Migrating vRealize Orchestrator

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Migrating vRealize Orchestrator

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You can migrate your existing vRealize Orchestrator deployment to a new vRealize Orchestrator environment.

The vRealize Orchestrator migration transfers an external source vRealize Orchestrator configuration to your current vRealize Orchestrator environment, overwriting all existing elements such as workflows, actions, configuration and resource elements, packages, tasks, policies, certificates, plug-ins, and others.

Note Migration of embedded vRealize Orchestrator environments to external vRealize Orchestrator environments is not supported.

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

- Customized system settings, such as memory thresholds or an increased Java heap space.
- Logging levels that are different from the default settings.
- Syslog server configuration in the **Logging Integration** page in Control Center.
- Custom system properties that you configure in the **System Properties** page in Control Center or apply directly to the `vmo.properties` file on the appliance.
- Workflow execution logs.
- Dynamic types plug-in configurations.

Note Starting with vRealize Orchestrator 7.5, the appliance only supports the embedded PostgreSQL database. For non-Windows source vRealize Orchestrator configurations, data from external databases, such as Oracle or MSSQL, is migrated to the embedded PostgreSQL database automatically. For Windows source vRealize Orchestrator configurations, follow the relevant migration procedures to migrate the external database to the embedded PostgreSQL database.

This chapter includes the following topics:

- Migrating an External to External vRealize Orchestrator 7.5

Migrating an External to External vRealize Orchestrator 7.5

You can migrate your existing external vRealize Orchestrator server to a new external vRealize Orchestrator environment.

With vRealize Orchestrator 7.5, you can no longer upgrade your vRealize Orchestrator environments. To move vRealize Orchestrator environments to the latest version, you must migrate them.

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

■   Customized system settings, such as memory thresholds or an increased Java heap space.

■   Logging levels that are different from the default settings.

■   Syslog server configuration in the **Logging Integration** page in Control Center.

■   Custom system properties that you configure in the **System Properties** page in Control Center or apply directly to the `vmo.properties` file on the appliance.

■   Workflow execution logs.

■   Dynamic types plug-in configurations.

Migrate vRealize Orchestrator from Windows to vRealize Orchestrator 7.5 Environment

Migrate your source vRealize Orchestrator 5.5.x and 6.x Windows configuration to a target vRealize Orchestrator 7.5 environment.

Prerequisites

■   Deploy and configure your new vRealize Orchestrator 7.5 environment. For more information, see *Installing and Configuring VMware vRealize Orchestrator*.

■   If the source vRealize Orchestrator uses an SHA1 package-signing certificate, make sure to regenerate the certificate using a stronger signing algorithm, such as SHA2.

■   Enable SSH access for each node in your target vRealize Orchestrator environment.

■   Ensure that the source vRealize Orchestrator database is accessible from the target vRealize Orchestrator environment.

■   Stop the vRealize Orchestrator server service on the source and target vRealize Orchestrator instances.

■   Back up the database, including the database schema, of the source vRealize Orchestrator server.

Procedure

1   Download the migration tool from your target vRealize Orchestrator server.

   a   Log in to the Control Center as **root**.

   b   Open the **Export/Import Configuration** page and click the **Import Configuration** tab.

   c   Download the migration tool as specified in the description on the page, or download it directly from https://*orchestrator_server_IP_or_DNS_name*:8283/vco-controlcenter/api/ server/migration-tool.

2   If you are running a clustered vRealize Orchestrator deployment, stop the Control Center service on all replica nodes in the target vRealize Orchestrator environment.

   a   Open a new secure shell connection to each replica node.

   b   Stop the Control Center service

   ```
   service vco-configuration stop
   ```

   c   Logout and close the secure shell session.

3   Export the source vRealize Orchestrator configuration.

   a   Upload and extract the downloaded migration tool archive in the vRealize Orchestrator Windows install folder.

      The default path to the vRealize Orchestrator install folder in a Windows-based installation is `C:\Program Files\VMware\Orchestrator`.

   b   Ensure that the migration tool `bin` folder is *orchestrator-install-folder*`\migration-cli\bin`.

   c   Add the `bin` folder of the Java JRE installed with vRealize Orchestrator to the Windows `PATH` environment variable.

      The default path of the Java JRE `bin` folder installed with vRealize Orchestrator is `C:\Program Files\VMware\CIS\jre\bin`.

   d   Open the Windows command prompt and navigate to the migration tool `bin` folder.

      The default path to the migration tool `bin` folder is `C:\Program Files\VMware \Orchestrator\migration-cli\bin`.

   e   Run the migration command to export the vRealize Orchestrator configuration.

   ```
   vro-migrate.bat export
   ```

      An archive with the filename `orchestrator-config-export-orchestrator_ip_address-date_hour.zip` is created in the vRealize Orchestrator install folder. The vRealize Orchestrator configuration files and plug-ins are bundled into this archive.

4 Import the source vRealize Orchestrator configuration to the target vRealize Orchestrator environment.

Note For clustered vRealize Orchestrator deployments, use the target primary vRealize Orchestrator node.

a Log in to the Control Center as **root**.

b Open the **Export/Import Configuration** page and click the **Import Configuration** tab.

c Browse to and select the exported vRealize Orchestrator source configuration archive.

d (Optional) Enter the password that you used when exporting the configuration.

Leave blank if you did not export the configuration with a password.

e Set the import type as **External**.

Note Do not enable the **Import database settings** option.

f Click **IMPORT**.

A message states that the configuration is successfully imported. The vRealize Orchestrator server service restarts automatically.

g Stop the target vRealize Orchestrator server service.

5 Migrate the source vRealize Orchestrator database to the target vRealize Orchestrator environment.

    a   Open a new SSH connection and log in as **root**.

    b   Navigate to the vRealize Orchestrator `configuration-cli` folder.

```
cd /usr/lib/vco/tools/configuration-cli/bin
```

    c   Run the migration command.

```
./vro-configure.sh db-migrate --sourceJdbcUrl JDBC_connection_URL --sourceDbUsername
database_user --sourceDbPassword database_user_password
```

Note Enclose values that contain special characters in single quotation marks.

The *JDBC_connection_URL* is stored in the `vmo.properties` file in your source vRealize Orchestrator environment. The default path to the `vmo.properties` file is `C:\Program Files\VMware\Orchestrator\app-server\conf`.

The *JDBC_connection_URL* depends on the type of database that you use. The following examples show the *JBDC_connect_URL* format based on the configured database type:

```
PostgreSQL: jdbc:postgresql://host:port/database_name
```

```
MSSQL: jdbc:jtds:sqlserver://host:port/database_name\; if using SQL authentication and MSSQL:
jdbc:jtds:sqlserver://host:port/database_name\;domain=domain\;useNTLMv2=TRUE if using Windows
authentication.
```

```
Oracle: jdbc:oracle:thin:@host:port:database_name
```

6 Restart the vRealize Orchestrator services in the target environment.

    a   Restart the vRealize Orchestrator server service.

    b   Restart the vRealize Orchestrator Control Center service.

7 (Optional) For clustered environments, join the replica nodes to the cluster to synchronize the vRealize Orchestrator configuration.

For more information, see *Configure a Cluster of vRealize Orchestrator Instances in VAMI* in *Installing and Configuring VMware vRealize Orchestrator*.

What to do next

Follow the post migration steps to finish the migration.

Migrate an External vRealize Orchestrator Appliance 6.x and Later to vRealize Orchestrator 7.5

You cannot upgrade your vRealize Orchestrator 6.x and later environment to 7.5, you can only migrate it.

Note The migration procedure is identical for both standalone and clustered vRealize Orchestrator environments. If you have a clustered target environment, perform the migration through the VAMI interface on the target primary node.

Prerequisites

- Deploy and configure your new vRealize Orchestrator 7.5 environment. For more information, see *Installing and Configuring VMware vRealize Orchestrator*.

- Stop the source vRealize Orchestrator services.

- Enable SSH access for each node in the source and target environments.

- Ensure that the source vRealize Orchestrator database is accessible from the target vRealize Orchestrator environment.

- Back up the source vRealize Orchestrator database, including the database schema.

- Finish all workflows in the source vRealize Orchestrator environment that are in the **running** or **waiting for input** states. Workflows in these states are marked as failed after migration to the target environment.

Procedure

1 Log in to the VAMI interface of the target vRealize Orchestrator environment as **root**.

   Access the VAMI interface at https://*your_orchestrator_server_ip_or_DNS_name*:5480.

2 Select the **Migrate** tab.

3 Enter the hostname and root credentials of the source vRealize Orchestrator environment.

   Note When migrating a clustered vRealize Orchestrator environment, enter the credentials of any node from the source cluster. The target cluster must be in async mode for the migration to be successful.

4 Enter the root credentials of the target vRealize Orchestrator primary node.

5 Click **Validate**.

   The system performs a series of validations steps to verify that the migration prerequisites are met.

   Note If a migration prerequisite validation fails, review the failure and correct the problem. Click **Edit Settings** and retry the validation.

6   When the validation finishes, click **Migrate** to start the migration procedure.

> **Note**   If a migration step fails, review the failure and correct the problem. To retry the migration, revert to the pre-migration state of the target environment.

What to do next

Follow the post migration steps to verify that vRealize Orchestrator is configured properly.

To troubleshoot the vRealize Orchestrator migration, see Troubleshooting the vRealize Orchestrator Migration.

Post Migration Steps

Perform post migration checks on your vRealize Orchestrator environment.

Verify the vRealize Orchestrator Configuration in Control Center

Verify the health status of the vRealize Orchestrator configuration after the migration.

Prerequisites

Migrate a vRealize Orchestrator instance or cluster to a new target vRealize Orchestrator environment.

Procedure

1   Log in to the Control Center as **root**.

2   Click **Validate Configuration**.

The vRealize Orchestrator Control Center performs a check on all configuration parameters.

3   Verify that the status of the configuration parameters is valid.

Verify the Admin Group of the vRealize Orchestrator Configuration

Verify that the admin group of your vRealize Orchestrator environment is configured properly.

Prerequisites

Migrate a vRealize Orchestrator instance or cluster to a new target vRealize Orchestrator environment.

Procedure

1   Log in to the Control Center as **root**.

2   Select **Configure Authentication Provider** and verify that the authentication configuration is correct.

3   Select the **Test Login** tab.

4   Enter your admin credentials and click **Test**.

Verify the Migrated Scheduled Tasks State

Verify that there are no errors in your scheduled workflow tasks after the migration.

Prerequisites

Migrate an external vRealize Orchestrator environment to an external or embedded vRealize Orchestrator environment.

Procedure

1   Log in to the Java Client of the target vRealize Orchestrator as an **administrator**.

2   Navigate to **Scheduled Tasks**.

3   Select a scheduled task and check for errors.

4   (Optional) Click the error message.

5   (Optional) Provide the required credentials.

6   (Optional) Validate the workflow on the next scheduled run.

7   Repeat the procedure for all scheduled tasks.

Migrate Dynamic Type Configurations

You can export dynamic type configurations from your source vRealize Orchestrator environment and then import them to the target vRealize Orchestrator environment.

Prerequisites

Migrate an external vRealize Orchestrator environment to an external or embedded vRealize Orchestrator environment.

Procedure

1   Export the dynamic type configurations in the source environment.

    a   Log in to the Java Client as an **administrator**.

    b   Select the **Workflows** tab.

    c   Select **Library > Dynamic Types > Configuration**.

    d   Select the **Export Configuration as Package** workflow and run it.

    e   Click **Not Set > Insert value**.

    f   Select the namespaces you want to export and click **Add** to add them to the package.

    g   Click **Submit** to export the package.

2   Import the dynamic type configurations in the target environment.

    a   Log in to the Java Client as an **administrator**.

    b   Select the **Workflows** tab.

    c   Select **Library > Dynamic Types > Configuration**.

    d   Select the **Import Configuration From Package** workflow and run it.

    e   Click **Configuration package to import**.

    f   Browse to the exported package file and click **Attach file**.

    g   Review the information about the namespaces attached to the package and click **Submit**.

3   To validate the successful import of the dynamic type configurations, select **Inventory > Dynamic Types**.

Migrating an External vRealize Orchestrator Server to vRealize Automation 7.5

You can migrate your existing external vRealize Orchestrator server to a vRealize Orchestrator instance embedded in vRealize Automation.

With vRealize Orchestrator 7.5, you can no longer upgrade your vRealize Orchestrator environments. To move vRealize Orchestrator environments to the latest version, you must migrate them.

You can deploy vRealize Orchestrator as an external server instance and configure vRealize Automation to work with that external instance, or you can configure and use the vRealize Orchestrator server that is included in the vRealize Automation appliance.

You can migrate your external vRealize Orchestrator to the vRealize Orchestrator server that is built into vRealize Automation. The migration from an external to embedded vRealize Orchestrator provides the following benefits:

- Reduces the total cost of ownership.

- Simplifies the deployment model.

- Improves the operational efficiency.

Note Consider using the external vRealize Orchestrator in the following cases:

- Multiple tenants in the vRealize Automation environment.

- Geographically dispersed environment.

- Workload handling.

- Use of specific plug-ins, such as the Site Recovery Manager plug-in versions earlier than 6.5.

Migrate an External vRealize Orchestrator 6.x on Windows to vRealize Automation 7.5

After you upgrade your vRealize Automation from version 6.x to version 7.5, you can migrate your existing external vRealize Orchestrator 6.x installed on Windows to the vRealize Orchestrator server that is embedded in vRealize Automation 7.5.

Note   If you have a distributed vRealize Automation environment with multiple vRealize Automation appliance nodes, perform the migration procedure only on the primary vRealize Automation node.

Prerequisites

- Upgrade or migrate your vRealize Automation to the target release. For more information, see *Upgrading vRealize Automation* in *Installing or Upgrading vRealize Automation*.

- Back up your vRealize Automation environment, including any external databases.

- If the external vRealize Orchestrator uses an SHA1 package-signing certificate, make sure to regenerate the certificate using a stronger signing algorithm, such as SHA2.

- Enable SSH access for each node in your vRealize Automation environment.

- Ensure that the external vRealize Orchestrator database is accessible from the vRealize Automation environment.

- Stop the vRealize Orchestrator server service on the external and embedded vRealize Orchestrator nodes.

- Stop the vRealize Orchestrator Control Center service on the embedded vRealize Orchestrator nodes.

- Back up the database, including the database schema, of the external vRealize Orchestrator server.

Procedure

1   Download the `migration-tool.zip` archive that is located in the `/var/lib/vco/downloads` directory on your vRealize Automation appliance.

2   Export the external vRealize Orchestrator configuration.

    a   Upload and extract the downloaded migration tool archive in the vRealize Orchestrator Windows install folder.

       The default path to the vRealize Orchestrator install folder in a Windows-based installation is `C:\Program Files\VMware\Orchestrator`.

    b   Ensure that the migration tool `bin` folder is *orchestrator-install-folder*`\migration-cli\bin`.

c   Add the `bin` folder of the Java JRE installed with vRealize Orchestrator to the Windows `PATH` environment variable.

The default path of the Java JRE `bin` folder installed with vRealize Orchestrator is `C:\Program Files\VMware\CIS\jre\bin`.

d   Open the Windows command prompt and navigate to the migration tool `bin` folder.

The default path to the migration tool `bin` folder is `C:\Program Files\VMware\Orchestrator\migration-cli\bin`.

e   Run the migration command to export the vRealize Orchestrator configuration.

```
vro-migrate.bat export
```

An archive with the filename `orchestrator-config-export-orchestrator_ip_address-date_hour.zip` is created in the vRealize Orchestrator install folder. The vRealize Orchestrator configuration files and plug-ins are bundled into this archive.

3   Import the external vRealize Orchestrator configuration to the embedded vRealize Orchestrator environment.

a   Ensure that the embedded vRealize Orchestrator server and Control Center services are stopped on all nodes.

b   Open a new SSH connection to the primary vRealize Automation node and log in as **root**.

c   Navigate to the vRealize Orchestrator `configuration-cli` folder: `/usr/lib/vco/tools/configuration-cli/bin` directory and upload the exported configuration file.

d   Change the ownership of the exported vRealize Orchestrator configuration file.

```
chown vco:vco orchestrator-config-export-orchestrator_ip_address-date_hour.zip
```

e   Import the vRealize Orchestrator configuration file to the embedded vRealize Orchestrator server.

```
./vro-configure.sh import --type embedded --path orchestrator-config-export-orchestrator_appliance_ip-date_hour.zip
```

f   Remove all certificates from the database keystore.

```
./vro-configure.sh untrust --reset-db
```

4   Migrate the external vRealize Orchestrator database to the embedded vRealize Orchestrator environment.

    a   Open a new SSH connection to the primary vRealize Automation node and log in as **root**.

    b   Navigate to the vRealize Orchestrator `configuration-cli` folder.

```
cd /usr/lib/vco/tools/configuration-cli/bin
```

    c   Run the migration command.

```
./vro-configure.sh db-migrate --sourceJdbcUrl JDBC_connection_URL --sourceDbUsername
database_user --sourceDbPassword database_user_password
```

Note   Enclose values that contain special characters in single quotation marks.

The *JDBC_connection_URL* is stored in the `vmo.properties` file in your source vRealize Orchestrator environment. The default path to the `vmo.properties` file is `C:\Program Files\VMware\Orchestrator\app-server\conf`.

The *JDBC_connection_URL* depends on the type of database that you use. The following examples show the *JBDC_connect_URL* format based on the configured database type:

```
PostgreSQL: jdbc:postgresql://host:port/database_name
```

```
MSSQL: jdbc:jtds:sqlserver://host:port/database_name\; if using SQL authentication and MSSQL:
jdbc:jtds:sqlserver://host:port/database_name\;domain=domain\;useNTLMv2=TRUE if using Windows
authentication.
```

```
Oracle: jdbc:oracle:thin:@host:port:database_name
```

5   Restart the embedded vRealize Orchestrator services.

    a   Restart the vRealize Orchestrator server service.

    b   Restart the vRealize Orchestrator Control Center service.

6   (Optional) For clustered environments, join the replica nodes to the cluster to synchronize the vRealize Orchestrator configuration.

For more information, see *Reconfigure the Built-In vRealize Orchestrator to Support High Availability* in *Installing and Upgrading vRealize Automation*.

What to do next

Follow the post migration steps to finish the migration.

Migrate an External vRealize Orchestrator 6.x and Later to vRealize Automation 7.5

You can migrate your existing external vRealize Orchestrator server to a vRealize Orchestrator instance embedded in vRealize Automation.

Note The migration procedure is identical for both standalone and clustered vRealize Automation environments. If you have a clustered vRealize Automation environment, perform the migration through the VAMI interface on the primary node.

Prerequisites

- Upgrade or migrate your vRealize Automation to the target release. For more information, see *Installing or Upgrading vRealize Automation*.

- Back up your vRealize Automation environment, including any external databases.

- Stop the vRealize Orchestrator services of the external vRealize Orchestrator.

- Enable SSH access for each node in your external vRealize Orchestrator and vRealize Automation environments.

- Ensure that the external vRealize Orchestrator database is accessible from the vRealize Automation environment.

- Back up the database of the external vRealize Orchestrator server.

- Finish all workflows in the external vRealize Orchestrator environment that are in the **running** or **waiting for input** states. Workflows in these states are marked as failed in the embedded vRealize Orchestrator environment.

Procedure

1 Log in to the VAMI interface of the target vRealize Automation environment as **root**.

   Access the VAMI interface at https://*your_automation_server_ip_or_DNS_name*:5480.

2 Select the **Migrate** tab and then the **vRO** subtab.

3 Enter the hostname and root credentials of the source vRealize Orchestrator environment.

   Note When migrating a clustered vRealize Orchestrator environment, enter the credentials of any node from the cluster. The target vRealize Automation cluster must be in async mode for the migration to be successful.

4 Enter the root credentials of the target vRealize Automation primary node.

5 Click **Validate**.

   The system performs a series of validations steps to ensure that the migration prerequisites are met.

   Note If a migration prerequisite validation fails, review the failure and correct the problem. Click **Edit Settings** and retry the validation.

6 After the validation is finished, click **Migrate** to start the migration.

If a migration step fails, review the failure and correct the problem. To retry the migration, revert to the pre-migration state of the target environment.

What to do next

Set up the built-in vRealize Orchestrator server. See Configure the Embedded vRealize Orchestrator Server Service.

To troubleshoot the Orchestrator migration, see Troubleshooting the vRealize Orchestrator Migration.

Control Center Differences Between External and Embedded vRealize Orchestrator

Some of the menu items available in the Control Center for an external vRealize Orchestrator are hidden in the default Control Center view of an embedded vRealize Orchestrator instance.

In the Control Center of the embedded vRealize Orchestrator server, a few options are hidden by default.

Menu Item	Details
Licensing	The embedded vRealize Orchestrator is preconfigured to use vRealize Automation as a license provider.
Export/Import Configuration	The embedded vRealize Orchestrator configuration is included in the exported vRealize Automation components.
Configure Database	The embedded vRealize Orchestrator uses the database that is used by vRealize Automation.
Customer Experience Improvement Program	You can join the Customer Experience Improvement Program (CEIP) from the vRealize Automation appliance management interface. See *The Customer Experience Improvement Program* in *Managing vRealize Automation*.

Other options that are hidden from the default Control Center view are the **Host address** text box and the **UNREGISTER** button on the **Configure Authentication Provider** page.

Note To see the full set of Control Center options in vRealize Orchestrator that are built into vRealize Automation, you must access the **advanced Orchestrator Management** page at https://*vra-va-hostname.domain.name_or_load_balancer_address*:8283/vco-controlcenter/#/?advanced. Press the F5 key to refresh the page.

Post Migration Steps

Perform post migration checks on your vRealize Orchestrator environment.

Generate a Package Signing Certificate

The vRealize Orchestrator Appliance includes a package signing certificate that is generated automatically, based on the network settings of the appliance. If the network settings of the appliance change, you must generate a new package signing certificate manually.

Procedure

1 Log in to the Control Center as **root**.

2 Click **Certificates** and select the **Package Signing Certificate** tab.

3 Click **Generate**.

4 Select the signature algorithm.

5 Enter the common name.

6 (Optional) Enter the organization, organizational unit, and country code.

7 Click **Generate**.

Verify the vRealize Orchestrator Configuration in Control Center

Verify the health status of the vRealize Orchestrator configuration after the migration.

Prerequisites

Migrate a vRealize Orchestrator instance or cluster to a new target vRealize Orchestrator environment.

Procedure

1 Log in to the Control Center as **root**.

2 Click **Validate Configuration**.

The vRealize Orchestrator Control Center performs a check on all configuration parameters.

3 Verify that the status of all configuration parameters is valid.

Verify the Admin Group of the vRealize Orchestrator Configuration

Verify that the admin group of your vRealize Orchestrator environment is configured properly.

Prerequisites

Migrate a vRealize Orchestrator instance or cluster to a new target vRealize Orchestrator environment.

Procedure

1 Log in to the Control Center as **root**.

2 Select **Configure Authentication Provider** and verify that the authentication configuration is correct.

3 Select the **Test Login** tab.

4 Enter your admin credentials and click **Test**.

Verify the Migrated Scheduled Tasks State

Verify that there are no errors in your scheduled workflow tasks after the migration.

Prerequisites

Migrate an external vRealize Orchestrator environment to an external or embedded vRealize Orchestrator environment.

Procedure

1 Log in to the Java Client as an **administrator**.

2 Navigate to **Scheduled Tasks**.

3 Select a scheduled task and check for errors.

4 (Optional) Click the error message.

5 (Optional) Provide the required credentials.

6 (Optional) Validate the workflow on the next scheduled workflow run.

7 (Optional) Repeat the procedure for all scheduled tasks.

Migrate Dynamic Type Configurations

You can export dynamic type configurations from your source vRealize Orchestrator environment and then import them to the target vRealize Orchestrator environment.

Prerequisites

Migrate an external vRealize Orchestrator environment to an external or embedded vRealize Orchestrator environment.

Procedure

1 Export the dynamic type configurations in the source environment.

    a Log in to the Java Client as an **administrator**.

    b Select the **Workflows** tab.

    c Select **Library > Dynamic Types > Configuration**.

    d Select the **Export Configuration as Package** workflow and run it.

    e Click **Not Set > Insert value**.

    f Select the namespaces you want to export and click **Add**.

    g To export the package, click **Submit**.

2 Import the dynamic type configurations in the target environment.

    a Log in to the Java Client as an **administrator**.

    b Select the **Workflows** tab.

    c Select **Library > Dynamic Types > Configuration**.

    d Select the **Import Configuration From Package** workflow and run it.

    e Click **Configuration package to import**.

f   Browse to the exported package, and click **Attach file**.

g   Review the information about the namespaces attached to the package, and click **Submit**.

3   To validate the successful import of the dynamic type configurations, select **Inventory > Dynamic Types**.

Update the Configured vRealize Orchestrator Server in vRealize Automation

Verify the configuration of the migrated vRealize Orchestrator server.

Prerequisites

Migrate a vRealize Orchestrator instance or cluster to the embedded vRealize Orchestrator server in vRealize Automation.

Procedure

1   Log in to vRealize Automation as `tenant admin`.

2   Navigate to **Administration > vRO configuration > Server configuration**.

3   If the configured vRealize Orchestrator server is the external vRealize Orchestrator server, update the configuration to the hostname of the embedded vRealize Orchestrator server of the vRealize Automation environment.

4   Log in to vRealize Automation as `system admin`.

5   Navigate to **Administration > vRO configuration > Server configuration**.

6   If the configured vRealize Orchestrator server is the external vRealize Orchestrator server, update the configuration to the hostname of the embedded vRealize Orchestrator server of the vRealize Automation environment.

What to do next

Repeat the procedure for all tenants in your vRealize Automation environment.

Update the Migrated vRealize Orchestrator Infrastructure Endpoint in vRealize Automation

Verify that the vRealize Orchestrator endpoint is configured to the embedded vRealize Orchestrator environment in vRealize Automation.

Prerequisites

Migrate a vRealize Orchestrator instance or cluster to the embedded vRealize Orchestrator server in vRealize Automation.

Procedure

1   Log in to vRealize Automation as `tenant admin`.

2   Navigate to **Infrastructure > Endpoint > Endpoint**.

3   Verify that all vRealize Orchestrator endpoints are configured to the embedded target vRealize Orchestrator environment in vRealize Automation. Update any vRealize Orchestrator endpoints that are still configured to the external source vRealize Orchestrator environment.

What to do next

Repeat the procedure for all tenants in your vRealize Automation environment.

Configure the Embedded vRealize Orchestrator Server Service

After you migrate an external vRealize Orchestrator configuration and import it to vRealize Automation, you configure the vRealize Orchestrator server service.

Procedure

1   In the vRealize Automation appliance management interface, under **Services**, verify that the embedded vco service is **REGISTERED**.

2   Select the vco service of the external vRealize Orchestrator server that you have migrated and click **Unregister**.

What to do next

- Import any certificates that were trusted in the external vRealize Orchestrator server to the trust store of the built-in vRealize Orchestrator. For more information, see *Manage Orchestrator Certificates* in *Installing and Configuring VMware vRealize Orchestrator*.

- Add the vRealize Automation host and the IaaS host to the inventory of the vRealize Automation plug-in, by running the **Add a vRA host** and **Add the IaaS host of a vRA host** workflows.

Troubleshooting the vRealize Orchestrator Migration

To solve problems with your vRealize Orchestrator migration, follow the described procedures.

Troubleshoot a Validation Failure of the Source vRealize Orchestrator Database Server

You can encounter a database error while validating the vRealize Orchestrator migration.

Problem

The validation of the vRealize Orchestrator migration fails at the **Validate the source vRealize Orchestrator database server** step.

Cause

If your source vRealize Orchestrator deployment uses the built-in PostgreSQL database, you might have to enable remote connections for the validation step to finish.

Solution

1 Log in to the vRealize Orchestrator Virtual Appliance over SSH as **root**.

2 Add a line to the */var/vmware/vpostgres/current/pgdata/postgresql.conf* file.

```
listen_addresses ='*'
```

3 Restart the PostgreSQL service.

```
service vpostgres restart
```

4 Retry the validation.