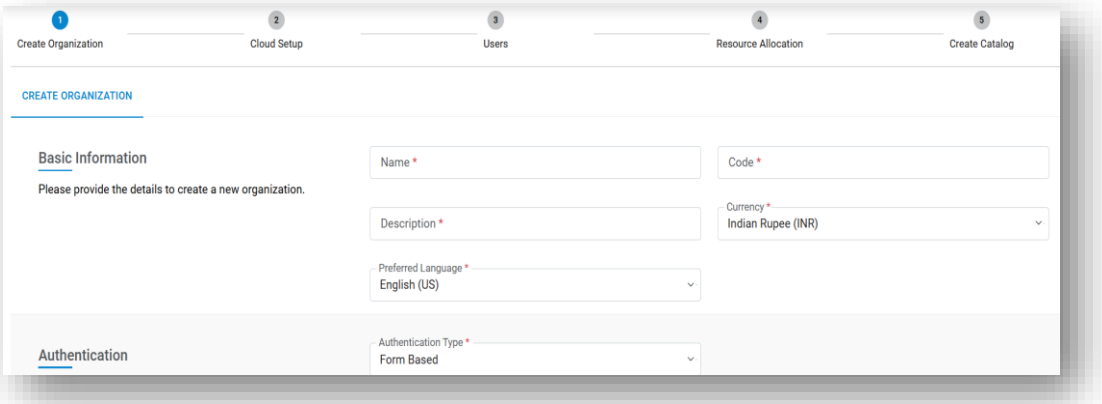


Figure 479 – Create Organization

The user needs to take the following steps:

1. Fill Required details as shown in image.
2. Click on Next button after filling the required details.

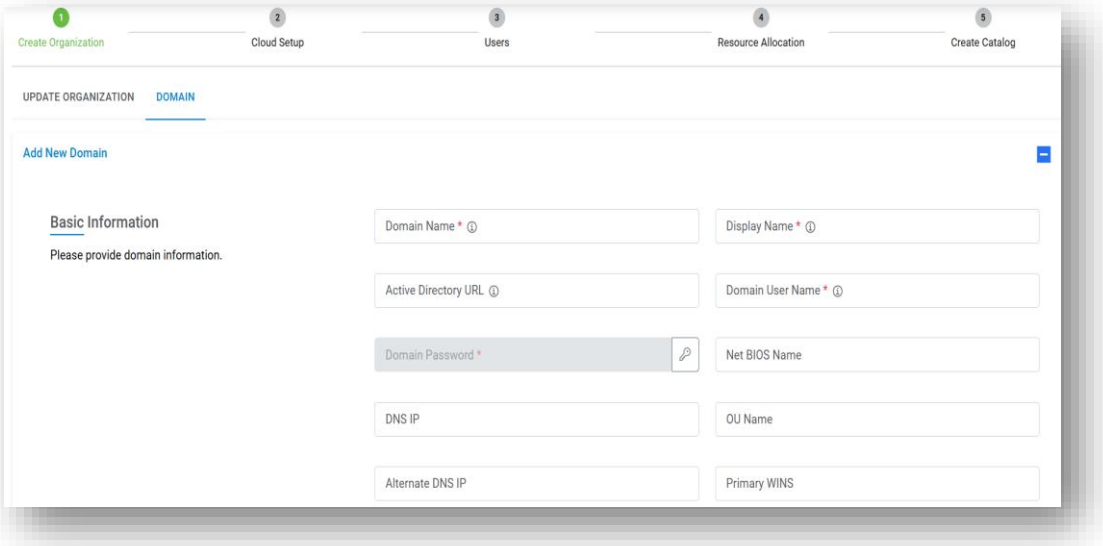


Figure 480 – Create Domain

3. Now users have to set up the Domain for the organization you have created.
4. Click on Next button after filling the required details.
5. Now the user will come to the next step which is Cloud Setup, and the previous tab is coloured as green which means it was created successfully.

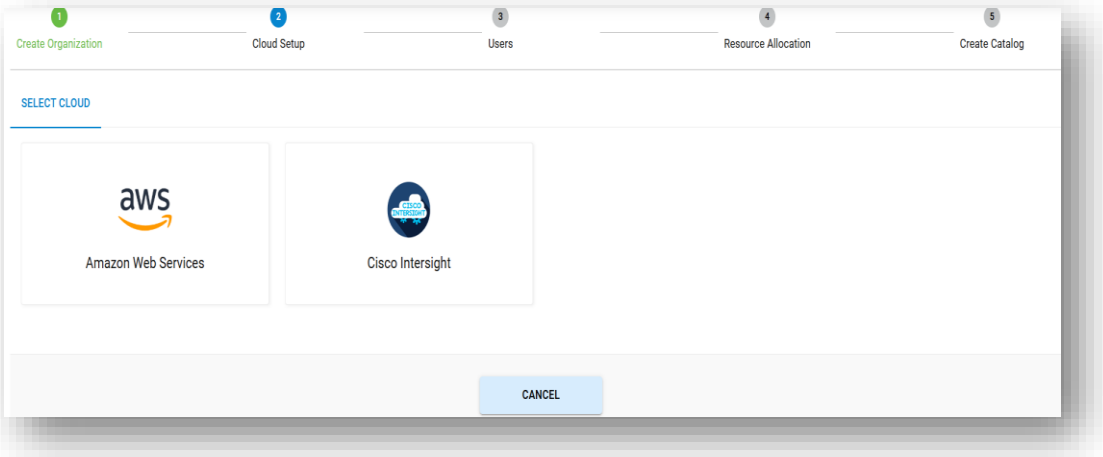


Figure 481 – Cloud Setup

6. Select the cloud.
7. Now it redirects to fill in the required details to set up the cloud environment.

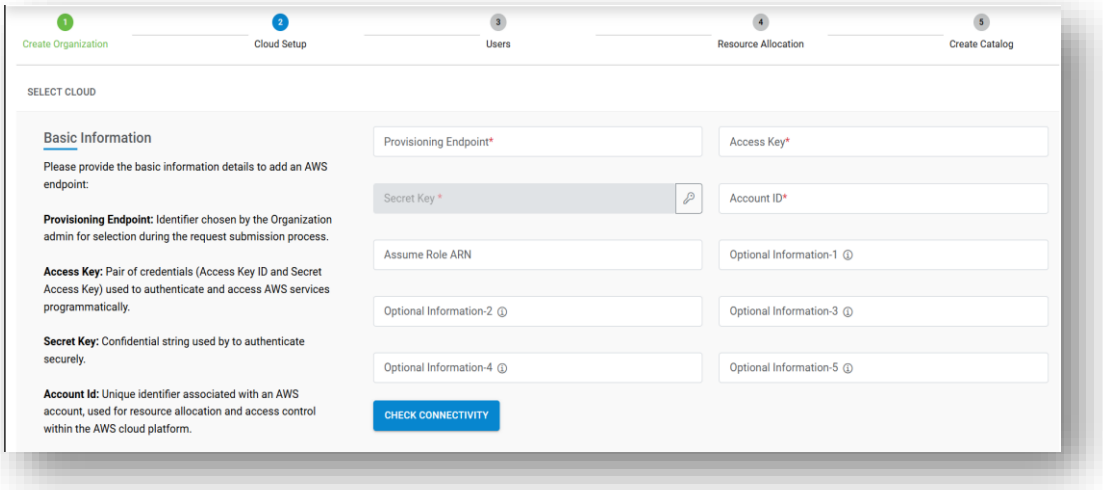


Figure 482 - Users

8. Click on Next button after filling the required details.
9. Now it redirects to fill in the required details to create the user.

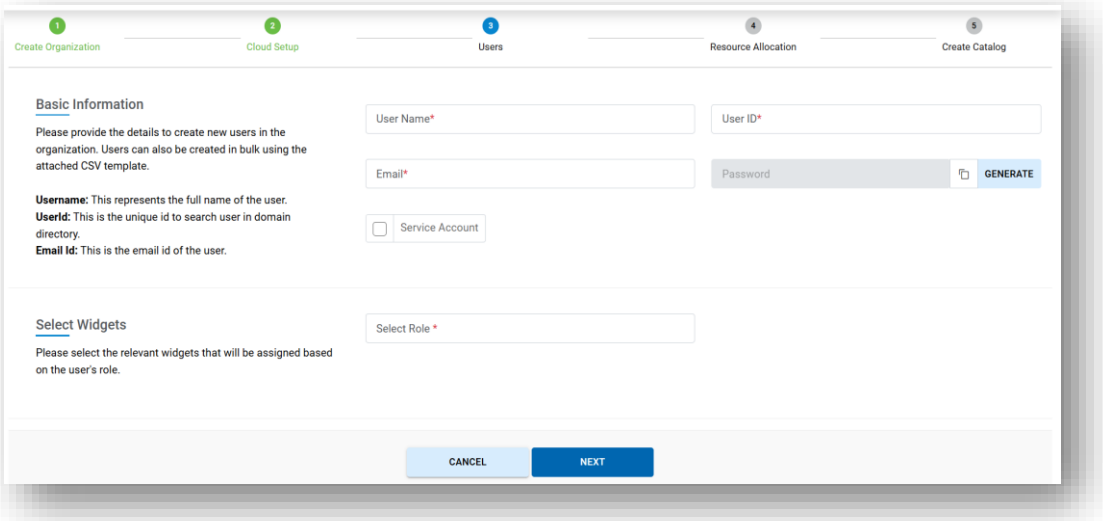


Figure 483 – Resource Allocation

10. After creating the user now, we have to allocate a resource.

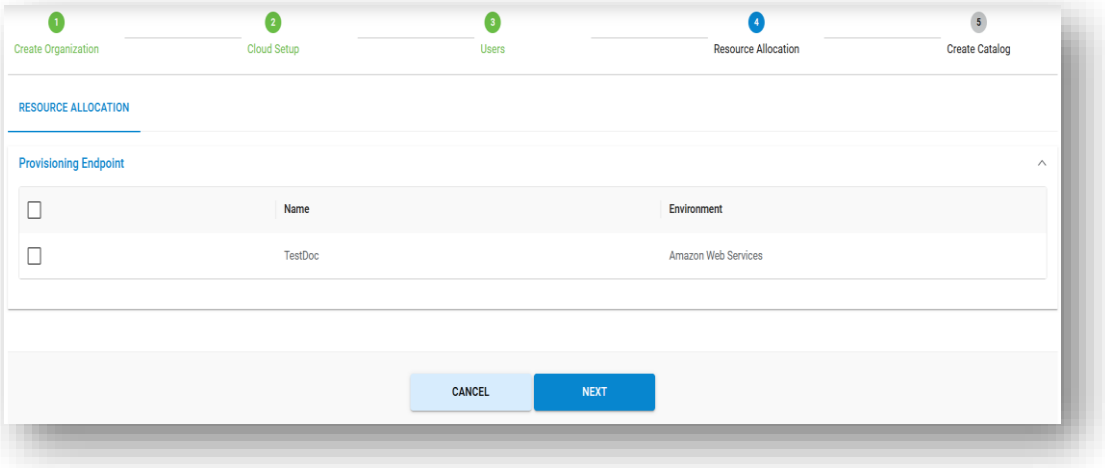


Figure 484 – Resource Allocation (Cont.)

11. Click on Next button after selecting the resource available in the tabular form.
12. Now it will redirect the user to create the Catalog.

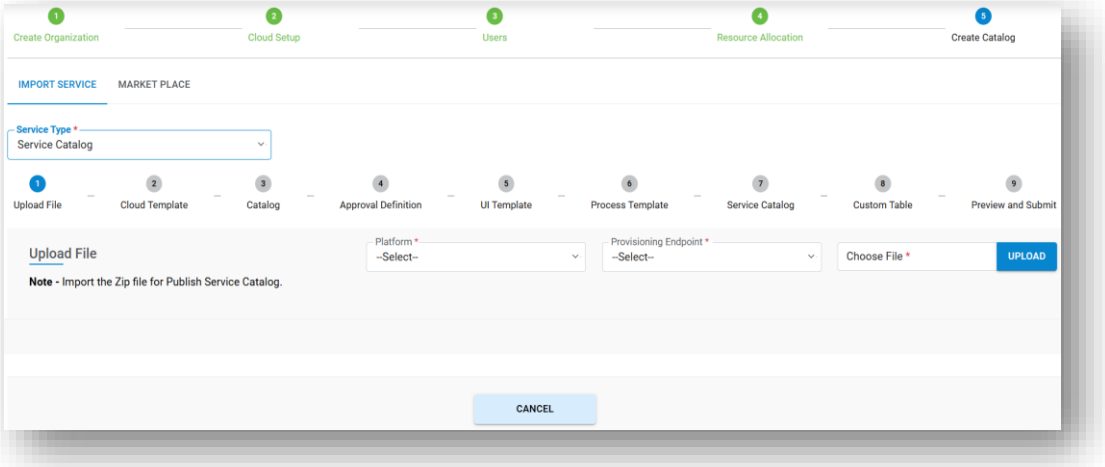


Figure 485 – Create Catalog

13. Select the Service Type as Service Catalog to create a new catalog.
14. Select the Platform and Provisioning Endpoint.
15. Upload the file.
16. After that Refer to 1.5.3.2.4 Section for Create/Import Service Catalog.
17. After all steps are completed then the user will see this screen as all cards are completed.

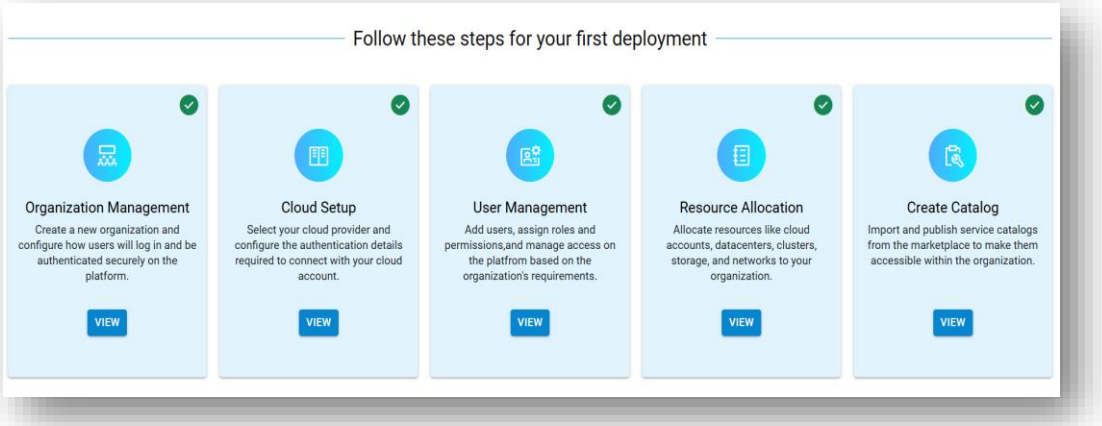


Figure 486 – Landing Journey Completed

3. Support

To get support for this product, drop a mail to bigfixclm-prodsupport-team@hcl-software.com.

HCLSoftware

hcltechsw.com