

Configuring the VMware vRealize Automation for ServiceNow ITSM Application

Release 8.4

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vRealize Automation

You can find the most up-to-date technical documentation on the VMware website at:

<https://docs.vmware.com/>

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Release Notes

1

The vRealize Automation for ServiceNow ITSM application 8.4 is available on the ServiceNow store and below are the highlights of the release.

Highlights

- Added the support for value-picker datatype in the Native UI and Service Portal.
- Added the support for custom resources on the Native UI and Service Portal.
- Added the support for custom day-2 actions on the Native UI and Service Portal.
- Added a system property to fetch number of records in an API call from vRA via REST call.
- On the Deployments widget, the custom properties for custom resource are displaying in the Service Portal.
- Reconciliation of the Custom Day-2 Action.

Overview of vRealize Automation for ServiceNow ITSM Application

2

The VMware vRealize[®] Automation™ for ServiceNow[®] ITSM application is an integration between VMware vRealize Automation and ServiceNow platform.

The VMware vRealize Automation for ServiceNow ITSM application imports the VMware vRealize Automation catalog items in the ServiceNow platform. The ServiceNow users can use these catalog items to perform various operations in ServiceNow including the deployment of virtual machine to various other day 2 operations.

Installation Prerequisites

3

Before installing VMware vRealize Automation for ServiceNow ITSM application, make sure that your environment meets the supported compatibility requirements and the Management, Instrumentation, and Discovery (MID) server is installed.

This chapter includes the following topics:

- [Compatibility Matrix](#)
- [Installation of MID Server](#)
- [Install the User Criteria Scoped API plug-in](#)
- [Install the Configuration Management for Scoped Apps plug-in](#)
- [Enable Application Access](#)
- [Provide the Script Include Access](#)

Compatibility Matrix

This table shows the version compatibility between the VMware vRealize Automation for ServiceNow ITSM application, vRealize Automation, and ServiceNow releases.

Table 3-1. VMware vRealize Automation for ServiceNow ITSM application Compatibility Matrix

| VMware vRealize Automation ITSM Application | Supported vRealize Automation Version | Supported ServiceNow Releases |
|---|---------------------------------------|-------------------------------|
| v8.4 | vRA 8.3, vRA 8.4, and vRA Cloud | Orlando, Paris, and Quebec |

Note The VMware vRealize Automation for ServiceNow ITSM application does not support the ServiceNow on-premise versions.

Installation of MID Server

Before the installation of VMware vRealize Automation for ServiceNow ITSM application, you must configure a MID server. The configured MID Server acts as a communication bridge between the ServiceNow platform and the VMware vRealize Automation application.

Refer to the ServiceNow documentation to install a MID Server.

- For the Orlando release, see [ServiceNow Orlando Release Documentation](#).
- For the Paris release, see [ServiceNow Paris Release Documentation](#).
- For the Quebec release, see [ServiceNow Quebec Release Documentation](#).

Note

- For better performance, use a dedicated MID Server for the VMware vRealize Automation for ServiceNow ITSM application.
 - The MID Server configuration is not required if you are using the VMware vRealize Automation Cloud version.
-

Install the User Criteria Scoped API plug-in

The User Criteria Scoped API plug-in enables you to create, modify, or delete user criteria records using scripts. In ITSM application user criteria records are created or updated for vRealize Automation catalog items and Day-2 actions catalog items using script. This plug-in is a paid ServiceNow plug-in that requires a subscription. Contact ServiceNow Support for more information. If the vRealize Automation for ServiceNow ITSM application is previously configured on your ServiceNow, then you can skip this section.

Prerequisites

You must be the system administrator in the ServiceNow.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 From the left pane, go to **System Definition > Plugins**.

The **All Application** page opens with the list of plugins and ServiceNow Store applications.

- 3 In the **Search** text box, enter **user criteria scoped API** to search the plug-in.

The User Criteria Scoped API plug-in appears.

- 4 Click **Install**, and then click **Activate**.

After the plug-in is installed, the success message appears.

Install the Configuration Management for Scoped Apps plug-in

The Configuration Management for Scoped Apps plug-in imports all the deployments and resources from the vRealize Automation to the ServiceNow application. The Configuration Management for Scoped Apps plug-in enables creating, updating, and deleting records in CMDB

tables from scoped application. Deployment and Resources tables are the extended from the CMDB.

Prerequisites

You must be the system administrator in the ServiceNow.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 From the left pane, go to **System Definition > Plugins**.
- 3 In the **Search** box, enter **Configuration Management For Scoped Apps** to search the plug-in.
The Configuration Management For Scoped Apps plug-in appears.
- 4 Click **Install**, and then click **Activate**.
After the plug-in is installed, the success message appears.

Create a Data Source Choice in ServiceNow

The vRealize Automation for ServiceNow ITSM application uses Identification and Reconcile Engine which requires to have discovery source element for the application.

Prerequisites

- You must be the system administrator in the ServiceNow.
- The application scope must set to Global.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 From the left pane, go to **System Definition > Choice Lists**.
- 3 Click **New**.
- 4 Select the **Table** as **Configuration Item [cmdb_ci]**.
- 5 In the **Element** text box, enter the value as **discovery_source**.
- 6 In the **Label** and **Value** text boxes, enter **ITSM 8.x**.
- 7 Click **Submit** to create.

Enable Application Access

The vRealize Automation for ServiceNow ITSM application requires access for certain ServiceNow tables to perform operations. The ITSM application create, read, update, and delete the records in these tables using script.

Prerequisites

You must be the system administrator in the ServiceNow.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 From the left pane, go to **System Definition > Tables**.
- 3 To provide `question_choice` table access:
 - a In the **Search** box, search for **question_choice** table name.
 - b Click the label name link to open table details.
 - c On the **Application Access** tab, select the **can read**, **can create**, **can update**, and **can delete** check boxes.
 - d Click **Update** to provide permission.
- 4 To provide `sc_cat_item_category` table access:
 - a In the **Search** box, search for **sc_cat_item_category** table name.
 - b Click the label name link to open table details.
 - c On the **Application Access** tab, select the **can read**, **can create**, **can update**, and **can delete** check boxes.
 - d Click **Update** to provide permission.
- 5 If by default `item_option_new` table access is not available, then provide table access:
 - a In the **Search** box, search for **item_option_new** table name.
 - b Click the label name link to open table details.
 - c On the **Application Access** tab, select the **can read**, **can create**, **can update**, and **can delete** check boxes.
 - d Click **Update** to provide permission.
- 6 If by default the `sc_cat_item_user_criteria_mtom` table access is not available, then provide table access:
 - a In the **Search** box, search for **sc_cat_item_user_criteria_mtom** table name.
 - b Click the label name link to open table details.
 - c On the **Application Access** tab, select the **can read**, **can create**, and **can update** check boxes.
 - d Click **Update** to provide the permission.

Provide the Script Include Access

The ServiceNow provides JavaScript APIs for use within scripts running on the ServiceNow platform to deliver common functionality. The JSUtil is a class of shortcuts for common JavaScript routines. The VMware vRealize Automation for ServiceNow ITSM application is required access to JSUtil scripts.

Prerequisites

- You must be the system administrator in the ServiceNow.
- The application scope must set to Global.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 From the left pane, go to **System Definition > Script Includes**.
- 3 Search for **JSUtil** and open the script.
- 4 From the **Accessible from** drop-down menu, select **All Application Scopes**.
- 5 Click **Update**.

Install and Update the vRealize Automation for ServiceNow ITSM Application

4

The ServiceNow System Administrator can install or update the vRealize Automation for ServiceNow ITSM application from the ServiceNow store.

This chapter includes the following topics:

- Installation of VMware vRealize Automation for ServiceNow ITSM application
- Update the VMware vRealize Automation for ServiceNow ITSM Application

Installation of VMware vRealize Automation for ServiceNow ITSM application

The ServiceNow system administrator can install the VMware vRealize Automation for ServiceNow ITSM application from the ServiceNow Store. The VMware vRealize Automation for ServiceNow ITSM application is free, but you must have a valid VMware vRealize Automation product license. If you have previously installed the VMware vRealize Automation for ServiceNow ITSM application, then you can skip this section.

Prerequisites

- You must have access to the ServiceNow Store.
- You must be the system administrator in the ServiceNow.
- The user criteria scoped API plug-in must be installed. See [Install the User Criteria Scoped API plug-in](#).
- The CMDB plug-in must be installed. See [Install the Configuration Management for Scoped Apps plug-in](#).
- A data source choice list must be created. See [Create a Data Source Choice in ServiceNow](#).

Procedure

- 1 Log in to the ServiceNow Store <https://store.servicenow.com/>.
- 2 Search for **VMware vRealize Automation ITSM Application 8.4**.
- 3 Click the application to view the details. In the top-right corner of the form, click **Manage Entitlements**.

- 4 Select the ServiceNow instances to install the application. Click **OK**.

The application is now available on the selected ServiceNow instances for installation.

- 5 Log in to the ServiceNow instance as a system administrator.
- 6 From the left pane, click **System Applications > All Available Applications > All**.
- 7 Search for the VMware vRealize Automation for ServiceNow ITSM application for ServiceNow.
- 8 Click **Install**.
- 9 Select **Install with demo data**, and complete the installation.

The application is successfully installed message displays.

Update the VMware vRealize Automation for ServiceNow ITSM Application

If you previously downloaded the vRealize Automation for ServiceNow ITSM application version 8.x from the ServiceNow store, you can update it to version 8.4 in your instance. From the vRealize Automation for ServiceNow ITSM application version 8.3, the Service Portal will be available as a default portal for deployments and day-2.

Prerequisites

- You must be the system administrator in the ServiceNow.
- Deactivate these scheduled jobs that are specific to the vRealize Automation for ServiceNow ITSM application for ServiceNow:
 - vRA Generate API Token
 - vRA Import Project
 - vRA Import Catalog
 - vRA Import Resources and CMDB
 - vRA Delete Queue
 - vRA Reconcile Actions
- The user criteria scoped API plug-in must be installed. See [Install the User Criteria Scoped API plug-in](#).
- The CMDB plug-in must be installed. See [Install the Configuration Management for Scoped Apps plug-in](#).
- A data source choice list must be created. See [Create a Data Source Choice in ServiceNow](#).
- If you are upgrading from ITSM 8.2.2 or earlier version and facing the issue with version unrelease, you must delete the catalog items for which you are facing issue.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 In the left pane, click **System Applications > All Available Applications > All**.
- 3 Search for the **VMware vRealize Automation ITSM Application 8.4**.
- 4 Select version 8.4 and click **Update**.
- 5 Select the **Load Demo Data** check-box and click **Update**.

The VMware vRealize Automation for ServiceNow ITSM application version is updated to 8.4.

After the update, all scheduled jobs are moved into the active state. If they do not activate automatically, you can activate them manually.

Note The Service Portal is available as a default portal to view all the catalog items and all the existing entitlements for catalog items and day-2 actions for the users will be converted into user criteria.

- 6 Provide the required access for the `question_choice` table. See [Enable Application Access](#).

Note From the version 8.2.2 of VMware vRealize Automation for ServiceNow ITSM application, the **ITIL** role is not required.

- 7 Delete all the day-2 actions and inactive the associated catalog items:
 - a In the left pane, click **System definition > Fix Scripts** .
 - b On the **Fix Scripts** page, search for **vRA-delete Day2Action Record**.
 - c Open the **vRA-delete Day2Action Record** script.
 - d Uncomment the script code.
 - e Click **Run Fix Script** then click **Proceed** to run the script.

This script deletes all the day-2 actions and inactivates the associated catalog items. Depending upon the number of day-2 actions and catalog items, this operation can take some time.

- f Comment the script code and click **Update**.
- 8 Run the schedule jobs:
 - a In the left pane, click **vRealize Automation > Job Schedules**.
 - b Activate all the schedules jobs.
 - c Run the **vRA Import Project** scheduled jobs.
 - d Run the **vRA Import Resources and CMDB** job.

Updating the Workspace View

The ServiceNow default Workspace view is set to Global but when you installed the ITSM 8.x application, the Workspace view gets overwritten. This is an issue with the ServiceNow platform. To fix this issue, the ServiceNow system administrator requires to perform steps provided in this section. This section is applicable when you are upgrading the VMware vRealize Automation ITSM Application for ServiceNow from 8.3 or earlier versions.

Prerequisites

- You must be the system administrator in ServiceNow.
- You must have a setup that has the Global workspace view available.

Procedure

- 1 Log in to the another ServiceNow instance where the Global workspace view is available.
- 2 Capture the Global workspace view in an Update Set.
- 3 Log in to the ServiceNow as a System Administrator on the instance where vRealize Automation for ServiceNow ITSM is installed.
- 4 Commit the Update Set created in previous step.
- 5 If required, from the Forms Related lists, delete the **x_vmw_cloudservice_machines** view.

Configuration of the VMware vRealize Automation for ServiceNow ITSM Application

5

After the VMware vRealize Automation for ServiceNow ITSM application is installed, the system administrator is required to carry out the configuration steps described in this chapter.

This chapter includes the following topics:

- [Managing the ServiceNow Users](#)
- [Configuration in the vRealize Automation on-premise Version](#)
- [Register with the vRealize Automation on-premise Version](#)

Managing the ServiceNow Users

In the VMware vRealize Automation for ServiceNow ITSM application, the system administrator must set up the groups, set up the users, and complete other required configuration tasks.

Setting Up the Users

Set up the ServiceNow users to manage the VMware vRealize Automation for ServiceNow ITSM application configuration and the end users to use the VMware vRealize Automation User Portal and Service Portal. If the VMware vRealize Automation for ServiceNow ITSM application is previously configured on your ServiceNow, then you can skip this section.

Prerequisites

You must be the system administrator in the ServiceNow.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 In the left pane, click **System Security > Users and Groups > Users**.
- 3 Click **New**.
- 4 Complete the new user form.

Note It is important to set up the users in both VMware vRealize Automation for ServiceNow ITSM application and VMware vRealize Automation with the same email address to assign the ownership of deployments and resources.

- 5 Click **Submit** to create the user.
- 6 Repeat steps 3 to 5 to set up additional users.

Adding the ServiceNow User Roles

For the VMware vRealize Automation for ServiceNow ITSM application, the system administrator is required to create two types of users.

- vRA ITSM 8.4 application admin user
- vRA ITSM 8.4 application end user

The categorization of users is achieved by assigning the required roles to each user. For the VMware vRealize Automation for ServiceNow ITSM application, the **ITIL** role is not required.

Table 5-1. Users and Required Roles

| User | Description | Required Roles |
|--|---|---|
| vRA ITSM 8.4 application admin-user | Responsible for all administrative tasks including application configuration, end-point registration, user entitlement management, and so on. | <ul style="list-style-type: none"> ■ catalog_admin ■ agent_admin ■ x_vmw_cloudservice.vra_catalog_admin ■ x_vmw_cloudservice.vra_end_user ■ cmdb_read |
| vRA ITSM 8.4 application end user | Uses the VMware vRealize Automation Service Portal or User Portal in ServiceNow. | <ul style="list-style-type: none"> ■ x_vmw_cloudservice.vra_end_user ■ cmdb_read |
| vRA ITSM 8.4 application approver user | Approves or rejects the catalog item requests. | <ul style="list-style-type: none"> ■ x_vmw_cloudservice.vra_end_user ■ cmdb_read ■ approver_user |

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 In the left pane, click **System Security > Users and Groups > Users**.
- 3 Select the user and open the user record.
- 4 In the **Roles** tab, click **edit**.
- 5 Refer to the [Table 5-1. Users and Required Roles](#) table and add the roles for the users from the **Collection List** and move the role to the **Roles List**.

Note For the VMware vRealize Automation for ServiceNow ITSM application, the **ITIL** role is not required.

- 6 Click **Save** to assign the role.
- 7 Click **Update** to save the user record.

- 8 Repeat steps from 2 to 6 for each user to assign roles.

Setting Up ServiceNow Groups

The ServiceNow system administrator can add users to the approval and support group. Users in the approval group are responsible for approving or rejecting the deployment requests made by the users. The incidents created on the failure of the catalog request submissions are assigned to users of the support group.

Prerequisites

You must be the system administrator in the ServiceNow.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 In the left pane, click **System Security > Users and Groups > Users**.
- 3 Select the user and open the user record.
- 4 In the **Groups** tab, click **edit**.
- 5 From the **Collection list**:
 - a To add user to the approval group, select the **vRealizeAutomation-ApprovalGroup** and move it to the **Groups List**.
 - b To add user to the support group, select the **vRealizeAutomation-SupportGroup** and move it to the **Groups List**.
- 6 Click **Save** to add the user to the selected group.
- 7 Click **Update**.

The user is added to the selected group.
- 8 Repeat steps from 2 to 6 to add more users to the required group.

Note If you do not add any users to the approval group, the requests get auto approved.

Configuration in the vRealize Automation on-premise Version

You must set up an administrative user in the vRealize Automation. The VMware vRealize Automation for ServiceNow ITSM application connects to the vRealize Automation using the credentials of this user.

This user must have these roles in the vRealize Automation on-premise version, but does not require a role in ServiceNow:

- Project Administrator
- Service Broker Administrator

- Organization Owner

To assign these roles, see [VMware vRealize Automation Documentation](#).

Note

- All catalog item requests from the ServiceNow are serviced by this user in the vRealize Automation. In the vRealize Automation, the requests and corresponding deployments display this user as the owner. However, in the ServiceNow, requests, and corresponding deployments display the ServiceNow user who initiated the request. This is achieved by correlating the email address from the user records across two systems.
- You must add the integration user to each project as a project admin to use the project in vRealize Automation for ServiceNow ITSM application.

Create Day 2 Policies

Create a day-2 action policy for the integration user. The integration user must be added to the deployment criteria using the created by condition to limit the policy to integration user. This policy can be used to limit the day-2 actions for the integration user.

To create policies, see [VMware vRealize Automation Documentation](#).

Note Use the Deployment Criteria option to limit the day-2 actions for the integration user.

Verify Email Address Mapping

The vRealize Automation and ServiceNow can have different Authentication Providers. It is important to set up the users in both systems with the same email address.

The correlation is required to assign the ownership of the deployments and resources.

Register with the vRealize Automation on-premise Version

To establish the connection between the vRealize Automation and the VMware vRealize Automation for ServiceNow ITSM application, the ServiceNow system administrator or application administrator must register the ITSM application to a vRealize Automation instance. To register the vRealize Automation for ServiceNow ITSM application with vRealize Automation on-premise, a MID server is required and its status must be Up and Validated.

Prerequisites

- You must be the system administrator or ITSM application admin in ServiceNow.
- MID Server must be configured and its status must be Up and Validated.

Procedure

- 1 Log in to ServiceNow as a system administrator or ITSM application admin user.
- 2 From the left pane, go to **Manage Endpoints > New**.

- 3 From the **Endpoint Type** drop-down menu, select **vRealize Automation (vRA)**.
- 4 Enter the details of your vRealize Automation instance.

| Field | Description |
|-------------------|---|
| Name | Name for the vRealize Automation instance. |
| MID Server | Name of the MID Server that you created for use with vRealize Automation. |
| Host Url | URL address for the vRealize Automation appliance. |
| Username | User name as configured in the vRealize Automation. |
| Password | User password. |
| Active | Import jobs run only if the Active box is checked. |

- 5 Click **Save and Import** to register and import the vRealize Automation on-premise data in the vRealize Automation for ServiceNow ITSM application.
- 6 Repeat steps from 2 to 5 to register additional vRealize Automation cloud endpoints.

Note If an endpoint is deactivated and reactivated again, then run the scheduled jobs again to reimport. Else, the user cannot perform any day 2 actions. See [Configure and Run Import Jobs](#).

Quebec Support

From the ServiceNow Quebec release, the ServiceNow has enhanced security with the TLS MID Server certificate check policies. If the vRealize Automation on-premise version has an untrusted certificated connection, the connection will be refused. This procedure modifies the TLS MID Server certificate check policies and disables the check for untrusted certificates to connect them insecurely.

For security considerations and detailed information, refer to the [MID Server TLS or SSL certificate check policy Quebec upgrade](#) information.

Configuration for ServiceNow Quebec Release

This procedure modifies the TLS MID Server certificate check policies and disables the check for untrusted certificates to connect them insecurely. You do not need to perform steps provided in this section if the endpoint has CA signed certificate.

Prerequisites

You must be the system administrator in ServiceNow.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 In the left pane, search for **MID security policy**.
- 3 In the Intranet record, set the **Certificate Chain Check** to **false**.

- 4 Register the vRealize Automation on-premises from the Manage Endpoint. See [Register with the vRealize Automation on-premise Version](#).

Configuring and Using the Service Portal

6

From the VMware vRealize Automation for ServiceNow ITSM application version 8.3, the Service Portal is available as a default portal for deployment. You can use the Service Portal to view Service Catalog, deployment, and resources. You can also perform various day-2 actions on associated deployments and resources. The ServiceNow users can either work on Service Portal or User Portal at a time.

To configure the User Portal, see [Configure the User Portal](#).

This chapter includes the following topics:

- [Create the User Criteria for Service Portal](#)
- [Setting Up the Service Portal Prefix](#)
- [Configuring the Deployment Widget](#)
- [Using the Service Portal](#)
- [Reconfiguring the Service Portal](#)

Create the User Criteria for Service Portal

The user criteria control the accessibility of categories and catalog items in the Service Catalog. The ServiceNow system administrator can create user criteria for the Service Portal in the VMware vRealize Automation for ServiceNow ITSM application scope.

- You must create entitlement using the user criteria. To create the user criteria records in the Service Catalog, see [Create User Criteria Record](#).
- To assign the user criteria to catalog items and projects in the Service Catalog, see [Apply User Criteria to Items and Categories](#).

Note You must have `x_vmw_cloudservice.vra_end_user` to access catalog items on Service portal or Native UI in the VMware vRealize Automation for ServiceNow ITSM application.

Setting Up the Service Portal Prefix

The ServiceNow system administrator must ensure that the Service Portal prefix value in their instance is the same as the prefix value in the `x_vmw_cloudservice.servicePortalPrefix` system property.

Prerequisites

You must be the ServiceNow system administrator.

Procedure

- 1 Log in to the ServiceNow as a system administrator.
- 2 From the left pane, click **vRealize Automation > System Properties**.
- 3 In **Search**, search for `x_vmw_cloudservice.servicePortalPrefix`.
- 4 In the **Value** text box, enter your Service Portal prefix.
The default value is **sp**.
- 5 Click **Update**.

Configuring the Deployment Widget

To view the VMware vRealize Automation deployments on the Service Portal, the ServiceNow system administrator must add the VMware vRealize Automation deployment widget on a Service Portal page.

Prerequisites

- You must be the system administrator in the ServiceNow.
- The application scope must set to Global.
- The VMware vRealize Automation for ServiceNow ITSM plug-in Service Portal Prefix value must be same as the Service Portal prefix value on your instance. See [Setting Up the Service Portal Prefix](#).

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 In the left pane, click **Service Portal > Service Portal Configuration**.
- 3 Click **Designer**.
The Service Portal Designer page opens with a list of all the available pages.
- 4 Search for **index**, and then open the Service Portal page.
- 5 Select the required column to insert the widget.
- 6 On the top right, click the **Edit**.

7 Ensure that the minimum width size for the column is as follows:

| Screen | Size |
|--------|------|
| xs | 12 |
| sm | 12 |
| md | 6 |
| lg | 6 |

8 Click **Save**.

9 On the left pane, in the **Filter Widgets** text box, search for **CAS_SP_deployments**.

10 Drag and drop the widget to the column.

If the VMware vRealize Automation for ServiceNow ITSM application is registered and VMware vRealize Automation required roles are assigned, the VMware vRealize Automation deployments will display. See [Adding the ServiceNow User Roles](#).

The **vRA Deployments** widget display on the Service Portal home page with the five most recent deployment with their status.

Add the View and Modify Resource Widget on the Request Summary Page

The View and Modify Resource widget adds a button to the Request Summary page to allows users to go back to the deployment details page.

Prerequisites

- You must be the system administrator in the ServiceNow.
- The application scope must set to Global.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 In the left pane, click **Service Portal > Service Portal Configuration**.
- 3 Click **Designer**.

The Service Portal Designer page opens with a list of all the available pages.

- 4 In **Search**, search for **order_status**.
- 5 Select and open the **Request Summary** page.
- 6 Select the bottom column to insert the widget.

Note If an an empty column is not available then, you can insert a new column.

7 On the left pane, in the **Filter Widgets** text box, search for **CAS_SP_returnToDeployment**.

- 8 Drag and drop the widget to the column.

The View and modify resources widget is added to the **Request Summary** page.

Configuring the Deployment Counts in the Deployment List

The ServiceNow system administrator or the application admin can configure the number of deployment should display on a single page in the Deployment List widget. By default, users can view 20 deployments on one page.

Prerequisites

You must be the system administrator or ITSM application admin in ServiceNow.

Procedure

- 1 Log in to the ServiceNow as a system administrator or ITSM application admin.
- 2 From the left pane, go to **vRealize Automation > System Properties**.
- 3 In **Search**, search for `x_vmw_cloudservice.deploymentWindowSize`.
- 4 In the **Value** field, enter the number of deployment you want to appear in the Deployment List widget.

The entered number of deployment displays on a single page in the **Deployment List** widget.

- 5 Click **Update**.

Configure the Deployment Counts in the Deployments Widget

By default, users can view five deployments in the Deployments widget on Service Portal. The ServiceNow system administrator or the application admin can configure the number of deployment entries should display in the Deployments widget.

Prerequisites

You must be the system administrator or application admin in ServiceNow.

Procedure

- 1 Log in to the ServiceNow as a system administrator or ITSM application admin.
- 2 From the left pane, go to **vRealize Automation > System Properties**.
- 3 In **Search**, search for `x_vmw_cloudservice.DeploymentLimit`.
- 4 In **Value**, enter the desired number.

The entered number of deployment will display in the **Deployments** widget.

- 5 Click **Update**.

Using the Service Portal

This chapter describes how to use the Service Portal for the VMware vRealize Automation for ServiceNow ITSM application.

Viewing the Deployments

The Deployment List page displays the list of deployments entitled to the user. Users can view the status of the deployments they own. From the Deployment List page, the user can view the deployment status, expiry date, number of resources associated with deployment, a project associated with the deployment, owner, and so on.

Prerequisites

- You must have the required roles assigned to view the Service Portal. See [Adding the ServiceNow User Roles](#).
- The Deployment widget must be added. See [Configuring the Deployment Widget](#).

Procedure

- 1 Log in to the ServiceNow portal.
- 2 From the left pane, go to **Service Portal > Service Portal Home**.
- 3 On the **Deployments** widget, click **View All**.

The **Deployment List** page opens with a list of all the available deployments.

- 4 Click the desired deployment to view the deployment details.

On the Deployment List page, you can search deployment using the search bar only for the following fields:

- Name
- Status
- Description
- Project
- Endpoint

Deployment Actions

You can perform actions that are associated with deployments and entitled to a user. You can perform one action at a time. If any deployment action is in progress, then a progress bar appears, and all the other day-2 actions are hidden until the in-progress action complete. The progress bar shows the status of in-progress action.

Prerequisites

You must have the required roles to view the vRealize Automation catalog items on Service Portal. See [Adding the ServiceNow User Roles](#).

Procedure

- 1 Log in to the ServiceNow portal.
- 2 From the left pane, go to **Service Portal > Service Portal Home**.
- 3 On the **vRA Deployments** widget, click **View All**.

The **Deployment List** page opens with a list of all the available deployments.

- 4 You can perform deployment action using one of the following methods:
 - From the **Deployments List** page: Click the three dots before the desired deployment name and select the action.
 - From the **Deployment details** page:
 - a Select the desired deployment.
 - b On the deployment header, from the **Actions** drop-down, select the required deployment action.
- 5 If the approval group is configured, the request will send for approval, and the status is updated to Request Approval.

Note If the approval group is not configured or the users are not added to the approval group the request will get auto-approved. The vRealize Automation for ServiceNow ITSM application submits the request on the vRealize Automation instance.

Resource Actions

From the Deployments details page, you can view the details of resources. You can view the resource properties including, custom properties, network information, general properties, owner information, routes, and storage information. You can also perform all the entitled resource actions.

Prerequisites

You must have the required roles to view the vRealize Automation catalog items on Service Portal. See [Adding the ServiceNow User Roles](#).

Procedure

- 1 Log in to the ServiceNow portal.
- 2 From the left pane, go to **Service Portal > Service Portal Home**.
- 3 On the **vRA Deployments** widget, click **View All**.

The **Deployment List** page opens with a list of all the available deployments.

- 4 Click the desired deployment to view the deployment details.
- 5 On the **Resources** pane, search and select the desired resource to view the details.
- 6 Click the **Actions** drop-down button next to the resource name and select the required resource action.

If the approval group is configured, the request will send for approval, and the status is updated to Request Approval.

Note If the approval group is not configured or the users are not added to the approval group the request will get auto-approved. The vRealize Automation for ServiceNow ITSM application submits the request on the vRealize Automation instance.

Reconfiguring the Service Portal

If the ServiceNow service administrator has configured the User Portal they can go back to Service Portal.

Prerequisites

You must be either the ServiceNow system administrator or application admin.

Procedure

- 1 Log in to the ServiceNow as a system administrator or application admin.
- 2 From the left pane, go to **vRealize Automation > System Properties:**
- 3 Set the Service Portal property to true:
 - a In **Search**, search for `x_vmw_cloudservice.vRA Servicenow UI`.
 - b Set the **Value** to true.
 - c Click **Update**.
- 4 Update the parent category `sys_id`:
 - a In the left pane, search for `sc_category.list`.
 - b Right-click on required category and select **Copy sys_id**.
 - c From the left pane, go to **vRealize Automation > System Properties:**
 - d In **Search**, search for `x_vmw_cloudservice.vra_parent_category`.
 - e Open the record and in **Value**, delete the existing value, and paste the `sys_id` copied in the previous step.
 - f Click **Update**.
- 5 Add the Service Catalog Sys ID:
 - a In the left pane, search for `sc_catalog.list`.
 - b Right-click on Service Catalog and select **Copy sys_id**.

- c From the left pane, go to **vRealize Automation > System Properties:**
 - d In **Search**, search for `x_vmw_cloudservice.cas_catalog_sysid`.
 - e Open the record and in **Value**, delete the existing value, and paste the `sys_id` copied in the previous step.
 - f Click **Update**.
- 6 Run the scheduled job:
- a From the left pane, go to **vRealize Automation > Job Schedules**.
 - b Run the **vRA Import Project** scheduled jobs.

Configuring and Using the Service Catalog on Native UI

7

From the VMware vRealize Automation for ServiceNow ITSM application version 8.3, you can configure the Service Catalog on the Native UI.

This chapter includes the following topics:

- [Configuring the Service Catalog on Native UI](#)
- [Using the Service Catalog](#)

Configuring the Service Catalog on Native UI

The system administrator can create Service Catalog for catalog items to use the Native UI for the vRealize Automation for ServiceNow ITSM application.

Prerequisites

You must be the ServiceNow system administrator.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 Go to **Self Service > Service Catalog**.
- 3 Click the plus (+) icon.
- 4 Search for **vRA Items** category for vRealize Automation Catalog items and click **Add here**.
- 5 Search for **vRA Actions** category for deployment and resource day 2 actions and click **Add here**.

Using the Service Catalog

This chapter describes how to use the Service Catalog for the VMware vRealize Automation for ServiceNow ITSM application.

Viewing and Requesting the Catalog Items

The vRA Items page displays the list of catalog items entitled to the user. User can create request for catalog items.

Prerequisites

You must have the required roles assigned to view the Service Portal. See [Adding the ServiceNow User Roles](#).

Procedure

- 1 Log in to the ServiceNow.
- 2 Go to **Self Service > Service Catalog**.
- 3 Click **vRA Items**.

The vRA Items page opens with a list of all the available vRA Projects.

- 4 Click the desired Project to view the catalog items.
- 5 Select the required catalog item to request.
- 6 Fill all mandatory fields and click **Order Now**.

Performing the Actions

From the vRA Actions page you can perform deployment and machine actions entitled to you.

Prerequisites

You must have the required roles assigned to view the Service Portal. See [Adding the ServiceNow User Roles](#).

Procedure

- 1 Log in to the ServiceNow.
- 2 Go to **Self Service > Service Catalog**.
- 3 Click **vRA Actions**.

The vRA Actions page opens with a list of all the available vRA Action.

- 4 Click the **Deployment Action**:
 - a Select the required deployment action.
The deployment action form appears.
 - b Fill all mandatory fields and click **Order Now**.
- 5 Click the **Resource Action**:
 - a Select the required resource action.
The resource action form appears.
 - b Fill all mandatory fields and click **Order Now**.

Note For best practice, it is recommended to perform only one action at a time.

Configuring and Using the User Portal



This chapter describes how to configure and use the VMware vRealize Automation for ServiceNow ITSM application User Portal.

If you switch from the Service Portal to the User Portal, the User Criteria does not get converted into entitlements. You must create the entitlements.

This chapter includes the following topics:

- [Configure the User Portal](#)
- [Create Entitlements](#)
- [Accessing the VMware vRealize Automation for ServiceNow ITSM Application User Portal](#)
- [System Overview](#)
- [Catalog](#)
- [Deployments](#)
- [Activities](#)

Configure the User Portal

From the VMware vRealize Automation for ServiceNow ITSM application version 8.3, the Service Portal will be available as a default portal. However, the ServiceNow system administrator or application admin can configure the User Portal for the VMware vRealize Automation for ServiceNow ITSM application.

Prerequisites

You must be the ServiceNow system administrator or application admin.

Procedure

- 1 Log in to ServiceNow as a system administrator or application admin.
- 2 From the left pane, go to **vRealize Automation > System Properties**:

- 3 Set the Service Portal property to false:
 - a In **Search**, search for `x_vmw_cloudservice.vRA Servicenow UI`.
 - b Set the **Value** to false.
 - c Click **Update**.
- 4 Delete the Parent category value:
 - a In **Search**, search for `x_vmw_cloudservice.vra_parent_category`.
 - b Open the record and in **Value**, delete the existing value.
 - c Click **Update**.
- 5 Add the VMware Cloud Automation Catalog Sys ID:
 - a In the left pane, search for `sc_catalog.list`.
 - b Right-click on VMware Cloud Automation Catalog and select **Copy sys_id**.
 - c From the left pane, go to **vRealize Automation > System Properties**:
 - d In **Search**, search for `x_vmw_cloudservice.cas_catalog_sysid`.
 - e Open the record and in **Value**, delete the existing value, and paste the `sys_id` copied in the previous step.
 - f Click **Update**.
- 6 Run the scheduled job:
 - a From the left pane, go to **vRealize Automation > Job Schedules**.
 - b Run the **vRA Import Project** scheduled jobs.

Create Entitlements

To use the User Portal, the system administrator or application admin is required to create entitlements for projects, catalog items, day-2 actions, and assign them to users.

Prerequisites

You must be the system administrator or application admin in ServiceNow.

Procedure

- 1 Log in to ServiceNow as a system administrator or application admin user.
- 2 From the left pane, go to **Manage Entitlements > New**.
- 3 Enter the details to create the entitlement.

| Field | Description |
|-------------|------------------------------|
| Name | Name for entitlement. |
| Description | Description for entitlement. |

| Field | Description |
|---------------------------|---|
| Endpoint | Endpoint to associate with the entitlement. |
| Projects | Click the lock icon to view the imported projects from vRealize Automation. Search for the desired projects, and then select the projects from the list. |
| Catalog items | Click the lock icon to view the catalog items associated with the selected projects. Search for the desired catalog items, and then select the catalog items from the list. |
| Deployment Actions | <p>Click the lock icon to view the deployment actions associated with the selected endpoint, and then select the desired deployment action from the list. The VMware vRealize Automation for ServiceNow ITSM application supports these deployment actions:</p> <ul style="list-style-type: none"> ■ Change Lease ■ Delete ■ Power on ■ Power off ■ Update |
| Machine Actions | <p>Click the lock icon to view the action that the user can perform on the virtual machine, and then select the desired action from the list. The VMware vRealize Automation for ServiceNow ITSM application supports these machine actions:</p> <ul style="list-style-type: none"> ■ Add Disk ■ Compute Relocate ■ Create Snapshot ■ Delete ■ Delete Snapshot ■ Power off ■ Power on ■ Reboot ■ Remove Disk ■ Reset ■ Resize ■ Resize Boot Disk ■ Resize Disk ■ Restart ■ Revert to Snapshot ■ Shutdown ■ Suspend |
| Entitled Users | Click the lock icon to view the list of users, and then search for the desired users to select. |

| Field | Description |
|-----------------|--|
| Entitled Groups | Select the user groups that should be entitled to see catalog items and day 2 actions on deployments and resources. |
| Active | Select to activate or Inactivate the entitlements. Note The Inactive entitlement does not display in the Service Portal and User Portal. The ServiceNow system administrator can view the catalog items and deployments irrespective of entitlements but action entitlement applies to the system administrator. |

- 4 Click **Submit** to create the entitlements.
- 5 Repeat steps from 2 to 4 to create additional entitlements.

Accessing the VMware vRealize Automation for ServiceNow ITSM Application User Portal

You can access the VMware vRealize Automation for ServiceNow ITSM application from the ServiceNow User Portal.

Prerequisites

You must have permission to access the VMware vRealize Automation for ServiceNow ITSM application User Portal in ServiceNow.

Procedure

- 1 Log in to the ServiceNow portal by using valid credentials.
- 2 From the left pane, go to **vRealize Automation > User Portal**.

The vRealize Automation ITSM User Portal opens in a new window.

System Overview

When you log in to the VMware vRealize Automation for ServiceNow ITSM application User Portal, you are redirected to the System Overview page.

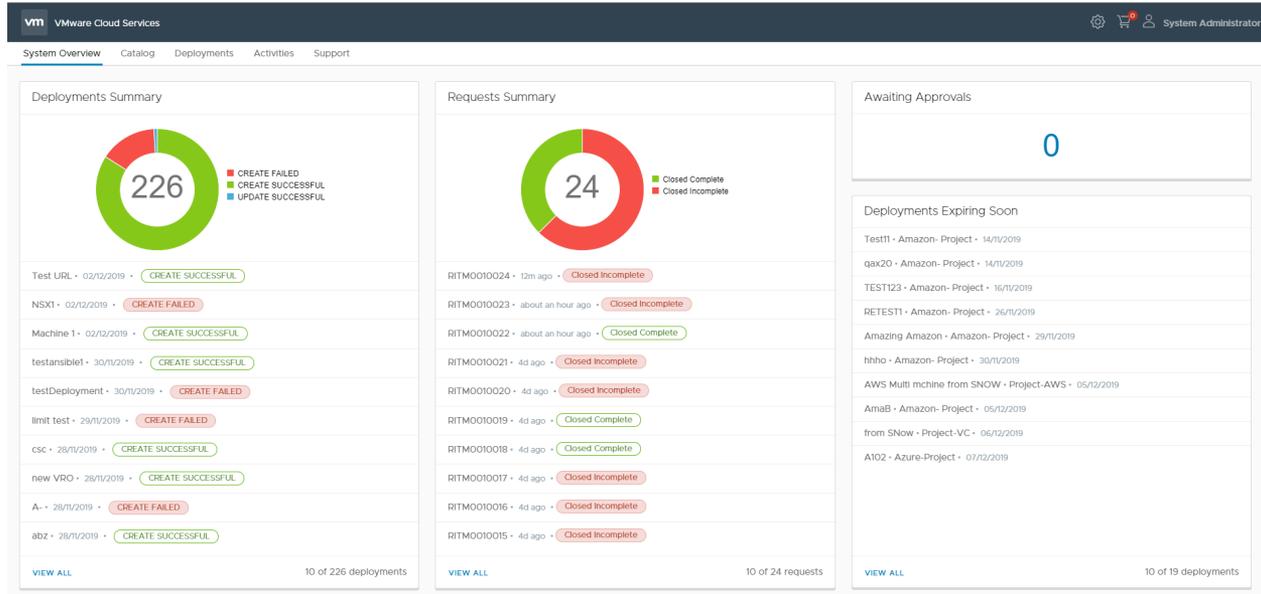
On the System Overview page, you can view a summary of all the actions performed by users including:

- **Deployments Summary:** Displays the deployment status, including failed deployment, created successful, update successful, and so on.
- **Requests Summary:** Displays the total number of requests created including the request status such as closed completed, closed incomplete, and so on.

- **Awaiting Approvals:** Displays the number of requests waiting for approval from the approval group.

Note Only the users of the approval group can view the Awaiting Approvals chart.

- **Deployments Expiring Soon:** Displays the top 10 deployments that expire soon and their deployment expiry date.



Catalog

On the Catalog page, you can view all the entitled catalog items. These catalog items are categorized into projects that can be viewed from the left pane. Users can view the entitled catalog items and projects. You can view the catalog items in either Grid View or List View. From the Catalog page, you can also create a request for the deployment of any entitled catalog item.

Procedure

- 1 Open the User Portal, see [Accessing the vRealize Automation ITSM Application User Portal](#).
- 2 Click **Catalog**.
A list of all the catalog items entitled to the user appears.
- 3 Search the desired catalog item, and then click **REQUEST**.

- 4 Complete the displayed request form, and then click **Submit**.

The request is sent to the Approval group if, any.

Note If the approval group is not configured in ServiceNow, the catalog request is directly submitted to the vRealize Automation instance and vRealize Automation starts working on the request. Until the deployment and related resource provisioning are completed in vRealize Automation, the status of the request in the User Portal appears as Open.

Deployments

The Deployments page displays the list of deployments entitled to the user. Users can view the status of the deployments they own and deployments that are shared with them.

From the Deployments page, the user can view the deployment status, expiry date, number of resources associated with deployment, a project associated with the deployment, deployment owner and so on.

You can view the deployments in either Grid View or List View. The user can also perform entitled deployment actions and share the deployments.

Note If multiple users is using the Catalog items or Deployments in different time zones, then the VMware vRealize Automation for ServiceNow ITSM application always displays the time zone set by the logged in user.

Deployment Details

From the Deployments page, you can view the details of deployment. You can view the deployment properties including deployment summary, expense, deployment owner information, and deployment history. You can also view the list of resources associated with the deployments and performs all the entitled deployment action.

Procedure

- 1 Open the User Portal, see [Accessing the vRealize Automation ITSM Application User Portal](#).

- 2 Click **Deployments**.

The list of all the entitled deployments appear.

- 3 In the **Name** column, click the deployment name.

The deployment details appear.

Resource Details

From the Deployments page, you can view the details of a resource. You can view the resource properties including custom properties, network information, general properties, owner information, routes, storage information, and action history. You can also perform all the entitled resource actions.

Procedure

1 Open the User Portal, see [Accessing the vRealize Automation ITSM Application User Portal](#).

2 Click **Deployments**.

The list of all the entitled deployments appear.

3 In the **Name** column, click the deployment name.

The deployment details appear.

4 In the **Resources** column, click the resource name.

The Resource details appear.

5 To view the deployment details back, click the deployment name.

Actions

You can perform actions that are associated with deployments and resources and entitled to a user.

You can perform one action at a time. If any deployment or resource action is in progress, then all the other user actions are dimmed until the current in-progress action is completed.

Deployment Actions

The entitled deployment actions are applicable for all the associated resources.

Procedure

1 Open the User Portal, see [Accessing the vRealize Automation ITSM Application User Portal](#).

2 Click **Deployments**.

The list of all the entitled deployments appear.

3 On the desired deployment:

a On the right side, from the **Actions** drop-down menu, select an action to perform on the deployment.

OR

b In the **Name** column, click the deployment name.

The deployment details appear.

c From the **Actions** drop-down menu, select an action to perform on the deployment.

To view the supported deployment actions, see [Chapter 10 Supported and Unsupported Functionality](#).

Resource Actions

The resource action is performed on the selected resource.

Procedure

1 Open the User Portal, see [Accessing the vRealize Automation ITSM Application User Portal](#).

2 Click **Deployments**.

The list of all the entitled deployments appear.

3 In the **Name** column, click the deployment name.

The deployment details appear.

4 In the **Resources** column, click the resource name.

The resource details appear.

5 In the **Resource Details** section, from the **Actions** drop-down menu, select an action to perform on the resource.

To view the supported resource actions, see [Chapter 10 Supported and Unsupported Functionality](#).

Activities

On the Activity page, you can view all the request activity and track the status of their requests.

The Activity page has three sections:

- **Requests:** Display the status of all the requests created by the logged in user. You can filter the requests using the Open, In Progress, Closed Complete, and Closed Incomplete status.

Note Users with the admin role can use **View my Activities** and **View All Activities** filters to view the requests.

- **Approvals:** Users with the admin role and users that are part of the approval group can view the requests that require approval, and they can either approve or reject the request.

- **Awaiting Approval:** Display the requests that are waiting for approval.

- **Rejected:** Display the rejected requests.

- **Approved:** Display the approved requests.

Note Users with the admin role can use **View my Activities** and **View All Activities** filters to view the approval requests.

- **Shared Resources:** Display the list of resources that are shared by and shared with the user.

Approve or Reject a Request

After the request is created and if the approval group is configured, the request is sent to the approval group for their approval. The members of the approval group can approve or reject the request and add their comments.

Procedure

- 1 Open the User Portal, see [Accessing the vRealize Automation ITSM Application User Portal](#).
- 2 Click **Activities**.
- 3 Click **Awaiting Approval** to view the list of requests that are waiting for approvals.
- 4 On the deployment request:
 - a If you are viewing the requests in the list view, then from the more icon selects one of these options to approve or reject the request.
 - **Approve:** If the request information is correct, provide your feedback in **Type your message here** text box, and then click **Approve**. The request is approved and the deployment proceeds.
 - **Reject:** If the requested information is incorrect, provide your feedback in **Type your message here** text box, and then click **Reject**. The request is rejected.

OR

- b Click the request name link to view the request details. Review the request information, and then select one of these options to approve or reject the request.
 - **Approve:** If the request information is correct, provide your feedback in **Type your message here** text box then click **Approve**. The request is approved and deployment proceeds.
 - **Reject:** If the requested information is incorrect, provide your feedback in **Type your message here** text box then click **Reject**. The request is Rejected.

Note It is mandatory to add comments while approving or rejecting the request.

Results

The request status is updated.

If the status is Approved, a request is submitted on the vRealize Automation instance and vRealize Automation starts working on the request. Until the deployment and related resource provisioning of the request is completed in vRealize Automation, the status of the request in the User Portal appears as Open/In Progress.

A request on the User Portal can have these statuses:

- **Create Successful:** The requested deployment is created successfully.
- **Create Failed:** The requested deployment is not created successfully.
- **Create In-progress:** The requested deployment is in progress.
- **Update Successful:** The requested deployment is updated successfully.

- **Update Failed:** The requested deployment update failed.

Note If the deployment is successfully deployed, on the Summary Overview tab, the Deployment Summary takes a fraction of time to update.

Share the Deployment

Deployment owners can share their deployment with other users. If the deployment is shared, all the associated resources are automatically shared with users.

Procedure

- 1 Open the User Portal, see [Accessing the vRealize Automation ITSM Application User Portal](#).

- 2 Click **Activities**.

The list of all requests appears.

- 3 From the left pane, go to **Shared Resources > New Share**.

The **New Share** window appears.

- 4 Complete new share form.

| Field | Description |
|-------------------|--|
| Name | Name for the shared deployment. |
| Description | Description for the shared deployment. |
| Deployments | Search for the desired deployments then select it to share. This is a mandatory field. |
| Share with users | Search for the desired users and select it to share the selected deployments and associated resources. |
| Share with groups | Search for the desired groups then select it to share the selected deployments and associated resources. |

Note It is mandatory to select either User or Group or both as deployments cannot be shared without users or groups.

- 5 Click **Create**.

The selected deployments and associated resources are shared with the selected users and groups.

Note You can also share the deployment and resource from the **Action** drop-down menu available on the **Deployments** page.

Advanced Configuration

9

The ServiceNow system administrators can configure the additional features to enhance the VMware vRealize Automation for ServiceNow ITSM application.

This chapter includes the following topics:

- [Enable the Two-Way Check-Out](#)
- [Configure and Run Import Jobs](#)
- [Email and Ticketing Properties](#)
- [System Properties](#)
- [Configure the Multi-Level Approval for Catalog Item Requests](#)
- [Configure the Multi-Level Approval for Day-2 Action Catalog Item Request](#)
- [Create Custom Workflow for Specific Catalog Items](#)

Enable the Two-Way Check-Out

Two-way check-out enables users to send multiple requests for catalog items at the same time.

Prerequisites

- You must be the ServiceNow system administrator.
- The scope must be selected as Global.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 In the left pane, click **Catalog Administration > Properties**.
The **Service Catalog Configuration** page appears.
- 3 On the **Cart** tab, use the slider and turn on **Use the two step catalog checkout model (default false)**.
The Two-way check-out is enabled.

Configure and Run Import Jobs

The Configure and Run Import Jobs section describes the jobs that are automatically scheduled at the time of installation. You can update the default schedule as required. You can also run these jobs manually (on-demand).

However, exercise caution while changing the default configuration or manually running the jobs as data corruption or loss can occur.

Caution Import jobs must configure and run in the order they appear in the following table. Manual (on-demand) execution of these jobs must also follow this order. Failure to follow this order can cause the data corruption or loss.

This table describes the import jobs.

| Scheduled Import Jobs | Description |
|-------------------------------|--|
| vRA Generate API Token | Generates an authentication token when vRealize Automation is registered. This job gets auto-updated based on the defined schedule. |
| vRA Import Project | Imports projects from vRealize Automation into ServiceNow as projects. |
| vRA Import Catalog | Imports catalog items from vRealize Automation into ServiceNow as catalog items. |
| vRA Import Resources and CMDB | Imports deployments and resources from vRealize Automation into ServiceNow so that users can view the resources they own on the portal. |
| vRA Delete Queue | Deletes the scheduled import queues that are older than the interval specified. |
| vRA Reconcile Actions | While importing the day-2 actions from the vRA, if any day-2 actions is removed from the vRA, then it will be removed from the ServiceNow. |

Email and Ticketing Properties

The ServiceNow system administrator or application admin can configure email notification properties and support tickets in the VMware vRealize Automation for ServiceNow ITSM application.

The system administrator or ITSM application admin can configure the email notification for these functionalities:

- **Manage Endpoint:** An email is sent to the users responsible to create, update, and delete the endpoint.
- **Manage Entitlement:** An email is sent to the users responsible to create, update, and delete the entitlement.

- Approval request: If all the email settings are configured, then:
 - An email is sent to both requester and approval group once the request is created.
 - An email is sent to requester if the submitted request is approved or rejected.
 - An email is sent to requester if more information is required by approval group.
- Deployment Requested Items (RITM) to vRA: If all the email settings are configured, then:
 - An email is sent to requester once the RITM is submitted.
 - If the approval group is configured, an email is sent to the approval group once the RITM is submitted.
 - An email is sent to requester if RITM is successful.
 - An email is sent to requester if RITM is failed and a support ticket is created.
- Day-2 actions: If all the email settings are configured, then:
 - An email is sent to requester if day-2 deployment or resource action is successful.
 - An email is sent to requester if day-2 deployment or resource action is failed and a support ticket is created.

The system administrator or ITSM application admin can configure the properties to create support tickets:

- A support ticket is created if a RITM request is failed.
- A support ticket is created if a day-2 deployment or resource action is failed.

Configure the Email and Ticketing Properties

The system administrator or ITSM application admin can configure the system properties for email notification and support tickets if there is a failure of day-2 action and RITM request.

Prerequisites

You must be the system administrator or ITSM application admin in ServiceNow.

Procedure

- 1 Log in to ServiceNow as a system administrator or ITSM application admin.
- 2 From the left pane, go to **vRealize Automation > Advanced > Email Properties**.

3 On the **vRealize Automation Email and Ticketing Properties** screen, select or deselect the boxes to configure these properties:

| Field | Default Values | Description |
|--|----------------|--|
| Trigger the email notifications on Manage Endpoints. | Yes | To receive emails updates from Manage Endpoints including create, update, and delete of endpoints. |
| Trigger the email notifications on Manage Entitlement. | No | To receive the emails updates form Entitlement including create, update, and delete of endpoints. Note Manage Entitlement option is only available for User Portal. For Service Portal, this property set to No. |
| Trigger the email notifications on Shared Resources. | Yes | To receive the email updates on resource sharing including create, update, and delete of endpoints. Note Resource Sharing option is only available for User Portal. For Service Portal, this property set to No. |
| Trigger the email notifications to group on approval request. | Yes | To send the email notification to approval group for the approval of request. |
| Trigger the email notifications on request approval. | No | To receive email notification if the approval group, approve the request. |
| Trigger the email notifications on reject of approval request. | Yes | To receive email notification if the approval group, reject the request. |
| Trigger the email notification when more details need to be provided on approval requests. | Yes | To receive email notification when approval group requests for more information. |
| Trigger the email notifications on the successful completion of catalog item requests. | Yes | To receive email notification on the successful completion of the catalog item request. |
| Trigger the email notifications on successful/failure of day-2 actions. | No | To receive email notification on the successful completion or failure of day 2 actions. |

| Field | Default Values | Description |
|---|----------------|---|
| Create the incident on the failure of catalog item submission on vRA. | Yes | To create an incident (support ticket) if a catalog request submission is failed on the vRealize Automation. |
| Create the incident on the failure of day-2 actions on vRA. | No | To create an incident (support ticket) if day-2 action is failed on the vRealize Automation environment. Note This option is only available for User Portal. For Service Portal, this property set to No. |

- 4 Click **Save** to configure.

Note

- To receive the Out-of-Box (OOB) emails and not the plug-in emails then disable the email properties for the VMware vRealize Automation for ServiceNow ITSM application. See [Configure the Email and Ticketing Properties](#).
- To receive plug-in emails and not the OOB emails then apply the appropriate conditions at the places where OOB emails are initiated.

System Properties

The system properties chapter contains most commonly used system properties in the VMware vRealize Automation for ServiceNow ITSM application.

Configure the Support Group for Request Failure Incidents

If a deployment request initiated from the ServiceNow fails in vRealize Automation or if a day-2 action fails, the vRealize Automation for ServiceNow ITSM application creates a support ticket and assigns it to the support group. The system administrator can configure the system properties for support groups.

Prerequisites

You must be the system administrator or application admin in ServiceNow.

Procedure

- 1 Log in to ServiceNow.
- 2 From the left pane, go to **vRealize Automation > System Properties**.
- 3 In **Search**, search for `x_vmw_cloudservice.support_group_for_ITSM_8.0`.
- 4 Open the record and in **Value**, enter the name of support group.

5 Click **Update**.

The support group is configured for selected properties.

Retriggering Time for Catalog Item Request if MID Server is Down

The system administrator and application admin can configure a retriggering time for catalog requests. The system uses the configured time to resend the catalog request when the MID server is down. The system resends the request until the request is successfully submitted to vRealize Automation.

Prerequisites

You must be the system administrator or application admin.

Procedure

- 1 Log in to ServiceNow as a system administrator or application admin.
- 2 From the left pane, go to **vRealize Automation > System Properties**.
- 3 In **Search**, search for `x_vmw_cloudservice.TimetoRe-TriggerCatalogRequest`.
- 4 Open the record and in **Value**, enter the time in minutes.
The default time is set to 60 minutes.
- 5 Click **Update**.

Cancel Time for Catalog Item Request if MID Server is Down

The ServiceNow system administrator and application admin can define a cancel time for catalog requests when the mid-server is down. It declines the catalog requests if, the request is not submitted to vRealize Automation before the defined cancel time.

Prerequisites

You must be the system administrator or application admin.

Procedure

- 1 Log in to ServiceNow as a system administrator or application admin.
- 2 From the left pane, go to **vRealize Automation > System Properties**.
- 3 In **Search**, search for `x_vmw_cloudservice.cancelCatalogRequest`.
- 4 Open the record and in **Value**, enter the time in hours.
The default time is set to 48 hours.
- 5 Click **Update**.

Re-triggering Time for Catalog Item Request Status Check

The ServiceNow system administrator and application admin can configure a time to automatically check the catalog request status. Once the catalog request is submitted to vRealize Automation, the system uses this configured time to automatically check the request status then update the status accordingly.

Prerequisites

You must be the system administrator or application admin.

Procedure

- 1 Log in to ServiceNow as a system administrator or application admin.
- 2 From the left pane, go to **vRealize Automation > System Properties**.
- 3 In **Search**, search for `x_vmw_cloudservice.vRACSTimerToCheckRequestStatus`.
- 4 Open the record and in **Value**, enter the time in seconds.
The default time is set to 60 seconds.
- 5 Click **Update**.

Cancel Time for Catalog Item Request Status Check

The ServiceNow system administrator and application admin can define an end time to stop verifying the requests status.

Prerequisites

You must be the system administrator or application admin.

Procedure

- 1 Log in to ServiceNow as a system administrator or application admin.
- 2 From the left pane, go to **vRealize Automation > System Properties**.
- 3 In **Search**, search for `x_vmw_cloudservice.vRACSTimeToCancelRequestWorkflow`.
- 4 Open the record and in **Value**, enter the time in seconds.
The default time is set to 1200 seconds.
- 5 Click **Update**.

Configure the Multi-Level Approval for Catalog Item Requests

The ServiceNow administrator can configure the multi-level approval for the ServiceNow catalog request.

Prerequisites

- You must be the system administrator in ServiceNow.
- The scope must be selected as the VMware vRealize Automation ITSM application.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 From the left pane, go to **Workflow > Workflow Editor**.
The Workflow Editor opens in the new browser tab.
- 3 Search for **vRA Approval SubWorkflow** then open the Workflow.
- 4 Check out the workflow to add more activities to sub-workflow.
- 5 From the **Core** tab, add the **Approval - Group** to the workflow.
- 6 In the **Approvers** section, select the groups.
- 7 Update the connecting arrows for **Accept** and **Reject**.
- 8 Click **Update**.
- 9 Click the **menu** icon and select **Publish** to save.
- 10 Repeat the steps to add more approval activities in the subworkflow.

Note

- By default, three approval activities are added in the subworkflow. Admin can add desired approval groups in these activities.
 - System administrator must add all the approval group names in the `x_vmw_cloudservice.vRealizeAutomation-ApprovalGroup` system property.
-

Configure the Multi-Level Approval for Day-2 Action Catalog Item Request

The ServiceNow administrator can configure the multi-level approval for the day-2 action.

Prerequisites

- You must be the system administrator in ServiceNow.
- The scope must be selected as the VMware vRealize Automation ITSM application.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 From the left pane, go to **Workflow > Workflow Editor**.
The Workflow Editor opens in the new browser tab.
- 3 Search for **vRA Day2 Action Approval SubWorkFlow** then open the Workflow.

- 4 Check out the workflow to add more activities to sub-workflow.
- 5 From the **Core** tab, add the **Approval - Group** to the workflow.
- 6 In the **Approvers** section, select the groups.
- 7 Update the connecting arrows for **Accept** and **Reject**.
- 8 Click **Update**.
- 9 Click the **menu** icon and select **Publish** to save.
- 10 Repeat the steps to add more approval activities in the subworkflow.

Note

- By default, three approval activities are added in the subworkflow. Admin can add desired approval groups in these activities.
 - System administrator must add all the approval group names in the `x_vmw_cloudservice.vRealizeAutomation-ApprovalGroup` system property.
-

Create Custom Workflow for Specific Catalog Items

By default, VMware vRealize Automation Request Workflow is assigned to each catalog item in the VMware vRealize Automation for ServiceNow ITSM application. The ServiceNow system administrator can create their custom workflow and assign it to catalog items.

Create a Sub-Workflow

The system administrator requires to create a sub-workflow. This workflow contains the approval group activity and approval group information.

Prerequisites

You must be the system administrator in the ServiceNow.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 From the left pane, go to **Administration > Workflow Editor**.
The Workflow Editor opens in the new browser tab.
- 3 Select and open the **vRA Approval SubWorkflow**.
- 4 Click the **menu** icon and select **Copy**.
- 5 On the **Workflow Name** dialogue box, enter the new workflow name, and then click **OK**.
The New workflow is created.

- 6 Configure the required workflow activity.

Note The result of sub-workflow should be either Approve or Reject.

- 7 Click the **menu** icon and select **Publish** to save.

Create a Main Workflow

The workflow created in this section is assigned to the catalog items.

Prerequisites

You must be the system administrator in the ServiceNow.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 From the left pane, go to **Administration > Workflow Editor**.
The Workflow Editor opens in the new browser tab.
- 3 Select and open the **vRealize Automation Request Workflow**.
- 4 Click the **menu** icon and select **Copy**.
- 5 On the **Workflow Name** dialogue box, enter the new workflow name, and then click **OK**.
The New workflow is created. After you have created the main workflow and sub-workflow, link the main workflow with subworkflow.
- 6 In the **Workflow Activity Properties** section, update the workflow created in [Create a Sub-Workflow](#).
- 7 Click **Update** to link.
- 8 Click the **menu** icon and select **Publish** to save.

Update the Approval Group System Property

In the `x_vmw_cloudservice.vRealizeAutomation-ApprovalGroup` system property has a default value as `vRealizeAutomation-ApprovalGroup`. The ServiceNow system administrator is required to update the approval group system property to add more approval groups used in the subworkflow.

Prerequisites

You must be the system administrator in the ServiceNow.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 From the left pane, go to **vRealize Automation > System Properties**.
- 3 Search for `x_vmw_cloudservice.vRealizeAutomation-ApprovalGroup`.

- 4 Open the system property and in **Value**, enter the approval group name.

Note Use the comma-separated values to add multiple approval groups.

- 5 Click **Update** to save.

Configure the Custom Sub-Workflow

The ServiceNow system administrator can update the existing vRA Approval Sub-Workflow with their custom workflow to send approvals to specific approval groups.

The ServiceNow system administrator can set conditions or criteria using javascript in ServiceNow to achieve the following type of context:

A custom workflow can be created to ensure that the requester belongs to either entitlement A or entitlement B or entitlement C. If the user is in entitlement A, the request must go to approval group A. If the user is in entitlement B, the request must go to approval group B. If the user is in entitlement C, the request must go to approval group C.

Prerequisites

You must be the ServiceNow system administrator.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 From the left pane, go to **Administration > Workflow Editor**.
The Workflow Editor opens in a new browser tab.
- 3 Search for **vRA Approval SubWorkflow** then open the Workflow.
- 4 Check out the workflow to add more approval group activities to subworkflow.
- 5 In the **Approval group activity** section, select the **Advance** check box.
- 6 On the **Additional groups script** box, add the appropriate conditions or criteria in javascript.

Note For this JavaScript code use Manage Entitlement table system name that is `x_vmw_cloudservice_cas_catalog_entitlement`.

- 7 Save and publish the workflow.

Update the System Property of the Workflow Activity

The ServiceNow system administrator requires to update the workflow turnstile activity `sys_ids` for the system properties, if the system administrator check out or publish the vRealize Automation Request Workflow.

Prerequisites

You must be the ServiceNow system administrator.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 From the left pane, go to **vRealize Automation > System Properties**.
- 3 In **Search**, search for `x_vmw_cloudservice.Request re-trigger turnstile activity sys_id`.
- 4 Update the **sys_id** and then click **Update** to save.

Note For more information on accessing the `sys_ids`, see [Access the Sys IDs](#).

- 5 In **Search**, search for `x_vmw_cloudservice.Request Iteration turnstile activity sys_id`.
- 6 Update the **sys_id** and then click **Update** to save.

Note For more information on accessing the `sys_ids`, see [Access the Sys IDs](#).

Access the Sys IDs

Each turnstile activity has a unique `sys_id` and a new turnstile activity is created when the system administrator updates the vRealize Automation Request Workflow. This section provides information to view the required `sys_ids` in the VMware vRealize Automation ITSM application.

Prerequisites

You must be the system administrator in ServiceNow.

Procedure

- 1 Log in to ServiceNow as a system administrator.
- 2 In the left pane search for **wf_activity.LIST**.
The Workflow activity window open in a new tab.
- 3 In the **Name** column, search for **Check for iterations**.
The list of available activities displays.
- 4 Select the activity for which **Published** is set to **True**.
- 5 Right-click on the activity and select **Copy sys_id**.
Note: Update this `sys_id` for `x_vmw_cloudservice.Request Iteration turnstile activity sys_id` system property. See [Update the System Property of the Workflow Activity](#).
- 6 In the **Name** column, search for **Check for Request re-trigger**.
The list of available activities displays.
- 7 Select the activity for which **Published** is set to **True**.

- 8 Right-click on the activity and select **Copy sys_id**.

Note: Update this sys_id for `x_vmw_cloudservice.Request re-trigger turnstile activity sys_id` system property. See [Update the System Property of the Workflow Activity](#).

Supported and Unsupported Functionality

10

This section provides information for supported and unsupported functionalities for the VMware vRealize Automation for ServiceNow ITSM application.

Catalog Item Support and Limitation

- Consolidate catalog items across multiple VMware vRealize Automation instances are supported.
- Catalog entitlement for User Portal is limited to one end point at a time.
- Approval group to approve or reject the deployment requests are supported.
- The VMware vRealize Automation for ServiceNow ITSM application supports the following input types in the blueprint design:
 - String
 - Integer
 - Number
 - Boolean
- The VMware vRealize Automation for ServiceNow ITSM application does not support the multi-value picker data type. When the Import catalog job runs, it skips the catalog items with the multi-value picker.
- The vRealize Automation for ServiceNow ITSM application supports the dependent field data types for text field, text area, and drop-down list.
- The data grid designed using YAML is not supported in the VMware vRealize Automation for ServiceNow ITSM application.
- The following types of data source for the dual list data type are supported:
 - Default and External source
 - Default and Constant

Note It is not supported to configure all the data sources together in a dual list data type.

- These vRealize Automation data types supports the following data types:

| Data Types | Part of vRO Workflow | External Source vRO Action | Placeholder | Hidden Fields (Visibility = No) |
|--------------------|----------------------|----------------------------|-------------|---------------------------------|
| Text area | ✓ | ✓ | ✓ | ✓ |
| Text field | ✓ | ✓ | ✓ | ✓ |
| Text | ✓ | ✗ | ✗ | ✓ |
| Password | ✓ | ✗ | ✗ | ✓ |
| Decimal | ✓ | ✓ | ✗ | ✓ |
| Integer | ✓ | ✓ | ✗ | ✓ |
| Drop down | ✓ | ✓ | ✓ | ✓ |
| Multi select | ✓ | ✓ | ✗ | ✓ |
| Dual list | ✓ | ✓ | ✗ | ✓ |
| Check box | ✗ | ✗ | ✗ | ✓ |
| Radio group | ✗ | ✗ | ✗ | ✓ |
| Data grid | ✗ | ✗ | ✗ | ✓ |
| Multi value picker | ✗ | ✗ | ✗ | ✗ |
| Value picker | ✓ | ✓ | ✗ | ✓ |
| Tree picker | ✗ | ✗ | ✗ | ✗ |
| Combo box | ✗ | ✗ | ✗ | ✗ |
| Date time | ✓ | ✓ | ✗ | ✓ |
| Link | ✗ | ✗ | ✗ | ✗ |
| File upload | ✗ | ✗ | ✗ | ✗ |
| Image | ✗ | ✗ | ✗ | ✗ |
| Object field | ✗ | ✗ | ✗ | ✗ |
| Array input | ✗ | ✗ | ✗ | ✗ |

Note The following types of vRealize Automation data types are not supported:

- Bind fields
 - Concatenate
 - Conditional value
 - Computed value
-
- These vRealize Automation data types supports the following data types for default values:

| Data Types | Constant | External Source |
|--------------------|----------|-----------------|
| Text area | ✓ | ✓ |
| Text field | ✓ | ✓ |
| Text | ✓ | ✗ |
| Password | ✓ | ✓ |
| Decimal | ✓ | ✓ |
| Integer | ✓ | ✓ |
| Drop down | ✓ | ✗ |
| Multi select | ✓ | ✗ |
| Dual list | ✓ | ✗ |
| Check box | ✓ | ✗ |
| Radio group | ✓ | ✗ |
| Data grid | ✓ | ✗ |
| Multi value picker | ✗ | ✗ |
| Value picker | ✓ | ✗ |
| Tree picker | ✗ | ✗ |
| Combo box | ✗ | ✗ |
| Date time | ✓ | ✓ |
| Link | ✗ | ✗ |
| File upload | ✗ | ✗ |
| Image | ✗ | ✗ |
| Object field | ✗ | ✗ |
| Array input | ✗ | ✗ |

- These vRealize Automation data types supports the following data types for Constraints:

| Data Types | Required | Regular Expression | Minimum Values | Maximum Values |
|------------|----------|--------------------|----------------|----------------|
| Text area | ✓ | ✓ | ✓ | ✓ |
| Text field | ✓ | ✓ | ✓ | ✓ |
| Text | ✗ | ✗ | ✗ | ✗ |
| Password | ✓ | ✓ | ✓ | ✓ |

| Data Types | Required | Regular Expression | Minimum Values | Maximum Values |
|--------------------|----------|--------------------|----------------|----------------|
| Decimal | ✓ | X | ✓ | ✓ |
| Integer | ✓ | X | ✓ | ✓ |
| Drop down | ✓ | X | X | X |
| Multi select | ✓ | X | ✓ | ✓ |
| Dual list | ✓ | X | ✓ | ✓ |
| Check box | ✓ | X | X | X |
| Radio group | X | X | X | X |
| Data grid | ✓ | X | X | X |
| Multi value picker | ✓ | X | X | X |
| Value picker | ✓ | X | X | X |
| Tree picker | X | X | X | X |
| Combo box | X | X | X | X |
| Date time | X | X | X | X |
| Link | X | X | X | X |
| File upload | X | X | X | X |
| Image | X | X | X | X |
| Object field | X | X | X | X |
| Array input | X | X | X | X |

- On the Service Portal, duplicate data type fields are displaying in the RITM if the catalog item have multiple versions.
- In the vRealize Automation for ServiceNow ITSM application, the stepwise increment option (stepper) is not supported for decimal and integer data type constraints.
- The vRealize Automation for ServiceNow ITSM application does not support the Text Element if fetched from External Source.
- Configurator data type is not supported in catalog items.

Day 2 Action Support and Limitation

- Sharing of the deployment and associated resource are supported only for the User Portal.
- Configuration of email notification for endpoint, entitlement, approval request, RITM request on vRealize Automation, day 2 actions, and resource sharing are available.

- A support ticket is created on the failure of catalog request submission and day 2 action on the vRealize Automation environment.
- After you have removed the disk from a machine, it takes time to reflect the same in the VMware vRealize Automation for ServiceNow ITSM application.
- These day 2 actions are available from the VMware vRealize Automation for ServiceNow ITSM application:

| Resource Actions | Deployment Actions |
|--------------------|--------------------|
| Add Disk | Change Lease |
| Compute Relocate | Delete |
| Create Snapshot | Power Off |
| Delete | Power On |
| Delete Snapshot | Update |
| Power Off | |
| Power On | |
| Reboot | |
| Remove Disk | |
| Reset | |
| Resize | |
| Resize Boot Disk | |
| Resize Disk | |
| Restart | |
| Revert to Snapshot | |
| Shutdown | |
| Suspend | |

- On the Puppet deployments, Run Puppet Task day 2 action is not supported.
- Custom Day-2 Actions and Custom Resources are supported.
- Custom Day-2 Action is supported for:
 - Built In Resources
 - Custom Resources
 - Form-based day-2 actions
 - Formless day-2 actions

- The vRealize Automation for ServiceNow ITSM application supports following data types for custom resources and custom day-2 actions:

| Data Types | Custom Resource | Custom Day-2 Actions | | |
|--------------|-----------------|----------------------|------------|----------------|
| | | Direct Binding | In Request | Binding Action |
| Text area | ✓ | ✓ | ✓ | ✗ |
| Text field | ✓ | ✓ | ✓ | ✗ |
| Text | ✓ | ✓ | ✓ | ✗ |
| Password | ✓ | ✗ | ✓ | ✗ |
| Decimal | ✓ | ✓ | ✓ | ✗ |
| Integer | ✓ | ✓ | ✓ | ✗ |
| Drop down | ✓ | ✓ | ✓ | ✗ |
| Multi select | ✓ | ✗ | ✗ | ✗ |
| Dual list | ✓ | ✗ | ✗ | ✗ |
| Check box | ✓ | ✓ | ✓ | ✗ |
| Radio group | ✓ | ✗ | ✗ | ✗ |
| Data grid | ✓ | ✗ | ✗ | ✗ |
| Value picker | ✓ | ✓ | ✓ | ✗ |
| Date time | ✓ | ✗ | ✗ | ✗ |

- The vRealize Automation for ServiceNow ITSM application does not support multi tab option for custom day-2 actions.
- The vRealize Automation for ServiceNow ITSM application does not support the Update day 2 action for Custom Resources.

Catalog Items with vRO Workflows Supported and Limitation

- VMware vSphere[®], Amazon Web Services[™] (AWS), Google Cloud Platform[™], and Microsoft[®] Azure[®] blueprints are supported.

Other Supported Functionality and Limitation

- Defining the permissions for Admin, Catalog Admin, and User are supported.
- Reconciliation of CMDB to keep the CI item updated is supported.

- ServiceNow users are not able to view deployments. Ensure that the user is using the email address as username in the vRealize Automation and it must be same as the email address of the user in ServiceNow.
- The VMware vRealize Automation for ServiceNow ITSM application tested on the following web-browsers and versions:

| Web Browser | Minimum Supported Version |
|-----------------|---------------------------|
| Google Chrome | 90.0.4430.93 |
| Microsoft Edge | 91.0.864.41 |
| Mozilla Firefox | 89.0 |

Known Issues

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The following issues are known in the VMware vRealize Automation for ServiceNow ITSM application:

- Junk sys_id: In the VMware vRealize Automation for ServiceNow ITSM application, when a catalog item or project is deleted, if the deleted catalog item or project is part of a defined entitlement, then these deleted records are seen as junk values in the entitlement record.
- The VMware vRealize Automation for ServiceNow ITSM application displays Boolean type fields as check boxes in catalog items.
- If there are multiple catalog items with the same name, then the VMware vRealize Automation for ServiceNow ITSM application displays the latest created catalog item and earlier created catalog items are removed.
- While deleting an endpoint make sure that data is in the VMware application scope. If not, an error message displays for the cross scope data deletion post endpoint is deleted and data is removed successfully .
- For custom forms, field properties such as, Match field is not supported in the Constraints.
- For custom forms, field properties such as, Hide or Unhide field based on another field value is not supported.
- Minimum and maximum validation is not supported for multi-select and dual list data types in the ServiceNow.
- When a shared resource is stop being shared, the UI of unshared resource becomes distorted. Reload the page to resolve this.
- Catalog items designed using YAML is not supported in the VMware vRealize Automation for ServiceNow ITSM application.
- Depending upon the number of fields in the catalog form, it may take more time to load the catalog form with available values as loader functionality is not available in the Native UI.
- In the VMware vRealize Automation, if a blueprint is having a property group or property definition defined in the input, then the same blueprint will fail in the ServiceNow.
- For the Service Portal and Native UI, the placeholder functionality is not supported.
- For the Service Portal and Native UI, the RITM displays extra fields that are not part of the request form.

- In the vRealize Automation for ServiceNow ITSM application, the dependent fields having minimum and maximum values with the VMware vRealize Automation action is not supported.
- For Native UI, password data type does not support the Minimum and Maximum values.
- The vRealize Automation Configure Items over the catalog items does not supported in the the vRealize Automation for ServiceNow ITSM 8.4 application.
- If you have created following fields in the vRealize Automation then while performing the import in the ServiceNow these fields will not be created:
 - deploymentName
 - description
 - project
- For the User Portal, if any catalog item has a dot in their versions then the catalog item will not fetch the dependent drop-down values.
- In the ServiceNow Qubec release, the catalog item requests having a password field is getting failed. This issue occurs as in the custom scoped application, the ITSM application is unable to use `getDecryptedValue()` for masked variable in catalog item. This is a ServiceNow known issue for Qubec release.
- In the Native UI, if a day-2 action catalog item contains the check-box or label fields then the ServiceNow displays the cross-scope info messages while loading the day-2 catalog items. This is a ServiceNow known issue.
- On the Service Portal, in the deployments page, the 3-dots are overlapping with the deployment icons in the Google Chrome version 91.0. This is an browser issue.

The troubleshooting topics provide solutions to potential problems that you might encounter when using your VMware vRealize Automation for ServiceNow ITSM application.

This chapter includes the following topics:

- [Unable to perform Day-2 Action](#)
- [Complete Hover Message or Field Name is not Displayed](#)
- [Deployments and Resources are not displayed](#)
- [ServiceNow Users are not able to View Deployments](#)
- [Catalog Item Request Form is either Blank or Duplicate Entries are Displayed](#)
- [Duplicate Resources are displaying in VMware vRealize Automation ITSM 8.2 or later](#)
- [Tool Tip message is getting truncated](#)

Unable to perform Day-2 Action

ServiceNow users are not able to perform day-2 actions.

Problem

From the deployment and resource actions, ServiceNow users are not able to perform day-2 operations.

Cause

The registered endpoint is activated after deactivation in ServiceNow.

Solution

Run the import jobs for the deployment and resources. See [Configure and Run Import Jobs](#).

Complete Hover Message or Field Name is not Displayed

Large hover message or field names are getting truncated.

Problem

Not able to see full value of translated text and Question text.

Cause

By default field length of the `translated_text` and `question_text` is 250 and 255 respectively. If the length is greater than desired length, the field length will be truncated.

Solution

The ServiceNow system administrator must increase the field length for `translated_text` and `question_choice`. You must import the catalog items again after updating the length.

Deployments and Resources are not displayed

The deployments and resources are not visible in the ServiceNow.

Problem

Deployments and resources are not displayed on the ServiceNow.

Cause

Either the CMDB plug-in is not activated or the Data source choice is not created.

Solution

Ensure that the CMDB plug-in is installed and the Data Source Choice table is created. See [Install the Configuration Management for Scoped Apps plug-in](#) and [Create a Data Source Choice in ServiceNow](#).

ServiceNow Users are not able to View Deployments

Deployments and resources owner is not able to view their deployments and resources

Problem

ServiceNow end user not able to view their deployments and resources.

Cause

User name and email id of user is not same in vRA.

Solution

Ensure that the user is using the email address as user name in the vRealize Automation and it must be same as the email address of the user in ServiceNow.

Catalog Item Request Form is either Blank or Duplicate Entries are Displayed

ServiceNow end user is either the blank or duplicate entries are displaying on the Catalog Item request form.

Problem

- 1 Catalog Item request form shows blank initially when the page is loading.
- 2 Catalog Item request form shows drop-downs with duplicate entries.

Solution

- 1 Delete Entitlements, Projects and Catalog Items.
- 2 Run scheduled jobs to import Projects and Catalog Items.
- 3 Recreate Entitlements.

Duplicate Resources are displaying in VMware vRealize Automation ITSM 8.2 or later

In the VMware vRealize Automation ITSM 8.2 or later application, duplicate resources are displayed for the same deployment.

Problem

After you have upgraded to VMware vRealize Automation ITSM 8.2 or later, the ITSM application displays the duplicate resources for the same deployment.

Solution

- 1 Delete the resources.
- 2 Run the import jobs for the deployment and resources. See [Configure and Run Import Jobs](#).

Tool Tip message is getting truncated

In the VMware vRealize Automation for ServiceNow ITSM application, larger tool tip messages are getting truncated.

Problem

Not able to see the full text of tool tip messages.

Cause

By default, in the ServiceNow the tool tip length is limit to 40 characters. If the length is greater than desired length, the tool tip message will be truncated.

Solution

The ServiceNow system administrator must increase the tool tip character length from the dictionary record.

This chapter contains the list the available custom tables, CMDB tables, and system properties used in the VMware vRealize Automation for ServiceNow ITSM application.

ServiceNow Custom Table used in VMware vRealize Automation for ServiceNow ITSM Application

These custom tables are used in the ServiceNow.

| Label | Name | Extended Table |
|----------------------------|---|--------------------------|
| Project | x_vmw_cloudservice_cas_project | Categories |
| Catalog Items | x_vmw_cloudservice_cas_catalog_items | Catalog Item |
| Deployments | x_vmw_cloudservice_deployments | Application |
| Resources | x_vmw_cloudservice_machines | Virtual Machine Instance |
| Deployments Import Set | x_vmw_cloudservice_vra_deployments_import_set | Import Set Row |
| Resources Import Set | x_vmw_cloudservice_vra_machines_import_set | Import Set Row |
| Job Queue | x_vmw_cloudservice_cas_queue | |
| Manage Endpoints | x_vmw_cloudservice_register_cas_organization | |
| Manage Entitlements | x_vmw_cloudservice_cas_catalog_entitlement | |
| Shared Resource | x_vmw_cloudservice_shared_resources | |
| Day-2 Actions | x_vmw_cloudservice_vra_cloud_actions | |
| Day-2 Action Request | x_vmw_cloudservice_vra_action_request | |
| Day-2 Actions Entitlements | x_vmw_cloudservice_day_2_action_request_entitlement | |

ServiceNow CMDB Tables in VMware vRealize Automation for ServiceNow ITSM Application

These custom tables are used in the ServiceNow.

| Table | Custom Field | Label |
|--------------------------------|-----------------------------|----------------------|
| x_vmw_cloudservice_deployments | ■ blueprint_version | ■ Blueprint Version |
| | ■ blueprint_id | ■ Blueprint Id |
| | ■ code | ■ Code |
| | ■ deployment_id | ■ Deployment Id |
| | ■ last_update_time | ■ Last Update Time |
| | ■ message name | ■ Message Name |
| | ■ project_id | ■ Project Id |
| | ■ catalog_id | ■ Catalog Id |
| | ■ hostname | ■ Host Url |
| | ■ organization_id | ■ Organization Id |
| | ■ catalog_version | ■ Catalog Version |
| | ■ operational_status | ■ Operational status |
| | ■ servicenow_owner | ■ ServiceNow Owner |
| | ■ entitled_groups | ■ Entitled Groups |
| | ■ vra_owner | ■ vRA Owner |
| | ■ entitled_users | ■ Entitled Users |
| | ■ unit | ■ Unit |
| | ■ created_at | ■ Created At |
| | ■ expired | ■ Expired |
| | ■ expires_on | ■ Expires On |
| | ■ last_updated_at | ■ Last Updated At |
| | ■ last_updated_by | ■ Last Updated by |
| | ■ message status | ■ Message Status |
| | ■ stimulated | ■ Stimulated |
| | ■ u_catalog_item | ■ Catalog Item |
| | ■ u_project | ■ Project |
| | x_vmw_cloudservice_machines | ■ createdat |
| ■ deploymentid | | ■ DeploymentId |
| ■ entitled_users | | ■ Entitled Users |
| ■ instance_protocol | | ■ Instance Protocol |
| ■ instance_port | | ■ Instance Port |
| ■ machine_id | | ■ Resource Id |
| ■ machine_name | | ■ Resource Name |
| ■ name | | ■ Name |
| ■ memory | | ■ Memory(MB) |
| ■ network_schema | | ■ Network Schema |
| ■ operational_status | | ■ Operational status |
| ■ organization_id | | ■ Organization Id |
| ■ port | | ■ Port |
| ■ protocol | | ■ Protocol |
| ■ project | | ■ Project |
| ■ storage | | ■ Storage Schema |
| ■ sync_status | | ■ SyncStatus |
| ■ status | | ■ Status |
| ■ vra_owner | ■ vRA Owner | |

| Table | Custom Field | Label |
|-------|----------------------------|----------------------------|
| | ■ resource_name | ■ Resource Name |
| | ■ encrypted | ■ Encrypted |
| | ■ attachment_status | ■ Attachment status |
| | ■ address | ■ Address |
| | ■ endpointtype | ■ endpointType |
| | ■ account | ■ Account |
| | ■ volumetype | ■ volumeType |
| | ■ node_uuid | ■ Node UUID |
| | ■ enviornment | ■ Enviornment |
| | ■ workflow_name | ■ Workflow name |
| | ■ started_on | ■ Started on |
| | ■ id | ■ Id |
| | ■ account_region | ■ Account/Region |
| | ■ network_type | ■ Network Type |
| | ■ network | ■ Network |
| | ■ internet_facing | ■ Internet facing |
| | ■ capacity_gb | ■ Capacity(GB) |
| | ■ zone | ■ Availability Zone |
| | ■ region | ■ Region |
| | ■ externallink | ■ externalLink |
| | ■ role | ■ Role |
| | ■ workflow_id | ■ Workflow ID |
| | ■ workflow_run_id | ■ Workflow run ID |
| | ■ completed_on | ■ Completed on |
| | ■ u_type | ■ Type |
| | ■ stack_name | ■ Stack Name |
| | ■ custom_properties_schema | ■ Custom Properties Schema |
| | ■ servicenow_owner | ■ ServiceNow Owner |
| | ■ shared_groups | ■ Entitled Groups |
| | ■ inputs | ■ Inputs |
| | ■ outputs | ■ Outputs |
| | ■ resources | ■ Resources |
| | ■ host_schema | ■ Host Schema |
| | ■ attached_disks | ■ attached Disks |
| | ■ computehostref | ■ computeHostRef |
| | ■ computehostType | ■ computeHostType |
| | ■ count | ■ Count |
| | ■ countIndex | ■ countindex |
| | ■ cpucount | ■ cpuCount |
| | ■ deployment_sys | ■ Deployment Sys |
| | ■ environment | ■ Environment |
| | ■ flavor | ■ Flavor |
| | ■ flavorref | ■ flavorRef |
| | ■ hassnapshots | ■ hasSnapshots |
| | ■ image | ■ Image |

| Table | Custom Field | Label |
|-------|---|---|
| | <ul style="list-style-type: none"> ■ os_type ■ outputs ■ primarymac ■ resourcepool ■ routes_schema ■ softwareName ■ Status | <ul style="list-style-type: none"> ■ OS Type ■ Outputs ■ primaryMAC ■ resourcePool ■ Routes Schema ■ softwarename ■ status |

System Properties in VMware vRealize Automation for ServiceNow ITSM Application

The catalog admin or system administrator of VMware vRealize Automation for ServiceNow ITSM application can update the system properties:

| System Properties | Description | Updated by |
|---|--|---|
| x_vmw_cloudservice.cancelCatalogRequest | Update the value in hours to cancel the catalog request if mid server is down. | Application admin or system administrator |
| x_vmw_cloudservice.CAS.log.header | Contains header for the log file. | Application admin or system administrator |
| x_vmw_cloudservice.CAS.logging.verbosity | Contains log verbosity for the VMware vRealize Automation for ServiceNow ITSM application. | Application admin or system administrator |
| x_vmw_cloudservice.cloud_API_endpoint_URL | The API URL for different geographical locations can be different. | Application admin or system administrator |
| x_vmw_cloudservice.Request Iteration turnstile activity sys_id | Add Request Iteration turnstile activity sys_id | System administrator |
| x_vmw_cloudservice.Request re-trigger turnstile activity sys_id | Add Request re-trigger turnstile activity sys_id | System administrator |
| x_vmw_cloudservice.Request re-trigger turnstile activity sys_id | Create the support group for the VMware vRealize Automation for ServiceNow ITSM application when an incident is created from RITM assign it to them. | System administrator |
| x_vmw_cloudservice.TimeToRe-TriggerCatalogRequest | Time in minutes to retrigger the catalog request if the MID server is down. | System administrator |
| x_vmw_cloudservice.vra_itsm_application_version | Version of the VMware vRealize Automation for ServiceNow ITSM application. | Application admin or system administrator |
| x_vmw_cloudservice.vRealizeAutomation-ApprovalGroup | Contains the name for the Approval group. | Application admin or system administrator |

| System Properties | Description | Updated by |
|---|---|---|
| x_vmw_cloudservice.SetApiVersionDate | Allows you to lock the API at a given point in time and control when you upgrade to a new API version. Update the API version date in the yyyy-mm-dd format. For example: 2019-01-15. | Application admin or system administrator |
| x_vmw_cloudservice.deploymentWindowSize | Allows you to update the number of Deployments in Deployment List Widget of the Service Portal. The default value is 20. | Application admin or system administrator |
| x_vmw_cloudservice.DeploymentLimit | Allows you to update the number of Deployments in the Deployment Widget of the Service Portal. The default value is 5. | Application admin or system administrator |
| x_vmw_cloudservice.servicePortalPrefix | Allows you to update the customized Service Portal prefix. The default value is sp. | System administrator |
| x_vmw_cloudservice.vRA Servicenow UI | Allows you to select the choices to see UI specific Module in Servicenow. | System administrator |
| x_vmw_cloudservice.deploymentCategory | Allows you to to set parent category of Deployment day 2 Action Catalog Items. | System administrator |
| x_vmw_cloudservice.machineCategory | Allows you to to set parent category of Resource day 2 Action Catalog Items. | System administrator |
| x_vmw_cloudservice.vra_parent_category | It contains the sys_id of the category for Service Portal. User need to update the sys_id of category in use or sys_id category created. | System administrator |
| x_vmw_cloudservice.apiPageSize | This system property is used to set the page size of the API call to retrieve records from vRA. Default value for the page size is 20 | Application admin or system administrator |
| x_vmw_cloudservice.resourceActionResource | This system property contains the deployment field sysId of the Resource Day2 Action. | System administrator |
| x_vmw_cloudservice.deploymentActionDeployment | This system property contains the deployment field sys Id of the Deployment Day2 Action. | System administrator |
| x_vmw_cloudservice.cas_valuepicker_ui_macro_sysid | This property contains default sysId of the UI Macro CAS_Valuepicker_UI_Macro. | System administrator |
| x_vmw_cloudservice.cas_valuepicker_widget_sysid | This property contains default sysId of the widget CAS_SP_valuePicker. | System administrator |