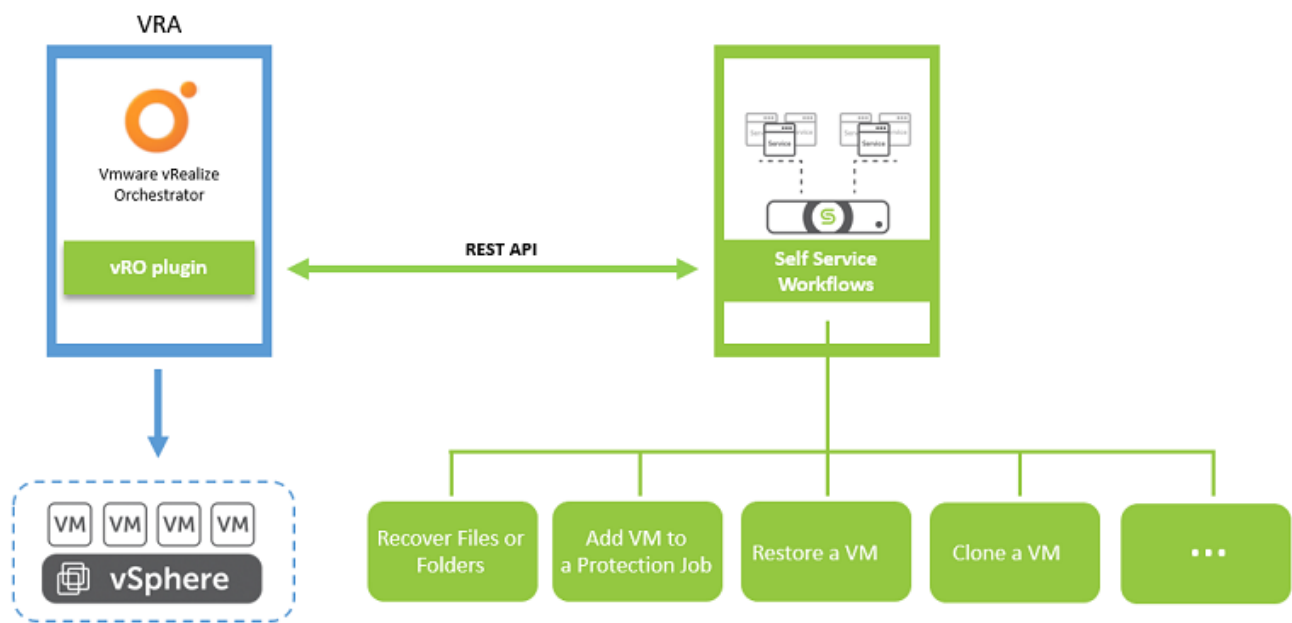


Cohesity vRO Plugin Deployment Guide

The **Cohesity vRealize Orchestrator (vRO)** Plugin provides self-service workflows for **Cohesity DataPlatform**. The **vRO plugin** is developed on the **VMware vRealize Orchestrator** component of the **VMware vRealize Automation**. This plugin uses REST APIs to interact with the **Cohesity DataPlatform**. Using this vRO plugin, you can execute many self service workflows such as Add VM to protection job, Restore a VM, Clone a VM and so on. See [Workflows](#) for details.

You can download the vRealize Orchestrator Plugins and workflows from [VMware Solution Exchange](#).



vRO Self Service Workflows

The plugin provides a list of workflows that you can access on the **Workflows** tab of the Orchestrator client. The plugin contains packages of workflows and actions that you can run on the objects in the inventory to automate the typical use cases of the integrated product.

| Custom Objects | Workflows |
|-----------------------|------------------------------------|
| Initial Configuration | Add a Cohesity Endpoint |
| | Remove a Cohesity Endpoint |
| | Update a Cohesity Endpoint |
| | Add an Email Configuration |
| | Remove an Email Configuration |
| | Update an Email Configuration |
| Day-1 Workflows | Add multiple VMs to Protection Job |

| Custom Objects | Workflows |
|--------------------------|--------------------------------------|
| | Remove VM from all Protection Job |
| Protection Job Workflows | Add Unprotected VM to Protection Job |
| | Clone Virtual Machine |
| | Move VM to new Protection Job |
| | Remove VM from Protection Job |
| | Restore Virtual Machine |
| | Run Protection Job on Demand |
| | Recover Files or Folders |

Features

The vRO plugin provides an inventory of objects that you can access on the Inventory tab of the Orchestrator client, along with packages of workflows and actions that you can run on these objects in the inventory to automate the typical use cases of the integrated product.

- **Managing Cohesity Data Operations:** Allows vRO user to perform operations for backups, data protection, restore and clone on Cohesity sources such as Virtual Machines and vCenters.
- **Managing Data with Multiple ESXi Boxes:** Move protected VM/data within protection jobs and also clone and restore over different ESXi boxes.
- **Multiple Platform Support:** Management of multiple Cohesity DataPlatform setups.

Prerequisites

| Software | Version | Provider |
|-----------------------|--------------|--------------------------------|
| vCenter Server | 5.5 or later | VMware |
| vRealize Automation | 7.x | VMware |
| Cohesity DataPlatform | 6.x or later | Cohesity |
| Web browsers | Latest | Mozilla Firefox, Google Chrome |

Process Overview

A snapshot of the overall process involved in using the Cohesity vRO plugin is as follows:

1. [Install the Cohesity vRO Plugin](#)
2. [Configure the Cohesity Plugin](#)
 1. [Add Cohesity Endpoints](#) (Mandatory)
 2. [Add Email Configurations](#) (Optional)
3. [Configure vRA](#)
 1. [Importing Blueprints](#)
 2. [Configuring Day 1 Workflows](#)
4. [Execute Protection Job Workflows](#)

What's New

| Version | What's New | Revision Date |
|---------|---|---------------|
| v1.0.2 | Second Draft of vRO plugin documentation. The document has been updated with the current procedures to execute workflows. | May 2019 |
| v1.0.1 | First draft released. | Nov 2018 |

Installing the Cohesity vRO Plugin

In This Section

| Topic | Description |
|---------------------------------------|--|
| Installing the Plugin | This section describes the detailed steps to install the Cohesity vRO plugin. |
| Removing the Plugin | This section provides information on disabling and removing the Cohesity vRO plugin. |

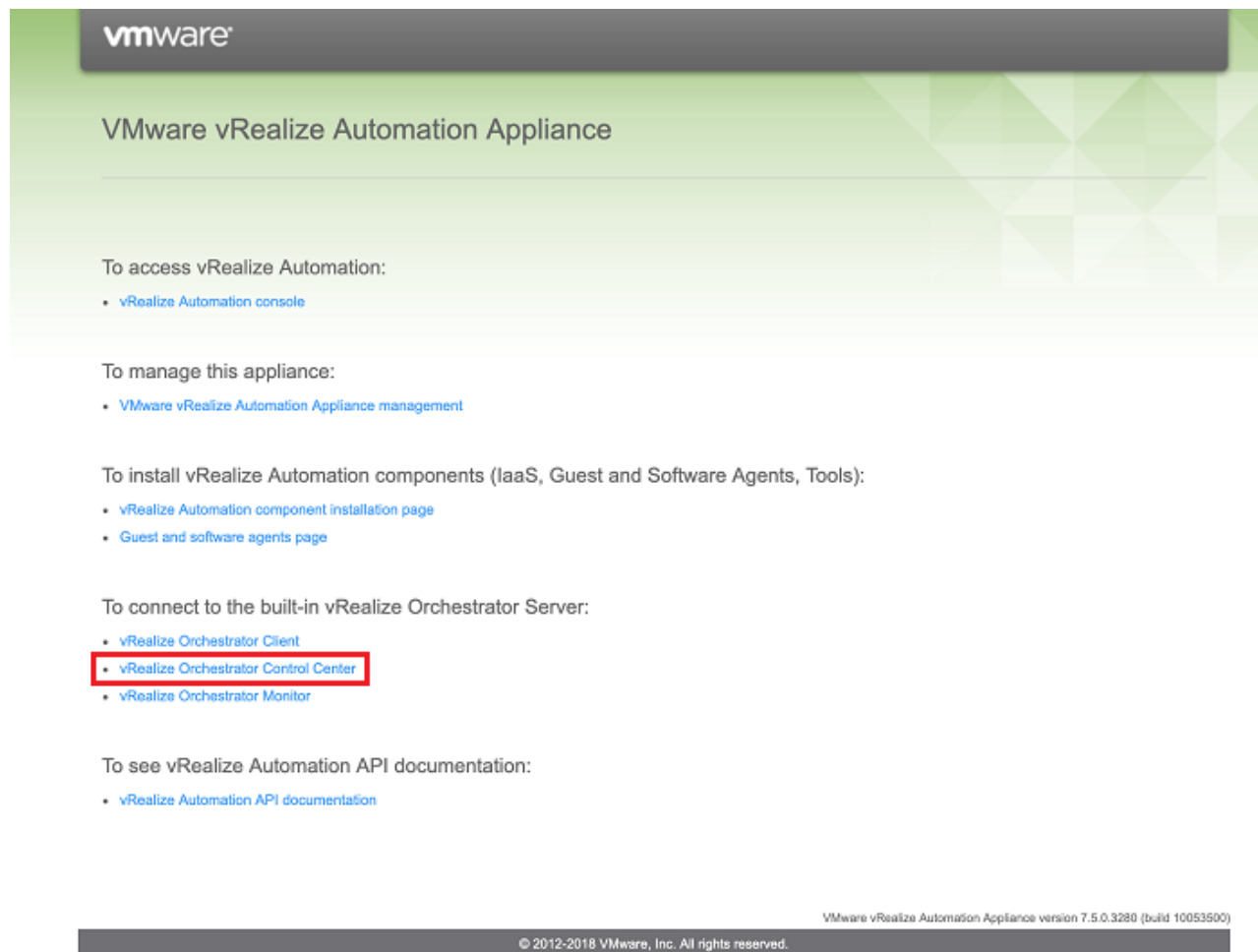
Installing the Plugin

This section describes the detailed steps to install the Cohesity vRO plugin.

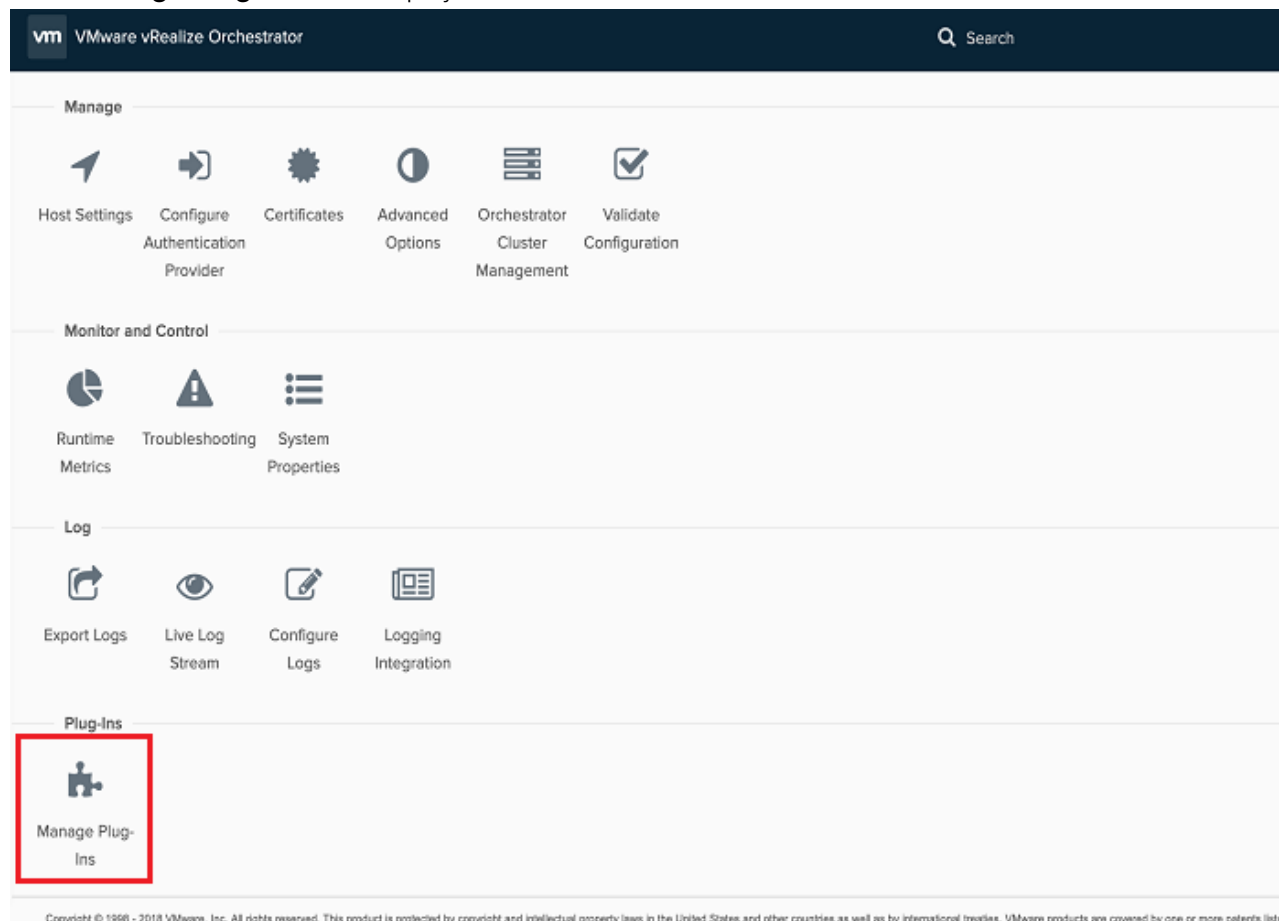
Note: If the Cohesity vRO plugin has already been installed and must be upgraded, you must first [remove](#) the existing plugin and then install the new Cohesity vRO plugin.

Procedure

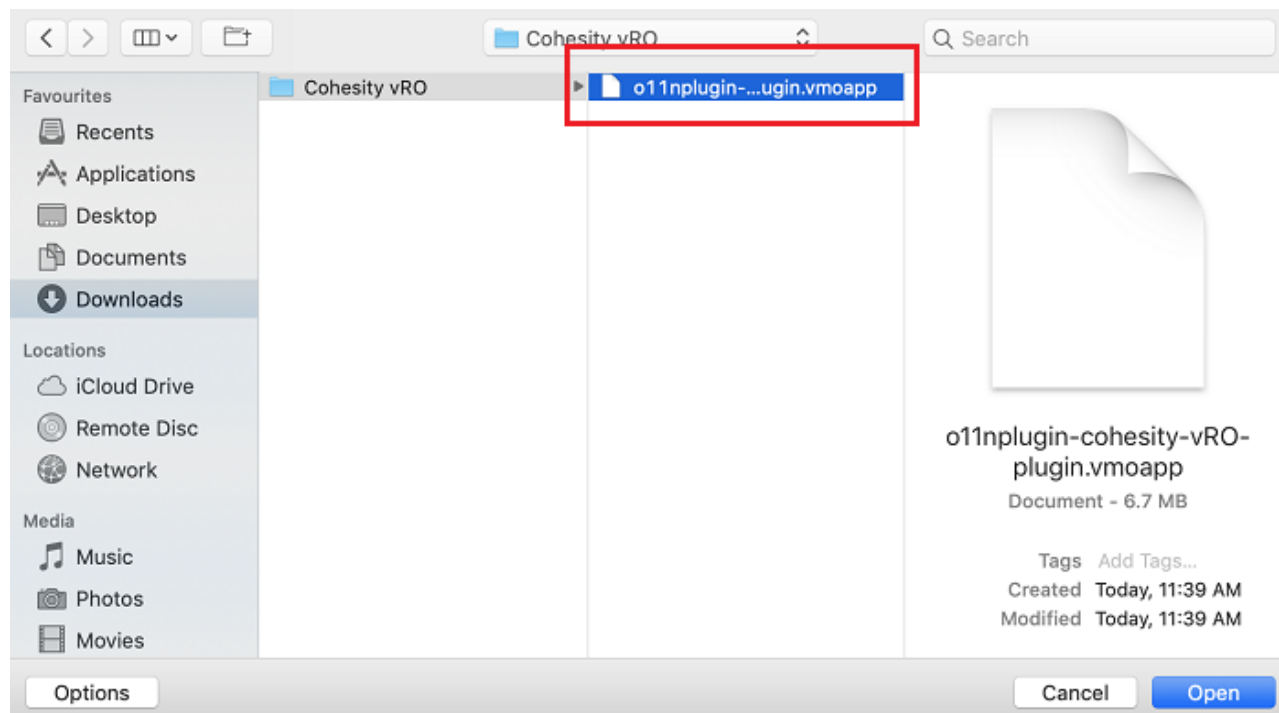
1. Login to the **vRealize Orchestrator** and click **vRealize Orchestrator Control Center**. You must know the credentials to log in to the Control Center.



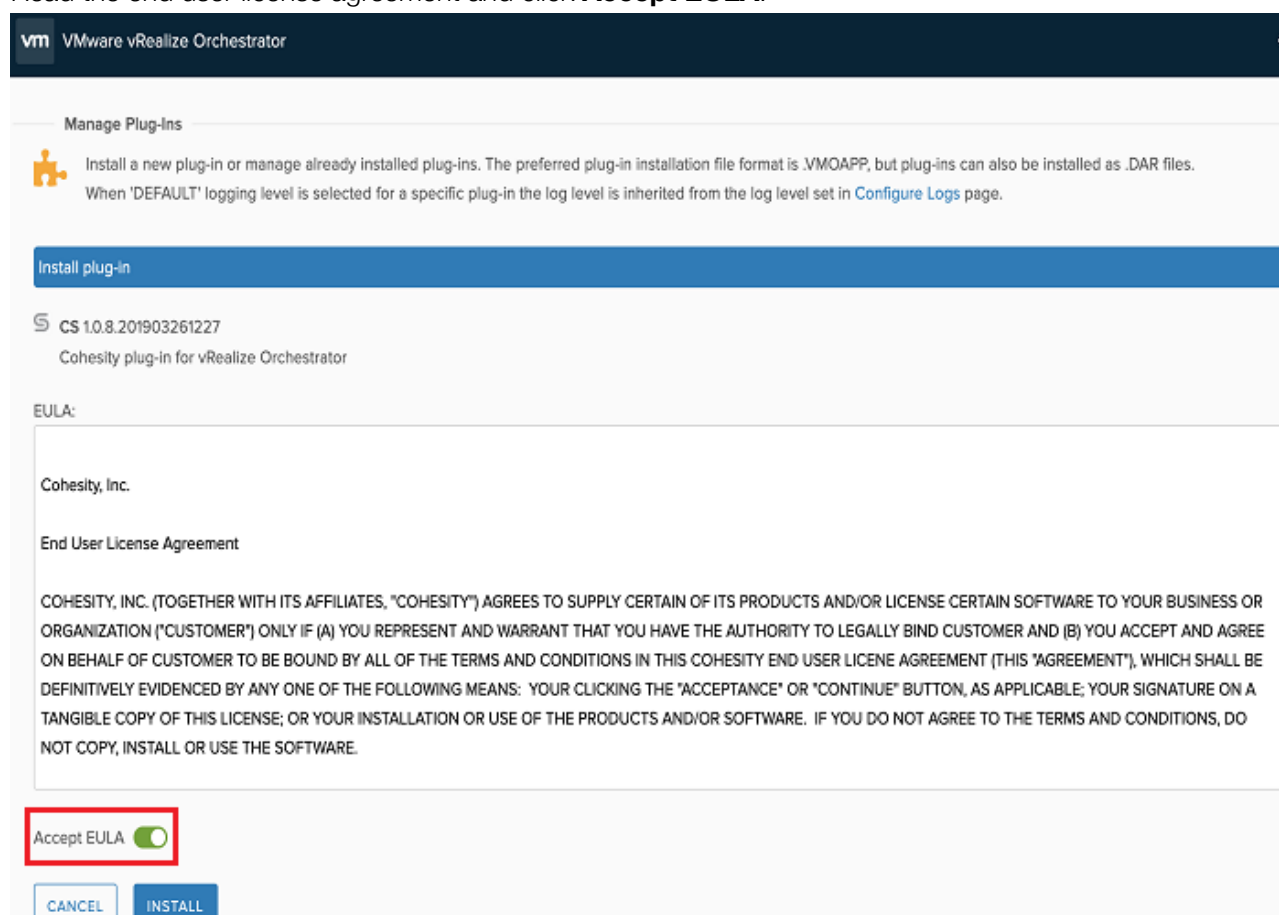
- Click **Manage Plugins** in the displayed **vCenter Control Center** window.



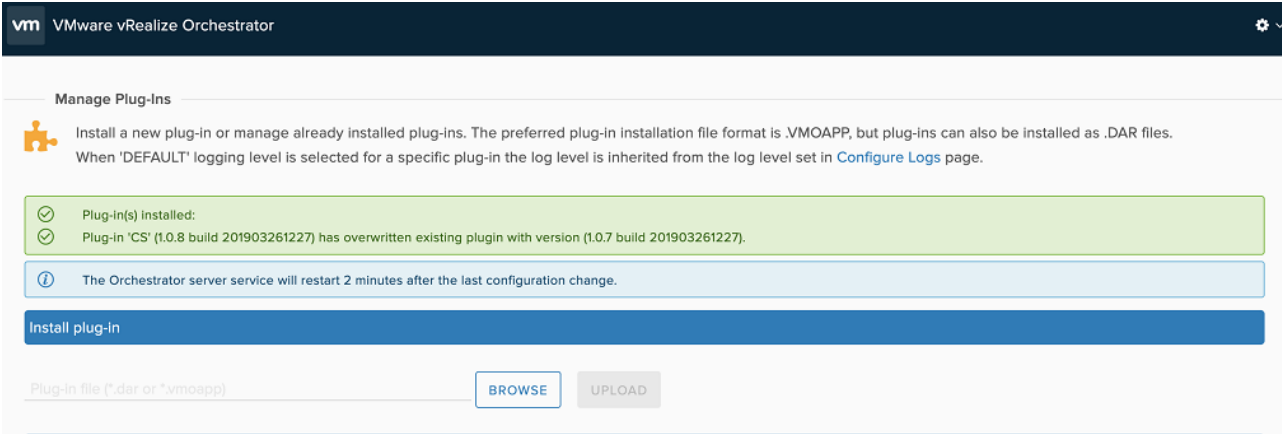
- In the **Manage Plugins** section, click **Browse** to navigate to the folder where you have saved the **.vmoapp** file and select the source installer **o11nplugin-cohesity-vRO-plugin.vmoapp.dar**.



4. Click **Install**.
5. Read the end user license agreement and click **Accept EULA**.



6. Click **INSTALL**. On successful installation of the plugin, the following screen is displayed.



7. Now you can open **vRO**. The plugin is added to the list. On selecting the plugin, the version and details of the plugin are displayed as follows:

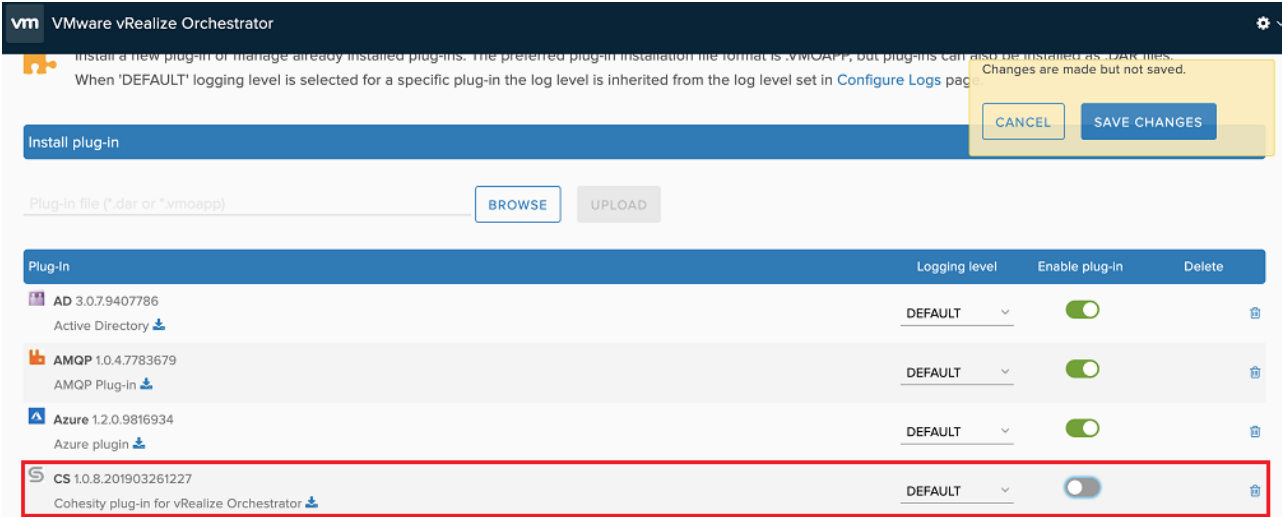


Removing the Plugin

Procedure

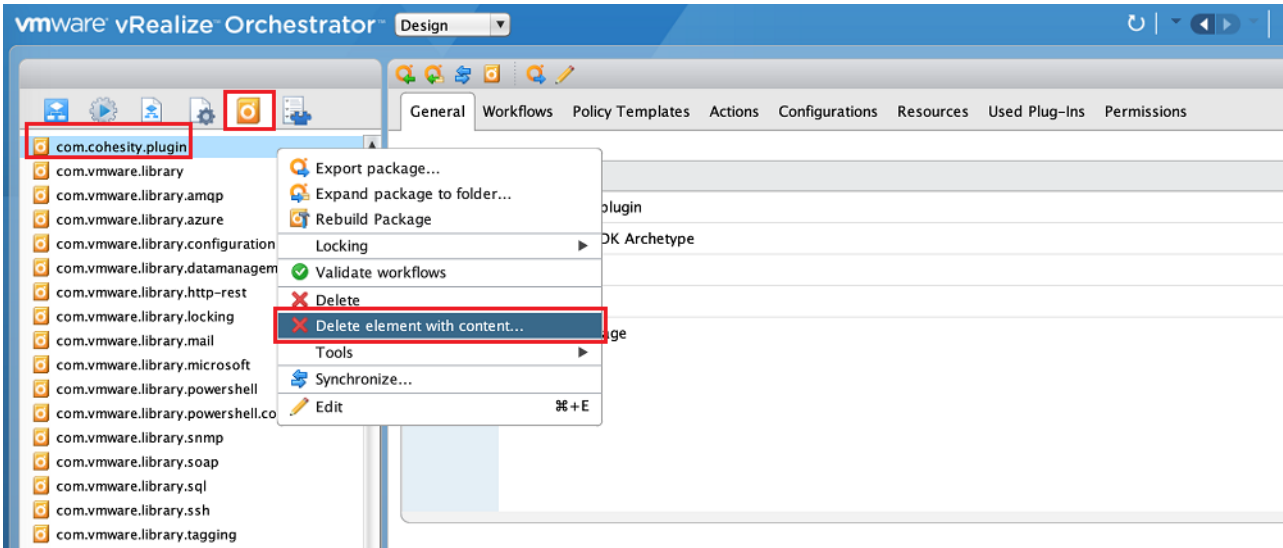
This section provides information on disabling and removing the vRO plugin.

- 1. In a supported browser, launch the **Control Center**. The VMware Orchestrator startup page is displayed.
- 2. Click the **Orchestrator Control Center** link. The **Control Center** page is displayed.
- 3. Click **Manage Plugin** in the Control Center. The **Manage Plugin** page is displayed.
- 4. Toggle off the Cohesity plugin to disable the plugin. Click **Save Changes**.



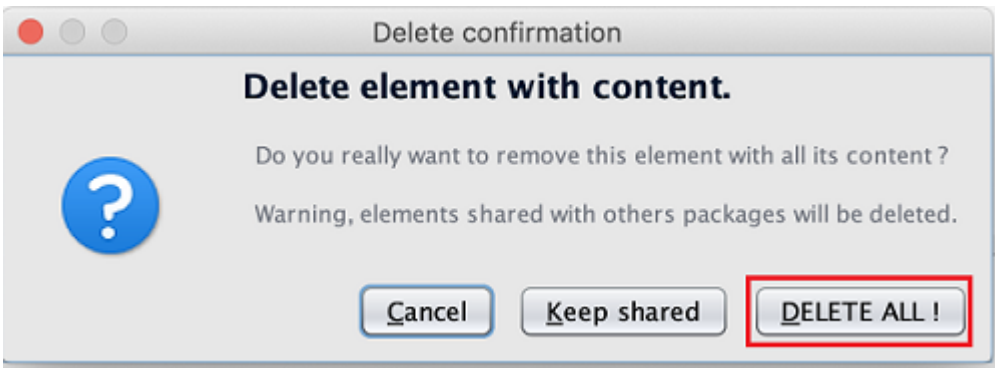
Alternatively, you can also click the **Remove** icon to remove the plugin.

5. Log in to vRO client and delete the Cohesity package.



Note: For details on removing the plugin from vRO, see [here](#).

6. In the confirmation dialog box, click **DELETE ALL**.



7. Restart the server. The plugin is disabled or removed accordingly.

Getting Started with Cohesity vRO Plugin

This section provides the initial configuration, details to add a Cohesity endpoint and Email configuration.

In This Section

| Topic | Description |
|--|---|
| Launching vRO Client | This section describes the basic steps to start the vRO Client. |
| Adding a Cohesity Endpoint | This section describes the details to add an endpoint and to connect vRO with the Cohesity Data Platform |
| Adding an Email Configuration (Optional) | This section describes the details about Email configuration to send notification to the intended recipients. |

Launching vRO Client

This section describes the basic steps to start the vRO clien

Prerequisites

Java (JDK version 7 or later) must be installed on the client side.

Before You Start

1. Go to the home page of *vra-appliant-ip*.
2. Click on **vRealize Orchestrator** client.

A *client.jnlp* file is downloaded.

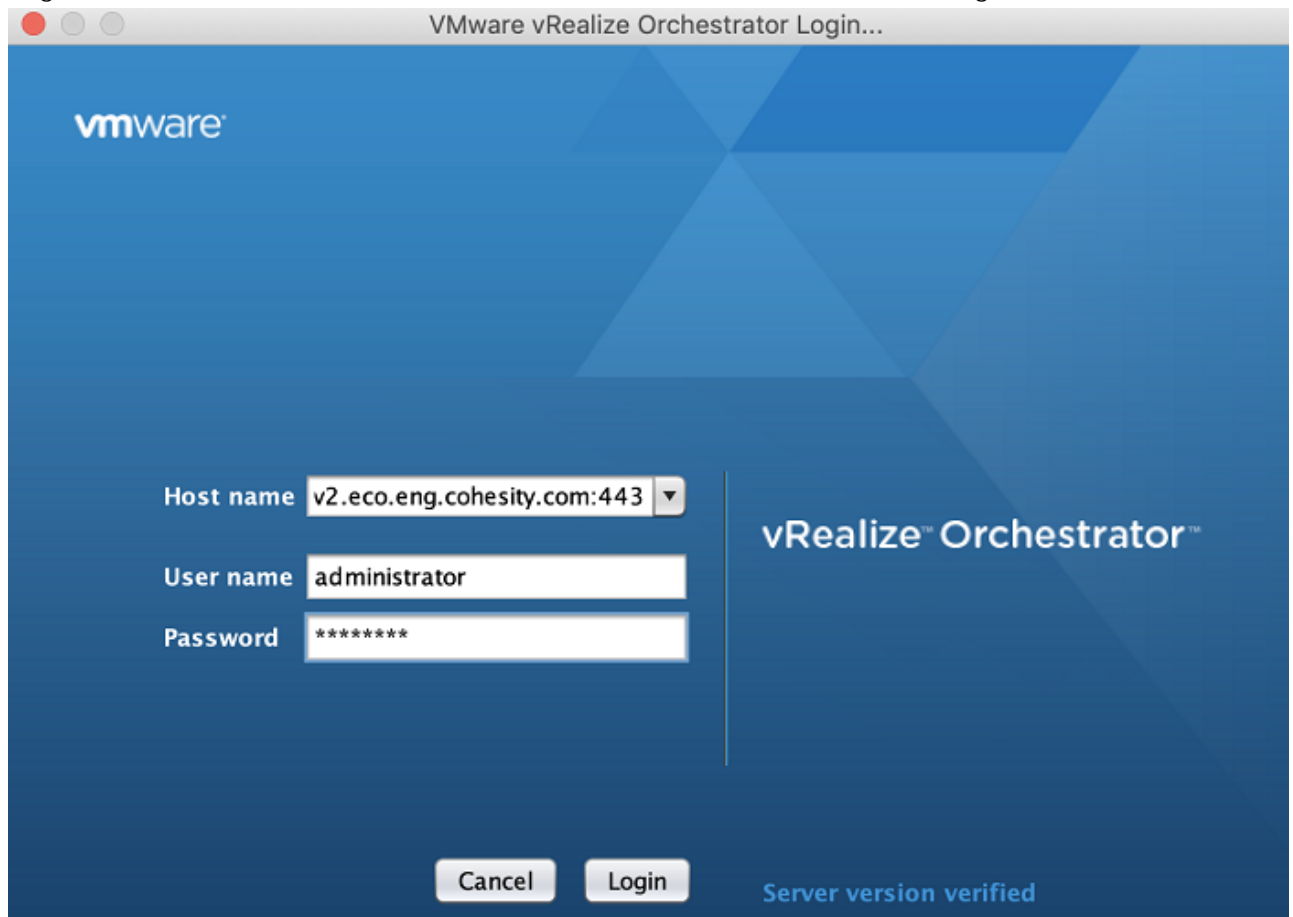
3. Open command prompt and run the following command.

javaws client.jnlp Note : The above mentioned steps are not mandatory to be executed if the VRA version is 7.5 or later. The client can directly access the HTML client interface available in VRA to configure the Cohesity plugin.

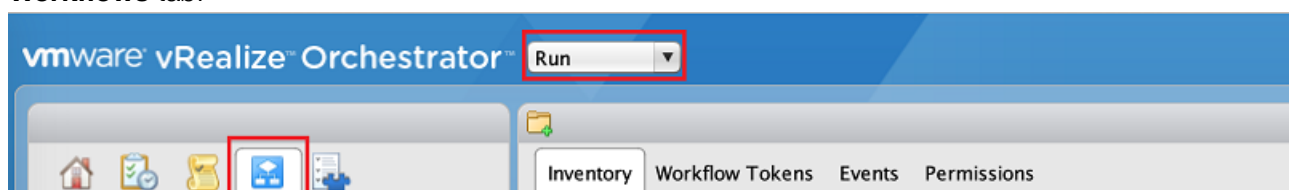
Procedure

The following procedure is to log in to the vRO client.

1. Log in to **VMware vRealize Orchestrator**. You must know the credentials to log in.



2. Select **Run** mode from the drop-down list located at the top left of the page and then click the **Workflows** tab.



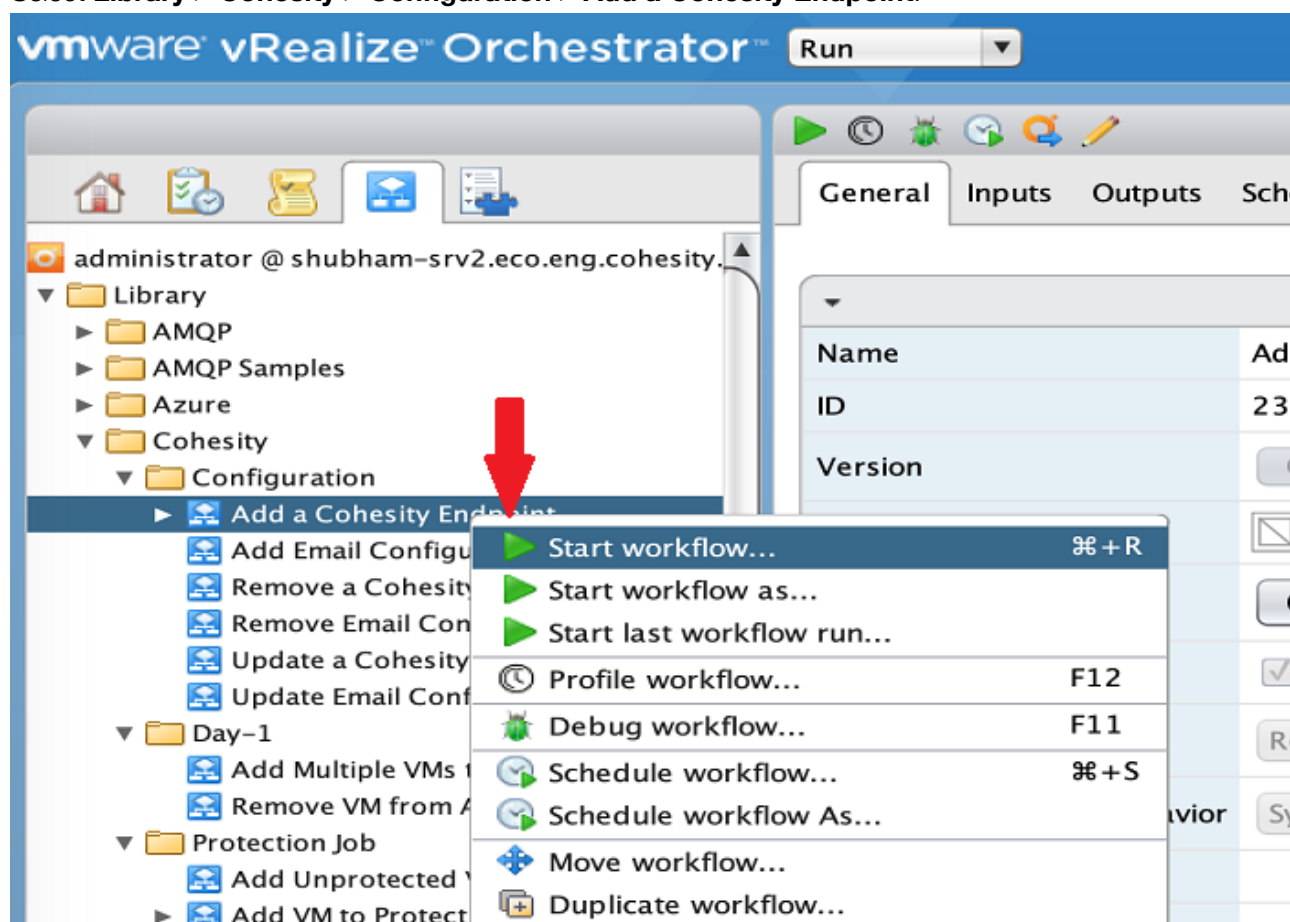
3. Select **Library > Cohesity**. All the workflows are listed in the left pane.

Adding a Cohesity Endpoint

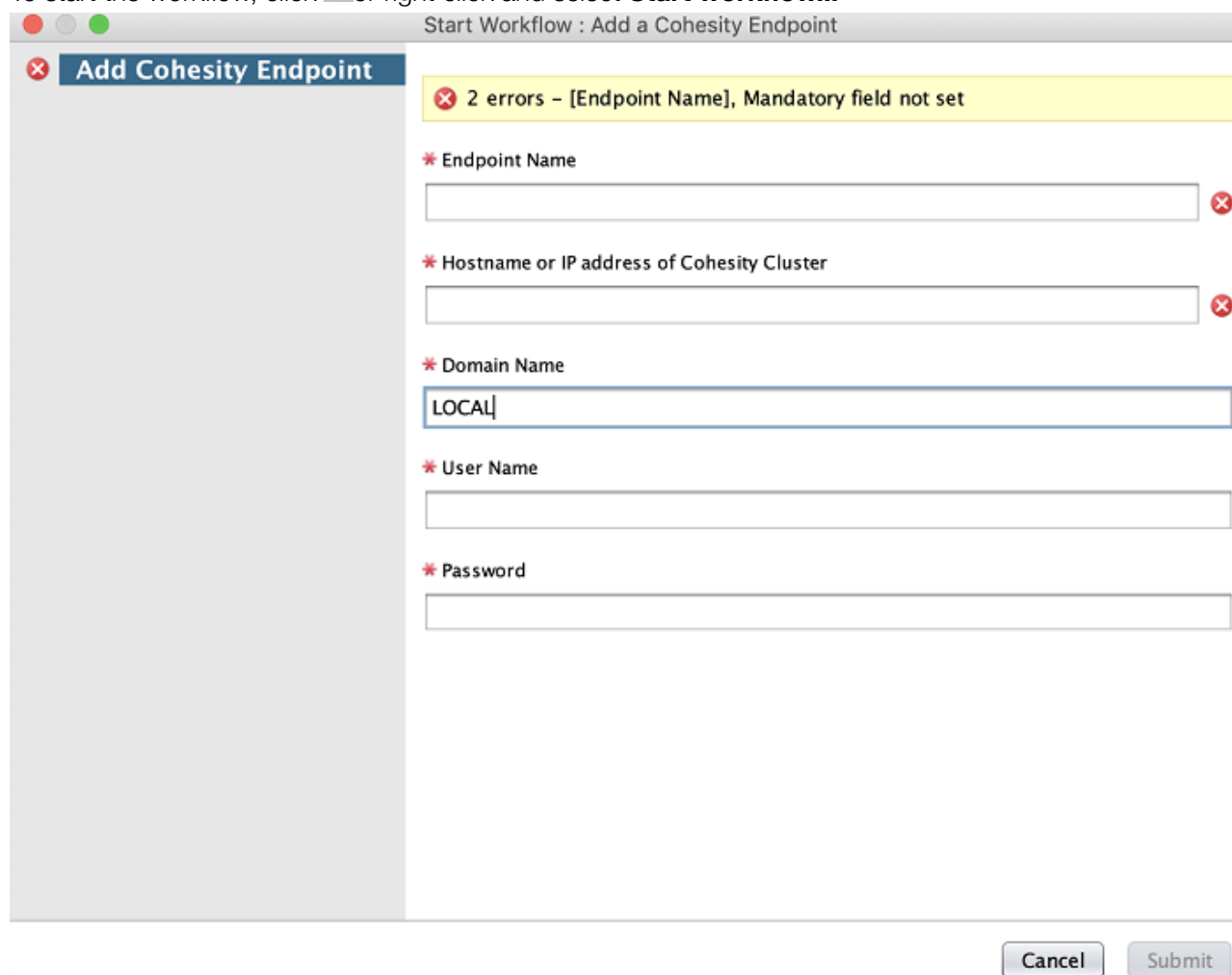
Procedure

This section describes the details to add an endpoint and to connect vRO with the Cohesity data platform.

1. Log in to **VMware vRealize Orchestrator**. You must know the credentials to log in.
2. Select **Run** mode from the drop-down list located at the top left of the page and then click the **Workflows** tab.
3. Select **Library > Cohesity > Configuration > Add a Cohesity Endpoint**.



4. To start the workflow, click  or right click and select **Start workflow...**



The **Add a Cohesity Endpoint** window is displayed

5. Enter the following details:
- **Endpoint Name:** Enter an endpoint name.
 - **Hostname or IP address of Cohesity Cluster:** Enter the Cohesity data platform URL you want to connect to.
 - **Domain Name:** This is the user defined domain name.
 - **User Name and Password:** Enter the credentials of the Cohesity DataPlatform.
6. Click **Submit** to add an endpoint successfully.

Adding an Email Configuration

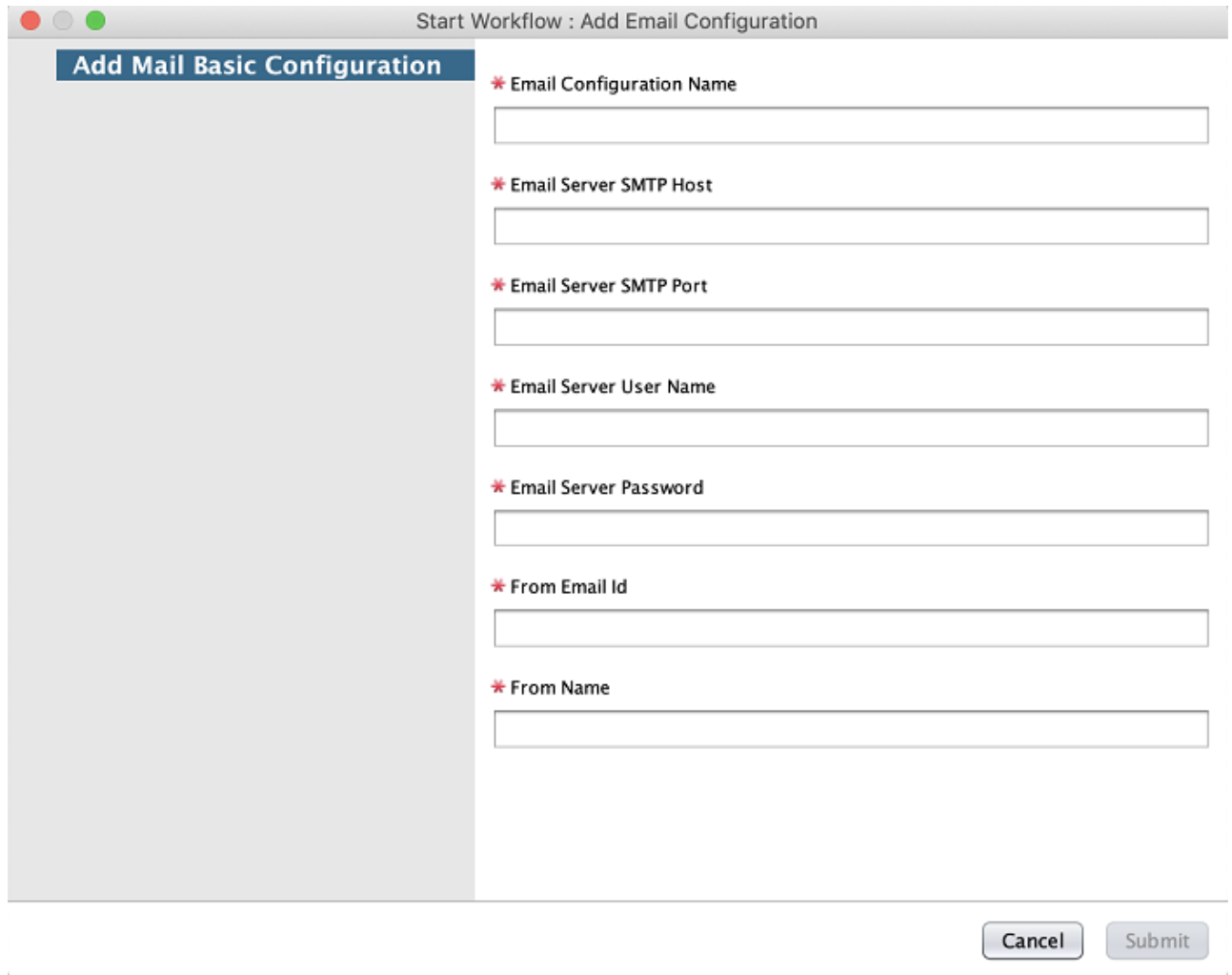
This section describes the details about Email configurations to send notification to the intended recipients for Recover of Files or Folders workflow.

Procedure (Optional)

To add an Email configuration:

1. Log in to **VMware vRealize Orchestrator**. You must know the credentials to log in.
2. Select **Run** mode from the drop-down list located at the top left of the page and then click the **Workflows** tab.
3. Select **Library > Cohesity > Configuration > Add Email Configuration**.

4. To start the workflow, click . The **Add Email Configuration** screen is displayed.



5. Enter the following details:
- **Email Configuration Name:** Enter an Email configuration name to identify while using it in another workflow.
 - **Email Server SMTP Host:** Enter the SMTP host name such as gmail.com
 - **Email Server SMTP Port:** Enter the SMTP port number.
 - **Email Server User Name:** Enter the Email server user name.
 - **Email Server Password:** Enter the Email server password.
 - **From Email Id:** Enter the Email ID from where the notification is sent.
 - **From Name:** Enter the name of a person who needs to be in notification sender.
6. Click **Submit** to add an Email configuration.

Configuring vRA

In this Section

| Topic | Description |
|--|--|
| Importing Blueprints | This section describes the details to import the XAAS blueprints. |
| Configuring Day 1 Workflows (Optional) | This section describes the details to configure vRA for Day-1 workflows. If Day-1 Workflows are not required, this section can be skipped. |

Importing Blueprints

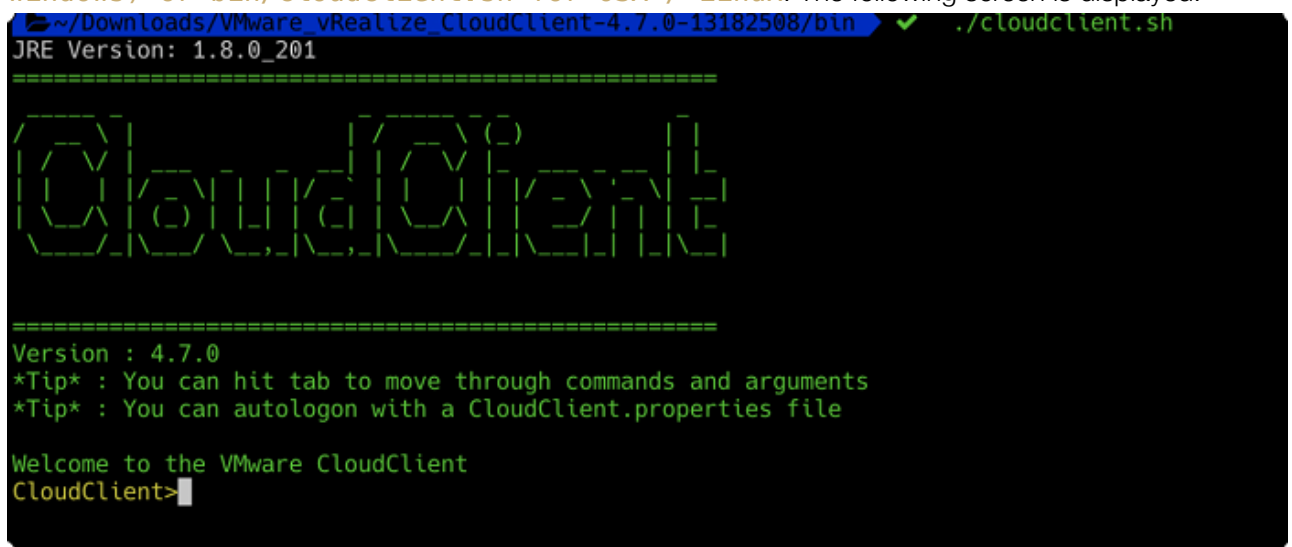
This section describes the details to import the XAAS blueprints.

Prerequisites

- Cohesity vRO Plugin - Ensure that the plugin is installed and configured on the vRO. Click [here](#) for the detailed procedure.
- [Cloud Client](#) - The vRealize command line utility must be available to import pre built blueprints and use cases in vRA.

Procedure

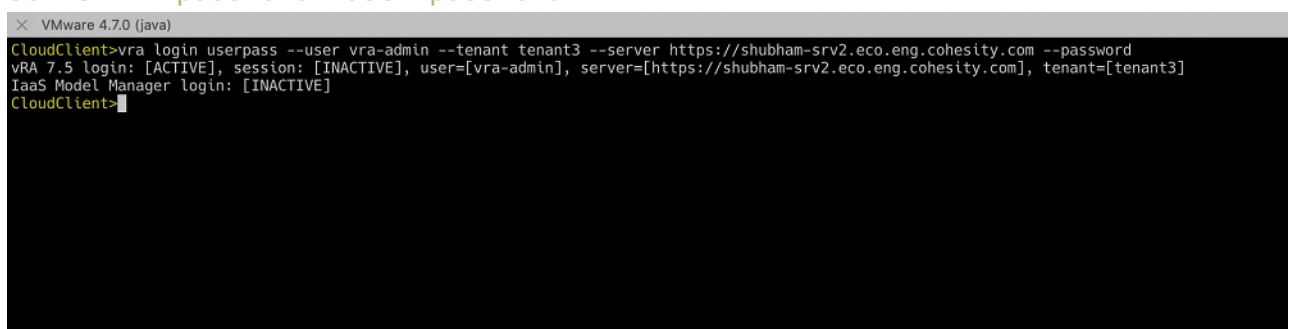
1. Download the Cohesity vRA Blueprint file available in the [repository](#).
2. Launch Cloud Client instance on your local system by executing `bin/cloudclient.bat` (for windows) or `bin/cloudclient.sh` for OSX / Linux. The following screen is displayed.



```
~/Downloads/VMware_vRealize_CloudClient-4.7.0-13182508/bin > ./cloudclient.sh
JRE Version: 1.8.0_201
=====
CloudClient
=====
Version : 4.7.0
*Tip* : You can hit tab to move through commands and arguments
*Tip* : You can autologon with a CloudClient.properties file

Welcome to the VMware CloudClient
CloudClient>
```

3. Login to the vRA appliance and vRA infrastructure server using the following command. `vra login userpass --user <userName> --tenant <tenantName> --server <vRA appliance server> --password <user-password>`



```
VMware 4.7.0 (java)
CloudClient>vra login userpass --user vra-admin --tenant tenant3 --server https://shubham-srv2.eco.eng.cohesity.com --password
vRA 7.5 login: [ACTIVE], session: [INACTIVE], user=[vra-admin], server=[https://shubham-srv2.eco.eng.cohesity.com], tenant=[tenant3]
IaaS Model Manager login: [INACTIVE]
CloudClient>
```

4. Import the blueprint file using the following command. `vra content import --path <path-to-zip-file> --resolution OVERWRITE --precheck WARN`

```
CloudClient>vra content import --path /Users/shubham.kumar/Downloads/Cohesity/39c04589-065e-4d60-bea8-49f043163c02.zip --resolution OVERWRITE --precheck WARN
+-----+
|Notification|
+-----+
* Performing Import precheck for [/Users/shubham.kumar/Downloads/Cohesity/39c04589-065e-4d60-bea8-49f043163c02.zip]. Note this operation does not import any content.
+-----+
|Import Precheck Result|
+-----+
SUCCESS : Import precheck finished Success..
* 18 content(s) were validated successfully.
* Nothing was imported.
+-----+
|Notification|
+-----+
* Importing [/Users/shubham.kumar/Downloads/Cohesity/39c04589-065e-4d60-bea8-49f043163c02.zip]. Note this operation will import the given content unless it encounters failures.
+-----+
|Import Result|
+-----+
SUCCESS : Import finished Success..
* 18 content(s) were imported successfully.
```

5. To verify if the import was successful, in VRA, navigate to **Design > XaaS > XaaS Blueprints**.

| Name | Description | Status |
|--------------------------------------|--|-----------|
| Add Unprotected VM to Protection Job | Adds an unprotected VM to given Protection Job | Published |
| Azure Machine | Creates new Azure virtual machine | Published |
| Clone Virtual Machine | This is the workflow to clone virtual machine. | Published |
| Move VM to New Protection Job | Move VM from one Protection Job to new Protection Job | Published |
| Recover Files or Folders | This is the workflow to restore selected files or folders. | Published |
| Remove VM from Protection Job | Removes Virtual Machine from the Protection Job | Published |
| Restore Virtual Machine | This is the workflow to restore virtual machine. | Published |
| Run Protection Job on Demand | Run Protection Job on Demand | Published |

6. Navigate to **Design > XaaS > Resource Actions** to confirm successful import of Resource Actions.

| Name | Description | Resource | Status |
|---------------------------------------|---|------------------------|-----------|
| Cohesity - Add to protection job | Adds an unprotected VM to given Protection Job | IaaS VC VirtualMachine | Published |
| Cohesity - Change Protection Job | Move VM from one Protection Job to new Protect | IaaS VC VirtualMachine | Published |
| Cohesity - Clone Machine | This is the workflow to clone virtual machine. | IaaS VC VirtualMachine | Published |
| Cohesity - Create Snapshot | Run Protection Job for the VM on Demand | IaaS VC VirtualMachine | Published |
| Cohesity - Recover Files/Folders | This is the workflow to restore selected files or fol | IaaS VC VirtualMachine | Published |
| Cohesity - Remove From Protection Job | Removes Virtual Machine from the Protection Job | IaaS VC VirtualMachine | Published |
| Cohesity - Restore Virtual Machine | Restore cohesity virtual machine. | IaaS VC VirtualMachine | Published |

Note: Ensure that the various users are entitled to the newly imported catalog items and resource actions. Click [here](#) for more details.

Configuring Day 1 Workflows

You need to perform the following only if you have to configure vRA for Day-1 workflows. Else, this section can be skipped.

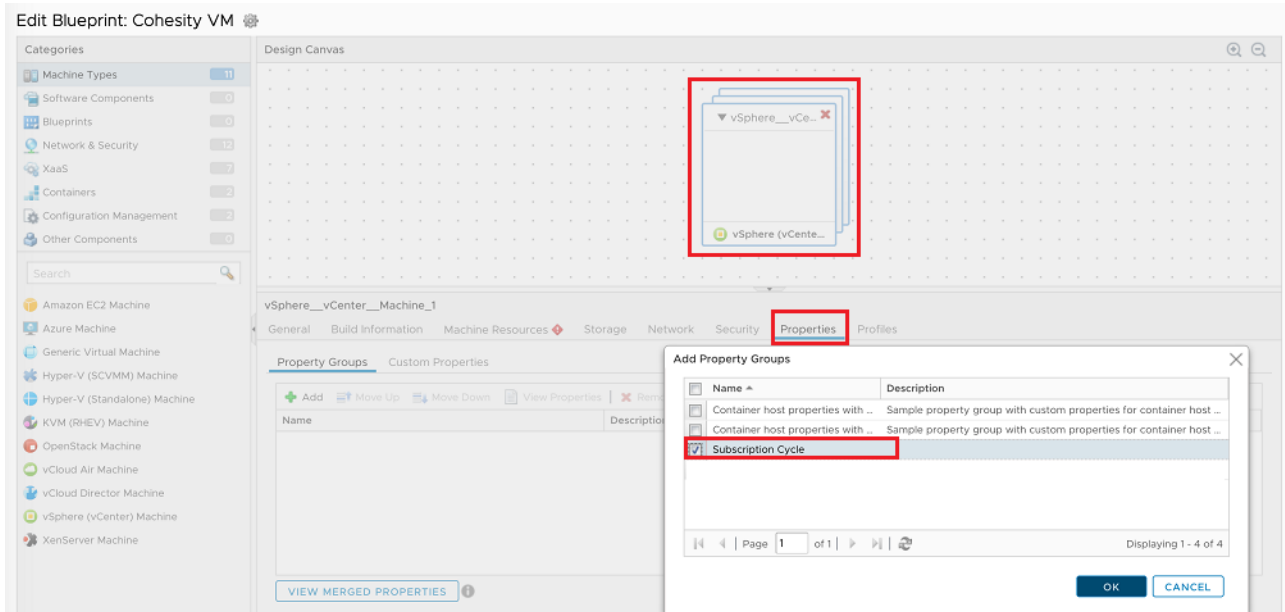
By configuring Day 1 Workflows, the VMs are added to the specified protection job when newly provisioned from VRA or removed from the protection job when the VM is destroyed.

Assigning Properties to Blueprint

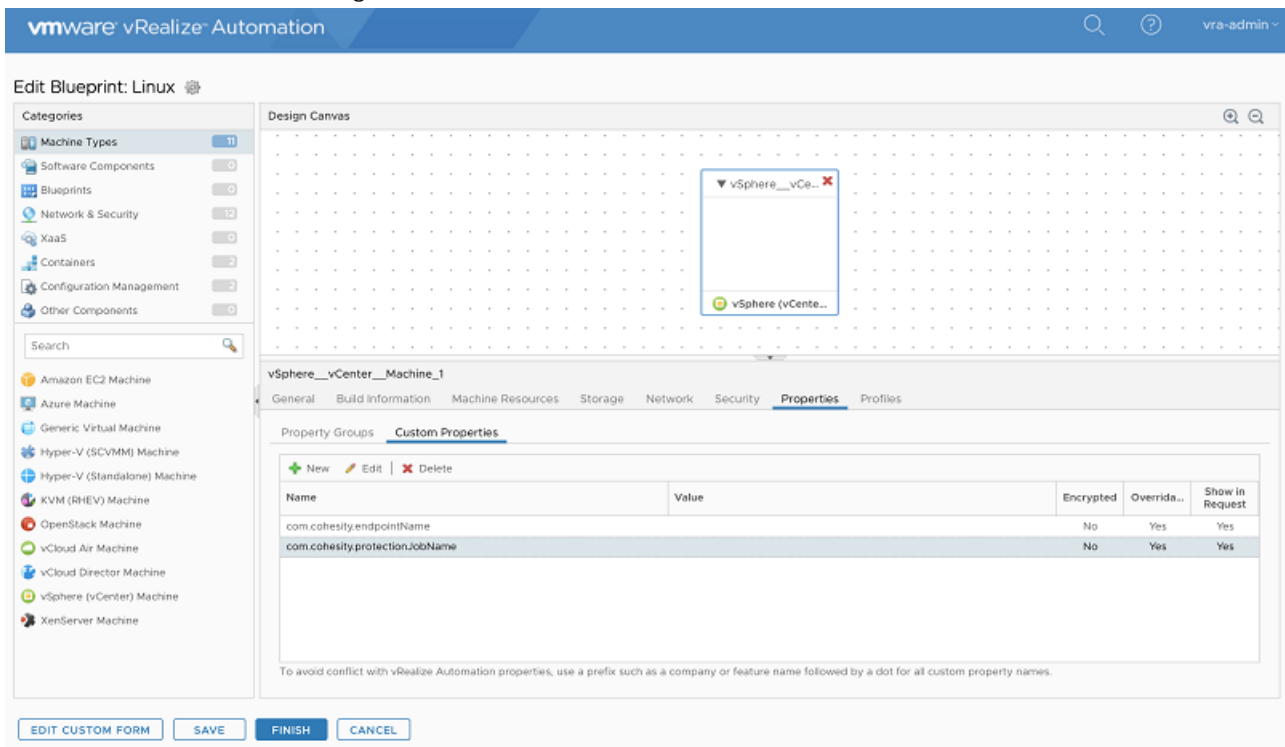
Procedure

This section describes the steps you need to perform to configure vRA property definition and groups.

1. In the **Design** tab, select **Blueprints**.
2. Select an existing blueprint from the **Blueprints** pane.
3. In the **Design Canvas** page, click the vSphere machine component (highlighted on the top of the page) and click the **Properties** tab. Add the property group **Subscription Cycle**.



4. Click the **Custom Properties** tab.
5. Add `com.cohesity.endpointName` and `com.cohesity.protectionJobName` and then set **Show in Request** to **Yes**.
6. Click **SAVE** to save the changes.



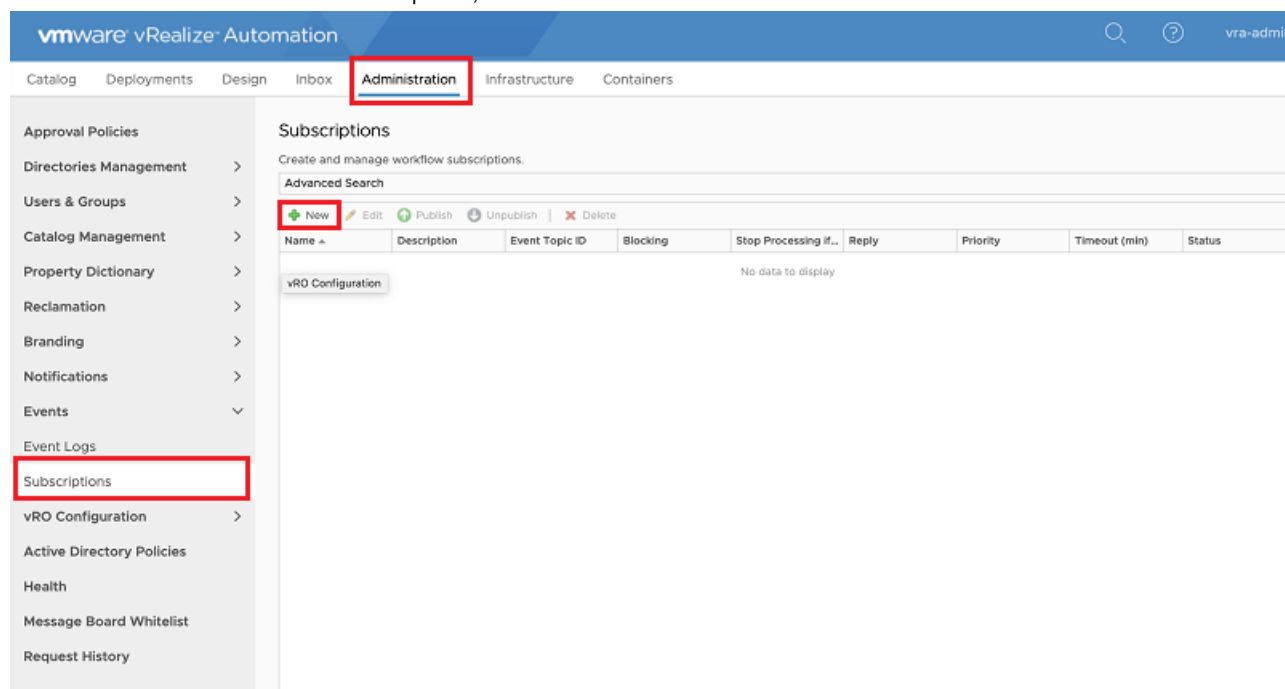
Configuring Event Subscription

This section describes the steps you need to perform to create and configure event subscription.

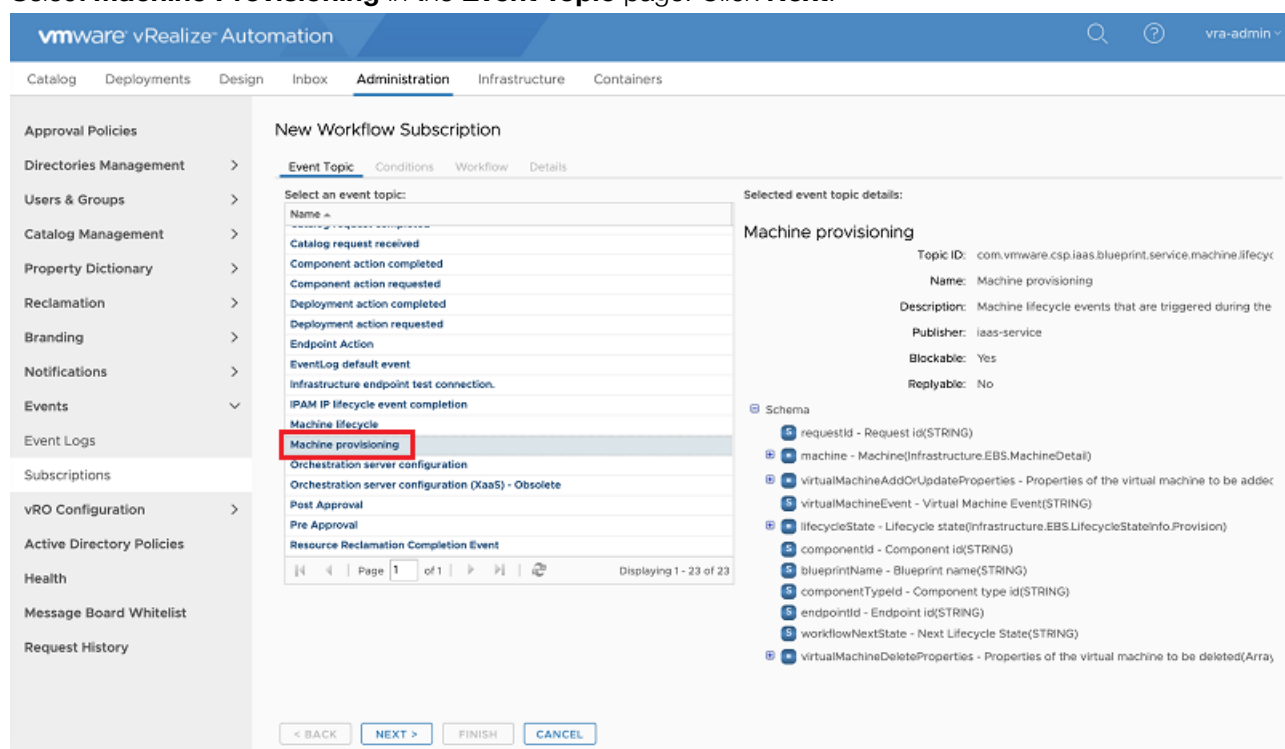
Procedure

1. Click **Administration > Events > Subscriptions**.

2. To create a new workflow subscription, click the **New** icon.



3. Select **Machine Provisioning** in the **Event Topic** page. Click **Next**.



4. In the **Conditions** tab, select the following values and click **Next**.

- *Run based on conditions = All of the following.*
- *Data > Blueprint Name = Cohesity (blueprint name to provision VM)*
- *Data > Lifecycle State > Lifecycle State Name = VMPSMasterWorkflow32.MachineProvisioned*

- *Data > Lifecycle State > State phase = POST*

The screenshot shows the 'New Workflow Subscription' form in the VMware vRealize Automation interface. The 'Conditions' tab is selected and highlighted with a red box. The form allows specifying whether the workflow should run for all events or based on conditions. The 'Run based on conditions' option is selected. Below this, a dropdown menu shows 'All of the following'. Three conditions are listed:

- Data > Blueprint name Equals Cohesity
- Data > Lifecycle state > ... Equals VMPSMasterWorkflow3...
- Data > Lifecycle state > ... Equals POST

Each condition has a red 'X' icon to its right. There is an 'Add expression' link below the conditions. At the bottom are buttons for '< BACK', 'NEXT >', 'FINISH', and 'CANCEL'.

5. In the **Workflow** tab, select the workflow from Orchestrator and add this DAY-1 workflow of **Add Multiple VMs to Protection Job**.

The screenshot shows the 'New Workflow Subscription' form in the VMware vRealize Automation interface, now with the 'Workflow' tab selected and highlighted with a red box. The 'Select a workflow:' section shows a tree view of workflows. The 'Day-1' folder is expanded, and the 'Add Multiple VMs to Protection Job' workflow is selected and highlighted with a red box. The 'Selected workflow:' section on the right displays the following information:

Name: Add Multiple VMs to Protection Job
Description: Day-1 workflow : This workflow is triggered after the VMs are provisioned from vRA to add it to protection Job

Input parameters:

| Name | Type |
|---------|------------|
| payload | Properties |

Displaying 1 - 1 of 1

Output parameters:

| Name | Type |
|----------------------|------------------|
| protectionJobUpdated | CS:ProtectionJob |

Displaying 1 - 1 of 1

At the bottom are buttons for '< BACK', 'NEXT >', 'FINISH', and 'CANCEL'.

6. In the **Details** tab, a new Subscription with a relevant name is displayed (It will use the Workflow name by default). Click **Finish**.

vmware vRealize Automation

Catalog Deployments Design Inbox Administration Infrastructure Containers

Approval Policies
Directories Management >
Users & Groups >
Catalog Management >
Property Dictionary >
Reclamation >
Branding >
Notifications >
Events >
Event Logs
Subscriptions
vRO Configuration >
Active Directory Policies
Health
Message Board Whitelist
Request History

New Workflow Subscription

Event Topic Conditions Workflow **Details**

*Name: Add Multiple VMs to Protection Job

*Priority: 10 ⓘ

Timeout (min): ⓘ

Description: Day-1 workflow : This workflow is triggered after the VMs are provisioned from vRA to add it to protection Job

☐ Blocking ⓘ

☐ Stop processing if the workflow fails. ⓘ

< BACK NEXT > **FINISH** CANCEL

7. Select the newly created subscription and click **Publish**.

vmware vRealize Automation

Catalog Deployments Design Inbox Administration Infrastructure Containers

Approval Policies
Directories Management >
Users & Groups >
Catalog Management >
Property Dictionary >
Reclamation >
Branding >
Notifications >
Events >
Event Logs
Subscriptions
vRO Configuration >
Active Directory Policies
Health
Message Board Whitelist
Request History

Subscriptions

Create and manage workflow subscriptions.

Advanced Search

New Edit **Publish** Unpublish Delete

| Name | Description | Event Topic ID | Blocking | Stop Processing if... | Reply | Priority | Timeout (min) | Status |
|------------------|--|---------------------|----------|-----------------------|-------|----------|---------------|--------|
| Add Multiple VMs | Day-1 workflow : This workflow is triggered after the VMs are provisioned from vRA to add it to protection Job | com.vmware.csp.iaas | No | No | No | | | Draft |

Page 1 of 1

Displaying 1 - 1 of 1

Remove VM from Protection Job

Procedure

To remove VM from Protection Job when VM is destroyed:

- 1. Click **Administration > Events > Subscriptions**.

2. Click the **New** icon and select **Machine Provisioning** in the **Event Topic** page.

vmware vRealize Automation

Catalog Deployments Design Inbox **Administration** Infrastructure Containers

Approval Policies
Directories Management >
Users & Groups >
Catalog Management >
Property Dictionary >
Reclamation >
Branding >
Notifications >
Events >
Event Logs
Subscriptions
vRO Configuration >
Active Directory Policies
Health
Message Board Whitelist
Request History

New Workflow Subscription

Event Topic Conditions Workflow Details

Select an event topic:

- Name >
- Machine request received
- Component action completed
- Component action requested
- Deployment action completed
- Deployment action requested
- Endpoint Action
- EventLog default event
- Infrastructure endpoint test connection.
- IPAM IP lifecycle event completion
- Machine lifecycle
- Machine provisioning**
- Orchestration server configuration
- Orchestration server configuration (XaaS) - Obsolete
- Post Approval
- Pre Approval
- Resource Reclamation Completion Event

Selected event topic details:

Machine provisioning

Topic ID: com.vmware.csp.iaas.blueprint.service.machine.lifecycle

Name: Machine provisioning

Description: Machine lifecycle events that are triggered during the

Publisher: iaas-service

Blockable: Yes

Replyable: No

Schema

- requestId - Request id (STRING)
- machine - Machine (Infrastructure.EBS.MachineDetail)
- virtualMachineAddOrUpdateProperties - Properties of the virtual machine to be added
- virtualMachineEvent - Virtual Machine Event (STRING)
- lifecycleState - Lifecycle state (Infrastructure.EBS.LifecycleStateInfo.Provision)
- componentId - Component id (STRING)
- blueprintName - Blueprint name (STRING)
- componentTypeId - Component type id (STRING)
- endpointId - Endpoint id (STRING)
- workflowNextState - Next Lifecycle State (STRING)
- virtualMachineDeleteProperties - Properties of the virtual machine to be deleted (Array)

Page 1 of 1 | Displaying 1 - 23 of 23

< BACK NEXT > FINISH CANCEL

3. In the **Conditions** tab, select the following and click **Next**.

- Run based on conditions = All of the following.
- Data > Blueprint Name = Cohesity (Blueprint name to the provision VM)
- Data > Lifecycle State > Lifecycle State Name = VMPSMasterWorkflow32.UnprovisionMachine
- Data > Lifecycle State > State phase = PRE

vmware vRealize Automation

Catalog Deployments Design Inbox **Administration** Infrastructure Containers

Approval Policies
Directories Management >
Users & Groups >
Catalog Management >
Property Dictionary >
Reclamation >
Branding >
Notifications >
Events >
Event Logs
Subscriptions
vRO Configuration >
Active Directory Policies
Health
Message Board Whitelist
Request History

New Workflow Subscription

Event Topic **Conditions** Workflow Details

Specify whether the workflow should be run for all events or based on conditions.

☐ Run for all events

☒ Run based on conditions

All of the following

Data > Blueprint name Equals Cohesity

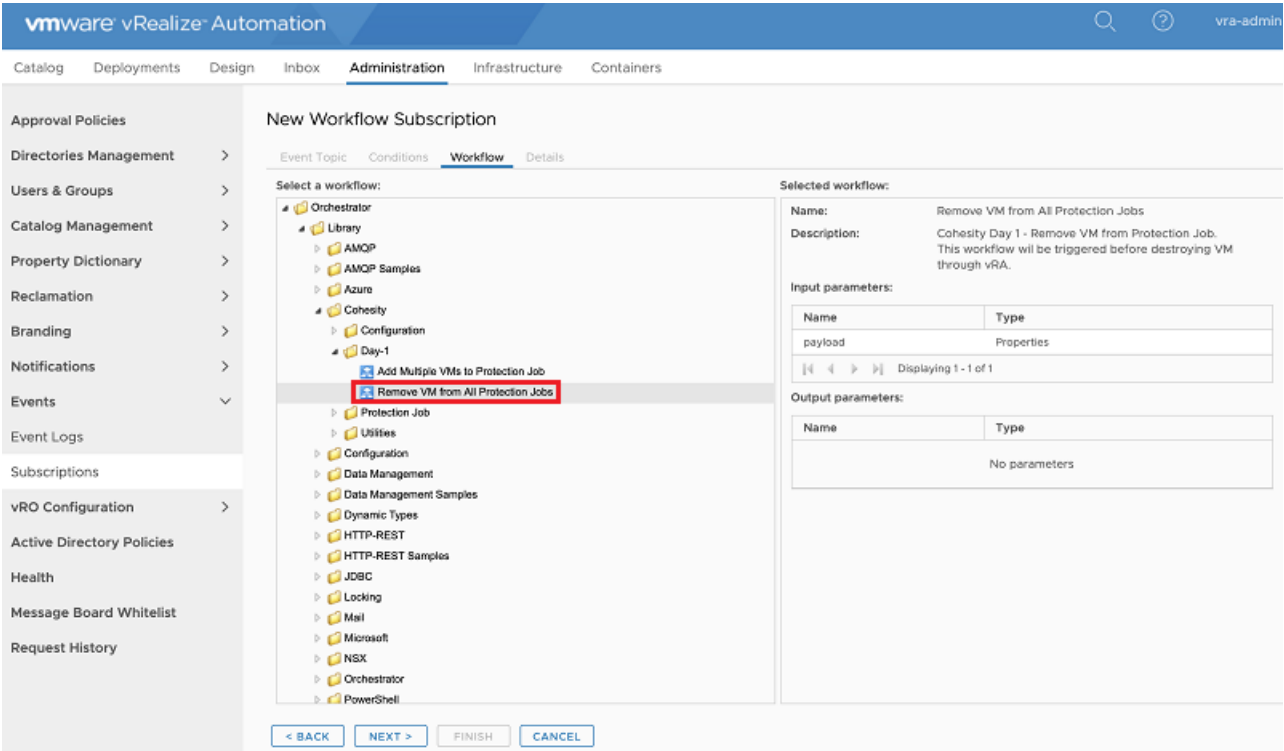
Data > Lifecycle state > Lifecycle State Name Equals VMPSMasterWorkflow32.UnprovisionMachine

Data > Lifecycle state > State phase Equals PRE

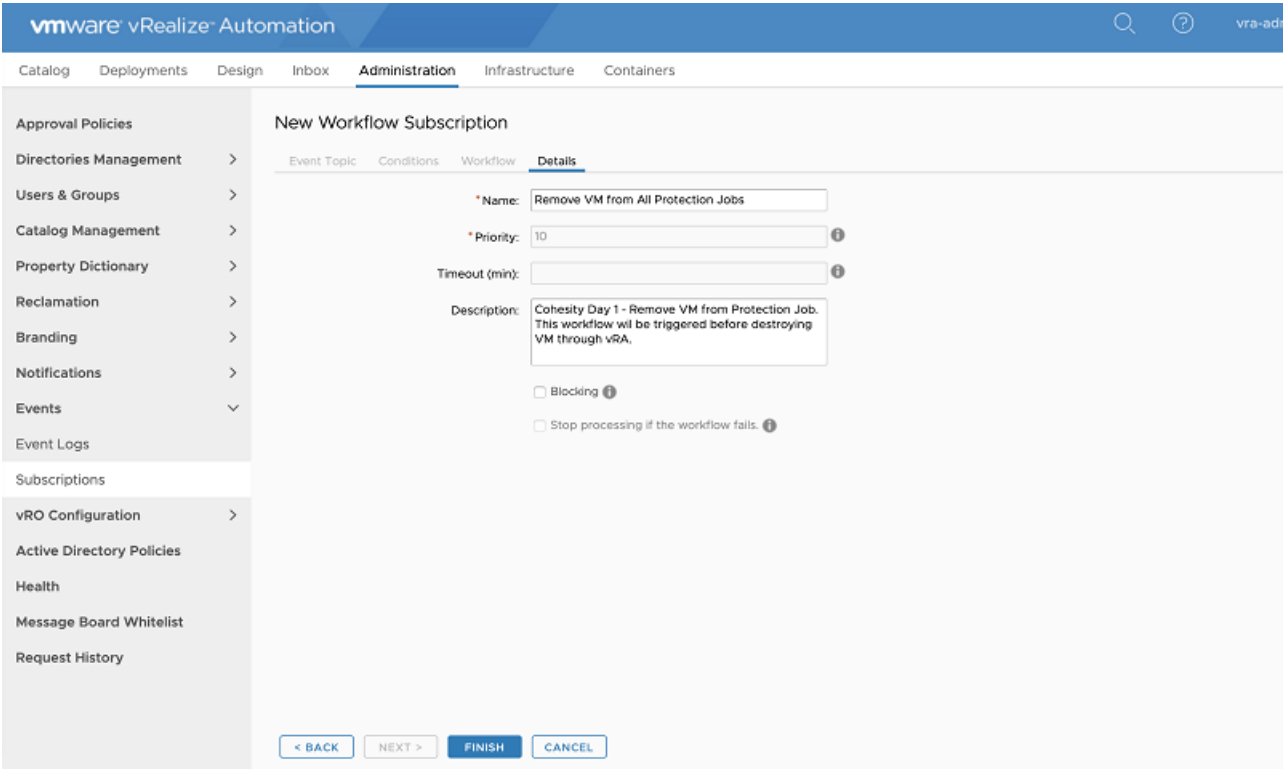
+ Add expression

< BACK NEXT > FINISH CANCEL

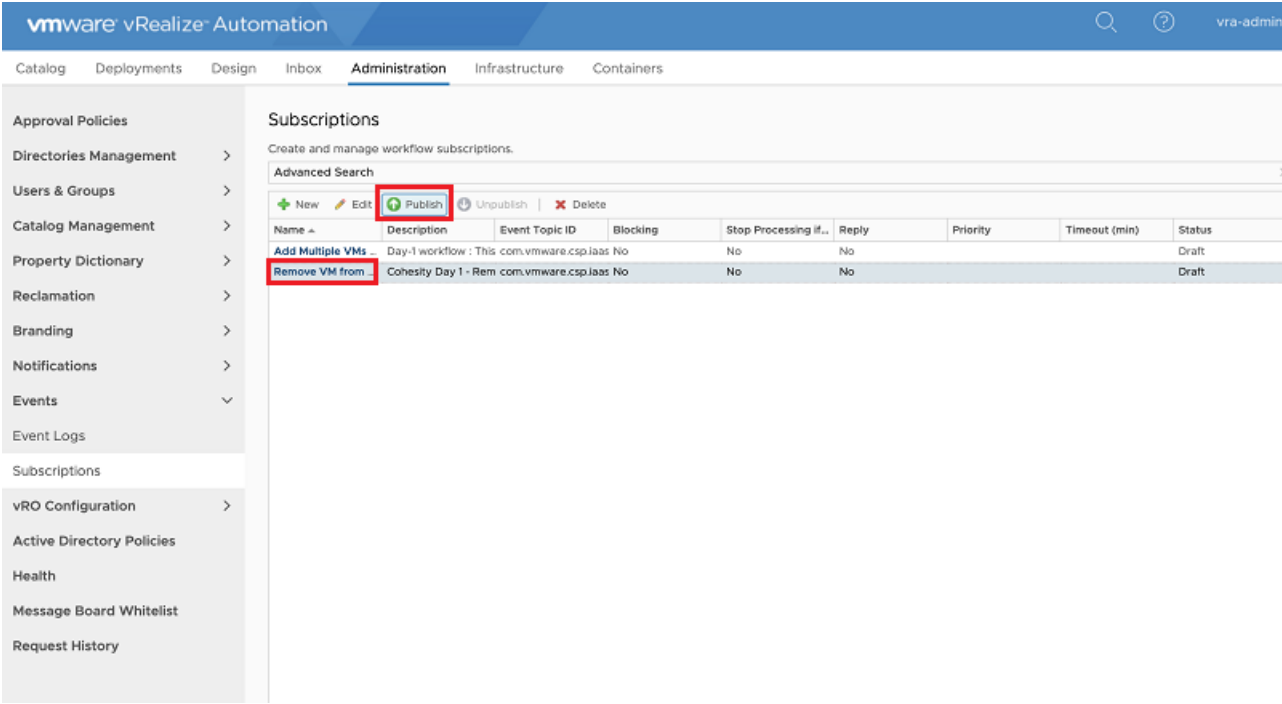
4. Select the workflow from Orchestrator and select the **DAY-1** workflow of **Remove VM from All Protection Jobs** in this page.



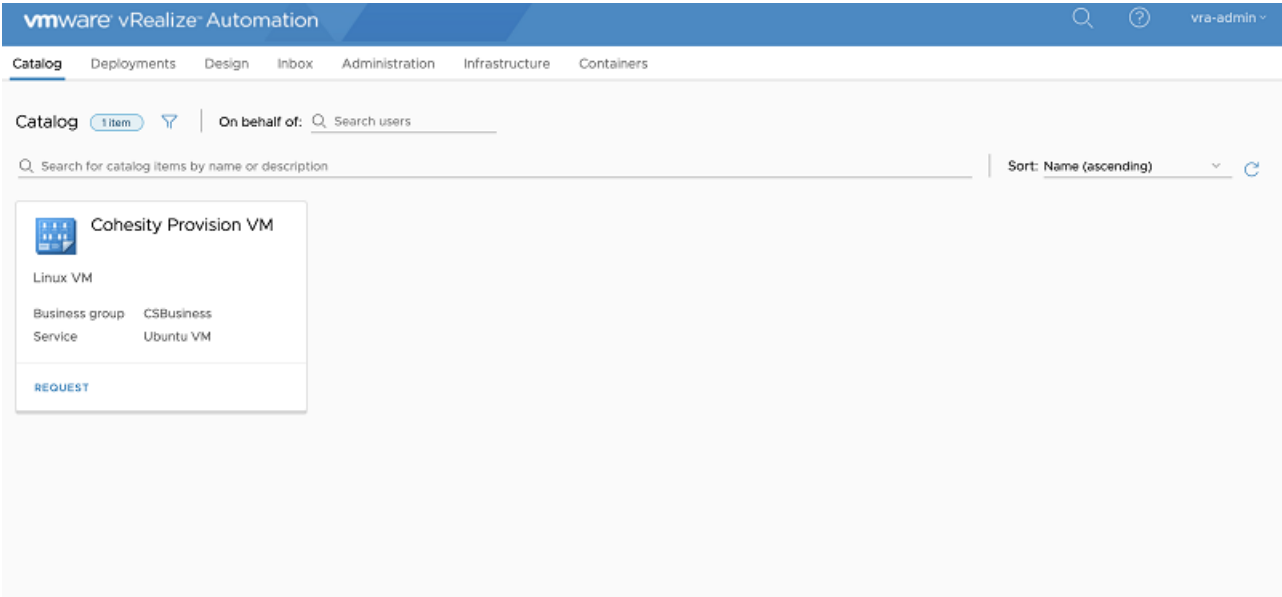
5. In the **Details** tab, enter the new **Subscription Name** (it will use the Workflow name by default) and then click **Finish**.



6. Select the newly created subscription and publish it.



After you have completed the above configurations, click the **Cohesity Provision VM**. **Note:** Here, **Cohesity Provision VM** is given as an example. This name could differ based on the client's configuration.



Executing Protection Job Workflows

You can execute the following actions in the Day-2 workflows. These workflows can be executed as a XAAS or resource actions.

In This Section

| Topic | Description |
|---|--|
| Adding an unprotected VM to protection job (XAAS) | This section describes the details to add an unprotected VM to a Protection Job. |

| Topic | Description |
|--|---|
| Cloning a VM (XAAS) | This section describes the details to clone a Virtual Machine. |
| Moving a VM to a New Protection Job (XAAS) | This section describes the details to move a VM to a new protection job. |
| Removing a VM from a Protection Job (XAAS) | This section describes the details to remove a VM from a protection job. |
| Restoring a Virtual Machine (XAAS) | This section describes the details to restore a Virtual Machine. |
| Executing a Protection Job on Demand (XAAS) | This section describes the details to run a protection job on demand. |
| Recovering Files or Folders (XAAS) | This section describes the details to recover a file or a folder. |
| Executing a Protection Job on Demand (Resource Action) | This section describes the details to run a protection job as a Resource Action in vRA. |

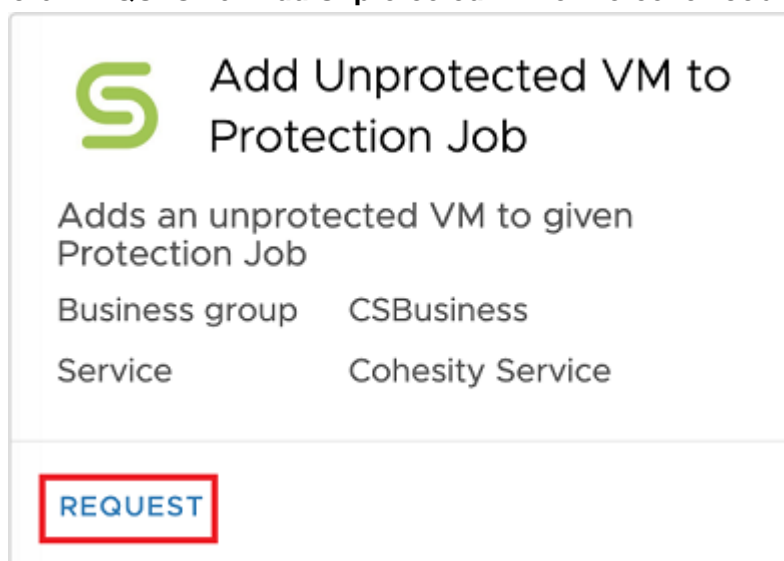
Note: The steps to execute a protection job on demand as a XAAS and a resource action has been captured in this section. All the other workflows can also be similarly executed either as a XAAS or a resource action.

Adding an Unprotected VM to Protection Job

Procedure (XAAS)

To add an unprotected VM to a protection job:

1. Log in to vRA using valid credentials. The list of Catalog Items are displayed in the Catalog Dashboard. Ensure that you have the necessary **Entitlements** to **Cohesity Catalog Items**. To access **Entitlements**, in vRA go to **Administration > Catalog Management > Entitlements**.
2. Click **REQUEST** on **Add Unprotected VM to Protection Job**.



3. Select the **Cohesity Endpoint** and the **Virtual Machine** from the drop down list. **Note:** In the drop down list for Virtual Machines, only the unprotected VMs are displayed.

4. Select the **Protection Job** to which the Virtual Machine must be assigned.

S Add Unprotected VM to Protection Job | Business group **CSBusiness** ▾

Select Endpoint

* Cohesity Endpoint: CS [id=CS] ▾

Select Cohesity Parameters

● Search Query: photon

* Virtual Machine: <None>
photon-linux [id=vc-67.eco.eng.cohesity.com,id:vm-6404
photon-linux-demo [id=vc-67.eco.eng.cohesity.com,id:vm

● * Protection Job: Demo Job [id=CS::56] ▾

SUBMIT **CANCEL**

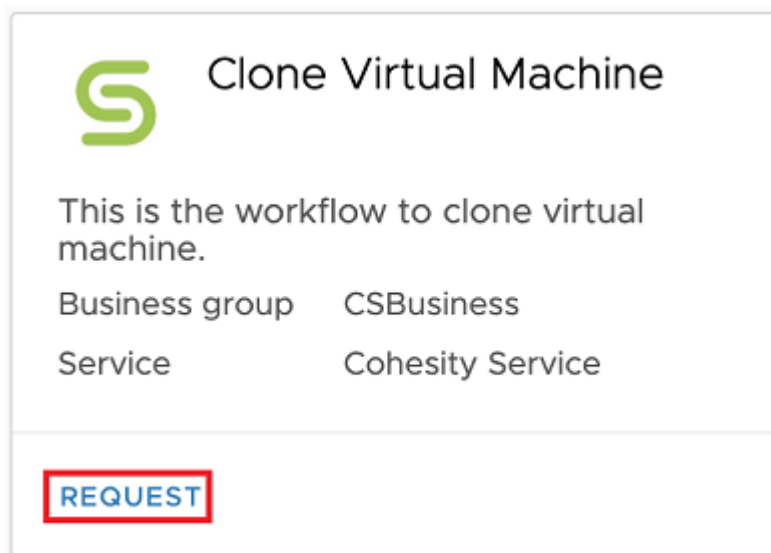
5. Click **Submit**. You can monitor the progress of the request in the **Deployments** tab.

Cloning a Virtual Machine

Procedure (XAAS)

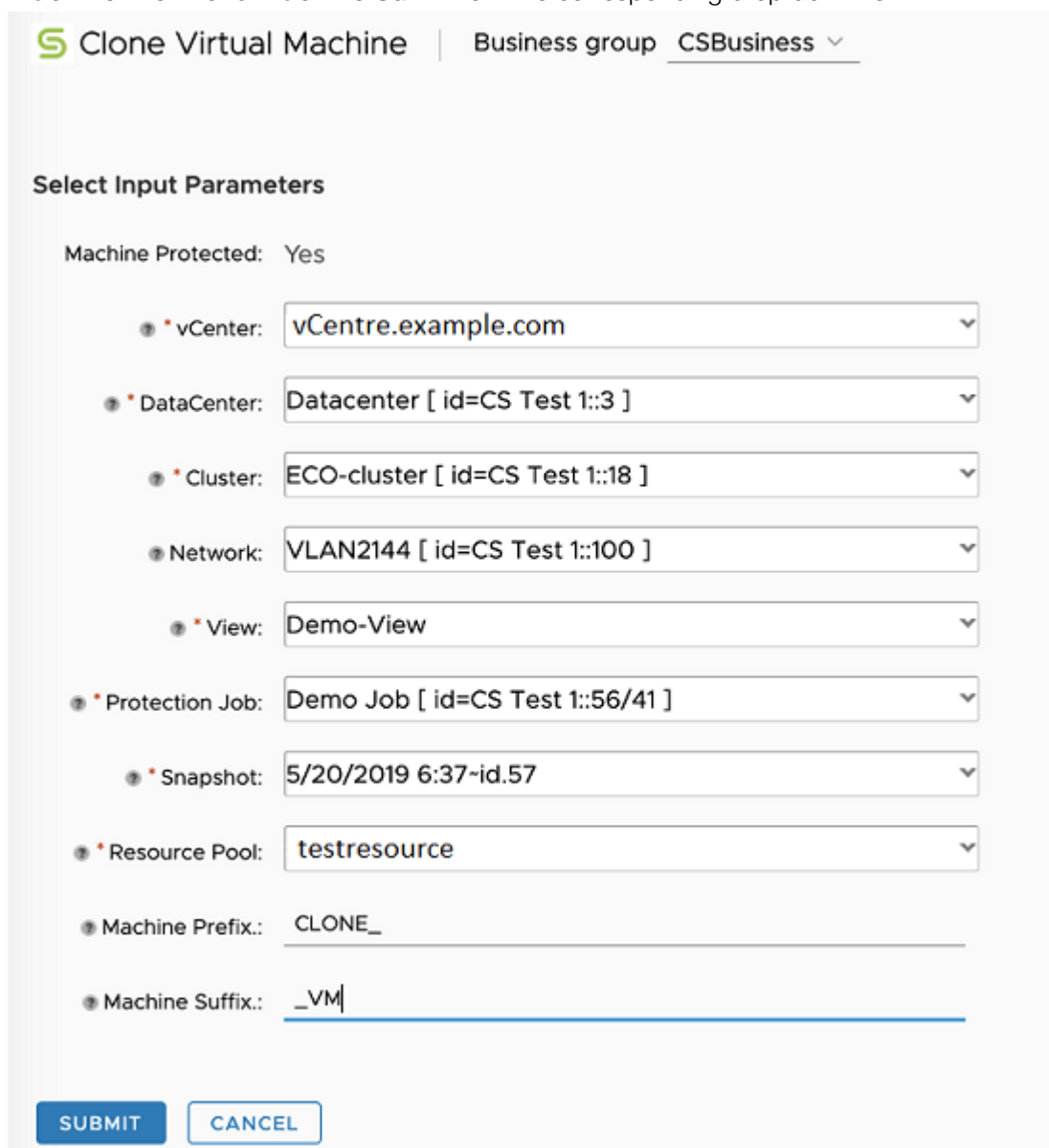
You can clone a virtual machine as follows.

1. In the Catalog Dashboard, click **REQUEST** on **Clone Virtual Machine**.



The image shows a workflow card titled "Clone Virtual Machine" with a green 'S' logo. It contains the text "This is the workflow to clone virtual machine." and two rows of information: "Business group CSBusiness" and "Service Cohesity Service". At the bottom, there is a red-outlined button labeled "REQUEST".

2. Select the **Cohesity Endpoint** and the **Virtual Machine** from the drop down list.
3. Ensure that the **Machine Protected** flag in **Select Input Parameters** screen is set to **Yes**. If this is not set to **Yes**, then the machine cannot be cloned as no restore objects are available in the cluster.
4. Select **vCenter**, **DataCenter**, **Cluster**, **Network**, **Protection Job**, **Resource Pool**, **View**, **Snapshot**, **Machine Prefix** and **Machine Suffix** from the corresponding drop down list.



The image shows the "Clone Virtual Machine" form with the "Business group" set to "CSBusiness". The "Select Input Parameters" section is active, showing "Machine Protected: Yes". The form contains several dropdown menus and text input fields for the following parameters:

- vCenter:** vCentre.example.com
- DataCenter:** Datacenter [id=CS Test 1::3]
- Cluster:** ECO-cluster [id=CS Test 1::18]
- Network:** VLAN2144 [id=CS Test 1::100]
- View:** Demo-View
- Protection Job:** Demo Job [id=CS Test 1::56/41]
- Snapshot:** 5/20/2019 6:37-id.57
- Resource Pool:** testresource
- Machine Prefix:** CLONE_
- Machine Suffix:** _VM

At the bottom, there are two buttons: "SUBMIT" and "CANCEL".

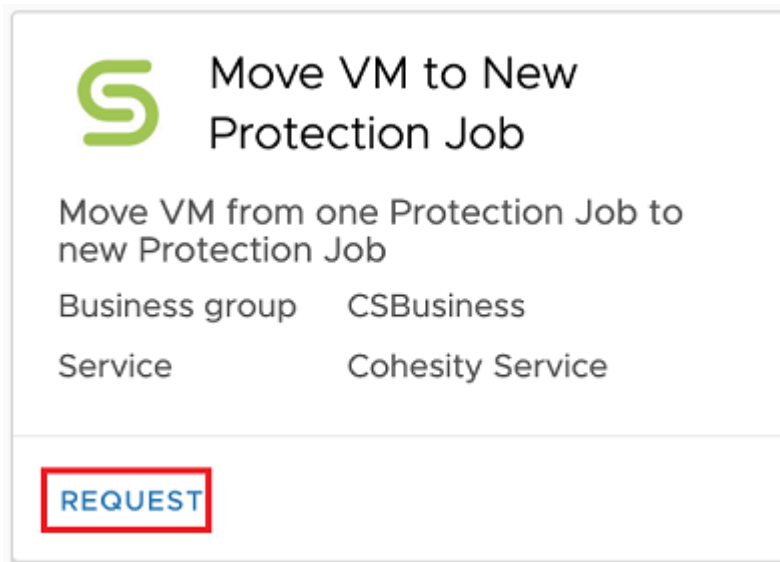
5. Click **Submit**.

Moving a VM to a New Protection Job

Procedure (XAAS)


You can move a VM to a new protection job as follows.

1. In the Catalog Dashboard, click **REQUEST** on **Move VM to New Protection Job**.



2. Select the **Cohesity Endpoint** from the drop down list.
3. Select the Cohesity Parameters such as **Virtual Machine**, its **Current Protection Job**, and the **New Protection Job** it must be assigned to. **Note:** In the drop down list for Virtual Machines, only the

protected VMs are displayed.

 Move VM to New Protection Job

Business group CSBusiness ▼

Select Endpoint

● *

Cohesity Endpoint:

CS Test 1 [id=CS Test 1] ▼

Select Cohesity Parameters

● *

VM Search Query:

● *

Protected vCenter Virtual Machine:

<None>

photon-linux [id=vc-67.eco.eng.cohesity.com,id:vm-6404

● *

Current Protection Job:

Demo Job [id=CS Test 1::56] ▼

● *

New Protection Job:

Demo - 2 Job [id=CS Test 1::200] ▼

SUBMIT

CANCEL


4. Click **Submit**.

Removing a VM from a Protection Job

Procedure (XAAS)

To remove a VM from a Protection Job:

1. In the Catalog Dashboard, click **REQUEST** on **Remove VM from Protection Job**.



Remove VM from Protection Job


Removes Virtual Machine from the Protection Job

Business group CSBusiness

Service Cohesity Service

REQUEST


2. Select the **Cohesity Endpoint** from the drop down list.
3. Select the Cohesity Parameters such as **Virtual Machine** and the corresponding **Protection Job**. **Note:** In the drop down list for Virtual Machines, only the protected VMs are displayed.



Remove VM from Protection Job


Business group CSBusiness ▼

Select Endpoint

 * Cohesity Endpoint:

CS Test 1 [id=CS Test 1] ▼


Select Cohesity Parameters

 VM Search Query:

photon

* vCenter Virtual Machine:

<None>
photon-linux [id=vc-67.eco.eng.cohesity.com,id:vm-6404]

 * Protection Job:

Demo Job [id=CS Test 1::56] ▼

SUBMIT

CANCEL

4. Click **Submit**.

Restoring a Virtual Machine

Procedure (XAAS)

To restore a VM:

1. In the Catalog Dashboard, click **REQUEST** on **Restore Virtual Machine**.



Restore Virtual Machine

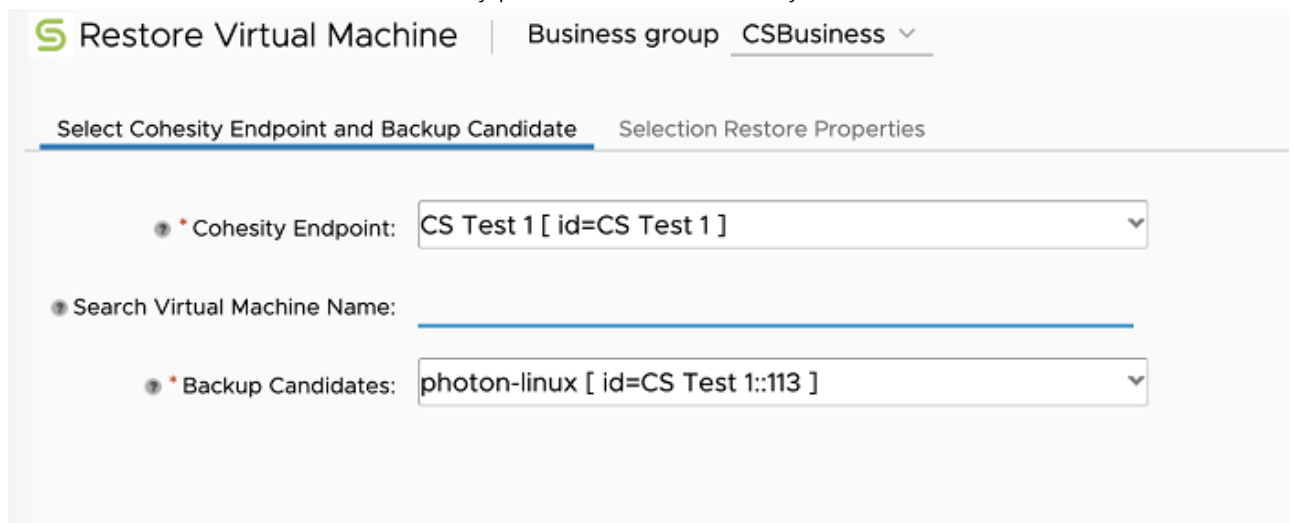
This is the workflow to restore virtual machine.

Business group CSBusiness

Service Cohesity Service

REQUEST

2. Select the **Cohesity Endpoint** and the **Backup Candidates** from the drop down list. **Note:** The Backup Candidates are the VMs that are already protected in the Cohesity Data Protection.



Restore Virtual Machine | Business group CSBusiness ▾

Select Cohesity Endpoint and Backup Candidate Selection Restore Properties

⚙️ * Cohesity Endpoint: CS Test 1 [id=CS Test 1] ▾

⚙️ Search Virtual Machine Name:

⚙️ * Backup Candidates: photon-linux [id=CS Test 1::113] ▾

3. Click **Selection Restore Properties** tab and enter the protection job you want to perform the restore from in the **Protection Job** field. Note: The list populated in the drop down of **Protection Job** may contain multiple values if the backup candidate is protected by multiple jobs.
4. Select the **Snapshot** from which you want to execute the restore.
5. Optionally, you can provide the **Machine Prefix** and **Machine Suffix**.

- By default, the VM is powered OFF after restore. Select as required and click **Submit**.

Restore Virtual Machine | Business group **CSBusiness** ▼

Select Cohesity Endpoint and Backup Candidate **Selection Restore Properties**

1 * Protection Job: Demo Job [id=CS Test 1::56/113] ▼

2 * Snapshots: 5/20/2019 20:30~id.142 ▼

3 Machine Prefix: RS_

4 Machine Suffix: _VM

5 Power On Machine: No ▼

SUBMIT **CANCEL**

Executing a Protection Job on Demand

Procedure (XAAS)

To execute a Protection Job:

- In the Catalog Dashboard, click **REQUEST** on **Run Protection Job on Demand**.

Run ProtectionJob on Demand

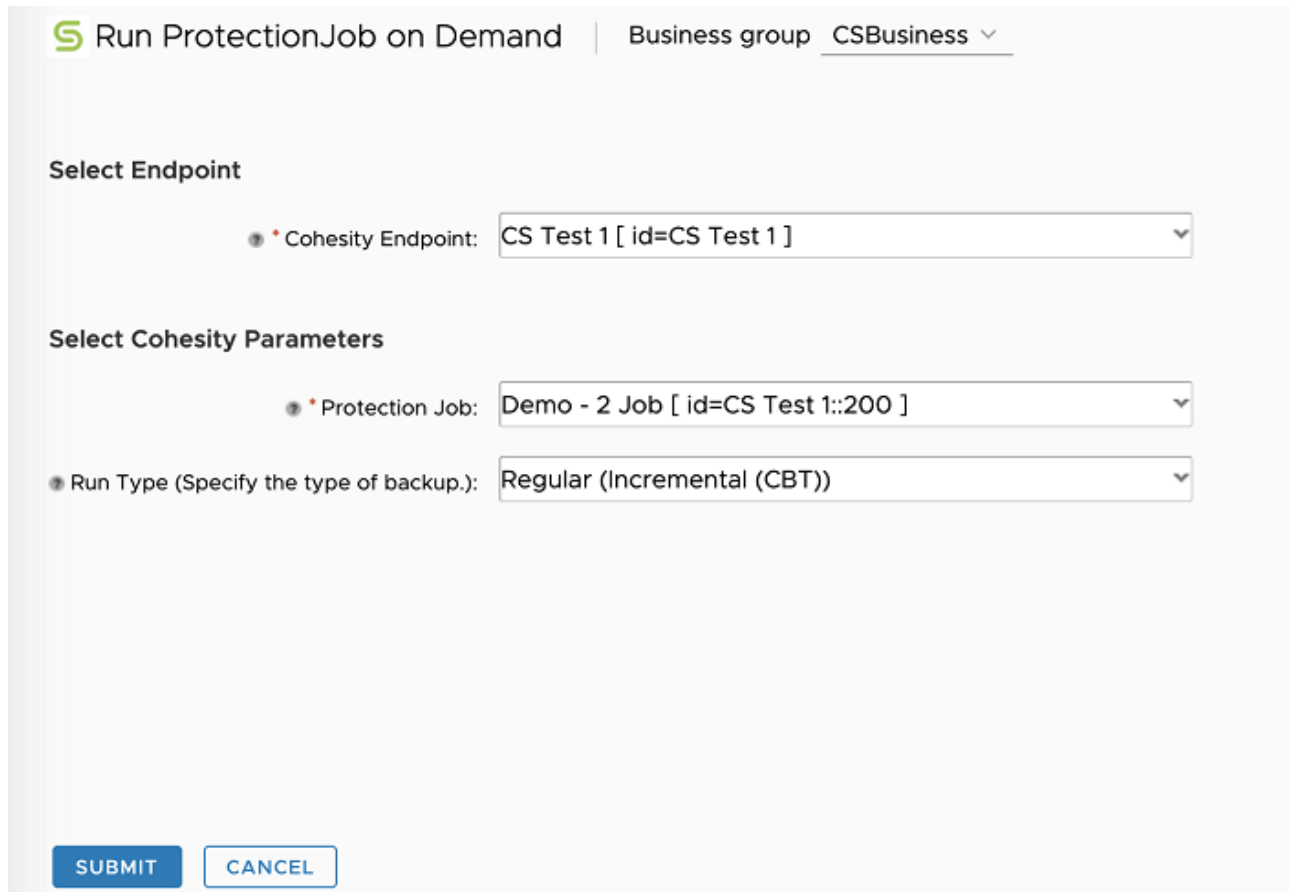
Run Protection Job on Demand

| | |
|----------------|------------------|
| Business group | CSBusiness |
| Service | Cohesity Service |

REQUEST

- Select the **Cohesity Endpoint** from the drop down list.
- In the **Protection Job** field, enter the protection job you want to execute.

4. In the **Run Type** field, you can select either **Regular (Incremental CBT)** or **Full (No CBT)**.



Run ProtectionJob on Demand | Business group CSBusiness ▼

Select Endpoint

● * Cohesity Endpoint: CS Test 1 [id=CS Test 1] ▼

Select Cohesity Parameters

● * Protection Job: Demo - 2 Job [id=CS Test 1::200] ▼

● Run Type (Specify the type of backup.): Regular (Incremental (CBT)) ▼

SUBMIT **CANCEL**

5. Click **Submit**.

Recovering Files or Folders

Procedure (XAAS)

To recover a file or folder:

1. In the Catalog Dashboard, click **REQUEST** on **Recover Files or Folders**.



Recover Files or Folders

This is the workflow to restore selected files or folders.

Business group CSBusiness

Service Cohesity Service

REQUEST

2. Select the **Cohesity Endpoint** from the drop down list.
3. In the **Search Virtual Machine Name** field, enter the virtual machine from which you want to recover a file or folder. A list of backup candidates is populated based on the selection.

4. In the **Backup Candidates** field, select the required VM from the populated list.
5. In the **Protection Job** field, select the required protection job from the populated list.
6. In the **OS Type** field, select either Linux or Windows based on the chosen VM so as to display the file or folder path in proper format.
7. In the **User Name** field, provide user name for the selected VM.
8. In the **Password** field, provide password for the selected VM.

The screenshot shows the 'Recover Files or Folders' interface with the 'Business group' set to 'CSBusiness'. The 'Select Cohesity Endpoint and Backup Candidate' tab is active. The form contains the following fields:

- Cohesity Endpoint:** CS Test 1 [id=CS Test 1]
- Search Virtual Machine Name:** (empty text field)
- Backup Candidates:** photon-linux [id=CS Test 1::113]
- Protection Job:** Demo Job [id=CS Test 1::56/113]
- OS Type:** Linux
- User Name(Virtual Machine Credentials):** root
- Password(Virtual Machine Credentials):** (masked with dots)

9. In **Selection Recover Properties** tab:
 1. In **Files or Folders** field, select option to search for files, folders or both.
 2. In the **Search Files or Folders Name** field, you can provide the search text to fetch the appropriate file or folder or both from the selected protection job. The search text can be a prefix or suffix or mid name of the file or folder name.
 3. Search responses such as file or folder path or both is listed in the **Files Backup Candidates** field.
 4. In the **File Snapshots** field, recovery points for the selected file or folder path is listed.
 5. Select **Yes** or **No** for **Recover to Original Location** parameter. If **Yes** is selected, file or folder is recovered to the original location from where it is backed up. If **No** is selected, **Recover To** field appears where you can specify the new path to recover the file or folder.
 6. Select **Yes** or **No** for **Overwrite Existing File/Folder** parameter. If **Yes** is selected, file or folder is overwritten, else a new folder is created to recover the file or folder.
 7. Select **Yes** or **No** for **Continue on Error** parameter. If **Yes** is selected, recovery is continued even when there is any error, else recovery stops when there is an error.

8. Select **Yes** or **No** for **Preserve Attributes** parameter.

Recover Files or Folders | Business group **CSBusiness** ▼

Select Cohesity Endpoint and Backup Candidate Selection Recover Properties

Files or Folders: Files only ▼

Search Files or Folders Name: /etc/resolv

* Files Backup Candidates: lvol_1/etc/resolv.conf [id=CS Test 1::56/lvol_1/etc/re... ▼

* File Snapshots: 5/20/2019 6:37-id.57 ▼

Recover to Original Location: Yes ▼

Overwrite Existing File/Folder: Yes ▼

Continue On Error: No ▼

Preserve Attributes: Yes ▼

Send Email Notification: No ▼

SUBMIT **CANCEL**

9. Select **Yes** or **No** for **Send Email Notification**. If **Yes** is selected, the **Mail Configuration to Send Notification** tab is enabled to choose Email connection and other related parameters.

Recover Files or Folders | Business group **CSBusiness** ▾

Select Cohesity Endpoint and Backup Candidate Selection Recover Properties **Mail Configuration To Send Notification**

* Email connection: CS Test 1 [id=CS Test 1] ▾

* Recipients: +

* Email Subject: Recover Files or Folders - jobStatus for VM : vmName

* Email Content:

```
<h3>Recover Files or Folders - jobStatus for VM : vmName.</h3>
<b>VM User Name : </b>userName<br><br>
<b>Search Type : </b>filesOrFoldersType<br><br>
<b>File or Folder Name : </b>filesOrFoldersName<br><br>
```

SUBMIT **CANCEL**

1. In the **Email connection** field, select the Email connection which is already configured.
 2. In the **Recipients** field, add one or more Email recipients.
 3. In the **Email Subject** field, subject is auto populated. However, it can be edited.
 4. In the **Email Content** field, model text is auto populated in HTML format and you can edit it as per the need.
10. Click **Submit** to start the workflow execution. **Note:** The VM must be powered on for the workflow execution to be successful.

Executing a Protection Job on Demand as Resource Action

Procedure (Resource Action)


To execute a Protection Job as a Resource Action in VRA:

1. In the **Deployments** tab , click on the required provisioned VM.
2. In the **Components** pane in the bottom left of the screen, click on **Actions** icon (as highlighted in the figure).

3. Select **Cohesity-Create Snapshot**.

CatalogDeploymentsDesignInboxAdministrationInfrastructureContainers

< Back

 Cohesity-47321012

No description

OwnerAdmin UserLease duration1 day

Provisioned onMay 21, 2019 1:44 PMExpiresin 23 hours

Business groupCSBusinessDestroy dateMay 24, 2019 1:44 PM

Catalog itemCohesity

HIDE DETAILS ↗

ComponentsHistory

▼ Cohesity-47321012

PS15

⚙️

Change Lease

Cohesity - Add to protection j...

Cohesity - Change Protection ...

Cohesity - Clone Machine

Cohesity - Create Snapshot

Cohesity - Recover Files/Folde...

Cohesity - Remove From Prote...

Cohesity - Restore Virtual Mac...

Connect to Remote Console

GeneralStorageNetworkSecurityPropertiesSnapshots

Name: PS15

Component: vSphere__vCenter__Machine_1

Status: On

CPU: 4

Memory (MB): 4096

Storage (GB): 16

Description:

Owner: vra-admin@vsphere.local

Blueprint: Cohesity

Compute resource: EFCO-cluster

4. Select the **Cohesity Endpoint** from the drop down list.

5. Ensure that the **VM Protected** flag is set to **Yes**. If this is not set to Yes, assign the VM to a protection job first.

6. In the **Protection Job** field, enter the protection job you want to execute.

33 / 45

7. In the **Run Type** field, you can select either **Regular (Incremental CBT)** or **Full (No CBT)**.

Cohesity - Create Snapshot - PS15

Run Protection Job for the VM on Demand

Select Endpoint

* Cohesity Endpoint:

CS Test 1 [id=CS Test 1]

Select Cohesity Parameters

VM Protected: Yes

* Protection Job:

Demo - 2 Job [id=CS Test 1::200]

* Run Type (Specify the type of backup.):

Regular (Incremental (CBT))

SUBMIT

CANCEL

8. Click **Submit**. To monitor the progress, log in to the Cohesity Dashboard and click **Protection** tab to view the progress.

Other Workflows


In This Section

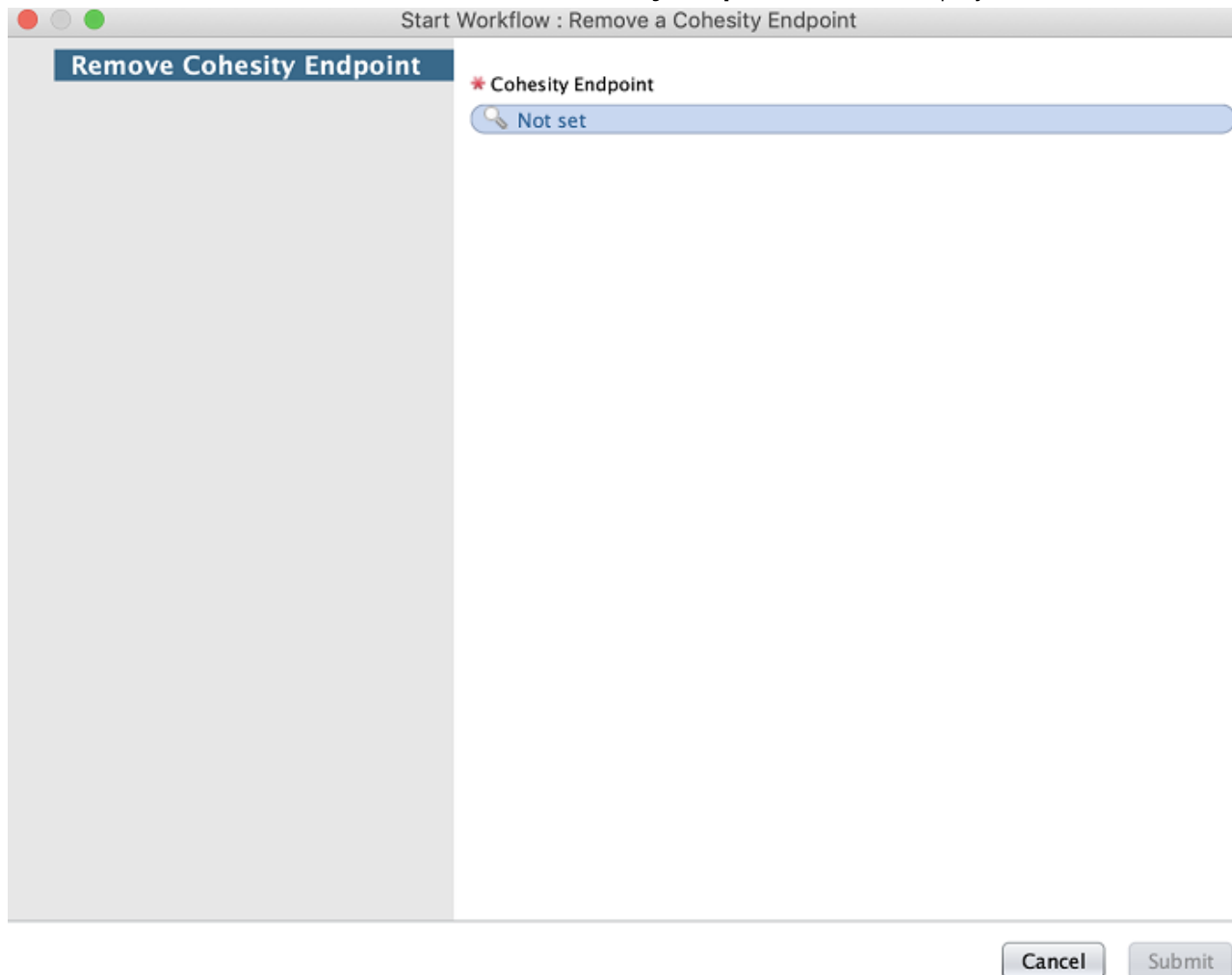
| Topic | Description |
|---|---|
| Removing a Cohesity Endpoint | This section describes the details to remove an existing Endpoint. |
| Updating a Cohesity Endpoint | This section describes the details to update a Cohesity Endpoint. |
| Removing Email Configuration | This section describes the details to remove the Email configuration. |
| Updating Cohesity Email Configuration | This section describes the details to update an Email configuration. |

Removing a Cohesity Endpoint

Procedure

To remove an endpoint:

1. Log in to **VMware vRealize Orchestrator**. You must know the credentials to log in.
2. Select **Run** mode from the drop-down list located at the top left of the page and then click the Workflows tab.
3. Select **Library > Cohesity > Configuration > Remove a Cohesity Endpoint**.
4. To start the workflow, click . The **Remove a Cohesity Endpoint** screen is displayed.



Start Workflow : Remove a Cohesity Endpoint

Remove Cohesity Endpoint

* Cohesity Endpoint

 Not set

Cancel Submit

5. In the **Cohesity Endpoint** field, click the **Not set** link to select the endpoint you want to remove. The following screen is displayed.

Start Workflow : Remove a Cohesity Endpoint

Remove Cohesity Endpoint

* Cohesity Endpoint

Filter

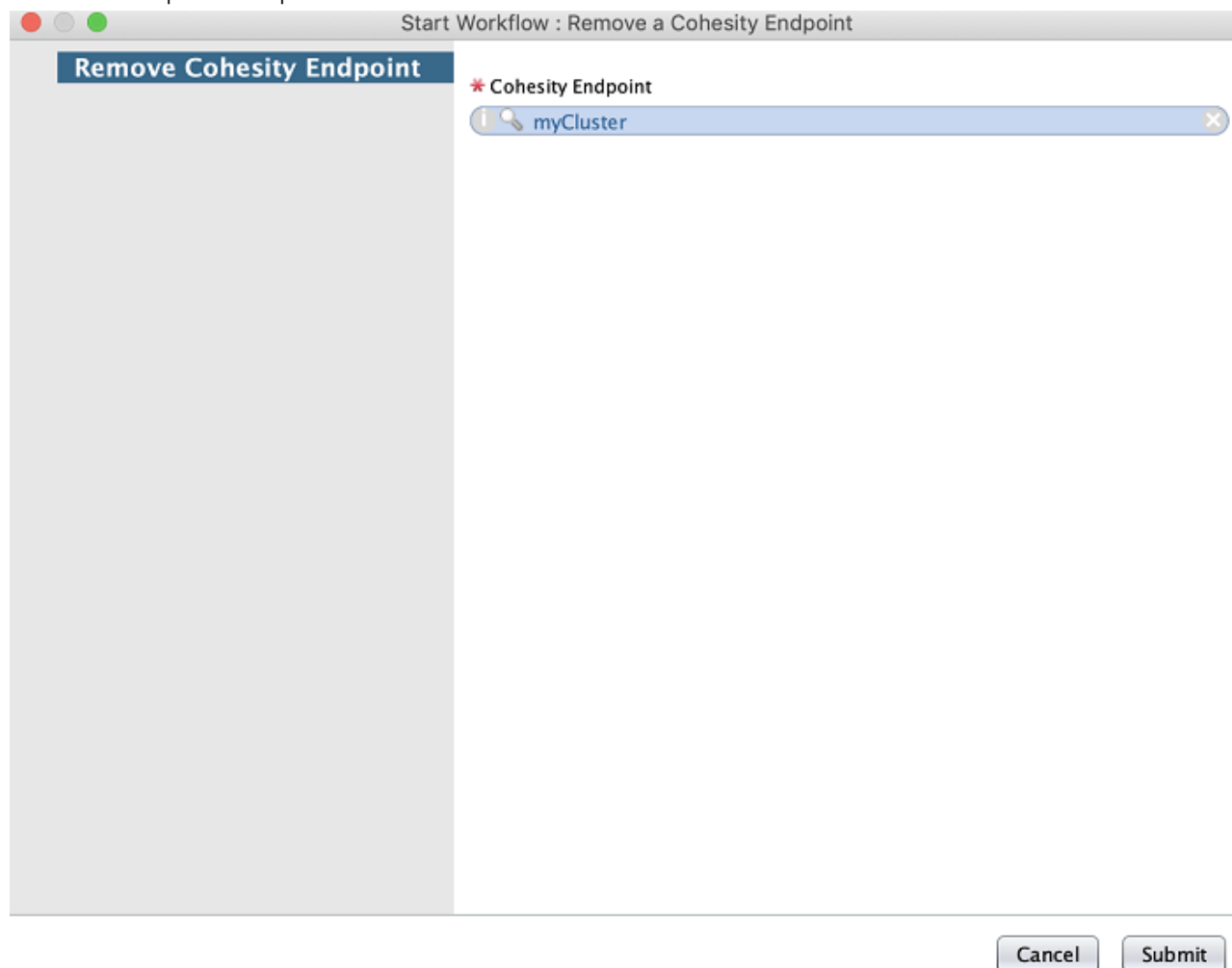
CS:CohesityConnection

myCluster

Cancel

Submit

6. Select the required endpoint and click **Select**.



7. Click **Submit** to remove the selected endpoint.

Updating a Cohesity Endpoint

Procedure

To update an endpoint:

1. Log in to VMware vRealize Orchestrator. You must know the credentials to log in.
2. Select **Run** mode from the drop-down list located at the top left of the page and then click the Workflows tab.
3. Select **Library > Cohesity > Configuration > Update a Cohesity Endpoint**.

4. To start the workflow, click . The **Update a Cohesity Endpoint** screen is displayed.



Start Workflow : Update a Cohesity Endpoint

1 Update a Cohesity Endpoint

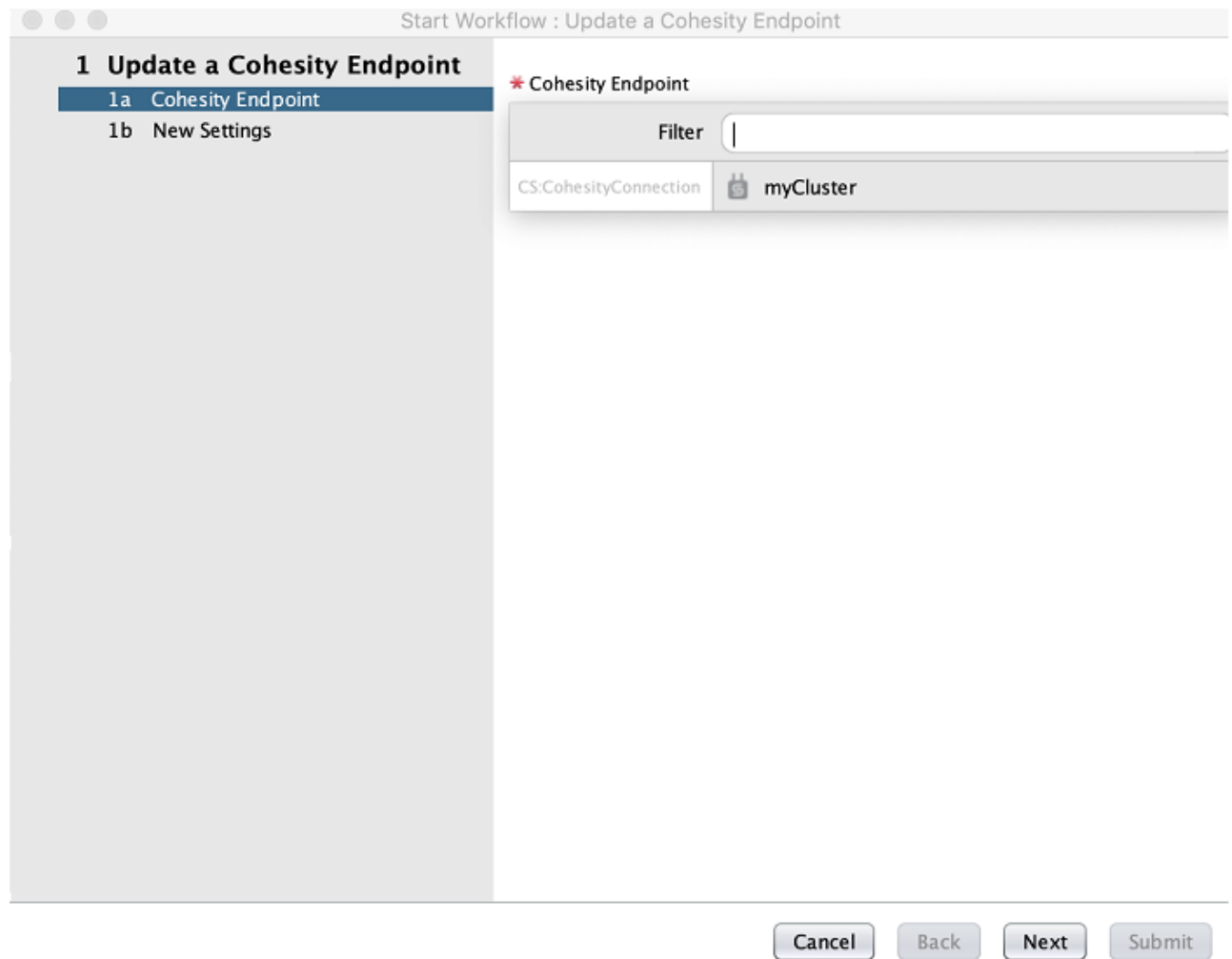
1a Cohesity Endpoint

* Cohesity Endpoint

Not set

Cancel Submit

5. In the **Cohesity Endpoint** field, click the **Not set** link to select the endpoint you want to update. The following screen is displayed.



6. Select the endpoint you want to update, click **Select** and then click **Next**.

7. Enter the details you want to update and click **Submit**.

1 Update a Cohesity Endpoint

✓ 1a Cohesity Endpoint

✗ 1b New Settings

✗ 1 error – [Password], Mandatory field not set

✗ Endpoint Name

myCluster

✗ Hostname or IP address of Cohesity Cluster

cluster.cohesity.com

✗ Domain Name

LOCAL

✗ User Name

admin

✗ Password

Cancel

Back

Next

Submit

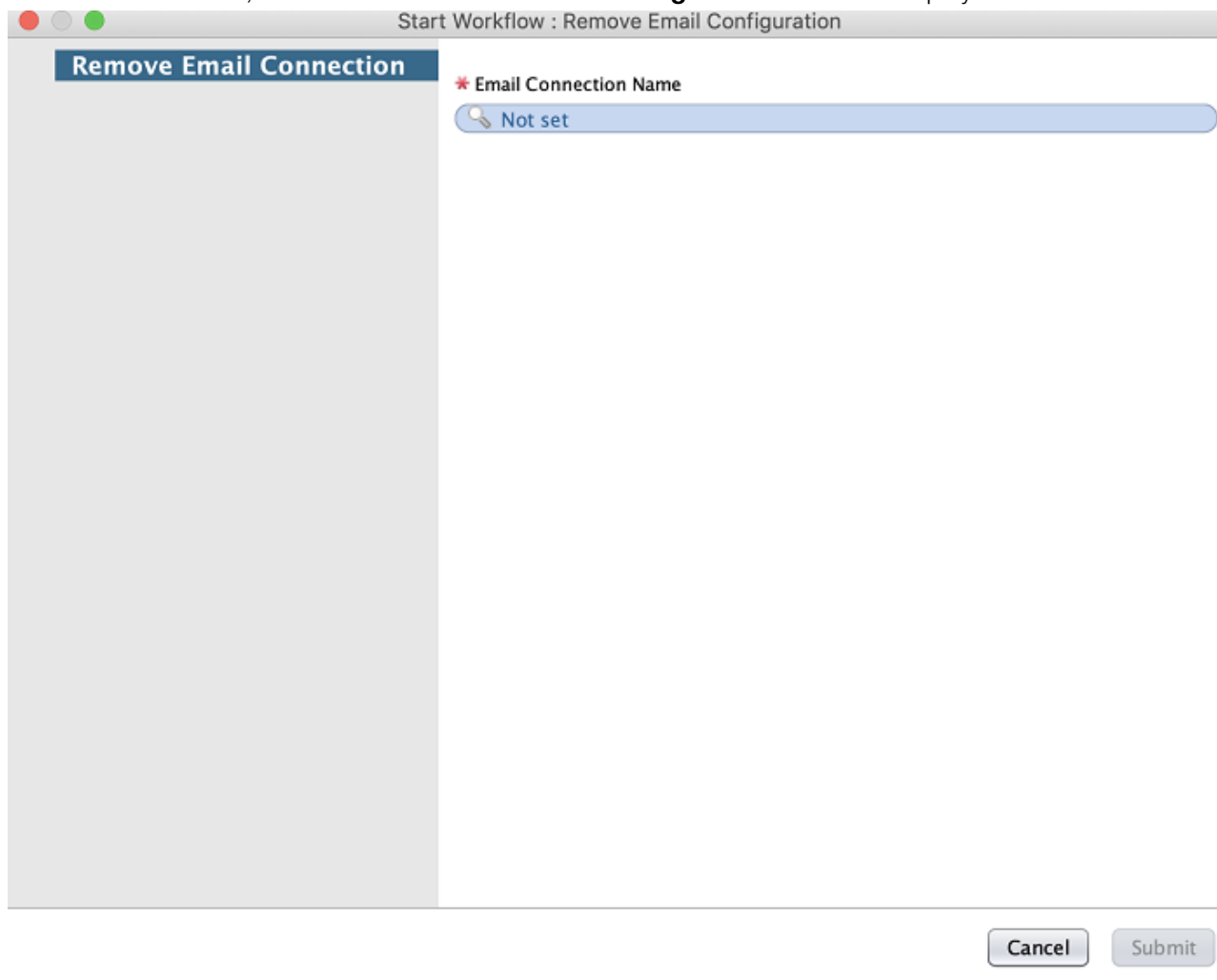
Removing Email Configuration

Procedure

To remove Email configuration:

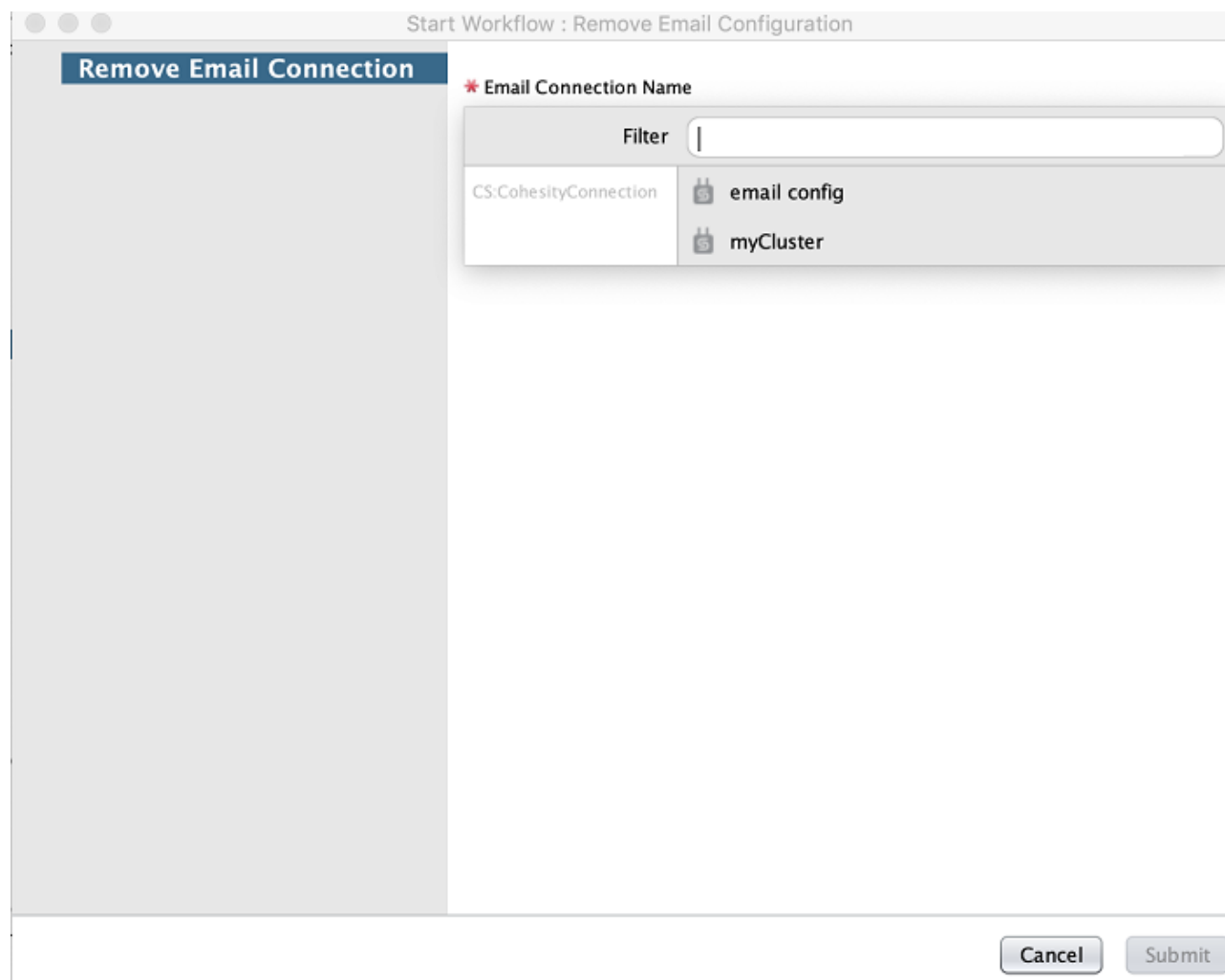
- 1. Log in to VMware vRealize Orchestrator. You must know the credentials to log in.
- 2. Select **Run** mode from the drop-down list located at the top left of the page and then click the Workflows tab.
- 3. Select **Library > Cohesity > Configuration > Remove Email Configuration**.

4. To start the workflow, click . The **Remove Email Configuration** screen is displayed.



The screenshot shows a web application window titled "Start Workflow : Remove Email Configuration". The main content area has a dark blue header with the text "Remove Email Connection". Below this header, there is a form field labeled "* Email Connection Name" with a magnifying glass icon and the text "Not set". At the bottom right of the window, there are two buttons: "Cancel" and "Submit".

5. In the **Email Connection Name** field, click the **Not set** link to select the **Email configuration** you want to remove. The following screen is displayed with the available Email Configurations listed.



6. Select the required **Email Configuration** and click **Select**.
7. Click **Submit** to remove the selected Email configuration.

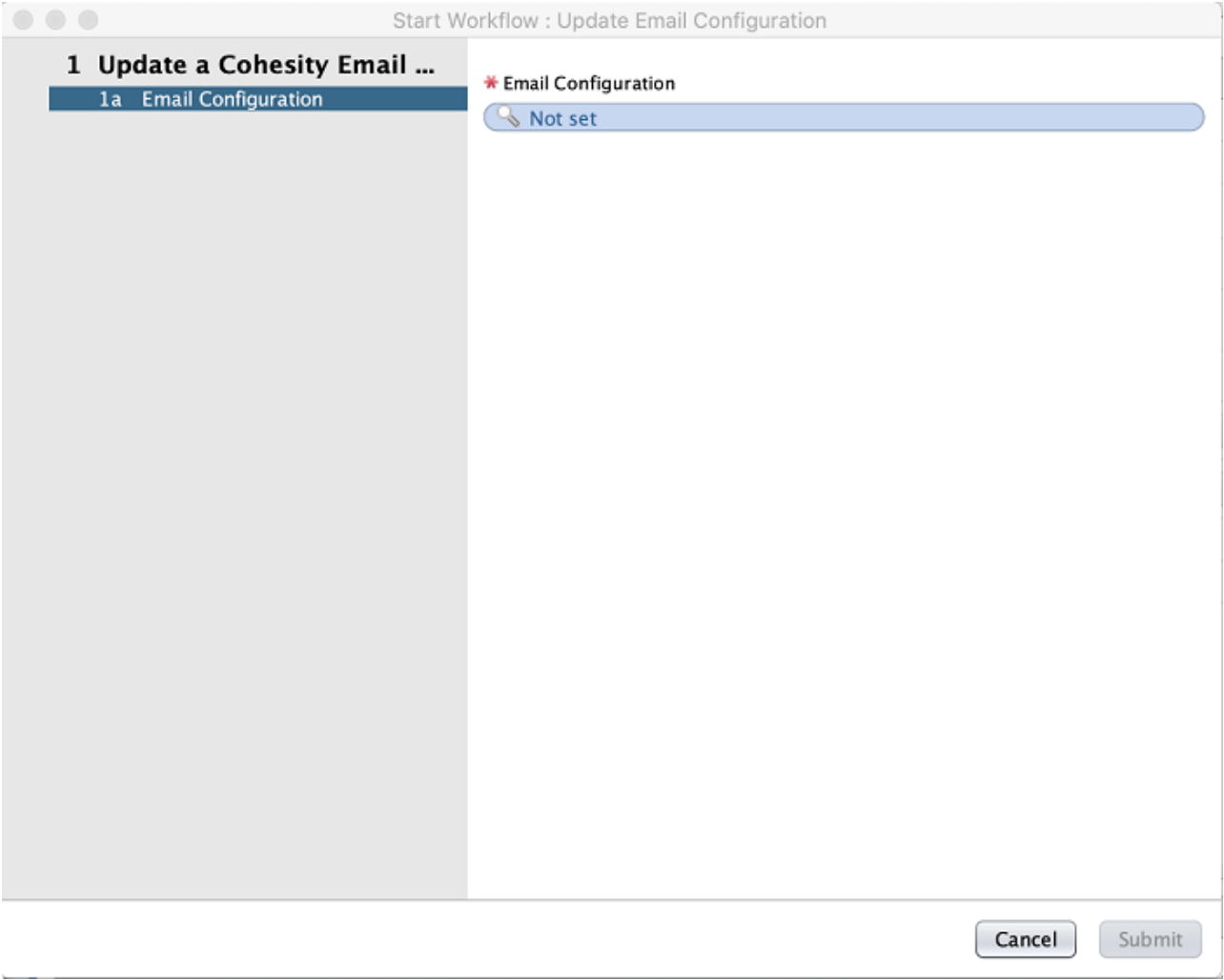
Updating Cohesity Email Configuration

Procedure

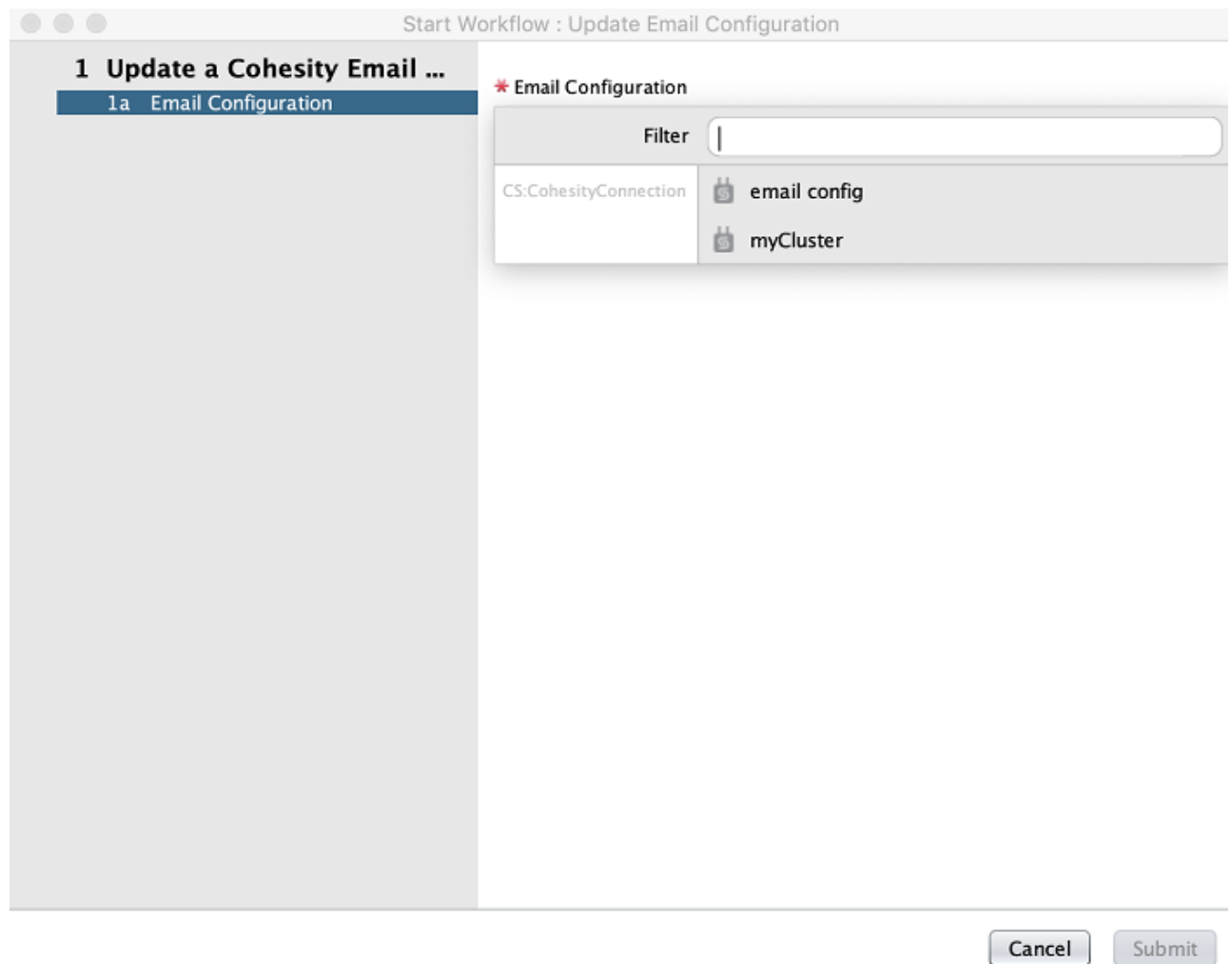
To update an Email configuration:

1. Log in to VMware vRealize Orchestrator. You must know the credentials to log in.
2. Select **Run** mode from the drop-down list located at the top left of the page and then click the Workflows tab.
3. Select **Library > Cohesity > Configuration > Update Email Configuration**.

4. To start the workflow, click . The **Update Email Configuration** screen is displayed.



5. In the **Email Configuration** field, click the **Not set** link to select the Email configuration you want to update. The following screen is displayed with the available Email configurations listed.



6. Select the Email configuration you want to update, click **Select** and then click **Next**.

7. Enter the details you want to update and click **Submit**.

Start Workflow : Update Email Configuration

1 Update a Cohesity Email ...

- ✓ 1a Email Configuration
- ✗ 1b New Settings

✗ 1 error - [Email Server Password], Mandatory field not set

* Email Configuration Name
email config

* Email Server SMTP Host
srv1.eng.com

* Email Server SMTP Port
9000

* Email Server User Name
admin

* Email Server Password
✗

* From Email Id
mail@cohesity.com

* From Name
CS

Cancel Back Next Submit

Feedback

We love to hear from you. Please send your feedback and suggestions to cohesity-api-sdks@cohesity.com