# vRealize Automation 8 Transition Guide

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vRealize Automation 8.6

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

https://docs.vmware.com/

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# Contents

# vRealize Automation 8 Transition Guide

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You can use this transition guide to help you migrate your vRealize Automation 7 environment to vRealize Automation 8.

Currently, the vRealize Automation 8 Migration Assistant tool supports migration from these source environments:

- vRealize Automation 7.6
- vRealize Automation 7.5
- vRealize Automation 7.4

  **Note** Tenant migration using VMware Identity Manager is not supported for 7.4 migrations. Before you can migrate to vRealize Automation 8x, you must manually create the tenants and then migrate, or upgrade to 7.5 and then migrate to 8.x. vRealize Automation 8.x does not support assessing and migrating a tenant from vRealize Automation 7.x to 2 or more organizations of the same vRA 8.x instance.

- vRealize Automation 7.3

  **Note** Tenant migration using VMware Identity Manager is not supported for 7.3 migrations. Before you can migrate to vRealize Automation 8x, you must manually create the tenants and then migrate, or upgrade to 7.5 and then migrate to 8.x. vRealize Automation 8.x does not support assessing and migrating a tenant from vRealize Automation 7.x to 2 or more organizations of the same vRA 8.x instance.

**Restrictions:** The vRealize Automation 8 migration assistant does not support:

- Migration with an external vRealize Orchestrator instance. The migration assistant only supports embedded vRealize Orchestrator migrations.

  For information about migrating vRealize Automation 7.x extensibility to vRealize Automation 8, see the vRealize Automation 8.x Extensibility Migration Guide.

- Migration of vROPS integrations. You must manually migrate your vROPS integrations to vRealize Automation 8.

# How can I migrate to vRealize Automation 8.x

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Depending on your circumstances, you can migrate to vRealize Automation 8 using the Migration Assistant or by using the onboarding feature.

## Migrating to vRealize Automation 8 using the Migration Assistant

For most cicumstances, the Migration Assistant provides ample support for migrating from vRealize Automation 7.x to vRealize Automation 8. However, for some customers migration using onboarding is recommended. For onboarding use cases see Migrating to vRealize Automation using the onboarding feature in the section below. Migrating using the Migration Assistant is recommended for:

- **Networking**
  - The migration assistant has advanced capabilities for identifying deployment constructs, specifically for networking. The migration assistant supports the migration of: all network objects in all clouds, IP management with native IPAM, load balancers, and security groups. Onboarding does not support this functionality.
- **VCT assignment to workloads**
  - The migration assistant can assign the blueprints to the workloads being migrated. The workloads are compatible with the VCT in vRA 8. Onboarding does not support this functionality.
- **Custom properties and property groups (limited) are automatically recognized**
  - The migration assistant automatically recognizes any custom properties or property groups used in blueprints and workloads and applies them to the workloads in vRA 8 to maintain the functionality and expected behavior of the custom properties.
- **Capabilities of migration assistant that are not present in onboarding**
  - The Migration Assistant includes many capabilities that onboarding does not. For example, support for migrating deployment history, retaining deployment metadata (such as names, descriptions, lease expirations, and ownership), migrating custom resources, migrating custom forms, lease policy compatibility, retaining the vRA 7.x consumption model, etc.

- **Cloudzone mapping and compatibility with limits**
  - When workloads are migrated using the Migration Assistant they are automatically placed in the right cloudzone. They are also compliant with the limits specified as the project-cloudzone assignment.
- **Scale out support**
  - In vRA 8, there are no day 2 actions for scale out of machines. To overcome this, vRA uses interative deployments where the VCT parameters are changed and then re-applied to the provisioned deployment to scale it out. Onboarding does not suppor this functionality.

# Migrating to vRealize Automation using the onboarding feature

As an alternative to using the Migration Assistant, you can use the onboarding feature to migrate certain vRealize Automation 7.x workloads to 8.x. Migration using Onboarding is limited to machine and connected objects (disks and networks) only. Onboarding also allows you onboard one or many machines to vRealize Automation Cloud Assembly using a single onboarding plan. Migrating using the onboarding feature is reommended for:

- **Side by side VCF migration**
  - Onboarding is recommended, if you want to migrate VCF 3.x to 4.x alongside migrating vRealize Automation 7.x to 8.x. To migrate, set up a separate VCF 4 stack and migrate workloads with HCX. After, you can onboard these workloads to the new vRealize Automation 8 instance that is deployed in the VCF 4 stack.
- **vRealize Automation changes in deployment structure**
  - Onboarding is recommended if you want to change how vRealize Automation is consumed in 8.x compared to 7.x. For example, if you want to consolidate business groups into fewer projects, reconstruct blueprints, ignore any non-relevant content present in 7.x, update existing processes to new methods, etc.
- **Make changes to deployments such as update name or add custom properties**

  **Note** Workload onboarding does not connect to vRealize Automation 7.x and does not have access to vRA 7 constructs and metadata such as blueprints and custom properties. It only operates on inventory discovered by vRA 8.

  - Onboarding is recommended if you want to make changes to your deployment metadata such as renaming it or adding additional custom properties.

- **Require changes in production vRealize Automation 7.x**
  - Onboarding is recommended if you do not want to make any changes to your 7.x environment in production to address incompatibilities reported by the migration assistant. For example, if you are unable to unpublish content you no longer use, if you make changes in blueprints, update vRO workflows, update entitlements, update custom day 2 actions, etc.
- **Migrate from vRealize Automation 7.x to vRealize Automation Cloud**
  - Onboarding is recommended if you want to migrate your vRA 7.x on-prem environment to vRA Cloud. Currently, the Migration Assistant does not support this migration path use case.

For more information on onboarding, see What are onboarding plans.

# How do I upgrade to vRealize Automation 8.x

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Using VMware vRealize Suite Lifecycle Manager, you can upgrade your vRealize Automation 8.x instance to the latest vRA 8.x version.

For information on upgrading vRealize Automation 8.x, see Upgrading vRealize Suite Lifecycle Manager and vRealize Suite Products.

# Using the vRealize Automation 8 Migration Assistant to run a migration assessment

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Before you can migrate to vRealize Automation 8, you need to perform a migration assessment.

You can perform a migration assessment against your source environment and any embedded vRealize Orchestrator instances to determine the migration readiness of your vRealize Automation 7 source environment. The migration assessment alerts you to any system object and its dependencies that are not ready for migration and that will impact your migration process. See Considerations About vRealize Automation 8.

After performing a migration assessment you can then migrate to import content and configuration data from your current vRealize Automation 7 source environment to vRealize Automation 8.

Before you can run a migration assessment and migration, you must enable the migration assistant service.

**To enable the migration assistant feature:**

1 After upgrading and deploying a new vRealize Automation 8 instance, navigate to Identity and Access Management.

2 Select the user, edit the role to Cloud Administrator, and migration service administrator or viewer. Add the migration assessment service.

3 Log user out of vRealize Automation 8.

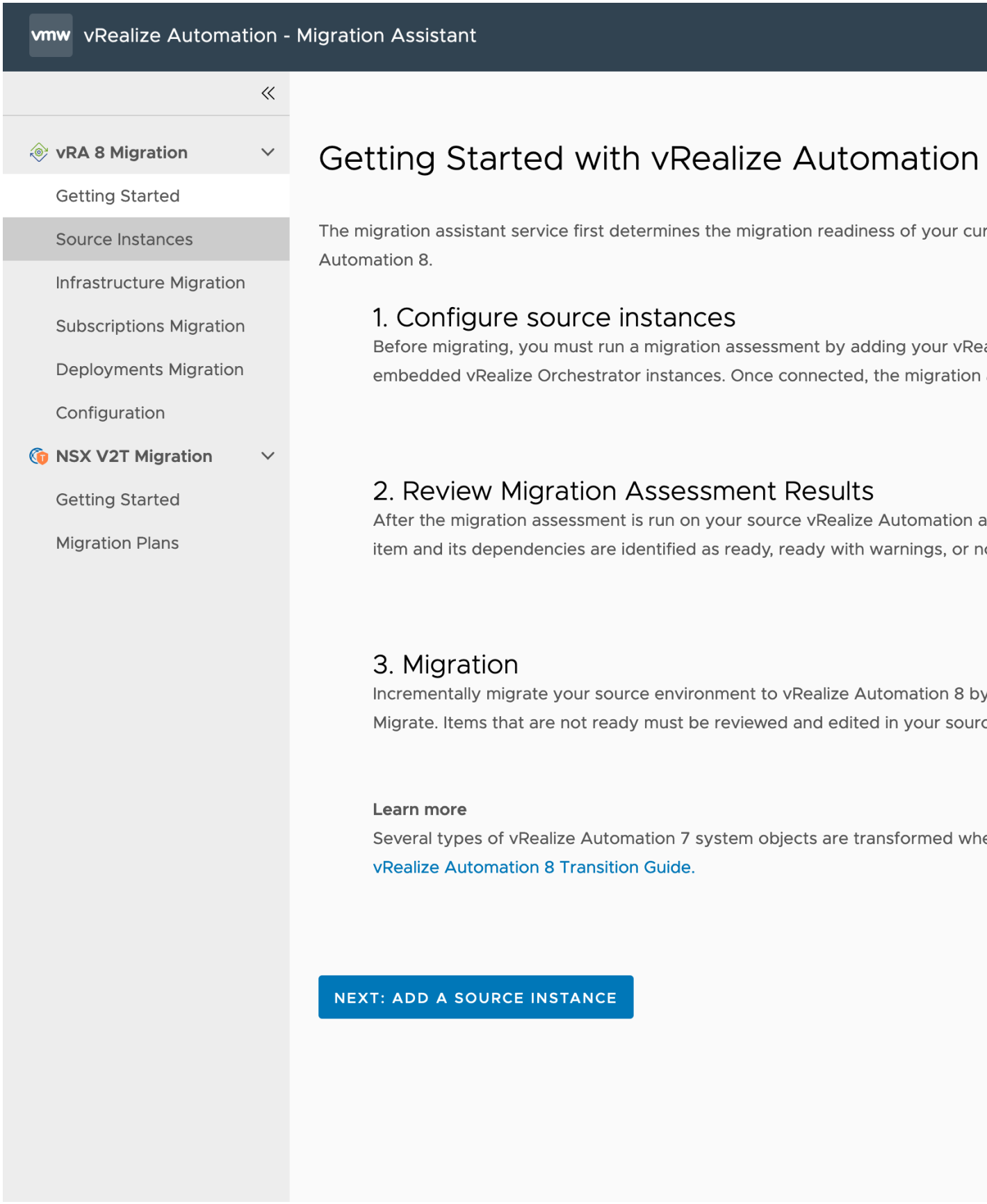
4 Log user in to vRealize Automation 8 to see the Migration Assessment tile.

This chapter includes the following topics:

- Running a Migration Assessment on a source instance
- View Assessment Results
- Considerations About vRealize Automation 8

## Running a Migration Assessment on a source instance

You can run a migration assessment against a single vRealize Automation 7, or vRealize Orchestrator source instance to determine migration readiness.


vRealize Automation - Migration Assistant
vRA 8 Migration
Getting Started
Source Instances
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Subscriptions Migration
Deployments Migration
Configuration
NSX V2T Migration
Getting Started
Migration Plans
Getting Started with vRealize Automation
The migration assistant service first determines the migration readiness of your cur
Automation 8.
1. Configure source instances
Before migrating, you must run a migration assessment by adding your vRea
embedded vRealize Orchestrator instances. Once connected, the migration
2. Review Migration Assessment Results
After the migration assessment is run on your source vRealize Automation a
item and its dependencies are identified as ready, ready with warnings, or n
3. Migration
Incrementally migrate your source environment to vRealize Automation 8 by
Migrate. Items that are not ready must be reviewed and edited in your sourc
Learn more
Several types of vRealize Automation 7 system objects are transformed whe
vRealize Automation 8 Transition Guide.
NEXT: ADD A SOURCE INSTANCE

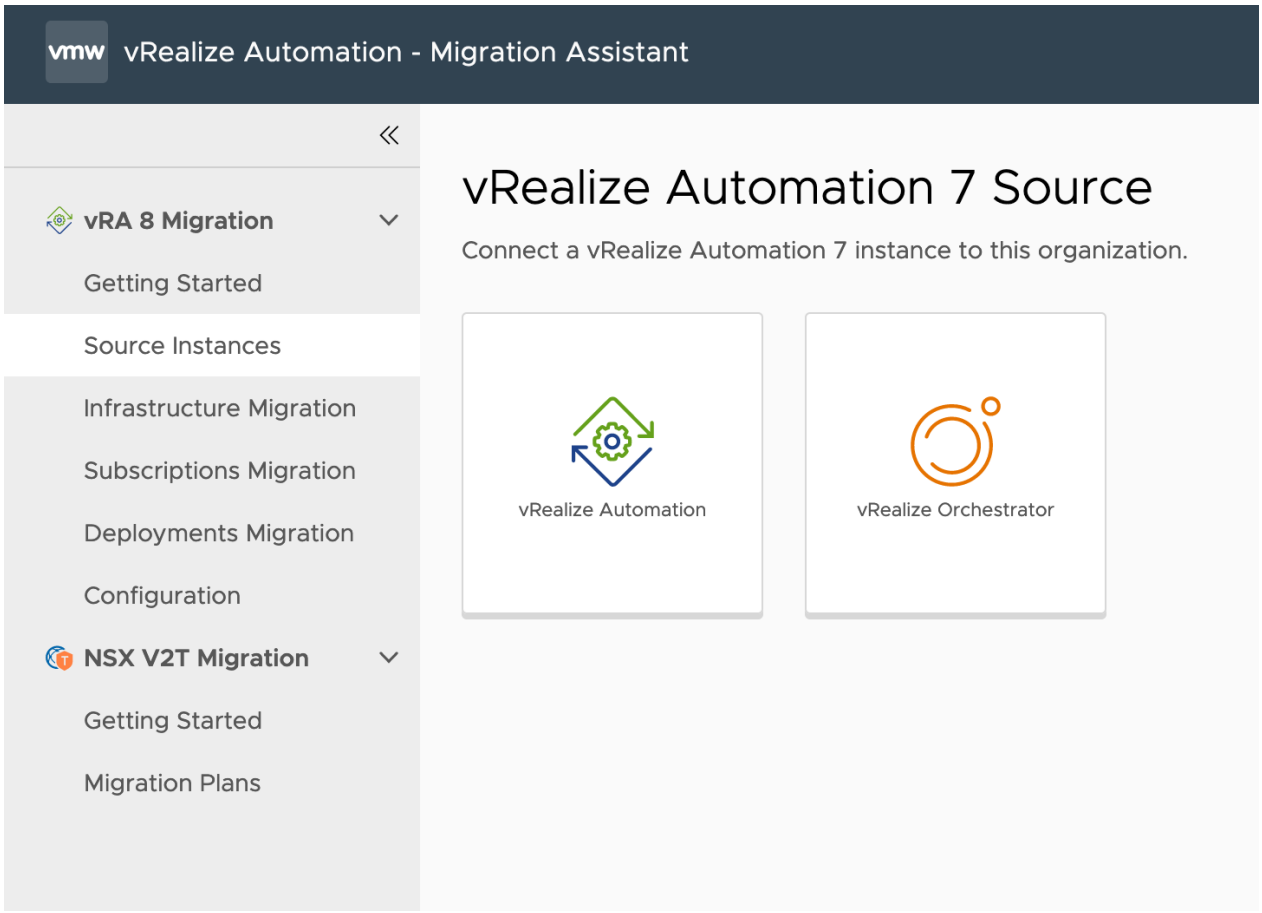
The migration assessment process includes connecting to your vRealize Automation source instances and assessing the vRealize Automation and embedded vRealize Orchestrator instances.

The migration assessment identifies what objects to carry over and migrate. You can review the assessment results and correct items in your source environment that are not correctly set up or ready for migration.

**Procedure**

1 From the Source Instance page, Click **Add a Source Account**.

2 Select a vRealize Automation or vRealize Orchestrator source type.




3 Enter the credentials of your vRealize Automation 7 or vRealize Orchestrator source environment.

**Note** You must provide the vRealize Automation primary node's FQDN or an IP address for the source in the hostname text box. For example, test-n-88-087.test.vmware.com

4 Click **Validate and Save** to validate and identify all the tenants that are available for migration.

**Note** You must provide the system administrator and password of your source environment to identify all available tenants.

5 In **Allow migrations from these tenants**, toggle and select which tenants you want to assess in vRealize Automation 8.

**Note** To assess and migrate multi-tenant environments, you must manually create all tenants and run a migration from each tenant individually. All vRA 7 tenants are visible to vRA 8 tenants.

**Note** When running a migration assessment on an embedded vRealize Orchestrator only, do not select any tenants.

6 (Optional) To run the migration on an embedded vRealize Orchestrator , select **Enabled Assessment for the embedded vRealize Orchestrator**.

7 Click **Save** to finish the migration assessment of the selected source tenants.

Results

Your source environment is assessed for migration readiness. You can view the details of the source enviroment configuration on the source instances page. Additionally, you can export the assessement report to your local drive by clicking **Export** on the source instance's tile.

**Note** Do not export reports containing more than 200 business groups. A report for an assessment larger than 200 business groups will be compiled from assessement service memory and will not contain business group details.

# View Assessment Results

After running a migration assessment on your source instance, you can view the results.

The assessment results are itemized into tabs in the Migration pane:

- Infrastructure
- Subscriptions
- Deployments

The assessed items are listed with their status:

- Ready - Ready for migration. No action is needed for migration readiness.
- Ready with warnings - Ready but needs review. Remediate any issues that might impact migration. For example, some custom properties can be ready with warnings. The custom property: VMware.Network.Type is partially supported and is flagged as ready with warnings because it is unclear how this property behaves regarding extensibility in vRealize Automation 8.
- Not Ready - Not ready for migration. Review details of the item in your source environment and correct areas needing attention or deselect these items for migration. If you proceed with migration, items marked as Not Ready are excluded from migration.
- Assessing - Item is still being assessed for migration readiness.

- Assessment failed - The assessment failed, retry assessment.

If applicable, after modifying any items listed as not ready or ready with warnings, click **Update** to update its status in the assessment results table.

**Note** If you make changes to your source environment, you must update and reassess the tenants in your source environment before migrating.

# Considerations About vRealize Automation 8

vRealize Automation 8 introduces various functional changes.

Review the changes that vRealize Automation 8 introduces to get a better understanding of vRealize Automation 8.

## Scalability Considerations

vRealize Automation 8 includes new scalability considerations.

Before proceeding with migration, review the Scalability and Concurrency Maximums.

## Using Legacy Extensibility

After migration, the extensibility functionality is hosted in the vRealize Automation Cloud Assembly service and managed by the Event Broker.

Depending on your source environment, you might need to modify existing workflows and action code to optimize extensibility in vRealize Automation 8. Modifications and new functionality include:

- vRealize Orchestrator plugin support
- Postgres and Microsoft SQL server database access
- Rewriting workflow or action code for use with vRealize Automation Cloud Assembly
- Using subscriptions with vRealize Automation Cloud Assembly

For more information on extensiblity changes between vRealize Automation 7.x and 8.x, refer to the vRealize Automation 8.x Extensibility Migration Guide.

### vRealize Orchestrator Plugins

Several vRealize Orchestrator plugins are not supported in vRealize Automation.

These plugins are no longer supported:

- vRealize Automation CAFE plugin
- vRealize Automation .NET plugin
- vRealize Automation REST Plugin

You must rewrite all custom content in vRealize Orchestrator to use the new vRealize Automation 8 API interface. Implementations that rely on API calls to vRealize Automation using the REST plugin must be rewritten.

For information on writing workflows that require a reduced effort to refactor, see Writing Workflows and Action Code for vRealize Automation Cloud Assembly.

## Postgres and Microsoft SQL Server Database Access

Access to the Postgres and Microsoft SQL Server databases are not supported.

To minimize problems during migration or upgrade, use the supported API interfaces.

**Note** Currently, there is no guidance for correcting direct database queries between vRealize Automation versions.

## Writing Workflows and Action Code for vRealize Automation Cloud Assembly

Using these best practices, you can write extensibility code and workflows to easily interact with vRealize Automation Cloud Assembly.

For more information on extensibility in vRealize Automation Cloud Assembly 8.x, see the vRealize Automation 8.x Extensibility Migration Guide.

### Use Payload from Event Broker

In cloud assembly, when you subscribe to an event the event broker triggers a workflow and passes to it a payload. The payload should have all of the data that the workflow needs. If the workflow needs additional data, it is available by calling various vRA 8 service APIs.

### Extensibility Actions

In vRealize Automation Cloud Assembly you can create customized actions, called Action-Based Extensibility (ABX), using python, nodejs, and powershell scripts without dependency on vRO. For more information on ABX, see Learn more about extensibility actions.

## Using Subscriptions in vRealize Automation Cloud Assembly

After migration, use migrated vRealize Automation 7 extensibility in vRealize Automation Cloud Assembly with these subscriptions accordingly.

Not all subscriptions from vRealize Automation 7 can be migrated to vRealize Automation 8. To determine if a subscription can be migrated, review the assessment report.

**Table 4-1. Subscriptions in vRealize Automation Cloud Assembly**

| vRealize Automation 7.x Subscription | vRealize Automation 8 Subscription |
|---|---|
| Blueprint component completed | Deployment resource completed |
| Blueprint component requested | Deployment resource requested |
| Blueprint configuration | Blueprint configuration |

Table 4-1. Subscriptions in vRealize Automation Cloud Assembly (continued)

| vRealize Automation 7.x Subscription | vRealize Automation 8 Subscription |
|---|---|
| Blueprint request completed | Deployment completed |
| Blueprint requested | Deployment requested |
| Business group configuration | Not supported |
| Catalog request completed | Deployment completed |
| Catalog request received | Deployment requested |
| Component action completed | Deployment resource action completed |
| Component action requested | Deployment resource action requested |
| Deployment action completed | Deployment action completed (deployment.action.post) |
| Deployment action requested | Deployment action requested (deployment.action.pre) |
| Endpoint action | Not supported |
| EventLog default event | EventLog |
| Infrastructure endpoint test connection | Not supported |
| IPAM IP lifecycle event completion | Not supported |
| Machine lifecycle | Not supported |
| Machine provisioning | Conditional, dependent on state. |
| Orchestration server configuration | Not supported |
| Orchestration server configuration (XaaS) | Not supported |
| Post Approval | Not supported |
| Pre Approval | Not supported |
| Resource Reclamation completion event | Not supported |

# Migrating Tenants Using vRealize Suite Lifecycle Manager

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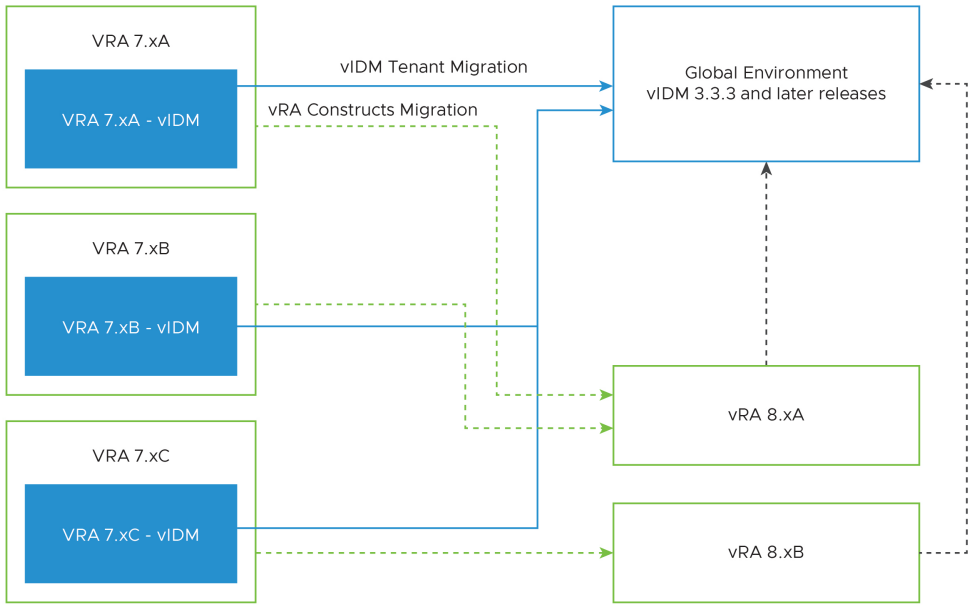
Depending on your system needs, you might need to migrate your source tenants using vRealize Suite Lifecycle Manager before you can migrate to vRealize Automation 8.x.

Tenant Migration involves close coordination between Workspace ONE Access (formerly known as VMware Identity Manager), vRealize Suite Lifecycle Manager, and vRealize Automation. When migrating tenants using vRealize Suite Lifecycle Manager, embedded VMware Identity Manager data in vRealize Automation 7 is migrated to the Global Environment of VMware Identity Manager version 3.3.3 and later. After migrating tenants, you can perform the merge tenant operation in vRealize Automation, in which you migrate vRealize Automation 7 environment to vRealize Automation 8. For more information on adding, deleting, or managing your tenants, refer to the Tenant Management section of the vRealize Suite Lifecycle Manager documentation. For a video walkthrough of migrating tenants using vRealize Suite Lifecycle Manager, see vRealize 8.x -Tenant Migration.

**Note** Tenant migration using vRealize Suite Lifecycle Manager is not supported for vRealize Automation 7.4. Tenant migration is only supported for 7.5 and 7.6. To migrate tenants from vRealize Automation 7.4 to 8.x, you must migrate them manually. vRealize Automation 8.x does not support assessing and migrating a tenant from vRealize Automation 7.x to 2 or more organizations of the same vRA 8.x instance.




**Prerequisites**

Before you can migrate tenants, you must perform these prerequisites:

- Installing vRealize Suite Lifecycle Manager 8.2 Patch 1
- Importing vRealize Automation 7.5/7.6
- Installing or Upgrading to VMware Identity Manager 3.3.3
- Upgrading to vRealize Automation 8
- Performing an Inventory Sync on vRealize Automation 7 and 8 Environments, and Global Environment
- Enabling Multi-Tenancy

This chapter includes the following topics:

- Prerequisites for Tenant Migration
- How do I migrate tenants
- How do I merge tenants

# Prerequisites for Tenant Migration

Before migrating tenants, review these prerequisites and important instructions for migrating and merging tenants.

- Installing vRealize Suite Lifecycle Manager 8.2 Patch 1
- Importing vRealize Automation 7.5/7.6
- Installing or Upgrading to VMware Identity Manager 3.3.3
- Upgrading to vRealize Automation 8

- Performing an Inventory Sync on vRealize Automation 7 and 8 Environments, and Global Environment
- Enabling Multi-Tenancy

## Installing vRealize Suite Lifecycle Manager 8.2 Patch 1

You can download the vRealize Suite Lifecycle Manager 8.2 patch 1 by visiting the VMware Patch Download Center and selecting vRealize Suite Lifecycle Manager from the Search by Product drop-down menu.

### For vRealize Suite Lifecycle Manager virtual appliances not connected to the Internet:

**Note** The vRealize Suite Lifecycle Manager 8.2 Patch 1 applies only to vRealize Suite Lifecycle Manager versions 8.2 and earlier.

1. Verify that you have taken a snapshot of vRealize Suite Lifecycle Manager VA.
2. Log in to vRealize Lifecycle Manager VA.
3. On the Lifecycle Operations dashboard, navigate to **Settings > Binary Mapping** and click **Patch Binaries**.
4. Click **UPLOAD > SELECT FILE** to upload the vRealize Suite Lifecycle Manager version 8.2 Patch 1 downloaded from VMware Patch Download Center.
5. Navigate to **Settings > System Patches**.
6. Click **NEW PATCH**, select the patch, and click **NEXT**.
7. To install the patch, click **INSTALL**. Once the patch install is triggered successfully, vRealize Suite Lifecycle Manager services are restarted and you are redirected to the vRealize Suite Lifecycle Manager UI login page.

   **Note** To verify your new patch, on the Lifecycle Operations dashboard navigate to SettingsSystem Patches, and select Patch Details.

### For vRealize Suite Lifecycle Manager virtual appliances connected to the Internet:

1. Verify that you have taken a snapshot of vRealize Suite Lifecycle Manager VA.
2. Log in to vRealize Suite Lifecycle Manager VA.
3. On the Lifecycle Operations dashboard, navigate to **Settings > Binary Mapping**and click **Patch Binaries**.
4. Click **CHECK PATCHES ONLINE**, search vRealize Suite Lifecycle Manager 8.2 patch and download the patch.
5. Navigate to **Settings > System Patches**.
6. Click **NEW PATCH**, select the patch, and click **NEXT**.

7 To install the patch, click **INSTALL**. Once the patch install is triggered successfully, vRealize Suite Lifecycle Manager services are restarted and you are redirected to the vRealize Suite Lifecycle Manager UI login page.

**Note** To verify your new patch, on the Lifecycle Operations dashboard navigate to **Settings > System Patches**, and select Patch Details.

## Importing vRealize Automation 7.5/7.6

If you have an existing vRealize Automation 7.5 or 7.6 environment, you must import this environment to vRealize Suite Lifecycle Manager, so that vRealize Suite Lifecycle Manager can manage the vRealize Automation environment.

**Note** For vRealize Automation 7.4 and earlier versions, upgrade to vRealize Automation 7.5 or 7.6, and then import this environment to vRealize Suite Lifecycle Manager.

## Installing or Upgrading to VMware Identity Manager 3.3.3

You can perform a new fresh installation of VMware Identity Manager or upgrade an existing instance, using vRealize Suite Lifecycle Manager. You can also upgrade outside vRealize Suite Lifecycle Manager, and then reimport by triggering the inventory sync in vRealize Suite Lifecycle Manager.

For more information about the latest version of VMware Identity Manager and upgrade instructions, see the VMware Identity Manager Release Notes, and then trigger an upgrade from vRealize Suite Lifecycle Manager.

When upgrading VMware Identity Manager, using vRealize Suite Lifecycle Manager:

- Verify that you have taken a snapshot of VMware Identity Manager nodes.
- Verify that you have your product binaries mapped.
- For a clustered VMware Identity Manager upgrade, ensure to disable all the stand-by nodes in the load-balancer so that the traffic is not routed to the stand-by nodes and enable them back once the upgrade is completed.

To complete the upgrade steps, refer to the Upgrade VMware Identity Manager section of the vRealize Suite Lifecycle Manager documentation.

## Upgrading to vRealize Automation 8

You can upgrade vRealize Automation in vRealize Suite Lifecycle Manager, and then apply patch 1. When upgrading, follow these instructions.

### Prerequisites

- Ensure that you have upgraded vRealize Suite Lifecycle Manager to the latest version.
- Ensure that you have upgraded VMware Identity Manager to 3.3.3.

- If you have installed vRealize Automation 8.0, 8.0.1, or 8.1, then upgrade it to the latest vRealize Automation 8.x version.
- Perform the binary mapping of the vRealize Automation patch file from Local, myvmware or NFS share. For more information on binary-mapping, see Configure Product Binaries.
- Increase the CPU, memory, and storage as per the system requirements of vRealize Automation 8.4. For more information, see the Hardware Requirements of vRealize Automation 8.4 Reference Architecture.

For instructions on applying the vRealize Automation patch, see Patching for Products through vRealize Suite Lifecycle Manager.

## Performing an Inventory Sync on vRealize Automation 7 and 8 Environments, and Global Environment

If you configure your product outside of vRealize Suite Lifecycle Manager, then the products managed from vRealize Suite Lifecycle Manager are out of sync. To update the configuration, you have to trigger the inventory sync.

Performing an inventory sync is useful:

- If there is any failure, inventory sync updates the correct primary node in vRealize Suite Lifecycle Manager.
- If any components of products are added or deleted outside of vRealize Suite Lifecycle Manager, the inventory sync also updates them.
- If a product password is modified, even if you sync it with the inventory, the request eventually fails. In this scenario, retry with the correct password. To modify the password directly in the application, for example, in vRealize Automation, you must run the inventory sync of the product in vRealize Suite Lifecycle Manager so that the modified passwords are synchronized. This action prompts you to provide the modified passwords during an inventory sync.

For all the products across all environments, follow these methods to sync your inventories.

- Click the horizontal ellipses on the product card and click **Trigger Inventory Sync**.
- If there are multiple environments and multiple products within an environment, click the **Trigger Inventory Sync** on the Environment page, which triggers the inventory sync on all the products across all environments.
- Click **View Details** of the product, and then click the **Trigger Inventory Sync**, which triggers the inventory sync for the required product.

## Enabling Multi-Tenancy

For tenant migration, you can enable multi-tenancy.

When enabling multi-tenancy:

- Use VMware Identity Manager global environment versions 3.3.3 or later.

- Verify the inventories are synchronized for all the environments in vRealize Suite Lifecycle Manager and all environments and products are up to date. This is to discover all the VMware Identity Manager-product integrations required for VMware Identity Manager re-register.
- Verify that the VMware Identity Manager global environment certificate is managed through the vRealize Suite Lifecycle Manager Locker service.
- Take a snapshot of VMware Identity Manager. VMware Identity Manager must be accessed through tenant FQDNs and existing VMware Identity Manager URLs are not accessible.
- For a clustered VMware Identity Manager, verify VMware Identity Manager cluster health status is green by triggering cluster health. For more information, see Day 2 Operations with Other Products In vRealize Suite Lifecycle Manager documentation.
- Verify the VMware Identity Manager certificate is updated with the primary tenant alias FQDN. Also ensure that the A-type DNS record is added mapping the primary tenant alias FQDN. For more information about Mandatory Certificate and DNS requirements, see Multi-Tenancy Model.

## How do I migrate tenants

vRealize Suite Lifecycle Manager migrates VMware Identity Manager data for vRealize Automation 7.5, 7.6, 8.0 to Global Environment of VMware Identity Manager 3.3.3 and later.

vRealize Suite Lifecycle Manager migrates:

- Tenants
- Directories
- Custom groups
- Roles and rule set
- User attributes
- Access policies
- Network ranges
- Third-party IDP configurations

**Prerequisites**

- The SMTP information of the source tenant must be configured on the Global Environment of VMware Identity Manager. This information is required to receive email instructions to reset the password for all local users. All local users in the source tenant must have valid email IDs before migrating tenants.
- For migration, you must enable remote connection from the Global Environment of VMware Identity Manager to the vRealize Automation 7.x database. Refer to KB 81219 for more information on enabling remote connection.

- Ensure that you have DNS configured in vRealize Automation and VMware Identity Manager. For more information on DNS and certificate requirements, refer to DNS and Certificate Requirement in the vRealize Suite Lifecycle Manager documentation.
- Ensure that the source vRealize Automation 7.x environment is in a healthy state and directories are synced before tenant migration.

Procedure

1 On the My Services dashboard of vRealize Suite Lifecycle Manager, click **Identity and Tenant Management**.

2 Select **Tenant Management**, and then click **Tenant Migrations**.

3 Read the information on VMware Identity Manager Tenant Migration and vRealize Automation Tenant Mapping, and then click **Continue**.

4 On the Environment Selection tab, select the Source Environment and Target Environment. Based on your source and the target environment selection, you can view a tabular representation of the available tenants on the source vRealize Automation. You can also view the status of the migrated or merged tenants on vRealize Automation 8.x.

5 Click **Next.**

6 On the Tenant Migration Workflow page, you can view the workflow of Tenant Migration and Tenant Merge, and understand the correlation between the two operations.

   In Tenant migration, the specific data of VMware Identity Manager is migrated to the destination tenant of Global Environment using vRealize Suite Lifecycle Manager. vRealize Suite Lifecycle Manager also creates 7.x endpoint when adding a new tenant on vRealize Automation 8.x. In Tenant Merge, the directories and tenants are already created on the source vRealize Automation 8.x. vRealize Suite Lifecycle Manager creates the 7.x endpoint to the existing tenants on vRealize Automation 8.x, so that you can migrate the business groups, infrastructure, and other specific tenants on vRealize Automation.

7 Click **SAVE AND NEXT** and read the list of manual steps which must be performed to proceed with the migration. Select the check box to confirm that you have read and verified the prerequisites and limitations.

8 To specify the Tenant Migration Workflow, enter these details on the **Tenant Details** tab.

   a Select the **Source Tenant**.

   **Note** The source tenants which are listed are not the migrated or merged tenants.

   b Enter the **Tenant Name**.

   c Under Target Tenant administrator details, enter the **Target Tenant Username**, **First Name**, **Last Name**, valid **Email ID**, and **Password**.

d Click **SAVE AND NEXT**. To specify a directory that must be migrated from the source vRealize Automation 7.x to vRealize Automation 8.x tenant, select one of these directories on the Directory Migration tab.

- System Directory: Connector selection and password creation are not required.
- JIT directory: Connector selection and password creation are not required.
- Active Directory over LDAP: Select a Windows or Linux target Connector and enter the BindPassword.
- OpenLDAP: Select a Windows or Linux target Connector and enter the BindPassword.
- Active Directory with IWA: You can only select a Windows target Connector for the VMware Identity Manager 3.3.3 version. Enter the Bind Password and Domain Admin Password that is required for migration.

**Note** To migrate a directory is a one-time operation, select all the directories which must be migrated. If the required directories are not selected during migration, you have to perform this operation manually.

9 Click **Validate**. After a successful validation, click **SAVE AND NEXT**.

10 Click **Run Precheck** to validate the tenant details and certificate details. Click **SAVE AND NEXT**.

11 On the **Summary Step** tab, you can view the summary of your selections.

12 Click **SUBMIT** if your validations are successful.

If the validations are not successful and you want to make changes, and then resume the tenant migration operation, click **SAVE AND EXIT**. The same wizard can be opened anytime to rerun the precheck to complete and proceed.

### Results

You can view the tenant migration details under the Request Details page. Both VMware Identity Manager and vRealize Automation tenants can be accessed through its tenant FQDNs.

## How do I merge tenants

Using vRealize Suite Lifecycle Manager, you can merge tenants.

### Prerequisites

- vRealize Automation 8.1 does not require you to accept a source certificate during migration assessment. To merge or manage the tenant using vRealize Suite Lifecycle Manager, you can delete the manually added source environment from vRealize Automation.
- Ensure that specific data of VMware Identity Manager is migrated to the target data in the Global Environment.

Procedure

1. On the My Services dashboard of vRealize Suite Lifecycle Manager, click **Identity and Tenant Management**.
2. Select **Tenant Management**, and then click **Tenant Migrations**.
3. Read the information on VMware Identity Manager Tenant Migration and vRealize Automation Tenant Mapping, and then click **Continue**.
4. On the Environment Selection tab, select the Source Environment and Target Environment.

   Based on your source and the target environment selection, you can view a tabular representation of the available tenants on the source vRealize Automation. You can also view the status of the migrated or merged tenants on vRealize Automation 8.x.
5. Click **Next** on the Tenant Migration Workflow page. You can view the workflow of Tenant Migration and Tenant Merge.
6. On the **Merge Details** tab, you can select one or multiple tenant mappings for vRealize Automation 7.x and merge it with the same or different destination tenants for vRealize Automation 8.x.

   If you cannot view the target tenant, perform an inventory sync, or perform a product association for the tenant.
7. Click **Next** and you can view the summary of your selections on the Summary Step tab.
8. Click **SUBMIT** if your validations are successful.

   If the validations are not successful and you want to make changes, and then resume the tenant merge operation, click **SAVE AND EXIT**. The same wizard can be opened anytime to rerun the precheck to complete and proceed.

# Using the vRealize Automation 8 Migration Assistant to run a migration

6

After running a migration assessment, use the migration assistant tool to migrate your source environment to vRealize Automation 8.

The vRealize Automation 8 Migration Assistant allows you to incrementally migrate your source environment with zero downtime or a scheduled maintenance window. This provides more customization and control over which infrastructure, subscription, and deployment components are migrated to vRealize Automation 8. The vRealize Automation migration assistant only migrates used or published content. The migration assistant does not migrate disabled or draft content. Before you can migrate you have to perform a migration assessment on your source environment. This assessment determines the migration readiness of your source environment components. After running a migration assessment, the results are listed on the **Assessment > Infrastructure** page by tenant. All assessed items are listed with their status:

- Ready - Ready for migration. No action is needed for migration readiness.
- Ready with warnings - Ready but needs review. Remediate any issues that might impact migration.
- Not Ready - Not ready for migration. Review details of the item in your source environment and correct areas needing attention.
- Assessing - Still being assessed for migration readiness.
- Assessment failed - The assessment failed. Verify that vRealize Orchestrator and vRealize Automation are accessible and retry assessment.

To migrate, select the items you want to migrate and click **Migrate**. The status updates to:

- Migrating - Item is being migrated.
- Migrated - Migration is complete and successful. You can view and use the migrated item in your vRealize Automation 8 environment.
- Failed - The migration failed. Review the item in your source environment, modify as needed, retry migration.
- Excluded - Business group, subscription, or deployment that was listed as Not ready was migrated but its not ready items were not migrated and are listed as excluded.

If the component you are migrating has dependencies that have not been migrated first the migration fails. For example, if you want to migrate a subscription that has infrastructure criteria you must first migrate the infrastructure component.

**Note** Once you migrate a deployment, the migration of its associated business group is complete.

After migration, your vRealize Automation 7 source content remains unchanged.

## Incremental Migration

The vRealize Automation 8 migration assistant allows you to incrementally migrate your source environment instead of performing a full migration all at once using the migrate with reassessment option. The migrate with reassessment option reassesses your source environment and migrates any changes to the target environment. For example, if you migrate a business group with 5 blueprints, then create or publish 5 more in your source environment, you can migrate the new 5 blueprints to the same business group. Only new source environment content is migrated. Changes to any migrated source content will not be migrated.

# Migration Prerequisites 7

Before you can use the migration assistant tool to migrate your vRealize Automation 7 source environment to vRealize Automation 8, ensure that these prerequisites are met.

## Migration Prerequisites

- Backup your vRealize Automation 7 source environment.
- If your source vRealize Automation 7 content has dependencies on an external vRealize Orchestrator, you must first migrate vRealize Orchestrator. See Migrating vRealize Orchestrator.
- Create or Chapter 5 Migrating Tenants Using vRealize Suite Lifecycle Manager.
- You must first import and install the IPAM plugin in vRealize Automation Cloud Assembly to migrate an IPAM endpoint. For more information, see Download and deploy an external IPAM provider package for use in vRealize Automation.
- After running a migration assessment, the vRO Azure endpoint configuration is populated on the Configuration tab. Before running a migration, you must manually enter the key by editing the configuration with the `https://FQDN/migration-ui/#/global-config` link. If you attempt to migrate without providing the endpoint key, the migration fails.
- For subscriptions, the input type 'payload' is not supported in vRealize Automation 8. Before migrating your vRealize Automation 7 subscriptions, you must update the input type to 'Properties'.
- vRealize Automation 8.1 did not require you to accept a source certificate during migration assessment. As a result, you must reassess your source environment. To reassess your source environment and accept the source certificate: delete the source environment, re-add it, accept the certificate, and reassess the source environment using the migration assistant service.
- Ensure your vRA license is up-to-date and active before proceeding with migration.

  **Note** The vRealize Automation 7.x advanced license supports public cloud, however the vRealize Automation 8 advanced license does not. During the migration assessment, any public cloud items are flagged.

- In preparation for migration, ensure you exclude virtual machine memory from snapshots on the target environment.

# Migration Limitations

8

The vRealize Automation 8 migration assistant tool includes some migration limitations.

This chapter includes the following topics:



## Blueprint Limitations

vRealize Automation 8 Migration Assistant tool includes these limitations.

- In vRealize Automation 8, Blueprints are called VMware Cloud Templates.
- Nested blueprints (Parent blueprint with children blueprints) are not supported in vRealize Automation 8. You can flatten nested blueprints, if desired. However, flattening blueprints will cause you to lose the abstraction layer.
- During migration, lease policies are migrated but the **Minimum lease days** field is not. vRealize Automation 8 migrates minimum lease days as **Maximum Lease Days** and maximum lease days as **Maximum Total Lease**.

- If your source Blueprint contained a reservation policy and that reservation policy is deleted before migration, the reservation policy is migrated and tagged on the VMware Cloud Template. However, when you attempt to provision a VMware Cloud Template (formerly Blueprint) in vRealize Automation 8, it fails because the reservation policy does not exist and issues this error message during provisioning:

  "No placement exists that satisfies all of the request requirements. See if suitable placements and cloud zones exist for the current project and they have been properly tagged."

  To remediate this, open the VMware Cloud Template in vRealize Automation 8 and remove the tag.
- When migrating blueprints, the Migration Assistant ignores NSX settings set at the blueprint level, such as Transport Zone and Networking Reservation Policy. When the migrated blueprint is deployed, the VM and Edge are placed in the same cluster.

# XaaS Limitations

vRealize Automation 8 includes these XaaS Limitations.

If your source environment contains multiple Xaas Blueprints or Custom Resources, they are assessed and migrated these ways:

- If the XaaS Blueprints or Custom Resources belong to the same business group, they are detected during the migration assessment but are blocked for migration. You must unpublish all XaaS Blueprints or Custom Resources except for one. The remaining published XaaS Blueprint or Custom Resource can be migrated. You can then publish the remaining XaaS Blueprints or Custom Resources and remigrate. Remigration only migrates the new content while preserving the previously migrated content.
- You can't have two XaaS blueprints configured to the same workflow. When you have 2 or more XaaS Blueprints or Custom Resources that belong to different business groups but are configured to the same workflow, they are not detected during the migration assessment. When migrated, the first migrated XaaS Blueprint or Custom Resource creates the vRealize Automation 8 XaaS Cloud Template or Custom Resource and is linked to the workflow. As a result, the subsequent XaaS Blueprints or Custom Resources are not configured to the workflow during migration.
- If multiple XaaS Blueprints contain the same custom resource but use different create, update, and delete workfows, the migrated custom resource only uses the workflows associated with the first migrated XaaS Blueprint. When migrated, all other XaaS Blueprints containing the same custom resource issue an error regarding missing input/output parameters for the custom resource.

# Network Limitations

The vRealize Automation 8 Migration Assistant tool includes these network limitations.

- You can only set one CIDR and only use the corresponding the IP ranges.

- CIDR and Subnet size might be inaccurate. You can correct this by editing the sizes in the Network Profile post migration.
- vRealize Automation 8 only supports Infoblox. No other third-party IPAM is supported. All other third-party IPAMs must be ported to the vRealize Automation 8 IPAM SDK by the user.
- Before you can migrate to vRealize Automation 8.x, the source and target IPAM endpoint configurations must be the same.
- The vRealize Automation 8 Migration Assistant does not support blueprints with a private network component that do not contain a private network profile for migration.
- Virtual machine IP allocations for both VMs and onboarded VMs are checked during deployment migration and allocated against the onboarded resources in vRealize Automation 8. If you only migrate your source infrastructure and not your deployments, provisioning virtual machines might fail because your source IP addresses are not migrated and allocated against vRealize Automation 8 onboarded resources.
- After migrating to vRealize Automation 8, all IPAM information is migrated. However, day2 operations, such as deleting deployments, release the IP addresses from an external IPAM for deployments containing external network profiles only. You must manually remove the IP address from IPAM for deployments containing on-demand networks. As a workaround, you can create a subscription to remove the IP from IPAM.
- If IP addresses are not allocated when migrating network profiles, they are allocated during deployment migration.

## Deployment Limitations

The vRealize Automation 8 migration assistant has these deployment limitations.

- Migration of a deployment is final regardless of whether it succeeded or failed. You cannot retry a deployment migration. You can rerun the plan created by the migration service, under Onboarding service.When rerun using the Onboarding service the owner, lease, and history of the deployment are not migrated.
- Historical costing information is not migrated with deployments. For more information on pricing and costs, see What are Pricing Cards.
- For deployments with on-demand networks, if you migrate a deployment that contains an IPAM-managed IP and then delete the migrated deployment from vRealize Automation 8, you must also manually delete the associated IP address from Infoblox.
- After migrating to vRealize Automation 8, all IPAM information is migrated. However, day2 operations, such as deleting deployments, release the IP addresses from an external IPAM for deployments containing external network profiles only. You must manually remove the IP address from IPAM for deployments containing on-demand networks. As a workaround, you can create a subscription to remove the IP from IPAM.

- If your source environment includes a load balancer configured to an existing network that is not connected to a machine, the external network is not migrated and the IP is not allocated during migration.
- The "Update Deployment" functionality only works for deployments containing vSphere machine components. Running an "Update Deployment" action on deployments that contain other component types (networks, AWS machines, Azure machines, etc) attempts to recreate the deployment components.
- vRealize Automation 7 does not collect data from Azure endpoints nor can it identify if an Azure machine was deleted outside of vRealize Automation 7. During Migration Assessment in vRealize Automation 8, any deleted Azure deployments are listed as Ready but are excluded during migration because the migration assistant cannot find the VMs.
- You cannot migrate a source deployment if it has mixed network types, such as both NAT/ route networks in the same deployment for NSX-T/NSX-V.
- Source deployments that contain more than one NSX Load Balancer component are not migrated.
- If your source environment contains multiple deployments of a one ARM existing load balancer (on-demand load balancer with existing network) created from the same blueprint on NSX-T, the migration assistant only creates one load balancer. Only one of the migrated deployments will have the load balancer component listed. All other existing one ARM load balancer deployments do not have the load balancer component.
- The IP address configured to the NAT network in your source deployments is not marked as allocated post migration. However, the IP addresses of migrated load balancers and VMs are marked as allocated under **Infrastructure > Networks > IP Address** post migration.
- If your source vRealize Automation 7 deployment contains an invalid resource, for example it does not have properties for a resource, then the resource is not migrated. If all the resources are invalid in the deployment, the entire deployment is not migrated.
- During brownfield migration, both onboarded and migrated machines are not linked to cloud zones. As a result, these machines are not calculated into storage maximum definitions.
- If you migrate a deployment with a single machine component and an existing network component, vRealize Automation attempts to recreate the existing machine and fails with a 'Subnet is required' error.
- If you migrate a vSphere deployment that is linked to a Cloud Template, and then update the Cloud Template post migration the deployment fails.
- If a deployment contains DNAT rules, reconfigure day 2 actions cannot be performed post migration.
- Migrated clustered machines do not support scale in / scale out when applying iterative Cloud Template updates to the parent deployment.

- You can only migrate clustered deployments from vRealize Automation 7.6 source environments. Migrating clustered deployments is not supported for vRealize Automation 7.5, 7.4, or 7.3 source environments.

## vIDM Limitations

The vRealize Automation 8 Migration Assistant includes these vIDM limitations.

- vIDM tenant migration is not supported. You must manually create tenants in LCM.

## Endpoint Limitations

The vRealize Automation 8 migration assistant tool includes these endpoint limitations.

- After running a migration assessment, the vRO Azure endpoint configuration is populated on the **Configuration** tab. Before running a migration, you must manually enter the key by editing the configuration. If you attempt to migrate without providing the endpoint key, the migration fails.

  **Note** If the vRO Azure endpoint was not captured during the migration assessment, re-run the assessment and ensure the endpoint is captured for the business group.

- For third-party IPAM endpoints, vRealize Automation 8 only supports Infoblox. All other third-party IPAMS must use the vRealize Automation 8 IPAM SDK.
- To be assessed and migrated, endpoints must contain at least one active reservation.
- In vRealize Automation 7, fabric groups were created to specify which regions/compute resources from a given endpoint were available to be managed by vRealize Automation (For example, the regions/compute resources that we can use when provisioning workloads). When an endpoint is migrated, the restrictions imposed by fabric groups are not preserved. Instead, all regions/compute resources belonging to the endpoint are available for management.
- vRealize Automation 8 only supports vSphere 6.x and later. Migration fails for vSphere 5.x or earlier.

## Subscription Limitations

The vRealize Automation 8 Migration Assistant tool includes these subscription limitations.

**Note** You must first migrate vRealize Orchestrator before you can migrate vRealize Automation subscriptions.

vRealize Automation 8 also no longer stops processing subscriptions in the event a workflow fails. If a workflow fails, the migration continues and issues an error saying it is not supported.

vRealize Automation 8 does not support these subscriptions:

- Business groups configuration
- Endpoint action
- Infrastructure enpoint test connection
- IPAM IP lifecycle event completion
- Machine lifecycle
- Orchestration server configuration
- Orchestration server configuration (XaaS)
- Post Approval
- Pre Approval
- Resource reclamation completion event

## Custom Properties Limitations

The vRealize Automation 8 Migration Assistant tool includes these custom properties limitations.

vRealize Automation 8 only supports vSphere custom property components. It does not support migration for these custom properties:

- Custom properties specified in compute resources
- Custom properties specified in reservations
- Custom properties specified in endpoints
- Predefined custom properties:
  - `_debug_deployment`
  - `_Notes`
  - NSX.Edge.ApplianceSize
  - NSX.Edge.HighAvailability
  - NSX.Edge.HighAvailability.PortGroup
  - VirtualMachine.Rdp.SettingN
  - VirtualMachine.Software%.ISOLocation
  - VirtualMachine.Software%.ISOName
  - VirtualMachine.Software%.Name
  - VirtualMachine.Software%.ScriptPath

- Property Groups. Custom properties in property groups are flatten out into blueprint migration.

  **Note** If a blueprint has a custom properties that use the '.' character it is replaced with '_' character. For example, VirtualMachine.Core.Count becomes VirtualMachine_Core_Count.

# Cloud Zone Limitations

vRealize Automation 8 includes these cloud zone limitations.

- Network and storage allocation does not follow the normal compute selection hierarchy and can fail with errors when shared resources exist across business groups. In the case this type of blueprint, provisioning fails because vRealize Automation 8 cannot find a common resource placement. To prevent this, add a contraint tag to the network and then provision the machine.

# Reservation Limitations

vRealize Automation 8 includes these reservation limitations.

- vRealize Automation 7.x supported the use of AWS IaaS endpoints to create a keypair on demand for each deployment. This is not supported in vRealize Automation 8.
- The Migration Assistant only supports vSphere clusters with DRS enabled. If you attempt to migrate a VC cluster with DRS disabled, the cluster is listed as a host in vRA 8 while the same cluster is shown as cluster in vRA7. This causes migration to fail as the Migration Assistant can not find the cluster.

# Business Group Limitations

The vRealize Automation 8 migration assistant includes these user limitations.

## User and Groups

- If your source 7.x environment contains business groups that include users or groups that use special characters ( for example, #, !, spaces, &, etc), the migration assessment fails for the all business groups for that tenant. You must remove the users or user groups from the business group in your source environment business groups, and rerun the migration assessment. After, you must manually add the user in vRealize Automation 8.
- If your source 7.x environment contains business groups that include "local users, custom groups, or All Users", they are skipped and not migrated. You must manually add these users and groups in vRealize Automation 8 after migrating business groups.
- Verify that the expected groups and users for the migrated project are present. If they are not present, you must add the users and groups before proceeding to deployment migration.

# How do I perform a brownfield migration

9

Using the migration assistant tool, you can perform a brownfield migration of your vRealize Automation 7 source instance and vRealize Automation 8.

If you created infrastructure in vRealize Automation 8 and want to align it with your vRealize Automation 7 infrastructure, you must run a migration assessment and then migrate your source environment. The migration assistant tool compares your existing vRealize Automation 8 infrastructure to the infrastructure in your vRealize Automation 7 source environment. After this comparison, the migration tool only migrates the difference between the two environments.

For example: if you created a project named vSphere Users with one cloud template in vRealize Automation 8 and your vRealize Automation 7 environment contains a business group named vSphere Users with four blueprints, the migration assistant tool only migrates the additional three blueprints (as VMware cloud templates) to the vRealize Automation 8 vSphere Users project.

If the migration is rolled back, the existing vRealize Automation 8 infrastructure is rolled back to its original state before the vRealize Automation 7 migration. Only the migrated source environment content is rolled back, leaving the pre-migration vRealize Automation 8 content intact.

**Note** Post-migration cloud zone tags are not removed during rollback.

Before performing a brownfield migration, review these considerations:

**Cloud Zones**

For AWS and Azure, the reservations are merged into one when they use the same region criteria. Similarly, all vSphere reservations are merged into one cloud zone, if they contain the same computes. New tags are added to the cloud zone based on reservation name and reservation policy.

**IP Ranges**

If your source environment contains overlapping IP ranges, the migration to vRealize Automation 8 fails.

**Network Profiles**

A new network profile is always created for on-demand networks. During migration, the source environment network profiles are merged into one when they contain the same regionId, isolation type, networks, security groups, and load balancers.

**Storage Profiles**

For Azure and vSphere, storage profiles are merged into one when they contain the same region and storage description. vRealize Automation 7 does not support storage profiles for AWS.

### Projects

New zones are added to existing projects. If the zone exists in the project, the memory limit, instances, and storage limits are set to the maximum of existing project and source projects. Priority is set to the lowest of the two (lower is higher). The user roles of existing projects are also updated if the user already exists.

# Migrating vRealize Automation 7 Infrastructure

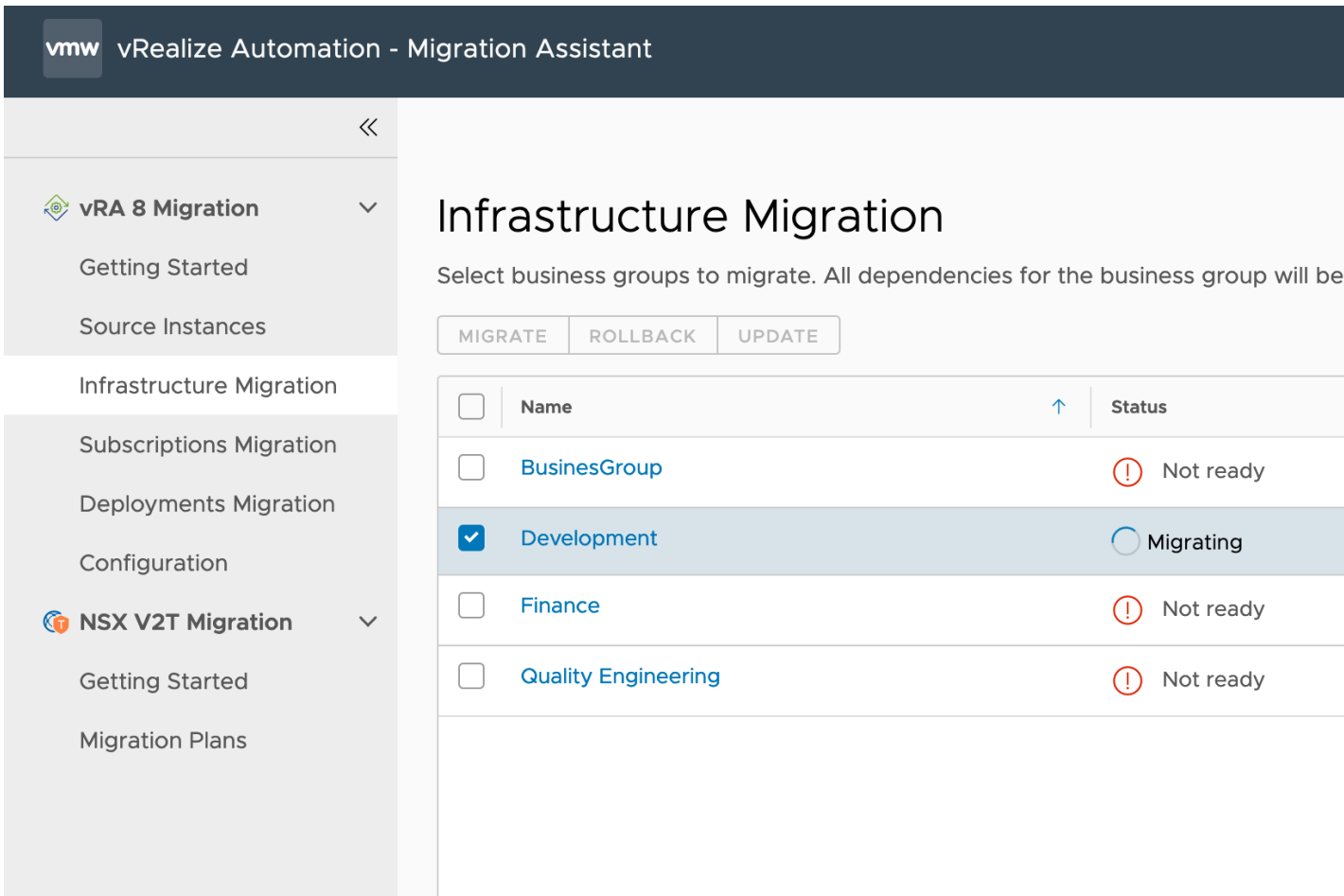
10

After running a migration assessment on your vRealize Automation 7 source environment, you can migrate individual business groups to vRealize Automation 8.

The infrastructure results of your migration assessment are listed on the **Migration > Infrastructure** tab. All assessed business groups are listed with their status:

- Ready - Business group is ready for migration. No action is needed for migration readiness.
- Ready with warnings - Business group is ready but needs review. Remediate any issues that might impact migration.
- Not ready - Business group is not ready for migration. Review details of the business group in your source environment and correct areas needing attention.
- Assessing - Business group is still being assessed for migration readiness.
- Assessment failed - The assessment failed, retry assessment.

If applicable, after modifying any business groups listed as not ready or ready with warnings, select the business group and click **Update** to update its status in the assessment results table.




## Migrate

Are you sure you want to migrate the selected business groups?

All dependencies for the business groups will be migrated.

Migrating vRealize Automation 7 reservations might reuse and share existing vRealize Automation 8 cloud zones. Shared cloud zones can impact governance by exposing and granting user access to clusters that were previously restricted. It can also impact resource allocation when provisioning new workloads.

Business groups: 1

Migration is a multi-step operation that may take several minutes.

CLOSE MIGRATE

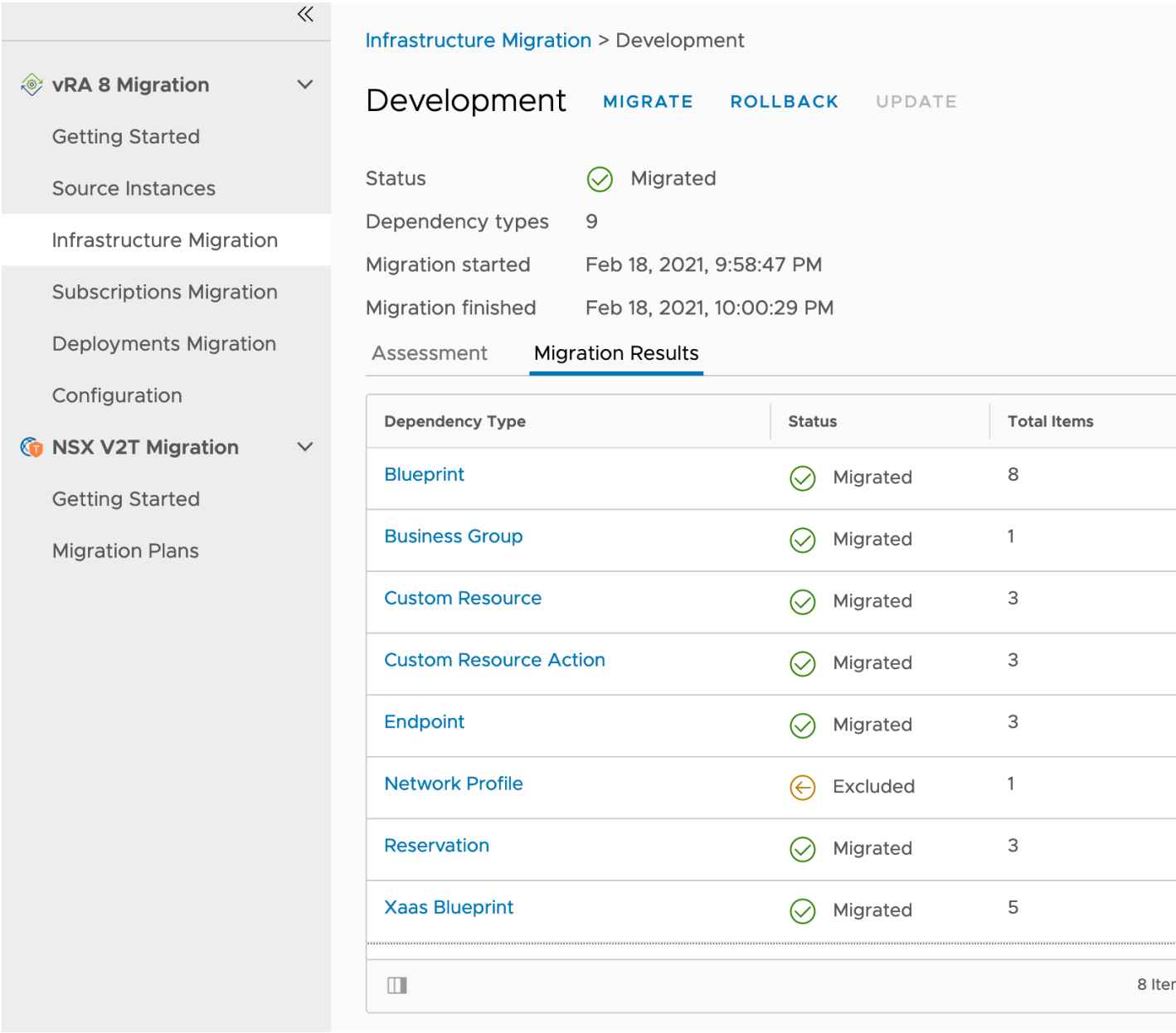
To migrate business groups, select one or more business groups with a ready or ready with warnings status and click migrate. You can roll back previously migrated business groups by selecting the migrated business group and clicking rollback.

**Note** If time passed between assessing your business groups and migrating them, the migration assistant tool reassesses your business groups. Reassessing business groups is the most time-consuming part of the migration. Consider turning reassessment off if you have not made changes to the source system since the last assessment.

**Note** If you modify any migrated items and then rollback, all edits post-migration are deleted.

After migrating, you can click the business group name to view its assessment and migration results and status:

- Migrating - Business groups is being migrated.
- Migrated - Migration is complete and successful. You can view and use the migrated business group in your vRealize Automation 8 environment.
- Failed - The migration failed. Review the business group in your source environment, modify as needed, retry migration.
- Excluded - Business group that was listed as Not ready was migrated but it is not ready items were not migrated and are listed as excluded. To migrate the not ready/excluded items, you must correct them, reassess, and then remigrate them.




You can continue to explore the details of the migrated business group by clicking a dependency type and viewing the itemized statuses. Any unsupported infrastructure components that were not able to be migrated are listed as excluded.

**Note** If you are upgrading to vRealize Automation 8.3 from vRealize Automation 8.0 or later, you must reassess all tenants of all sources to update your migration assessment report. For migrated business groups, you can remigrate with the reassessment option enabled to automatically update the assessment report.

In the event your business group migration fails, it might be due to a stale token. Restart all vRA services and retry migration. For more information on restarting your vRA services, see Starting and Stopping vRealize Automation.

This chapter includes the following topics:



# How are Business Groups mapped in vRealize Automation 8

Business groups and their components are mapped differently in vRealize Automation 8.

**Table 10-1. Business Group vRealize Automation 8 Mapping**

| vRealize Automation 7 Item | vRealize Automation 8 Mapping |
|---|---|
| Business Group | Project |
| Machine prefix | Naming template |
| Custom properties | Custom properties<br>**Note** The **Encrypted** and **Show in request** flags are not migrated to vRealize Automation 8. |
| Active Directory policy/Active Directory container | Active Directory integration account/project configuration<br>**Note** vRealize Automation 8 does not support migration for Active directories. You must manually configure them post-migration. |
| Capacity alert email address | N/A<br>**Note** vRealize Automation 8 does not support migration for capacity alert email addresses. |
| Business group managers | Project administrators |
| Business group users | Project members |
| Support users | Project members |
| Shared access users | Project members |

## Users

Users are migrated from vRealize Automation 7 to vRealize Automation 8 as strings.

vRealize Automation 8 does not perform user validation on migrated users. To make sure your users work, it is recommended to create users first in vRealize Automation 8 then migrate your source environment.

### Rule-Based Object Entitlements

In vRealize Automation 7, users were granted object entitlements by user account. In vRealize Automation 8, object entitlements are rule-based by user role, meaning all users of the same role have the same object entitlements. For example, two users with the same user role assigned to the same business group have the same entitlements to all project items.

To govern object entitlements:

1 Create a separate project.

2 Assign the desired user to the project.

3 Assign associated entitled objects to the project.

**Note** You cannot share deployments between projects.

# Blueprint Considerations

In vRealize Automation 8, Blueprints are called VMware Cloud Templates. All migrated vRealize Automation 7 blueprints are migrated as VMware Cloud Templates.

## Basic Blueprint Support

vRealize Automation 8 supports these component types and provisioning methods:

- Amazon EC2
- Azure
- vSphere
- Cloning
- Linked Clone

  **Note** vRealize Automation 8 does not support "Use current snapshot".

- OVF

  **Note** OVF server basic authentication and proxy servers are not supported.

- Reservation policies are migrated as constraint tags.

## Component Profile Support

Image and Size component profile value sets are migrated as input properties in VMware Cloud Templates.

- Image value sets
  - For OVF image value sets: Proxy server configuration, and basic authentication username and password fields are not migrated to vRealize Automation 8. The vRealize Automation 8 migration assistant supports these provisioning methods used by image value sets:
    - Clone
    - Linked Clone
    - OVF
- Size value sets
  - The storage field is not migrated to vRealize Automation 8.

## How do I migrate and share a cloud template between projects

vRealize Automation 8 supports sharing VMware Cloud Templates between projects.

During migration, you can migrate blueprints that are shared with existing projects. You can also maintain shared VMware Cloud Templates across projects even when the original project is rolled back. When the original project is rolled back, the cloud template ownership is transferred to another project.

**To migrate shared blueprints:**

### Procedure

1. Run a migration assessment on your vRealize Automation 7 source environment. For more information on how to run a migration assessment, see Running a Migration Assessment on a source instance.
2. Select the **Infrastructure** tab, select the first business group containing the blueprint, and click **Migrate**.

   The migrated blueprints and their associated projects are seen on the **Design** tab of vRealize Automation Cloud Assembly and as catalog items in vRealize Automation Service Broker.
3. Navigate back to the **Infrastructure** tab, select the additional business groups containing the blueprint, and click **Migrate**.

   In vRealize Automation Cloud Assembly, the cloud template is shown as only belonging to the first migrated project, but in vRealize Automation Service Broker the cloud template lists all projects in which it belongs.

### What to do next

If you want to rollback the migration of the original business group and transfer blueprint ownership, navigate to the **Infrastructure** tab, select the original business group, and click

**Rollback**. After rolling back the original business group, the cloud template ownership automatically transfers to the remaining migrated project associated with the cloud template. Any associated custom forms are also retained post rollback.

## How do I use vRealize Automation 6.x blueprints

Before you can use blueprints from vRealize Automation 6.x in vRealize Automation 8, you must first migrate them to vRealize Automation 7.4, 7.5, or 7.6.

After the migrating the blueprints to vRealize Automation 7, they are marked as 'Not Ready - blueprint is using Create workflow' after running a migration assessment. If the blueprint does not use the create workflow, you must open the blueprint in your source environment and save it without making any changes and rerun the migration assessment. After rerunning the assessment, the blueprint is marked as Ready. If the blueprint does use the create workflow, it cannot be migrated to vRealize Automation 8.

## VMware Cloud Templates

When comparing your vRealize Automation 7 source to your new vRealize Automation 8 environment, the blueprint object types are different and are called VMware Cloud Templates.

**Table 10-2. vRealize Automation 7 Blueprint Types to VMware Cloud Templates in vRealize Automation 8**

| Type | vRealize Automation 7 | vRealize Automation 8.0 |
|---|---|---|
| vSphere (vCenter) machine | Infrastructure.CatalogItem.Machine.Virtual.vSphere | Cloud.vSphere.Machine |
| AWS | Infrastructure.CatalogItem.Machine.Cloud.AmazonEC2 | Cloud.AWS.EC2.Instance |
| Azure Machine | | Cloud.Azure.Machine |
| Generic Virtual Machine | Infrastructure.CatalogItem.Machine.Virtual.Generic | Cloud.Machine |
| On-Demand Load Balancer (NSX) | Infrastructure.Network.LoadBalancer.NSX.OnDemand | Cloud.NSX.LoadBalancer |
| On-Demand Routed Network (NSX) | Infrastructure.Network.Network.NSX.OnDemand.Routed | Cloud.NSX.Network |
| NSX-T On-Demand Routed Network | Infrastructure.Network.Network.NSXT.OnDemand.Routed | Cloud.NSX.Network |
| NSX-T On-Demand NAT Network | Infrastructure.Network.Network.NSXT.OnDemand.NAT | Cloud.NSX.Network |
| Existing Network | Infrastructure.Network.Network.Existing | Cloud.vSphere.Network |
| On-Demand Private Network (NSX) | Infrastructure.Network.Network.NSX.OnDemand.Private | Cloud.NSX.Network |

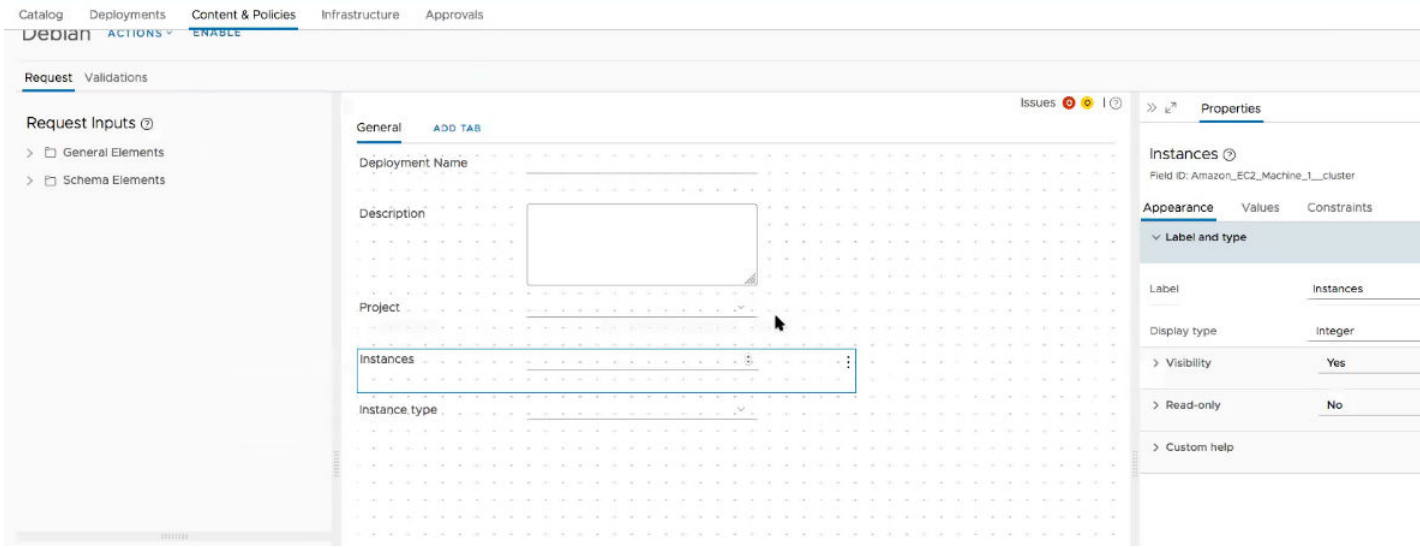
## Custom Form Blueprints

Using the migration assistant tool, you can migrate Custom Form blueprints to vRealize Automation 8.

To migrate a custom form blueprint, first perform a migration assessment on your vRealize Automation 7 source instance, then on the **Infrastructure** tab select the business group that contains the custom form blueprint and click migrate.

After migrating, open Service Broker and click the **Content and Policies** tab. Click the three dot icon next to the migrated cloud template to view and customize the custom form related fields.

Also, validate that all external values from vRealize Orchestrator workflows are present along with any other expressions. If values or expressions are missing, rework the vRealize Orchestrator workflow.



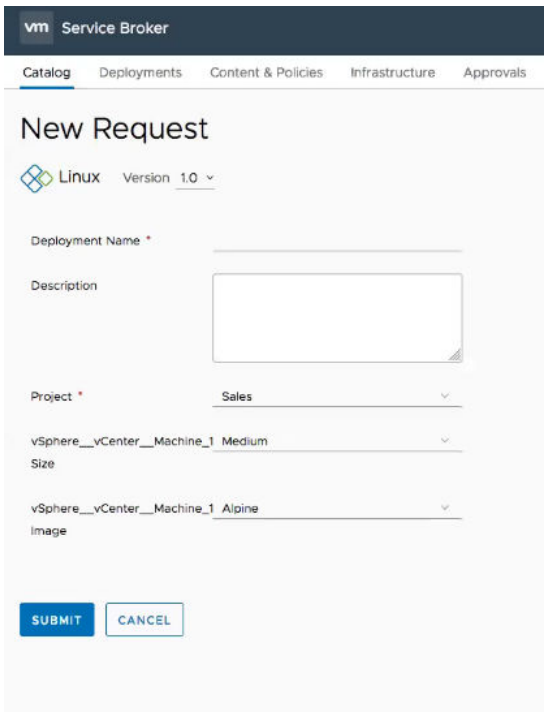

## Component Profile Blueprints

Using the migration assistant tool, you can migrate component profile blueprints to vRealize Automation 8.

To migrate a component profile blueprint, first perform a migration assessment on your vRealize Automation 7 source instance, then on the **Infrastructure** tab select the business group that contains the component profile blueprint and click migrate.

After migrating, open Service Broker and click the **Catalog** tab. Click **Request** to view the component profile fields. For example, this migrated blueprint contains size and image fields populated with their vRealize Automation 7 values.

After migrating, verify the migrated template with the added inputs for sizes.




## NSX Support

These NSX components are supported in VMware Cloud Templates.

### Supported NSX Components

- NSX (T/V) On-Demand Routed Network
- NSX (T/V) On-Demand Nat Network
- NSX (T/V) On-Demand Load Balancer
- NSX (T/V) Existing Security Group
- NSX V On-Demand Private Network
- NSX V On-Demand Security Group

### Unsupported NSX Components

- NSX (T/V) App Isolation
- NSX V Existing Security Tag

# XaaS Considerations

# XaaS Blueprints

XaaS blueprints are migrated into two different types of VMware Cloud Templates depending on their details.

Before you can migrate a XaaS blueprint, the associated workflow must be migrated to 8 first. vRealize Automation 8 supports:

- Request Form (Catalog item details and submitted request details are not supported)
- Search field on Request form
- Tree field on Request form
- Conditional default values only support a single condition. If conditions are nested, the conditions are ignored during migration.
- The read only, minimum length, and maximum length constraints value only supports constant values.
- The field visiblity can be set both conditionally and externally using the form designer.

vRealize Automation 8 no longer includes or supports the **Make Available as Component in Design Canvas** functionality.

Before migrating, if the associated workflow is not compatible with vRealize Automation 8, save the XaaS blueprint as a draft to continue the migration assessment and migration without it.

## XaaS Blueprints Without a Defined Provision Resource

vRealize Automation 7 XaaS blueprints without a defined provision resource are migrated to vRealize Automation 8 as XaaS Cloud Templates with the associated workflow and original request form fields. You might need to reorder the fields, as the fields' order is not preserved post migration.

## XaaS Blueprints with a Defined Provision Resource

vRealize Automation 7 XaaS blueprints with a defined provision resource are migrated to vRealize Automation 8 as VMware Cloud Templates along with the associated workflow and original request form. They are no longer listed as an XaaS blueprint. vRealize Automation 8 requires these XaaS blueprints to have an assigned update workflow and destroy workflow. If the XaaS blueprint does not contain one, vRealize Automation 8 assigns a dummy id to these workflow fields. You must replace the dummy id and assign an update and destroy workflow post migration.

**Note** The component lifecycle scalable functionality is not supported in vRealize Automation 8 and is flagged during the migration assessment.

# Custom Resources

vRealize Automation 8 includes these custom resource considerations.

When migrating XaaS Custom Resources, only the original fields are migrated. Any user added fields or tabs are not migrated and must be added post migration. Any vRealize Automation 7 plugins used in your custom resources must also exist in vRealize Automation 8. If the custom resource contains a plugin that is not supported in vRealize Automation 8, you must unpublish the associated XaaS blueprint to exclude it from migration.

These plugins, fields, and views are not supported in vRealize Automation 8:

- VCAC/VCACCAFE plugin
- Resource List view
- Submitted Action details

## Resource Mapping and Resource Actions

Resource mapping and resource actions are not supported because vRealize Automation 8 does not support their underlying vRealize Automation 7 components.

vRealize Automation 8 only includes an out-the-box workflow to map virtual machine types to orchestrator type VC:VirutalMachine in catalog resources.

# How are Entitled Actions mapped in vRealize Automation 8

vRealize Automation 8 uses built-in resource mapping for Entitled to Day 2 Policy actions.

During Migration, these entitled actions are mapped to these Day 2 Policy actions. All other entitled actions not listed in the table are currently not mapped during migration.

Table 10-3. Entitled Actions Mapping

| Type | vRealize Automation 7 Entitled Actions | vRealize Automation 8 Day 2 Policy Actions |
|---|---|---|
| Deployment | Change Lease | Deployment.ChangeLease |
| | Destroy | Deployment.Delete |
| | Change owner | Deployment.ChangeOwner |
| Machine | Connect to Remote Console | Cloud.vSphere.Machine.Remote.Console |
| | Power off | Cloud.vSphere.Machine.PowerOff<br>Cloud.AWS.EC2.Instance.PowerOff<br>Cloud.Azure.Machine.PowerOff |
| | Reboot | Cloud.vSphere.Machine.Reboot<br>Cloud.AWS.EC2.Instance.Reboot |

Table 10-3. Entitled Actions Mapping (continued)

| Type | vRealize Automation 7 Entitled Actions | vRealize Automation 8 Day 2 Policy Actions |
|---|---|---|
| | Reconfigure | (Partially Supported)<br>Cloud.vSphere.Machine.Add.Disk<br>Cloud.vSphere.Machine.Remove.Disk<br>Cloud.vSphere.Machine.Resize<br>Cloud.vSphere.Machine.Compute.Disk.Resize<br>Cloud.Azure.Machine.Add.Disk<br>Cloud.Azure.Machine.Remove.DiskCloud.Azure.Machine.Resize<br>Cloud.AWS.EC2.Instance.Add.Disk<br>Cloud.AWS.EC2.Instance.Remove.Disk Cloud.AWS.EC2.Instance.Resize<br>Cloud.AWS.EC2.Instance.Compute.Disk.Resize |
| | Shutdown | Cloud.vSphere.Machine.Shutdown |
| | Suspend | Cloud.vSphere.Machine.Suspend<br>Cloud.Azure.Machine.Suspend |
| Virtual Machine | Create Snapshot | Cloud.vSphere.Machine.Snapshot.Create |
| | Delete Snapshot | Cloud.vSphere.Machine.Snapshot.Delete |
| | Revert to Snapshot | Cloud.vSphere.Machine.Snapshot.Revert |
| Cloud Machine | Destroy | Cloud.Azure.Machine.Delete<br>Cloud.AWS.EC2.Instance.Delete |
| Azure Virtual Machine | Delete | Cloud.Azure.Machine.Delete |
| | Restart | Cloud.Azure.Machine.Restart |
| | Start | Cloud.Azure.Machine.PowerOn |
| | Stop | Cloud.Azure.Machine.PowerOff |
| VMware NSX Security Group | Reconfigure | Cloud.NSX.LoadBalancer.LoadBalancer.Reconfigure<br>Cloud.LoadBalancer.LoadBalancer.Reconfigure |

# Endpoint Considerations

vRealize Automation 8 includes these endpoint considerations.

vRealize Automation 8 supports these endpoints:

### Table 10-4. vRealize Automation 8 Supported Endpoints

| Endpoint | Added as ... |
|---|---|
| Azure | Added as a cloud account.<br>**Note** Azure is supported for Government Cloud, China, and Germany users. |
| AWS | Added as a cloud account |
| vCenter | Added as a cloud account |
| NSX-T | Added as a cloud account |
| NSX-V | Added as a cloud account |
| Puppet | Added as an integration account<br>**Note** You cannot migrate Puppet endpoints to vRealize Automation 8. However, vRealize Automation 8 does support adding Puppet endpoints as integrations post-migration or installation. |
| Ansible | Added as an integration account<br>**Note** You cannot migrate Ansible endpoints to vRealize Automation 8. However, vRealize Automation 8 does support adding Ansible endpoints as integrations post-migration or installation. |
| IPAM | Added as an integration account |
| vRealize Orchestrator | Added as an integration account |

vRealize Automation 8 does not support these endpoints:

- Hyper-V (standalone)
- Hyper-V (SCVMM)
- KVM (RHEV)
- NetApp ONTAP
- Openstack
- Proxy
- vCloud Air
- vCloud Director
- vROPs
- XenServer

## Infoblox IPAM

Before migrating an Infoblox endpoint, you must first install the latest Infoblox plugin for vRealize Automation 8 from the Marketplace in your target vRealize Automation 8 environment. vRealize Automation 8 also requires you to select an address space. Migration fails if you attempt to migrate a profile without a selected address space.

vRealize Automation 8 does not support or migrate these properties/property groups:

- Infoblox.IPAM.createFixedAddress
- Infoblox.IPAM.createAddressAndPtrRecords
- Infoblox.IPAM.Network0.enableDhcp
- Infoblox.IPAM.Network0.aliases
- Infoblox.IPAM.createReservation
- Infoblox.IPAM.Network0.msDhcpServer
- Infoblox.IPAM.Network0.comment
- Infoblox.IPAM.createAddressRecord
- Infoblox.IPAM.Network0.enableDns
- Infoblox.IPAM.CustomHostname.ConditionalMachineCustomProperty0.Value
- Infoblox.IPAM.enableCustomHostname
- Infoblox.IPAM.Network0.dnsView
- Infoblox.IPAM.CustomHostame.ConditionalMachineCustomProperty0.Name
- Infoblox.IPAM.restartIfNeeded
- Infoblox.IPAM.createHostRecord

# Approval Policy Considerations

vRealize Automation 8 includes these approval policy considerations.

Approval policies in vRealize Automation 8 do not support:

- Post Levels
- Multi Levels
- Nested Criteria
- AP integration with Event Subscriptions
- Approver determination based on Requests
- Approver Groups
- Approvals by Email

You can only use cost, requestedBy, cpucount, and memory criteria fields in your vRealize Automation 8 approval policies.

When migrating your vRealize Automation 7 approval policies to vRealize Automation 8, they are migrated as either Catalog Requests or Day 2 Action Request types.

Table 10-5. Catalog Request

| vRealize Automation 7 Catalog Request Type | vRealize Automation 8 Type |
|---|---|
| Service Catalog - Catalog Item Request | Deployment.Create |
| Service Catalog - Catalog Item Request - Virtual Machine | Deployment.Create<br>(resourceType = Cloud.vSphere.Machine) |
| Service Catalog - Catalog Item Request - Cloud Machine | Deployment.Create<br>(resourceType = Cloud.AWS.EC2.Instance) |
| Service Catalog - Catalog Item Request - Existing Network | Deployment.Create<br>(resourceType = Cloud.vSphere.Network) |
| Service Catalog - Catalog Item Request - NSX-T On-Demand Load Balancer | Deployment.Create<br>(resourceType = Cloud.NSX.LoadBalancer) |
| Service Catalog - Catalog Item Request - NSX-T Existing NS Group | Deployment.Create<br>(resourceType = Cloud.SecurityGroup) |
| Service Catalog - Catalog Item Request - NSX-T On-Demand Nat Network | Deployment.Create<br>(resourceType = Cloud.NSX.Network) |
| Service Catalog - Catalog Item Request - NSX-T On-Demand Routed Network | Deployment.Create<br>(resourceType = Cloud.NSX.Network) |
| Service Catalog - Catalog Item Request - Existing Security Group | Deployment.Create<br>(resourceType = Cloud.SecurityGroup) |
| Service Catalog - Catalog Item Request - On-Demand Routed Network | Deployment.Create<br>(resourceType = Cloud.NSX.Network) |
| Service Catalog - Catalog Item Request - On-Demand Private Network | Deployment.Create<br>(resourceType = Cloud.NSX.Network) |
| Service Catalog - Catalog Item Request - On-Demand Load Balancer | Deployment.Create<br>(resourceType = Cloud.NSX.Network) |

Table 10-5. Catalog Request (continued)

| vRealize Automation 7 Catalog Request Type | vRealize Automation 8 Type |
|---|---|
| Service Catalog - Catalog Item Request - On-Demand NAT Network | Deployment.Create<br>(resourceType = Cloud.NSX.Network) |
| Service Catalog - Catalog Item Request - Puppet<br>Service Catalog - Catalog Item Request - XaaS Blueprint<br>Service Catalog - Catalog Item Request - Software Component<br>Service Catalog - Catalog Item Request - Ansible<br>Service Catalog - Catalog Item Request - Composite Blueprint<br>Service Catalog - Catalog Item Request - Existing Security Tag<br>Service Catalog - Catalog Item Request - Container<br>Service Catalog - Catalog Item Request - Container Network<br>Service Catalog - Catalog Item Request - Container Volume | Not Supported |

Table 10-6. Day 2 Action Requests

| vRealize Automation 7 Action Type | vRealize Automation 8 Action Type |
|---|---|
| Resource Action Request - Change Lease - Deployment | Deployment.ChangeLease |
| Resource Action Request - Change Security - Deployment | Cloud.vSphere.Machine.Change.SecurityGroup |
| Resource Action Request - Create Snapshot - Virtual Machine | Cloud.vSphere.Machine.Snapshot.Create |
| Resource Action Request - Revert To Snapshot - Virtual Machine | Cloud.vSphere.Machine.Snapshot.Revert |
| Resource Action Request - Delete Snapshot - Virtual Machine | Cloud.vSphere.Machine.Snapshot.Delete |
| Resource Action Request - Delete - Azure Virtual Machine | Cloud.Azure.Machine.Delete |
| Resource Action Request - Destroy - Cloud Machine | Cloud.AWS.EC2.Instance.Delete |
| Resource Action Request - Destroy - Deployment | Deployment.Delete |
| Resource Action Request - Destroy - Virtual Machine | Cloud.vSphere.Machine.Delete |
| Resource Action Request - Power Off - Machine | Cloud.vSphere.Machine.PowerOff<br>Cloud.AWS.EC2.Instance.PowerOff |
| Resource Action Request - Power On - Machine | Cloud.vSphere.Machine.PowerOn<br>Cloud.AWS.EC2.Instance.PowerOff |
| Resource Action Request - Reboot - Machine | Cloud.AWS.EC2.Instance.Reboot<br>Cloud.vSphere.Machine.Reboot |
| Resource Action Request - Reconfigure - VMware NSX Load Balancer | Cloud.NSX.LoadBalancer.LoadBalancer.Reconfigure |

Table 10-6. Day 2 Action Requests (continued)

| vRealize Automation 7 Action Type | vRealize Automation 8 Action Type |
|---|---|
| Resource Action Request - Reprovision - Machine | Cloud.AWS.EC2.Instance.Reprovision<br>Cloud.vSphere.Machine.Reprovision |
| Resource Action Request - Restart - Azure Virtual Machine | Cloud.Azure.Machine.Restart |
| Resource Action Request - Shutdown - Machine | Cloud.vSphere.Machine.Shutdown |
| Resource Action Request - Start - Azure Virtual Machine | Cloud.Azure.Machine.PowerOn |
| Resource Action Request - Stop - Azure Virtual Machine | Cloud.Azure.Machine.PowerOff |
| Resource Action Request - Suspend - Machine | Cloud.vSphere.Machine.Suspend |

Table 10-6. Day 2 Action Requests (continued)

| vRealize Automation 7 Action Type | vRealize Automation 8 Action Type |
|---|---|
| | |
| Resource Action Request - Change Lease - Machine<br>Resource Action Request - Cancel Reconfigure - Machine<br>Service Catalog - Resource Action Request<br>Resource Action Request - Change NAT Rules - VMware NSX Network<br>Resource Action Request - Change NAT Rules - VMware NSX-T Network<br>Resource Action Request - Change Owner - Deployment<br>Resource Action Request - Destroy - Container<br>Resource Action Request - Destroy - Container Network<br>Resource Action Request - Destroy Volume - Container Volume<br>Resource Action Request - Execute Reconfigure - Machine<br>Resource Action Request - Expire - Deployment<br>Resource Action Request - Expire - Machine<br>Resource Action Request - Install Tools - Machine<br>Resource Action Request - Manage Public IP Address - Azure Virtual Machine<br>Resource Action Request - Power Cycle - Machine<br>Resource Action Request - Reconfigure - Machine<br>Resource Action Request - Register VDI - Virtual Machine<br>Resource Action Request - Remove from Catalog - Azure Virtual Machine<br>Resource Action Request - Resume - Deployment<br>Resource Action Request - Scale In - Deployment<br>Resource Action Request - Scale Out - Deployment<br>Resource Action Request - Start - Container<br>Resource Action Request - Stop - Container<br>Resource Action Request - Unregister - Machine<br>Resource Action Request - Unregister VDI - Virtual Machine<br>Resource Action Request - Unregister - VMware NSX Network<br>Resource Action Request - Unregister - VMware NSX-T Network | Not Supported |

# Networking Considerations

vRealize Automation 8 includes these NSX, Load Balancer, and Security Group considerations.

## NSX (T/V) Considerations

**Note** These considerations only apply to vSphere Networking with NSX.

The vRealize Automation 8 Migration Assistant does not support blueprints with a private network component that do not contain a private network profile for migration.

In vRealize Automation 8, every on-demand NSX-T network creates a new Tier-1 logical router, and every on-demand NSX-V network creates a new Edge.

When migrating NSX components from vRealize Automation 7 to vRealize Automation 8, they are renamed.

Table 10-7. Blueprint Components

| vRealize Automation 7 Component | vRealize Automation 8 Component |
|---|---|
| NSX-(V/T) On-Demand Nat Network | Cloud.NSX.Network (networkType: outbound) + Cloud.NSX.Gateway (Only if Nat rules specified in 7 BP) |
| NSX-(V/T) On-Demand Routed Network | Cloud.NSX.Network (networkType: routed) |
| NSX-(V/T) On-Demand LB | Cloud.NSX.LoadBalancer |
| NSX-V On-Demand Private Network | Cloud.NSX.Network (networkType: private) |
| NSX-(V/T) Existing Security Group | Cloud.SecurityGroup |
| Existing Network | Cloud.vSphere.Network |
| NSX-V On-Demand Security Group<br>NSX-V Existing Security Tag | Not Supported. |

Table 10-8. Deployment Components

| vRealize Automation 7 Component | vRealize Automation 8 Component |
|---|---|
| NSX-(V/T) On-Demand Nat Network | Network Component (networkType: outbound) |
| NSX-(V/T) On-Demand Routed Network | Network Component (networkType: routed) |
| NSX-(V/T) On-Demand LB | Cloud.NSX.LoadBalancer |
| NSX-V On-Demand Private Network | Network Component (networkType: private) |
| NSX-(V/T) Security Group | SecurityGroup Component (type : Existing) |
| Existing Network | Network Component (networkType: existing) |

Table 10-9. Endpoint Mapping

| vRealize Automation 7 Endpoint | vRealize Automation 8 Endpoint |
|---|---|
| NSX-V | NSX-V<br>**Note** The NSX-V endpoint is linked to vCenter. |
| NSX-T | NSX-T<br>**Note** The NSX-T endpoint is linked to vCenter (1:N Mappings). |
| NSX-T and NSX-V | vCenter (Hybrid)<br>**Note** All 3 endpoints are migrated but only the NSX-T endpoint is linked with VC. If needed, you must manually create additional links. |

## Network Profiles

If your vRealize Automation 7 source environment contains both reservations and a network profile, they are merged during migration into one Network Profile in vRealize Automation 8.

Table 10-10. Network Profile Conversion

| Name | vRealize Automation 7 | vRealize Automation 8 |
|---|---|---|
| External Profile | Assigned to Network in the Reservation | Equivalent CIDR is set on the 8.x subnet. Ip Ranges are set on the subnet. |
| Routed Profile | Linked to External Profile.<br>External Profile is set on the DLR or Tier -0 Logical Router in Reservation. | A Separate Network Profile with Isolation Type as Subnet is created.<br>The equivalent CIDR (of vRealize Automation 7 routed profile) and subnet is determined and set in the NP.<br>Subnet size is determined by the vRealize Automation 7 subnet mask. |

Table 10-10. Network Profile Conversion (continued)

| Name | vRealize Automation 7 | vRealize Automation 8 |
|---|---|---|
| Nat Profile | Linked to External Profile.<br>External Profile is set on the DLR or Tier -0 Logical Router in Reservation. | A Separate Network Profile with Isolation Type as Subnet is created.<br>The equivalent CIDR (of 7 vRealize Automation nat profile) and subnet is determined and set in the NP.<br>By default, the subnet size is 29.<br>If vRealize Automation 7 has both DHCP enabled and static IP ranges, vRealize Automation 8 assigns DHCP and Static as the IP range. |
| Private Profile | Linked to External Profile.<br>External Profile is set on the DLR or Tier -0 Logical Router in Reservation. | A Separate Network Profile with Isolation Type as Subnet is created.<br>The equivalent CIDR (of 7 vRealize Automation private profile) and subnet is determined and set in the NP.<br>By default, the subnet size is 29. |

**Note** External IPAM is supported for all network profiles. However, the CIDR is not set and the IP blocks of the IPAM are set as ranges.

When creating Network Profiles, you must select the address space and existing IP blocks.

**NAT Network Profile with Third-Party IPAM**

In vRealize Automation 7, you didn't need to select the address space. Only the IP ranges were specified in the Network Profile. During deployment, a new on-demand address space was created and IP range set.

In vRealize Automation 8, when creating a Network Profile you must select the address space and existing IP blocks.

## Security Groups

In vRealize Automation 8, Security Groups are linked only if you have a Network component. During Blueprint/Deployment migration, a network component is created by default when a VM is not attached to a Network Component.

For vRealize Automation 7 blueprints, the static IP is assigned to the NIC without having to link a network component. During migration to vRealize Automation 8, a default network component is created for these blueprints.

## Azure Networking

vRealize Automation 8 supports Azure blueprints with these components:

- With Security Groups.

- With vNET and Subnet

**Note** vRealize Automation 8 does not support Azure blueprints with load balancers. You must create a new load balancer.

# Reservation Considerations

vRealize Automation 8 includes these reservation considerations.

In vRealize Automation 8, reservations use cloud zones for compute policies, storage profiles to storage policies, and network profiles for network policies. These constructs are linked together using tags. In vRealize Automation 8, cloud zones are linked to one or more projects.

During reservation migration:

1 The compute components are migrated as a cloud zone and assigned a tag.

2 The storage components are migrated as one or more storage profiles and assigned the previously created tag.

3 The network components are migrated as a network profile and assigned the previously created tag.

4 The cloud zone is attached to the project.

**Note** If the reservation contains a reservation policy, a capability tag is also assigned to the cloud zone to represent the policy post migration.

vRealize Automation 8 also introduces default storage profiles. When a migrated reservation contains multiple storage profiles, vRealize Automation 8 assigns one as a default storage profile. Before provisioning, ensure that the correct storage profile is selected as default. If it is not, select the check box next to the desired storage profile under the reservation.

**Note** In vRealize Automation 7, Amazon reservations cannot configure storage placement policies. In vRealize Automation 8, the migration assistant tool does not create storage profiles during Amazon reservation migrations.

**Note** Only enabled storage paths are migrated to vRealize Automation 8. Disabled storage paths are not migrated to vRealize Automation 8.

## Optimized Reservations

During migration, reservations are consolidated into fewer cloud zones.

Reservations are consolidated into as few cloud zones, storage profiles, and network profiles as possible based on their computations to optimize them. For example, if you have five reservations using the same compute resource, they are migrated and consolidated into a single cloud zone in vRealize Automation 8.

- Multiple reservations that use the same compute resource are migrated as a single cloud zone.

- Multiple reservations that use the same storage paths are migrated as a single storage profile.
- Multiple reservations that use the same networks are migrated as a single network profile.

# Custom Properties Considerations

vRealize Automation 8 includes these custom properties considerations.

During blueprint migration, these custom properties are migrated as Input property parameters and linked to the Cloud Template component field.

- VirtualMachine.CPU.Count
- VIrtualMachine.Memory.Size
- VirtualMachine.NetworkN.PrimaryDNS
- VirtualMachine.NetworkN.SecondaryDNS
- VirtualMachine.NetworkN.Gateways
- VirtualMachine.NetworkN.DnsSuffix
- VirtualMachine.NetworkN.DnsSearchSuffixes
- VirtualMachine.NetworkN.Address
- VirtualMachine.NetworkN.AddressType
- VirtualMachine.NetworkN.NetworkProfileName
- VirtualMachine.NetworkN.ProfileName
- VirtualMachine.NetworkN.SubnetMask
- Custom properties attached to a deployment resource. These custom properties are migrated with their 7.x properties that might not work or be relevant in vRealize Automation 8.

All other custom properties are migrated as part of the Cloud Template schema.

Each property defined in VMware Cloud Templates supports string, boolean, decimal, object, array, and number types.

## Property Group Considerations

vRealize Automation 8 includes these property group considerations.

A property group is a group of custom properties that you can use to customize your Cloud Template. When migrating property groups from vRealize Automation 7.x to vRealize Automation 8.x, review these considerations:

- In vRA 7.x, a property group could be linked to a single tenant or shared across tenants. In vRA 8.x, these property groups are migrated and linked to a single tenant and the name of the tenant is added to the property group name: <propertygroupname>_<tenantname>. If a group is shared across tenants, in vRA 8.x it is migrated as is and without any changes to its name.

- Property groups containing constant properties (show in request: false) are migrated as constant type property groups: <propertygroupname>_constants. Property groups containing editable properties (show in request: true) are migrated as input type property groups: <propertygroupname>_inputs. During migration, if a property group contains both constant and editable properties the property group is split into two property groups: <propertygroupA>_constants and <propertygroupA>_inputs. However, if a property group contains a property that is a dropdown based on a vRO action, then the property group is not split into two property groups.
- If your vRealize Automation 8.x environment contains a property group with the same name as one being migrated, the migrated property group name is amended with a random number: <propertygroupname>_3439553.
- vRealize Automation 8 does not support the use of "-" and "." characters in property names. During migration these characters are replaced with the "_" character.
- Custom properties directly on Cloud Templates or components take precedence over property groups.
- vRealize Automation 8.x supports all property data types. However, vRealize Automation does not support all functionality within those data types. The unsupported functionality is flagged in the migration assessment report.
- vRealize Automation 8.x does not support migrating the display order for properties.

Table 10-11. Supported Property Group Attributes

| Attribute in vRA 7.x | vRA 8.x Mapping |
|---|---|
| Property Group Attributes | |
| Name | Display Name |
| ID | Name |
| Visiblity: all tenants | N/A |
| Visibility: this tenant | Visibility: this tenant |
| Description | Description |
| Property Group Property Attributes | |
| Name | Name |
| Value | Default Value |
| Encrypted | Encrypted |
| Show in request: true | Created as part of an input type property group. If a property definition exists for this property, the definition is applied. |

Table 10-11. Supported Property Group Attributes (continued)

| Attribute in vRA 7.x | | vRA 8.x Mapping |
|---|---|---|
| Show in request: false | | Created as part of a constant type property group. If a property definition exists for this property, the definition is ignored. |
| Property Definition Attributes | | |
| Name | | Name |
| Label | | Display Name |
| Visibility: all tenants | | N/A |
| Visibility: this tenant | | Visibility: this tenant |
| Description | | Description |
| Display Order | | N/A |
| Property Definition Data Type Attributes | | |
| Boolean | Display as: checkbox | Display as: checkbox |
| | Display as: Yes/No | N/A |
| Datetime | Required: Yes<br>Required: No | Required: Yes<br>Required: No |
| | Minimum value<br>Maximum value | N/A |
| | Display as: Date Time Picker | N/A |
| Decimal | Required: Yes<br>Required: No | N/A |
| | Minimum value<br>Maximum value | Minimum value<br>Maximum value |
| | Increment | N/A |
| | Display as: Dropdown/static list/ enable custom value entry: true/ static list: true | N/A |
| | Display as: Dropdown/static list/ enable custom value entry: false/ static list: true | Display as: Dropdown/static list/ enable custom value entry: false/ static list: true |
| | Display as: Dropdown/ external values | Display as: Dropdown/external values |
| | Display as: Slider | N/A |
| | Display as: Textbox | Display as: Textbox |

Table 10-11. Supported Property Group Attributes (continued)

| Attribute in vRA 7.x | | vRA 8.x Mapping |
|---|---|---|
| Integer | Required: Yes<br>Required: No | N/A |
| | Minimum value<br>Maximum value | Minimum value<br>Maximum value |
| | Increment | N/A |
| | Display as: Dropdown/static list/ enable custom value entry: true/ static list: true | N/A |
| | Display as: Dropdown/static list/ enable custom value entry: false/ static list: true | Display as: Dropdown/static list/ enable custom value entry: false/ static list: true |
| | Display as: Dropdown/external values | Display as: Dropdown/external values |
| | Display as: Slider | N/A |
| | Display as: Textbox | Display as: Textbox |
| Secure String | Required: Yes<br>Required: No | Required: Yes<br>Required: No |
| | Display as: Password that requires confirmation | N/A |
| | Display as: Textbox with validation | Display as: Textbox with validation |
| | Display as: Textbox without validation | Display as: Textbox without validation |
| String | Required: Yes<br>Required: No | Required: Yes<br>Required: No |
| | Display as: Dropdown/static list/ enable custom value entry: true/ static list: true | N/A |
| | Display as: Dropdown/static list/ enable custom value entry: false/ static list: true | Display as: Dropdown/static list/ enable custom value entry: false/ static list: true |
| | Display as: Dropdown/external values | Display as: Dropdown/external values |
| | Display as: Email | N/A |
| | Display as: Hyperlink | N/A |
| | Display as: Textarea | N/A |
| | Display as: Textbox with validation | Display as: Textbox with validation |
| | Display as: Textbox without validation | Display as: Textbox without validation |

# Multi-Tenancy Considerations

vRealize Automation 8 includes these multi-tenancy considerations.

When migrating multiple tenants to a single tenant in vRealize Automation 8, consider:

- Subscriptions - When a second subscription with the same name as an existing subscription is migrated, the conditions and workflows are updated according to the second subscription criteria.
- Blueprint - When migrating a second blueprint with the same name from another tenant, the blueprint is skipped and the first migrated blueprint is shared between the business groups of both tenants.
- CustomResource - When migrating the first custom resource, the migration assistant creates the create, update, destroy workflow, and Day 2 actions (if applicable) criteria. If you migrate a second custom resource with the same name, only the Day 2 actions are updated.

# Migrating vRealize Automation 7 Subscriptions

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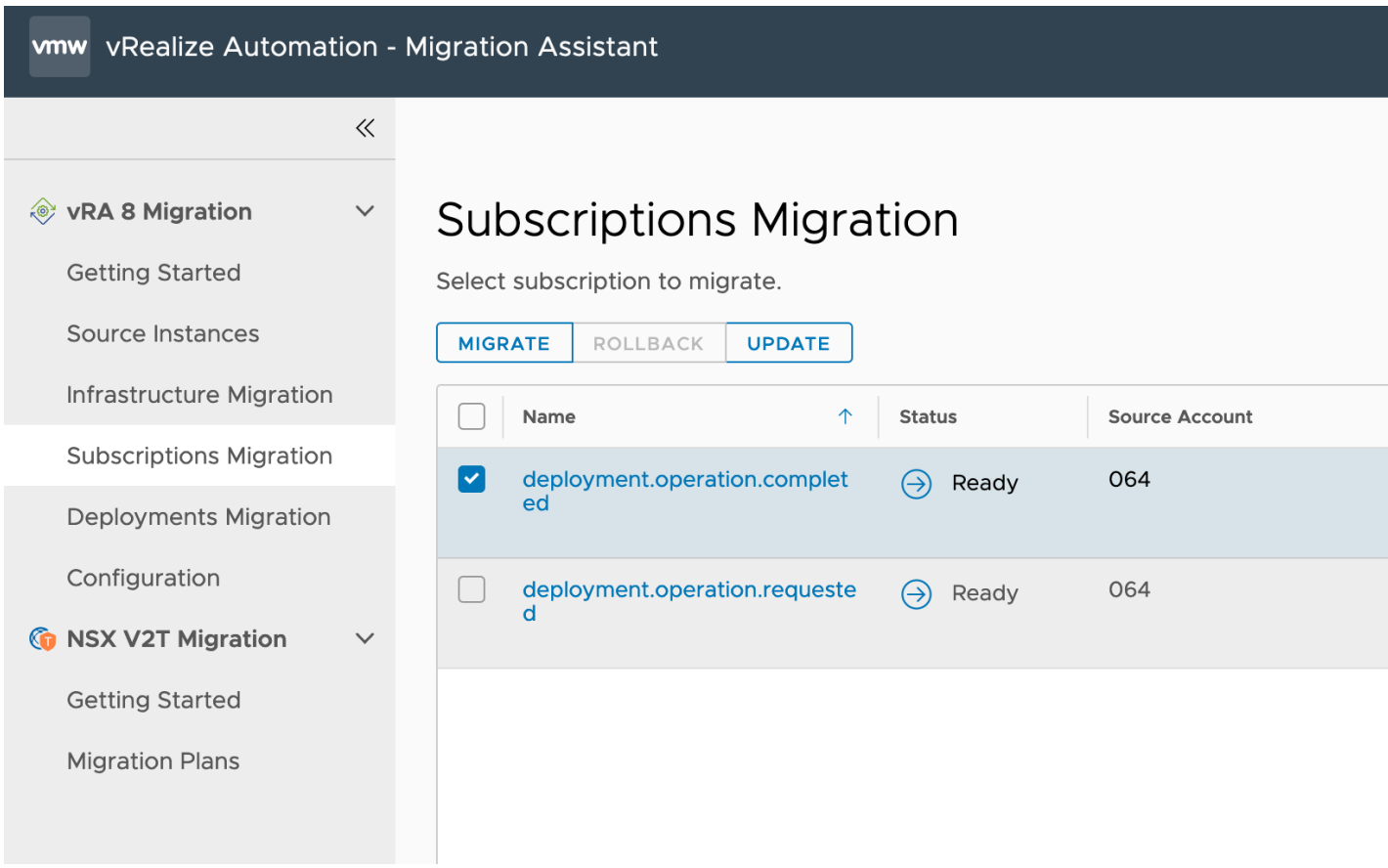
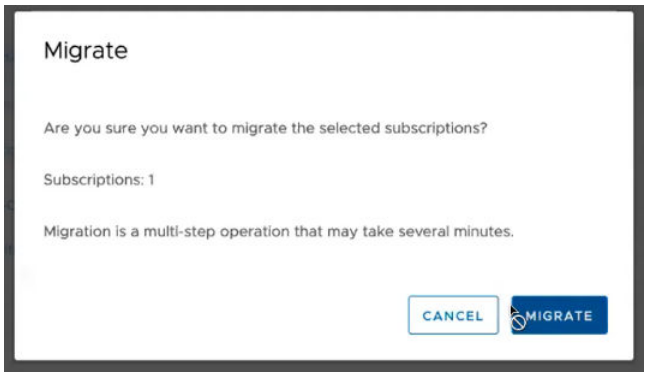
After running a migration assessment on your vRealize Automation 7 source environment, you can migrate individual subscriptions to vRealize Automation 8.

The subscriptions results of your migration assessment are listed on the **Migration > Subscriptions** tab. All assessed subscriptions are listed with their status:

- Ready - Subscription is ready for migration. No action is needed for migration readiness.
- Ready with warnings - Subscription is ready but needs review. Remediate any issues that might impact migration.
- Not ready - Subscription is not ready for migration. Review details of the subscription in your source environment and correct areas needing attention.
- Assessing - Subscription is still being assessed for migration readiness.
- Assessment failed - The assessment failed, retry assessment.

If applicable, after modifying any subscriptions listed as not ready or ready with warnings, select the subscription and click **Update** to update its status in the assessment results table. The assessment report also flags which subscription conditions are not supported. Before you can migrated these subscriptions, you must correct the unsupported conditions and reassess the subscription.




To migrate subscriptions, select one or more subscriptions with a ready or ready with warnings status and click migrate.

**Note** Before you can migrate a subscription, you must have at least one migrated business group in vRealize Automation 8 first. If a subscription has dependencies on vRO workflows, it will fail to migrate until these dependencies are migrated first.

After migrating, you can click the subscription name to view its assessment and migration results and status:

- Migrating - Subscription is being migrated.

- Migrated - Migration is complete and successful. You can view and use the migrated subscription in your vRealize Automation 8 environment.
- Failed - The migration failed. Review the subscription in your source environment, modify as needed, retry migration.
- Excluded - Subscription that was listed as Not ready was migrated but its not ready items were not migrated and are listed as excluded.

Migrated subscriptions are listed in **Cloud Assembly > Extensibility**. On the Extensibility tab, when you open a migrated subscription, the associated conditions and IDs are listed.

**Note** If a vRealize Automation 7 subscription contains an "or" condition, the subscription is migrated into two vRealize Automation 8 subscriptions in which both send the event to the same workflow.

You can roll back previously migrated subscriptions by selecting the migrated subscription and clicking rollback.

**Note** If you modify any migrated items and then rollback, all edits post-migration are deleted.

This chapter includes the following topics:



# Subscription Mapping and Considerations

When migrating from vRealize Automation 7 to vRealize Automation 8, subscriptions are mapped and supported differently.

To learn how to use your vRealize Automation 7 subscriptions with vRealize Automation 8, review the mapping table.

**Table 11-1. vRealize Automation 8 Subscription Mapping**

| vRealize Automation 7 Subscription | In vRealize Automation 8, becomes ... | Considerations |
|---|---|---|
| Blueprint component completed | Deployment resource completed | Supported Conditions in vRealize Automation 8:<br>■ componentId<br>■ blueprintId<br>■ deploymentId |
| Blueprint component requested | Deployment resource requested | Supported Conditions in vRealize Automation 8:<br>■ componentId<br>■ blueprintId<br>■ deploymentId |

Table 11-1. vRealize Automation 8 Subscription Mapping (continued)

| vRealize Automation 7 Subscription | In vRealize Automation 8, becomes ... | Considerations |
|---|---|---|
| Blueprint configuration | Blueprint configuration | Supported Condition in vRealize Automation 8:<br>■ blueprintId<br>Supported Schema:<br>■ name<br>■ eventType<br>■ status<br>■ id<br>■ description |
| Blueprint request completed | Deployment completed | Supported Conditions in vRealize Automation 8:<br>■ blueprintId<br>■ deploymentId |
| Blueprint requested | Deployment requested | Supported Conditions in vRealize Automation 8:<br>■ blueprintId<br>■ deploymentId |
| Catalog request completed | Deployment completed | Supported Conditions in vRealize Automation 8:<br>■ blueprintId<br>■ deploymentId |
| Catalog request received | Deployment requested | N/A |
| Component action completed | Deployment resource action completed | Supported Conditions in vRealize Automation 8:<br>■ componentId<br>■ blueprintId<br>■ deploymentId |
| Component action requested | Deployment resource action requested | Supported Conditions in vRealize Automation 8:<br>■ componentId<br>■ blueprintId<br>■ deploymentId |
| Deployment action completed | Deployment action completed (deployment.action.post) | Supported Conditions in vRealize Automation 8:<br>■ blueprintId<br>■ deploymentId<br>Supported Schema:<br>■ actionName<br>■ deploymentId<br>■ statusId<br>■ failureMessage |

Table 11-1. vRealize Automation 8 Subscription Mapping (continued)

| vRealize Automation 7 Subscription | In vRealize Automation 8, becomes ... | Considerations |
|---|---|---|
| Deployment action requested | Deployment action requested (deployment.action.pre) | Supported Conditions in vRealize Automation 8:<br>■ blueprintId<br>■ deploymentId<br>Supported Schema:<br>■ actionName<br>■ deploymentId<br>■ id |
| EventLog default event | EventLog (broker.event.log) | N/A |
| Machine Provisioning | Lifecycle state events<br>For more information on specific lifecycle states and event topics, refer to the lifecycle state events table below. | Supported Conditions in vRealize Automation 8:<br>■ lifecycleState<br>■ componentId<br>■ blueprintName<br>■ componentTypeId<br>■ endpointId |

## Lifecycle state events

Machine Provisioning vRealize Automation 7 subscriptions are converted to lifecycle state events subscriptions in vRealize Automation 8 that support various states, events, and event topics.

Table 11-2.

| State | Events | Event Topic |
|---|---|---|
| **VMPSMasterWorkflow32** | | |
| Building Machine | | Compute provision |
| DeactivateMachine | | Compute removal |
| Disposing | ■ OnDisposeComplete (Provision)<br>■ OnDisposeTimeout (Provision)<br>■ OnUnregisterMachine (Provision) | Compute removal |
| MachineActivated | OnCatalogRegistrationComplete (Provision) | Compute Post Provision |
| MachineProvisioned | | Compute Post Provision |
| Requested | OnProvisionMachine (Provision) | Compute provision |
| UnprovisionMachine | | Compute removal |
| WaitingToBuild | | Compute provision |
| **Clone Workflow** | | |

Table 11-2. (continued)

| State | Events | Event Topic |
|---|---|---|
| BuildComplete | | Compute Post Provision |
| CloneMachine | ■ OnCloneMachineComplete<br>■ OnCloneMachineTimeout | Compute Provision |
| CustomizeMachine | ■ OnCustomizeMachineComplete<br>■ OnCustomizeMachineTimeout | Compute Provision |
| CustomizeOS | ■ OnCustomizeOS<br>■ OnCustomizeOSComplete<br>■ OnCustomizeOSTimeout | Compute Provision |

# Migrating vRealize Automation 7 Deployments

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After running a migration assessment on your vRealize Automation 7 source environment, you can migrate deployments to vRealize Automation 8.

The results of your business groups' deployments migration assessment are listed on the **Migration > Deployments** tab. All assessed deployments are listed with their status:

- Ready - Deployment is ready for migration. No action is needed for migration readiness.
- Ready with warnings - Deployment is ready but needs review. Remediate any issues that might impact migration.
- Not ready - Deployment is not ready for migration. Review details of the deployment in your source environment and correct areas needing attention.
- Assessing - Deployment is still being assessed for migration readiness.
- Assessment failed - The assessment failed, retry assessment.

If applicable, after modifying any deployments, to re-assess your deployments select the business group and click **Update** to update its status in the assessment results table.

**Note** You can only migrate deployments after successfully migrating the associated business group to vRealize Automation 8, regardless of deployment assessment status.

**Required:** Before migrating your deployments, you must take a snapshot of your vRealize Automation 8 environment.

To migrate deployments, select one or more business groups under the **Deployments** tab with any status and click migrate. Deployments that are Not ready are excluded from migration.

**Note** Migration of a deployment is final regardless of whether it succeeded or failed. You cannot retry a deployment migration.

After migrating, you can click the business group's name to view its deployments assessment and migration results and status:

- Migrating - Deployment is being migrated.
- Migrated - Deployment was migrated successfully. You can view and use the migrated deployment in your vRealize Automation 8 environment.
- Failed - Deployment failed to migrate.

- Excluded - Deployment was excluded from migration because it was Not ready.

Before you can migrate a deployment of a specific business group, the business group infrastructure must be migrated first. The status of the infrastructure migration is also shown on the **Migration > Deployments** tab.

This chapter includes the following topics:



# Deployment Considerations

Deployment migration is a three-step process that involves migrating infrastructure deployment components, migrating XaaS deployment components, and customizing migrated deployments.

**Migrate Infrastructure Deployment Components**

vRealize Automation provisions Infrastructure components on Cloud providers. Migrating infrastructure components uses the vRealize Automation 8 Onboarding feature and consists of two parts:

- Resource Tagging
  - Migrating vRealize Automation 7 endpoints creates vRealize Automation 8 Cloud Accounts and triggers data collection against the Cloud providers the legacy endpoints represent. Migration uses the source deployments to locate and tag matching resources in vRealize Automation 8 with the necessary data to onboard them for vRealize Automation 8 management.
- Resource Onboarding
  - Migration creates an onboarding plan (one per business group) and a specific onboarding rule to link the relevant tagged resources to the plan and reconstruct the deployment/component hierarchy as it exists vRealize Automation 7. Once the plan is complete, the Migration Assistant uses it to migrate source deployments.

**Migrate XaaS Deployment Components**

The Migration Assistant manages XaaS components separately from Infrastructure:

- If your deployments only contain XaaS components, the Migration Assistant migrates the deployment and all its XaaS components.
- If your deployment contains both Infrastructure and XaaS components, the Migration Assistant identifies the target deployment that was created during onboarding and moves all the XaaS components to it.

**Note** If attempted, rerunning the onboarding plan created by the Migration Assistant retries onboarding for the infrastructure components only. It does not re-trigger migration for XaaS deployment components or deployment customizations.

### Customize Migrated Deployments

This last step fine tunes the migrated deployments by applying these customizations in this order:

1 Set the deployment name and description. Unlike vRealize Automation 7, vRealize Automation 8 does not allow deployments with identical names. During migration, the Migration Assistant enforces unique names when migrating deployment containers.

2 Set the deployment lease.

3 Replicate deployment request history in Cloud Assembly.

4 Set deployment owner.

### Deployment Considerations

vRealize Automation 8 Migration Assistant includes these additional deployment considerations.

- During deployment migration, the compute processing consumes project placement quota. Ensure you have enough placement quota before migrating your deployments by navigating to **Cloud Assembly > Infrastructure > Project > Provisioning**. Each cloud zone is shown with its limits.
- After migrating deployments, the deployments are active in both your source environment and vRealize Automation 8 environment. To prevent the machine from accidentally being deleted or destroyed, remove the user from your vRealize Automation 7 business group and modify the deployment's lease to never expire in your source environment.
- If you migrate your source infrastructure and attempt to migrate your deployments, the deployment migration might fail. If your deployment migration fails, rerun the onboarding plan. Learn more about Onboarding Plans.

# NSX Deployment On-Boarding Support

These NSX components are supported during Deployment On-Boarding.

## Supported NSX Components

- NSX (T/V) On-Demand Routed Network
- NSX (T/V) On-Demand Nat Network
- NSX (T/V) External Network
- NSX (T/V) Existing Security Group
- NSX V On-Demand Private Network
- NSX (T/V) App Isolation. This becomes an existing security group.
- NSX V On-Demand Security Group. This becomes an existing security group.

- NSX (T/V) On-Demand Load Balancer

**Note** If any NAT rules are specified on the network, they are not set on the onboarded network component. Also, if your external network is not attached to a VM in your source deployment it is not onboarded.

# Migrating vRealize Orchestrator 13

You can migrate your existing vRealize Orchestrator that is embedded in a vRealize Automation 7.x environment to an embedded vRealize Orchestrator 8.x.

For information about migrating standalone vRealize Orchestrator environments, see the Migrating a Standalone vRealize Orchestrator.

Migration is supported for vRealize Orchestrator 7.3 or later.

The vRealize Orchestrator migration transfers an embedded source vRealize Orchestrator configuration to your current vRealize Orchestrator 8.x environment, overwriting all existing elements such as workflows, actions, configuration and resource elements, including secure strings in workflows and configuration elements, packages, tasks, policies, certificates and trusted certificates, plug-ins and plug-in configurations, custom records in the `the js-io-rights.conf` file, Control Center system properties. The migration includes both built-in and custom vRealize Orchestrator content.

The migrated vRealize Orchestrator configuration does not include the following data that might affect the target vRealize Orchestrator performance and use.

- The VCAC, VCACCAFE, GEF, Data Management, and Workflow Documentation plug-ins of the source vRealize Orchestrator. Aside from workflow runs, all vRealize Orchestrator content associated with these plug-ins is not migrated to the target environment.
- Syslog server configuration in the **Logging Integration** page in Control Center.
- Workflow execution logs.
- Dynamic Types plug-in configurations.

**Note** Before migrating, if your vRealize Orchestrator endpoints are not assessed, you must reassess your vRealize Orchestrator instance.

This chapter includes the following topics:

# Migrate an Embedded vRealize Orchestrator 7.x Instance

You can migrate a single node vRealize Orchestrator instance that is embedded in vRealize Automation 7.x to an embedded vRealize Orchestrator 8.x deployment.

The migration transfers an embedded vRealize Orchestrator 7.x configuration to your vRealize Orchestrator 8.x environment. The migration involves overwriting all existing elements in your vRealize Orchestrator 8.x environment.

You perform the migration by using the `vro-migrate` script bundled with the vRealize Orchestrator appliance.

**Note** The migration script stops the vRealize Orchestrator services automatically. You might have to schedule a maintenance window for your source vRealize Automation environment.

### Prerequisites

- Migration is supported for embedded vRealize Orchestrator 7.3 or later.
- Back up the target vRealize Automation environment.
- Verify that SSH access is enabled on the source vRealize Automation instance and target vRealize Automation environment.
- Verify that the source vRealize Automation database is accessible from the target vRealize Automation environment.

### Procedure

1. Log in to the vRealize Orchestrator appliance command line of your target environment over SSH as **root**.
2. To start the migration, run the `vro-migrate` script.
3. Follow the command prompts to provide the fully qualified domain name (FQDN) and credentials of the source vRealize Orchestrator instance.
4. (Optional) To follow the migration progress, access the migration log:
   a. Log in to your target vRealize Orchestrator appliance command line over a separate SSH session as **root**.
   b. Run the `tail -f /var/log/vro-migration.log` command.

   The migration process begins. You receive a notification on the target vRealize Orchestrator appliance when the migration finishes.
5. (Optional) After the migration process finishes, log in to the source vRealize Orchestrator appliance and restart the `vco-server` and `vco-configurator` services.

   **Note** Restarting the vRealize Orchestrator services ensures that your 7.x deployment is accessible after migration. After the restart, navigate to the **Services** tab in the source vRealize Automation, and verify that the vRealize Orchestrator services are registered.

6 Log in to the target vRealize Automation appliance over SSH, run `kubectl get pods -n prelude`, and verify that the vRealize Orchestrator appliance reports `3/3`.

**Note** You might have to wait for up to 20 minutes before you run the `kubectl get pods -n prelude` command.

7 Verify that vRealize Orchestrator is accessible in the target vRealize Automation environment.

# Migrate an Embedded vRealize Orchestrator 7.x Cluster

You can migrate a clustered vRealize Orchestrator deployment that is embedded in a vRealize Automation 7.x environment to an embedded vRealize Orchestrator 8.x environment.

The migration transfers a clustered vRealize Orchestrator 7.x configuration to your vRealize Orchestrator 8.x environment. The migration involves overwriting all existing elements in your vRealize Orchestrator 8.x environment.

You perform the migration by using the `vro-migrate` script bundled with the vRealize Orchestrator appliance.

**Note** The migration script stops the vRealize Orchestrator services of the primary node automatically. Before you run the migration script, stop the services of the replica nodes of your clustered 7.x deployment.

```
service vco-server stop
service vco-configurator stop
```

### Prerequisites

- Migration is supported for embedded vRealize Orchestrator 7.3 or later.
- Configure a vRealize Orchestrator cluster in your target vRealize Automation 8.x environment. See *Configure a vRealize Orchestrator Cluster* in *Installing and Configuring VMware vRealize Orchestrator*.
- Back up the target vRealize Automation environment.
- Verify that SSH access is enabled on the source vRealize Automation instance and target vRealize Automation environment.
- Verify that the source vRealize Automation database is accessible from the target vRealize Automation environment.

### Procedure

1 Log in to the vRealize Orchestrator appliance command line of your target environment over SSH as **root**.

2 To start the migration, run the `vro-migrate` script.

3 Follow the command prompts to provide the fully qualified domain name (FQDN) and credentials of the source vRealize Orchestrator instance.

4 (Optional) To follow the migration progress, access the migration log:

   a Log in to your target vRealize Orchestrator appliance command line over a separate SSH session as **root**.

   b Run the `tail -f /var/log/vro-migration.log` command.

   The migration process begins. You receive a notification on the target vRealize Orchestrator appliance when the migration finishes.

5 (Optional) If you want to access your vRealize Orchestrator 7.x environment after migration, log in to the source vRealize Orchestrator appliance and restart the `vco-server` and `vco-configurator` services.

**Results**

You have migrated your clustered vRealize Orchestrator deployment.

# Additional Migration Requirements for Content Accessing the File System

Content migrated to the vRealize Orchestrator file system must follow the requirements of the new container-based appliance.

Because the vRealize Orchestrator appliance is running in a container, it has limitations regarding access to the file system. The `js-io-rights.conf` file still determines if a file is accessible from the vRealize Orchestrator scripting API, but you cannot use arbitrary folders in the file system. The main folder accessible to the vRealize Orchestrator service is `/var/run/vco`. Under the vRealize Orchestrator appliance file system, this folder is mapped under `/data/vco/var/run/vco`. All local files that access the vRealize Orchestrator scripting API must be moved to the specified main directory. Under the main directory, you can create subdirectories for your content.

For example, if you want to mount an external NFS volume to your vRealize Orchestrator appliance, you must mount it in `/data/vco/var/run/vco/`*`mount_directory_path`*. Afterwards, the vRealize Orchestrator scripting API can access the mounted NFS volume at `/var/run/vco/`*`mount_directory_path`*.

## Kerberos Configuration

To use a Kerberos configuration, you can only use the `/data/vco/usr/lib/vco/app-server/conf/krb5.conf` file. For information on Kerberos debug logging, see *Enable Kerberos Debug Logging* in *Installing and Configuring VMware vRealize Orchestrator*.

# How do I view my migration results

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After migrating your vRealize Automation 7 source environment components, you can view the migration results.

To view your migration results, click the Migration Results tab on the Infrastructure, Subscriptions, and Deployments tabs. The migrated components are listed with their status:

- Migrating - Item is being migrated.
- Migrated - Migration is complete and successful. You can view and use the migrated item in your vRealize Automation 8 environment.
- Failed - The migration failed. Review the item in your source environment, modify as needed, retry migration.
- Excluded - Not Ready business group, subscription, or deployment was migrated but any of its not ready items were not migrated and are listed as excluded.
- Rollback - Migrated item was rolled back and is no longer available for use in vRealize Automation 8.

You can also export your migration results by clicking export. The migration results report includes live links that when clicked open the migrated content in vRealize Automation 8.

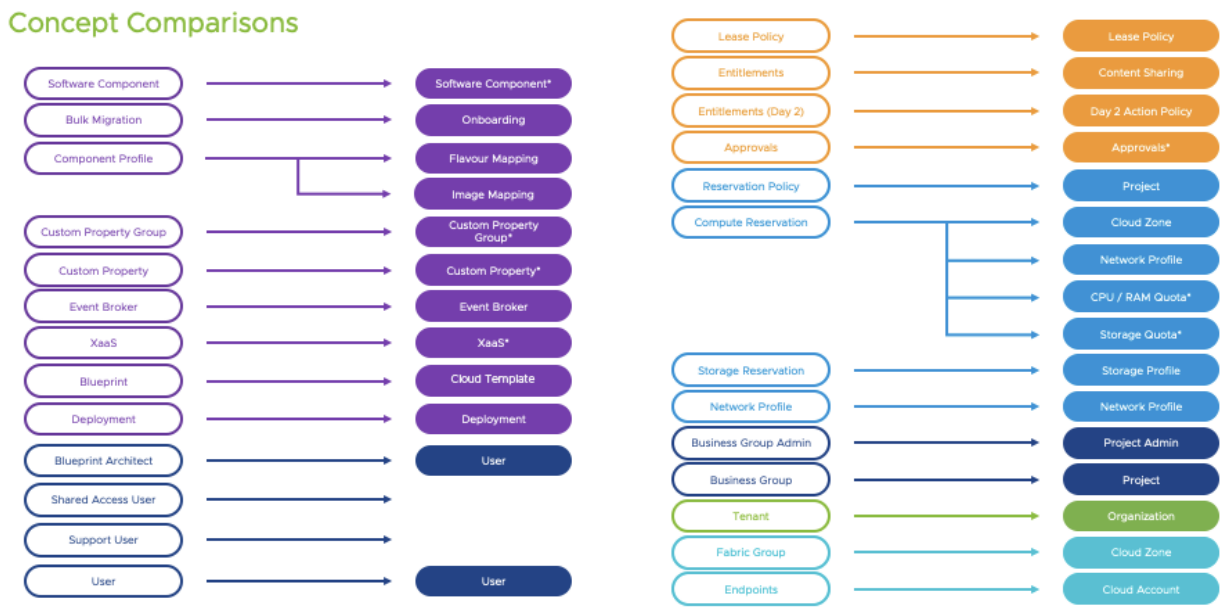
This chapter includes the following topics:



## How do I view constructs mapping between vRealize Automation 7 and vRealize Automation 8

Using the migration assistant tool, you can view mapping between your vRealize Automation 7 source instance and vRealize Automation 8.

After migration, components might be mapped differently in vRealize Automation 8 than they were in vRealize Automation 7. When viewing your migration results, refer to the mapping constructs table to identify how your source components were migrated and stored.




## Common Reservations

Common reservations are identified by matching cloud zones, compute, and region parameters. When migrated, the migration assistant tool assigns a tag based on the reservation policy to common reservations and merges them into one under the same cloud zone. This merging process also applies to Network Profiles and Storage Profile migrations.

**Note** If you do not previously define a network profile before migrating, the migration assistant tool creates a new one based on the reservation name and reuse it for each subsequent reservation.

You can view the migration results and reservation mapping by clicking the migrated business group and selecting the **Migration Results** tab.

# What happens during a migration rollback

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If necessary, you can rollback migrated items using the migration assistant.

The migration assistant has a rollback feature that allows you to remove migrated items from your vRealize Automation 8 environment. If the migrated item was modified post-migration in vRealize Automation 8 and then rolled back, all post-migration edits are deleted. If you rollback a business group that contains a shared cloud template, the cloud template ownership is transferred to the remaining migrated project associated with the cloud template.

**Note** Cloud zone tags and custom forms are retained after performing a rollback. Business groups cannot be rolled back if there are active deployments associated with a project.

To rollback migrated items:

1 Navigate to the Migration Assistant Service.

2 Select the migrated item from the Infrastructure or Subscription page.

**Note** You can only rollback migrated business groups and subscriptions.

3 Click **Rollback**.

This chapter includes the following topics:

- How do I migrate updates to my source environment made after migration

## How do I migrate updates to my source environment made after migration

After performing an initial migration to vRealize Automation 8, you might make changes to your source 7.x environment that you also want to migrate.

Depending on the type updates, new content versus updates to existing content, you might have to remigrate or rollback.

**New content added to 7.x source environment**

If you created new content in your 7.x source environment, you do not have to rollback your vRealize Automation 8 migration. To migrate your new content, remigrate your 7.x source environment. The migration assistant identifies and migrates the new content.

### Updated existing 7.x source environment

If you updated existing content in your 7.x source environment you must rollback your vRealize Automation 8 migration. After rolling back, remigrate your source environment.

# Manual Post Migration Steps

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After migrating to vRealize Automation 8, you might have to perform some manual post migration steps.

## Catalog Icons and Branding

To use catalog icons and any branding items, you have to manually add them to vRealize Automation 8 as they are not carried over during migration.

# Post Migration Validation Steps 17

After migrating to vRealize Automation 8, review these post migration steps to validate your migration.

## Review Migrated Infrastructure

| Step | Details |
|---|---|
| Review Cloud Accounts to ensure endpoints were migrated correctly. | |
| Review projects to ensure the correct zones are enabled. | Each business group should be a project. |
| Reservations might be consolidated. Review your cloud zones, network profiles, storage profiles, image mapping, and flavor mappings. | Verify that network profiles have the correct CIDR for IP management.<br>Copy the tag from your network and storage profiles and enter it in Tag Usage to view all associated artifacts. |
| Review Cloud Templates. | Blueprints are now Cloud Templates. The Cloud Templates should be associated with their correct project.<br>Run a test Cloud Template to verify that tags for placement between the networks and zones are correct.<br>(Optional) Add a "preventDelete:true" flag to your properties in Cloud Templates to prevent a migrated machine from being destroyed or deleting during an update. |
| Review XaaS items. | Verify XaaS blueprints are migrated to the Cloud Templates with custom resources or Service Broker workflow services. |
| Review users and approval policies. | Perform a user sync and verify approval policies and users. |

## Review Migrated Subscriptions

After migrating your subscriptions, review and verify these items:

- Verify the event topics are correct.
- Verify that the conditional logic is correct.

- A single subscription might be migrated into multiple subscriptions. Verify all expected subscriptions were migrated.
- Verify that the workflows associated with the subscriptions are correct and that payload variables and custom properties were manually updated. See the Extensibility Migration Guide for more information.
- Any subscription that was not migrated might need rework. Check the migration assessment report for the subscriptions that did not migrate and rework migrated subscriptions in your target environment.

## Review Migrated Data

After migrating to vRealize Automation 8, review your migrated data:

- Verify that machines are connected to the correct networks and storage locations.
- Verify the account that ran the migration owns the migrated deployments.
- Verify that migrated deployments are not associated with a Cloud Template.

# Troubleshooting your migration 18

If you encounter problems during migration, perform these migration troubleshooting steps.

The cause of any issues and troubleshooting steps depend on what stage of migration you are currently performing. For information on troubleshooting your migration:

- Troubleshooting: Migration Assessment
- Troubleshooting: Migration Failed
- Troubleshooting: Migration Rollback Failed

This chapter includes the following topics:



## Troubleshooting: Migration Assessment

If your migration assessment fails or encounters problems, perform these troubleshooting steps.

**Table 18-1. Troubleshooting Migration Assessment**

| Problem | Reason | Solution |
|---|---|---|
| Business group assessment failed | Your migration assessment might fail after connecting a source account. | Retry the migration assessment. |
| Assessment Report only shows information for one tenant when I assessed multiple. | Assessment reports only shows the tenant information of the last assessed tenant and not all assessed tenants. | Re-add the missing tenant and rerun assessment. Repeat for each missing tenant. |

Table 18-1. Troubleshooting Migration Assessment (continued)

| Problem | Reason | Solution |
|---|---|---|
| After adding a multi-org source environment, the source instance page shows a 404 Bad Request error. | One or more tenants are opened as tabs in the same browser window. | Use a different browser for each tenant. |
| Cannot add vRA 7.x source environment for migration assessment, issuing the error message "`Http failure response for https://<vRA8 FQDN>/migration/api/tenants/GUID/include: 500 OK `". | The SSL certificate has the wrong hostname and a vRA 7 source system with the same hostname found in the SSL certificate was already added. | Contact support. |

# Troubleshooting: Migration Failed

For various reasons, your migration to vRealize Automation 8 might fail. If your migration fails, perform these troubleshooting steps.

Table 18-2. Troubleshooting Failed Migration

| Type of Migration | Reason | Solution |
|---|---|---|
| Cloud Account Migration | Your cloud account migration might fail due to a migration timeout. | Retry cloud account migration. |
| Blueprint Migration failure for blueprints that contain NSX components. | During bulk migration, if any of the endpoints fail to migrate for the business group and the same business group contains NSX components, the NSX association might fail. For example, blueprints containing security groups fail to migrate because the migration assistant service does not find the associated NSX cloud account. | Manually add the NSX association to vCenters in vRealize Automation 8 and retry migration. |
| Subscription migration failed | Some subscriptions depend on fields such as deploymentId and blueprintId. If infrastructure components have not been migrated first, subscription migration fails. | Migrate infrastructure components and then retry subscription migration. |
| XaaS Blueprint or Custom Resource migration failed | If the underlying workflows have not been migrated or are not supported in vRealize Automation 8, XaaS blueprint/Custom Resource migration fails. | Migrate underlying workflows and then retry XaaS Blueprint/Custom Resource migration. If the workflow is not supported the blueprint/resource can't be migrated. |

# Troubleshooting: Migration Rollback Failed

For various reasons, your migration rollback might fail. If it fails, perform these troubleshooting steps.

### Table 18-3. Troubleshooting Failed Rollbacks

| Reason for Failure | Solution |
| --- | --- |
| If your vRealize Automation 8 environment contains active deployments, the bulk rollback of business groups and projects fails. | Delete active deployments from your vRealize Automation 8 environment and retry rollback. |

# Use Case: How do I identify and plan for changes to my production environment without changing my live production environment?

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In some circumstances, you might want to identify and plan for production changes before comitting to changing your live production environment.

You might want to identify and plan for production changes without immediately applying them or scheduling downtime. By creating a duplicate environment you can review changes before applying them and modifying your live production environment. The duplicate environment is also useful for troubleshooting any issues outside of your live environment.

Procedure

1. Create a duplicate environment by migrating your existing vRA 7.6 production environment to a new vRA 7.6 dev environment.
2. Disable the agents on the dev environment.
3. Perform a vRA 8 migration assessment on the 7.6 dev environment using the Migration Assistant.
4. Review the assessment results to identify what changes are needed on your 7.6 production environment.
5. Apply the changes to your vRA 7.6 production environment.
6. Migrate your production environment to vRA 8.