



VMware vRealize Orchestrator 8.0 Release Notes

vRealize Orchestrator Appliance 8.0 | 17 October 2019 | Build 14878026

Check frequently for additions and updates to these release notes.

What's in the Release Notes

The release notes cover the following topics:

- [What's New in vRealize Orchestrator 8.0](#)
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What's New in vRealize Orchestrator 8.0

vRealize Orchestrator 8.0 introduces a modern container based virtual appliance architecture and extensions to the functionality of the vRealize Orchestrator Client.

The many benefits of vRealize Orchestrator 8.0 include:

- Consistent and standardized environment and rapid deployment with containerization.
- Git integration
 - Configure Git repositories
 - Push and pull content to a Git repository
 - Push content selectively
 - View diff before commit
 - Add comments on commit
- Enhance search and filtering
 - Saved searches
 - Sorting by recently added and used content items
- Export workflow runs and logs
- Embedded vRealize Orchestrator in vRealize Automation 8.0
 - Fully capable vRealize Orchestrator Client accessible from the vRealize Automation service console.

- Access to integrated external vRealize Orchestrator Clients. Available only if your vRealize Orchestrator instance is authenticated with the same vRealize Automation instance. For more information on integrating an external vRealize Orchestrator Client, see [How do I integrate an external vRealize Orchestrator Client](#)
- The vRealize Orchestrator Client is localized in 7 languages: Spanish, French, German, Traditional Chinese, Simplified Chinese, Korean, and Japanese.
- License restrictions
 - Git integration is available only with a vRealize Automation license.
 - Role management is available only when using a vRealize Automation license
 - **[IMPORTANT]** If vSphere authentication is used, you must add a vRealize Automation license to get access to the Git integration and role management features. For more information on license-based feature enablement, see [vRealize Orchestrator Feature Enablement with Licenses](#)
- **[IMPORTANT]** Users from vRealize Orchestrator instances authenticated with vSphere can now be assigned to groups and given **Run** permissions.

For more information on the vRealize Orchestrator Client, see [Using the VMware vRealize Orchestrator Client](#).

[Important] Feature and Support Notices

- The Java-based Orchestrator Legacy Client is no longer available.
- The vRealize Orchestrator Virtual Appliance Management Interface (VAMI) is no longer available. All configuration commands are done with the vRealize Orchestrator Appliance command line.
- Role management for vRealize Orchestrator instances authenticated with vRealize Automation is controlled by the vRealize Automation Identity and Access Management service. See [Configure vRealize Orchestrator Client Roles in vRealize Automation](#)
- Role management is available for vRealize Orchestrator instances authenticated with vSphere authentication that use a vRealize Automation license.
- The following plug-ins are no longer available:
 - vRealize Automation Center Infrastructure Administration plug-in.
 - vRealize Automation plug-in for vRealize Orchestrator.
- VMware Cloud on AWS is not supported as an authentication provider for vRealize Orchestrator, supported by the vSphere plug-in.
- Because vRealize Orchestrator no longer uses a folder-based structure for workflows and other objects, the "Export package to folder" feature is no longer available.
- Dependency search for content usage is not available.
- Synchronization of the content between different instances is not available.
- Export and Import of individual workflows and actions is not available. To export your vRealize Orchestrator content, you must use a package. See [Using VMware vRealize Orchestrator Packages](#).
- Graphical diff capability used to compare different workflow versions is not available
- You cannot view the content of embedded workflows and actions from the parent workflow. To view the content of these embedded objects, you must locate them in the vRealize Orchestrator inventory and open them separately.
- Generating workflow documentation is not available.

Deploying the VMware vRealize Orchestrator Appliance 8.0

The vRealize Orchestrator Appliance is VMware PhotonOS-based appliance distributed as an OVA file. It is prebuilt and preconfigured with a internal PostgreSQL database, and and it can be deployed with vCenter Server 6.0 or later.

The vRealize Orchestrator Appliance is a fast, easy to use, and more affordable way to integrate the VMware cloud stack, including vRealize Automation and vCenter Server, with your IT processes and environment.

For instructions about deploying the vRealize Orchestrator Appliance, see [Download and Deploy the vRealize Orchestrator Appliance](#).

For information about configuring the vRealize Orchestrator Appliance server, see [Configuring a Standalone vRealize Orchestrator Server](#).

Migrating to vRealize Orchestrator 8.0

You can migrate a standalone vRealize Orchestrator 7.3-7.6 instance authenticated with vSphere to vRealize Orchestrator 8.0. The migration of clustered vRealize Orchestrator 7.x deployments or deployments authenticated with vRealize Automation is not supported.

IMPORTANT NOTE: Upgrading the vRealize Orchestrator Appliance from any earlier product version to 8.0 is not supported.

For instructions about migrating the vRealize Orchestrator Appliance, see [Migrating vRealize Orchestrator](#).

Important: For security reasons, the password expiry of the root account of the vRealize Orchestrator Appliance is set to 365 days. To increase the expiry time for an account, log in to the vRealize Orchestrator Appliance as root, and run the following command:

```
passwd -x number_of_days name_of_account
```

To make your vRealize Orchestrator Appliance root password last forever, run the following command:

```
passwd -x 99999 root
```

Plug-Ins Installed with vRealize Orchestrator 8.0

The following plug-ins are installed by default with vRealize Orchestrator 8.0:

- vRealize Orchestrator vCenter Server Plug-In 6.5.0
- vRealize Orchestrator Mail Plug-In 7.0.1
- vRealize Orchestrator SQL Plug-In 1.1.4
- vRealize Orchestrator SSH Plug-In 7.1.1
- vRealize Orchestrator SOAP Plug-In 2.0.0
- vRealize Orchestrator HTTP-REST Plug-In 2.3.4
- vRealize Orchestrator Plug-In for Microsoft Active Directory 3.0.9

- vRealize Orchestrator AMQP Plug-In 1.0.4
- vRealize Orchestrator SNMP Plug-In 1.0.3
- vRealize Orchestrator PowerShell Plug-In 1.0.13
- vRealize Orchestrator Multi-Node Plug-In 8.0.0
- vRealize Orchestrator Dynamic Types 1.3.3
- vRealize Orchestrator vCloud Suite API (vAPI) Plug-In 7.5.0

Internationalization Support

vRealize Orchestrator 8.0 provides multi-language support for the vRealize Orchestrator Control Center and the vRealize Orchestrator Client.

How to Provide Feedback

Your active feedback is appreciated. Provide your feedback by using one of the following methods:

- Support Requests (SRs)
- [The vRealize Orchestrator Community Forum](#)

Support Requests

File all issues that you find as Support Requests (SRs), even if you report them to VMware by other means.

For more information on VMware Support and instructions on how to file SRs, please visit [the official VMware Support Offerings page](#).

Include log files in your SRs.

To generate your vRealize Orchestrator logs:

1. Log in to the vRealize Orchestrator Appliance command line as **root**.
2. Run the *vracli log-bundle* command.

Result: The log bundle is generated in the root folder of the vRealize Orchestrator Appliance.

Earlier Releases of vRealize Orchestrator

Features and issues from earlier releases of vRealize Orchestrator are described in the release notes for each release. To review release notes for earlier releases of vRealize Orchestrator, click one of the following links:

- [vRealize Orchestrator 7.6.0](#)
- [vRealize Orchestrator 7.5.0](#)
- [vRealize Orchestrator 7.4.0](#)

Resolved Issues

The resolved issues are grouped as follows.

- [Web client](#)

Web client

- **Validation errors prevent the user from running workflows that require a file to be uploaded as an input.**
The custom forms don't have a file upload input field. Workflows that require file input cannot be run through the vRealize Orchestrator Client.
- **When users run a workflow repeatedly, they only see the workflow IDs instead of the workflow name.**
If you run a workflow repeatedly, the presentation is populated with object IDs instead of names.
- **The user may lose their package tags if they make changes in the package name.**
The tags of the packages are related with the package name. When you make changes to the name, package tags disappear after saving.
- **Even though there are multiple fields added to `_Highlighted fields_` in the external validation of the workflow input form, only the first one is marked as invalid in case of validation errors.**
When you add an external validation in the workflow input forms, only the first one of the added highlighted fields is taken into account.
- **The save button is not active in the Input Form tab of the workflow editor**
The save button is not active when the user creates or edits input forms in workflow editor.
- **Can't link Array-type variables to the configurations**
Array-type variables cannot be created or linked to configurations.
- **If the workflow input form has a custom validation added through the vRealize Orchestrator Client, it produces unexpected results (reports invalid values when they should be valid).**
In the vRealize Orchestrator Client, validation actions are invoked with the correct values only when workflow and action input parameter names are the same.
- **If you add more than one resource element in a package, an error occurs when you try to increment the version of the package content.**
If you add more than one resource element in a package, an error occurs when you try to increment the version of the package content.

- **A user with the workflow designer role and group member permissions can receive an error when they try to assign configuration element to a group.**

If the user has a workflow designer role and group member permissions, they will receive the "Failure to update configuration User LDAP-USER-[<username>] - vsphere.local\<username> doesn't have required access rights ((Edit, false)) for calling updateConfigurationElementWithContent method" error when trying to assign a configuration element to a group.

Known Issues

The known issues are grouped as follows.

- [Configuration Issues](#)
- [Migration issues](#)
- [Web client](#)
- [Miscellaneous Issues](#)
- [Previously known issues](#)

Configuration Issues

- **The Embedded vRealize Orchestrator does not update its authentication configuration.**

The Embedded vRealize Orchestrator does not update its authentication configuration if the virtual appliance host name is changed.

Workaround: After changing the host name, delete the `/data/vco/usr/lib/vco/app-server/conf/configured` file and restart the vRealize Orchestrator pod.

- **vRealize Orchestrator Client responds with a 403 forbidden error due to a missing x-xsrf-token when authentication provider is changed.**

When setting up for the first time or changing the authentication provider, it is possible to see the 403 forbidden error in the vRealize Orchestrator Client due to a missing or wrong x-xsrf-token. This issue occurs only if the user has previously opened the client in the browser and afterwards changes the authentication provider using the Control Center. The browser session keeps the first token loaded before the change of the provider. Then the token used is not updated and becomes invalid which causes the error in the client.

Workaround: You must clear your browsing data and reopen the vRealize Orchestrator Client.

- **"Runtime metrics" in the Control Center are not relevant for vRealize Orchestrator 8.0.**

The data shown in the "Runtime metrics" section of the Control Center is not relevant for vRealize Orchestrator 8.0. Relevant metrics are only available in the vRealize Orchestrator Client.

Workaround: To view relevant metrics, use the System Dashboard in the vRealize Orchestrator Client.

- **Increasing the size of vRealize Orchestrator Appliance disks is not reflected on the Operating System (OS) level.**

After increasing the size of any of the discs of a vRealize Orchestrator 8.0 Appliance, the changes are not reflected in the OS. New disc space is not accessible even after auto resize is triggered manually with the *vracli disk-mgr resize* command

Workaround:

1. Log in to the vRealize Orchestrator Appliance over SSH.
2. Navigate to the */etc/cron.d* directory.
3. Create a file named "disk-management" with this content:

```
* * * * * root /opt/scripts/monitor_disk_usage.sh >> /var/log/disk_usage.log 2>&1
```

```
* * * * * root sleep 10 && /opt/scripts/manage_disk_resize.sh >> /var/log/disk_resize.log 2>&1.
```

NOTE: Make sure there is a trailing newline at the end of the file.

4. Modify the file with read permissions for standard users and write permissions for the owner (*chmod 644 disk-management*).
5. If one or more disks have been externally resized, perform the following steps to trigger automatic resize on the OS level:
 - a. Navigate to the */var/run* directory.
 - b. Open the "disk_stats" file and modify its content to:


```
/dev/sda: 1
/dev/sdb: 1
/dev/sdc: 1
/dev/sdd: 1
```
 - c. Run the *vracli disk-mgr resize* command.

- **Deploying or upgrading a High Availability environment with vRealize Suite Lifecycle Manager might fail on boot, because of constraint violations when initializing vRealize Automation.**

After deploying or upgrading, you see the following error message in the vco-control-center container log:

```
<log_date><log_time>[localhost-startStop-1] ERROR {} [DbConfigurationInitializer] Failed to create the initial configuration data. Reason: query did not return a unique result: 2;
```

Workaround:

1. Scale the vco-app replicas to 0.

```
kubectl -n prelude scale deployment vco-app --replicas=0
```

2. By running the *vracli dev* command, verify that there are more than one record in *vmo_contentversioncontrol* where *repositorytype = 'INTERNAL'*.

```
vracli dev psql
```

```
\c vco-db
```

```
select count(*) from vmo_contentversioncontrol where repositorytype = 'INTERNAL'  
group by location;
```

```
select * from vmo_contentversioncontrol where repositorytype = 'INTERNAL';
```

3. Delete any additional records and leave only one record in vmo_contentversioncontrol performing the following sql query where {extra_record_id} has to be replaced with the id of the record that has to be deleted.

```
delete from vmo_contentversioncontrol where id='{extra_record_id}';
```

4. Exit the psql interactive terminal.

5. Scale the vco-app replicas to 1

```
kubectl -n prelude scale deployment vco-app --replicas=1
```

6. Wait for the vro pod to be ready and to have 3/3 ready containers for the pod and then scale vco-app replicas to 3. Two more pods have to be deployed.

```
kubectl -n prelude scale deployment vco-app --replicas=3
```

Migration issues

- **After migrating vRealize Orchestrator 7.x to 8.0, Active Directory takes a long time to show all plug-in folders in the inventory.**

This issue is not consistently observed, but in rare cases after migration the Active Directory inventory does not appear immediately in the vRealize Orchestrator Client.

No workaround. Wait for the problem to resolve itself.

- **Migration to vRealize Orchestrator 8.0 fails for vRealize Orchestrator 7.3 deployments that use an Oracle database.**

The migration fails because the source vRealize Orchestrator 7.3 instance uses an Oracle database.

Workaround: Before migrating your vRealize Orchestrator 7.3 deployment, switch to the embedded PostgreSQL database.

Web client

- **Unable to validate an SSH address when configuring a GitLab integration.**

Adding an SSH address and clicking on the validation button causes the following error: *Error: org.bouncycastle.util.io.pem.PemGenerationException: unknown object passed - can't encode.*

Workaround: When you add an SSH address, you must first click on the **Save** button to generate a public key. Paste your public key and add it in GitLab, so you can connect to your repository.

- **Critical issue when pushing resource elements to a Git repository.**

When pushing a resource element to the integrated Git repository, the user must push both

the resource.binary and resource.binary.properties elements. Failure to follow this requirement can cause a critical issue for the vRealize Orchestrator Git integration.

No workaround.

- **Error when displaying dynamic type workflows.**

Dynamic types selector for the workflow folder displays all folders under the same name.

No workaround.

- **Receiving a 406 error when editing a VC:SdkConnection variable.**

When you have a workflow or a configuration element with a variable of the VC:SdkConnection type and you have set its value to a vCenter instance that has an ID which ends with .com or some other domain, you receive a 406 error when you try to edit the variable. The 406 error can also appear when you click the caret to expand the details of the variable when its value was just set.

Workaround: Register the vCenter instance by its IP address and not by host name.

- **Exported package content does not follow the assigned restrictions.**

Setting "View Content" and "Add to package" export options does not have the desired effect over the exported package.

No workaround.

- **Some package content items are imported after package import fails.**

If the package import fails, some of the package items are nevertheless imported.

Workaround: The user must manually clean up the imported items, if needed.

- **Logging out of an external vRealize Orchestrator Client authenticated with vRealize Automation can redirect you to the vRealize Automation login page.**

Logging out of an external vRealize Orchestrator Client authenticated with vRealize Automation can redirect you to the vRealize Automation login page. Any following login operations continue to be redirected to vRealize Automation.

Workaround: Manually enter the FQDN of your external vRealize Orchestrator Client and click the browser's back button.

- **In the vRealize Orchestrator Client, you see tags containing underscore characters in the name.**

The vRealize Orchestrator Client doesn't support tag names with less than three characters or names containing white-space characters. All tags auto-generated from objects with shorter names will be suffixed with "underscore". All white-space characters will also be replaced with "underscore".

Example: The workflow located in "/Library/project A/app/DR/backup" in the Orchestrator Legacy Client, will have the following auto-generated tags in the vRealize Orchestrator Client: "Library", "project_A", "app", "DR_"

Workaround: Follow the presented tagging conventions when creating new content in the vRealize Orchestrator Client.

- **Removing the debug breakpoints does not work.**

Removing the debug breakpoints does not work. The workflow debugger saves the breakpoints of the previous run when you exit the workflow editor.

No workaround.

- **Group search works only for groups with small letters.**

If your group includes uppercase letters, you cannot use the vRealize Orchestrator Client search functionality to find this group.

Workaround: Name your groups in lowercase.

- **If a workflow run is exported while still running and then imported it will appear as running.**

The workflow cannot be canceled in the vRealize Orchestrator Client. Consequently, the workflow also can't be deleted as it still appears as running.

Workaround: If this is the only workflow with this behavior, it can be canceled from the Control Center using the **Cancel all tokens** command in the **Troubleshooting** page. Consider that this will also cancel all other workflows running at the time.

- **An invalid resource element is created if you attempt to upload a file with a size greater than 16 MB.**

When attempting to upload a file with a size greater than 16 MB, a error message appears, but the resource element is still created.

Workaround: Delete the invalid resource element.

- **Scheduled workflow runs are triggered at a different than the expected time with the time offset to UTC time.**

When you schedule workflow runs through scripting by using the `*workflow.scheduleRecurrently()*` function, scheduled workflows are always triggered in UTC time. There is a discrepancy between the vRealize Orchestrator Client UI and the function behavior, because the UI adds the time zone of your browser to the recurrence pattern. However, the time zone is not included in the recurrence pattern when using the function and the calculations of the time to the trigger the workflow runs are done on the server side in UTC time.

Workaround: When you schedule workflow runs in scripting, use time values in UTC time.

- **Duplicated workflows created in Orchestrator Legacy Client might display a constant instead of an external action in their value options.**

When editing the input parameters of a workflow that is designed in the Orchestrator Legacy Client, and duplicated in the vRealize Orchestrator Client, the value options might be set as a constant instead of an external action.

Workaround: Navigate to the **Input Form** tab and edit the input parameter presentation to include the required external action.

- **Unable to select an action as an external source in input forms because of a return type issue.**

In the vRealize Orchestrator Client **Input Form** tab, you are unable to select an action that has a return type of either Any or Array/Any for a default value or value option.

Workaround:

1. Log in to the vRealize Orchestrator Client.
2. Select your workflow and navigate to the **Input Form** tab.
3. Set the action with the return type expected from the widget default value or value option and save the changes.
4. Select the default value or value option action, save the workflow, and revert the action to previous version or change the return type back to the Any type.

Miscellaneous Issues

- **The vCenter Server plug-in does not support policies.**

The vCenter Server plug-in for vRealize Orchestrator does not support using policies to monitor for events that are issued by the managed vCenter Server instance.

- **You cannot access the Java documentation of the Plug-in SDK from Develop plug-in page.**

When you navigate from the vRealize Orchestrator Welcome page > Development and Resources > Plug-in Documentation and try to access the EXPLORE THE PLUG-IN SDK page, you are directed to a 404 error page.

Workaround: Deploy an earlier version of vRealize Orchestrator and access the Plug-in SDK Java documentation from there. There are no changes to the Plug-in SDK in vRealize Orchestrator 8.0, so the information you access in an earlier release is still valid.

- **Cannot register vRealize Orchestrator as a vSphere extension.**

The workflow **Register vCenter Orchestrator as a vCenter Server extension** fails with the error: *java.lang.IllegalArgumentException: cert parameter is required (Workflow:Register vCenter Orchestrator as a vCenter Server extension / Register extension (item1)#10198}*.

No workaround.

- **Failure to switch to an integrated external vRealize Orchestrator node from the embedded vRealize Orchestrator Client.**

When switching to an integrated external vRealize Orchestrator node from the embedded vRealize Orchestrator Client, the following message appears: *Can not switch to host \{{hostname}}. It is not properly configured or unreachable*. The browser logs contain messages indicating a certificate chain error. For Google Chrome, such a certificate chain error is: *2. net::err_cert_authority_invalid*.

Workaround: To connect to the external vRealize Orchestrator node, the certificate chain of the external node must be added to the browser trust store. One solution to this issue is to open the external vRealize Orchestrator node in a separate browser window and confirming that you trust the certificate. Another solution is to have the certificates of the vRealize Orchestrator nodes be signed by a trusted certificate authority accepted by the browser clients in the organization.

- **Importing a package created in a newer vRealize Orchestrator version into an older**

version of vRealize Orchestrator can cause an error.

Compatibility issues between vRealize Orchestrator versions lead to the inability to import packages created in newer product versions into older vRealize Orchestrator deployments.

No workaround.

Previously known issues

To view a list of previous known issues, click [here](#).

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