Lenovo XClarity Integrator for VMware vRealize Orchestrator
Installation and User Guide

Version 1.2.0

Note

Before using this information and the product it supports, read the information in Appendix A "Notices" on page 15.

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About this publication

This user guide provides the latest information about Lenovo XClarity Integrator for VMware vRealize Orchestrator .vmoapp plug-in. The plug-in provides workflows that interact with Lenovo XClarity Administrator.

Conventions and terminology

This publication uses conventions and special terms that will aid in your use of the information.

Paragraphs that start with a bold **Note**, **Important**, or **Attention** are notices with specific meanings that highlight key information.

Note: These notices provide important tips, guidance, or advice.

Important: These notices provide information or advice that might help you avoid inconvenient or difficult situations.

Attention: These notices indicate possible damage to programs, devices, or data. An attention notice appears before the instruction or situation in which damage can occur.

Frequently used terms

Table 1. Frequently used terms and acronyms

Term/acronym	Definition
LXCI	Lenovo XClarity Integrator
LXCA	Lenovo XClarity Administrator
vRO	VMware vRealize Orchestrator

Chapter 1. Lenovo XClarity Integrator for VMware vRealize Orchestrator

The Lenovo XClarity Integrator for VMware vRealize Orchestrator.vmoapp plug-in is a plug-in to the VMware vRealize Orchestrator. It provides workflows that interact with Lenovo XClarity Administrator to automate management. The Lenovo vRO plug-in supports the following features:
- Provision a new server
- Provision a new server and add to vCenter
- Provision a new server with interaction
- Assign a configuration pattern
- Deploy ESXi server
- Deploy ESXi server with static IP
- Get available servers
- Get server patterns
- Restart server
- De-asssign a configuration pattern
- Register XClarity Administrator with vRO plugin
- Unregister XClarity Administrator from vRO plugin
- Enhance "Deploy ESXi Server" workflow to support VLAN Tagging for ESXi Hosts

Chapter 2. Planning and installing Lenovo XClarity Integrator for VMware vRealize Orchestrator

Use this procedure to plan for and install Lenovo XClarity Integrator for VMware vRealize Orchestrator.

System requirements

This topic describes the software and system requirements for Lenovo XClarity Integrator for VMware vRealize Orchestrator. Lenovo XClarity Integrator for VMware vRealize Orchestrator leverages Lenovo XClarity Administrator for server management and has a dependency on Lenovo XClarity Integrator for VMware vCenter.

The following version combinations of Lenovo XClarity Administrator and Lenovo XClarity Integrator for VMware vRealize Orchestrator are supported.

Table 2. Software requirements

Software	Version
EXSi OS	6.7 and 7.0
VMware vRealize Orchestrator	8.3
Lenovo XClarity Administrator	3.2.0 and 3.3.0

Supported server models

Lenovo XClarity Integrator for VMware vRealize Orchestrator supports Lenovo ThinkAgile VX servers and ThinkSystem servers.

Table 3. Supported sever models

Series	Models	
ThinkAgile	ThinkAgile VX1320 Certified (7Z58)	VX3720 (7Y92)
	ThinkAgile VX 1U Certified (7Y93)	VX3720-N (7Y93)
	ThinkAgile VX 2U Certified (7Y94)	VX5520 (7Y14)
	ThinkAgile VX 2U4N Certified (7Y92)	VX5520 (7Y94)
	VX2320 (7Y13)	VX7320 (7Y94)
	VX2320 (7Y93)	VX7520 (7Y14)
	VX3320 (7Y13)	VX7520-N (7Y14)
	VX3320 (7Y93)	VX7520 (7Y94)
	VX3520-G (7Y14)	VX7820 (7Z12, 7Z13, 7Z14)
	VX3520-G (7Y94)	VX-SR665 (7D43)
	VX3720 (7Y12)	
ThinkSystem	SD530 (7X21)	SR650 V2 (7Z72, 7Z73)

Table 3. Supported sever models (continued)

| Series	Models	
	SD630 V2 (7D1K)	SR655 (7Y00, 7Z01)
	SD650 (7X58)	SR665 (7D2V, 7D2W)
	SD650 V2 (7D1M)	SR670 (7Y36, 7Y37, 7Y38)
	SD650-N V2 (7D1N)	SR670 V2 (7Z22, 7Z23)
	SE350 (7D1X, 7D27, 7Z46)	SR850 (7X18, 7X19)
	SR150 (7Y54)	SR850 V2 (7D31, 7D32, 7D33)
	SR158 (7Y55)	SR850P (7D2H)
	SR258 (7Y53)	SR850P (7D2F, 7D2G)
	SR250 (7Y51, 7Y52, 7Y72, 7Y73)	SR860 (7X69, 7X70)
	SR530 (7X07, 7X08)	SR860 V2 (7Z59, 7Z60 ,7D42)
	SR550 (7X03, 7X04)	SR950 (7X11, 7X12)
	SR570 (7Y02, 7Y03)	SR950(7X13)
	SR590 (7X98, 7X99)	ST250 (7Y45, 7Y46)
	SR630 (7X01,7X02)	ST258 (7Y47)
	SR630 V2 (7Z70, 7Z71)	ST550 (7X09, 7X10)
	SR635 (7Y98, 7Y99)	ST550 (7X09, 7X10)
	SR645 (7D2X, 7D2Y)	ST558 (7Y15, 7Y16)
	SR650 (7X05, 7X06)	ST650 V2 (7Z74, 7Z75)
	SR650 (7D4K)	

Installing the plug-in

This topic lists the prerequisites for installing the .vmoapp plug-in and the steps for installing the plug-in.

Before you begin

You must install VMware vRealize Orchestrator. For instructions on installing VMware vRealize Orchestrator, see the VMware vRealize Orchestrator Documentation website.

Procedure

Step 1.   Log in to the vRealize Orchestrator home page.

Step 2.   Click **START THE CONTROL CENTER** to start the installation.

Step 3.   Log in to the vRO Control Center with vRO Username and Password, and click **Login**. You must know the credentials to log in to the Control Center.

Step 4.   As you logged in to the Orchestrator, in the **Plug-ins** section, click the **Manage Plug-ins** icon.

Step 5.   Click **Browse** to navigate to the folder where you have saved the plug-in to be installed.
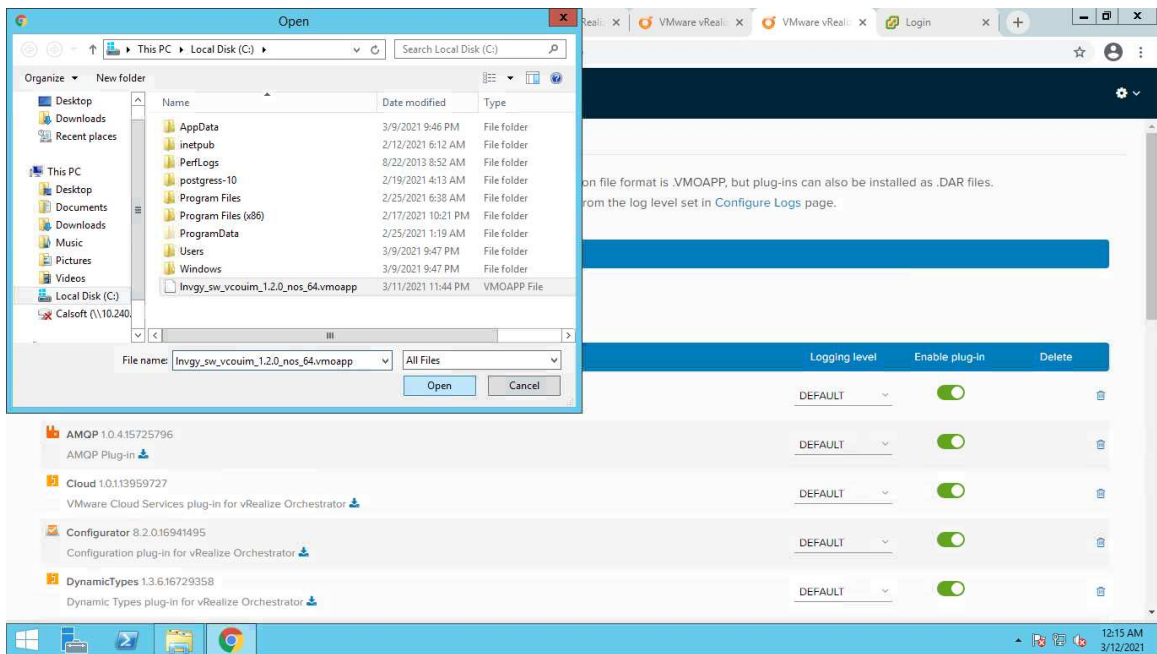
Step 6. Navigate to the folder where you have saved the <..vmoapp> file, select the <..vmoapp> file, and click **Open**.
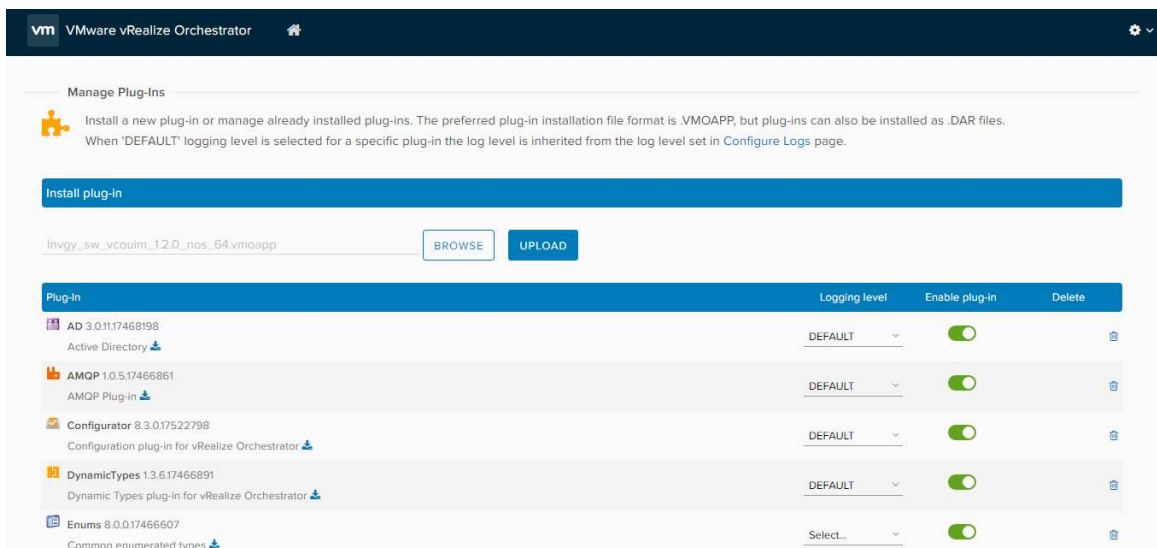
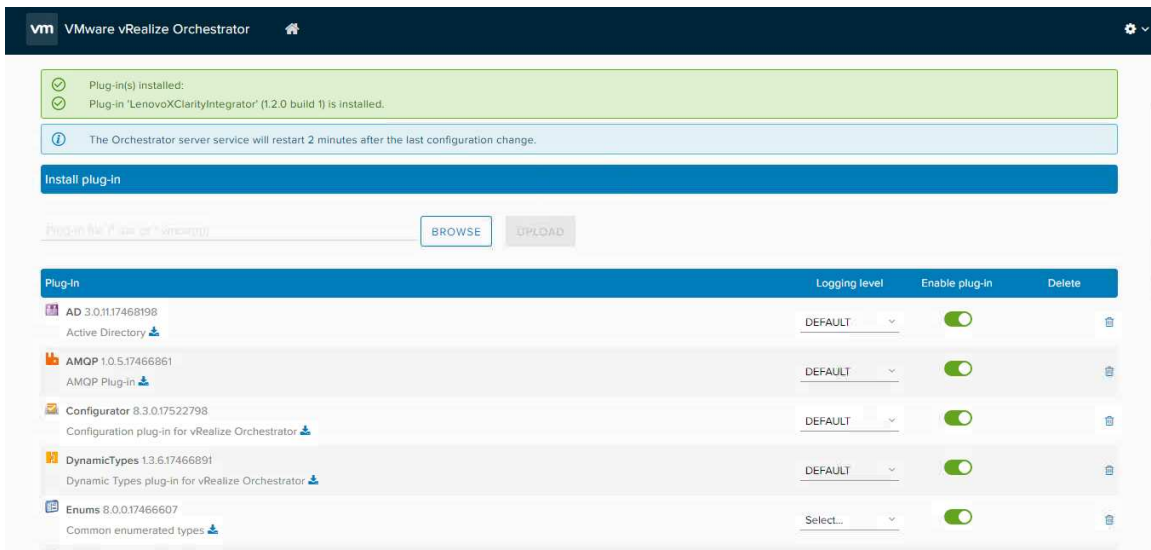Step 7.   Click **UPLOAD**. The end-user license agreement screen is displayed.
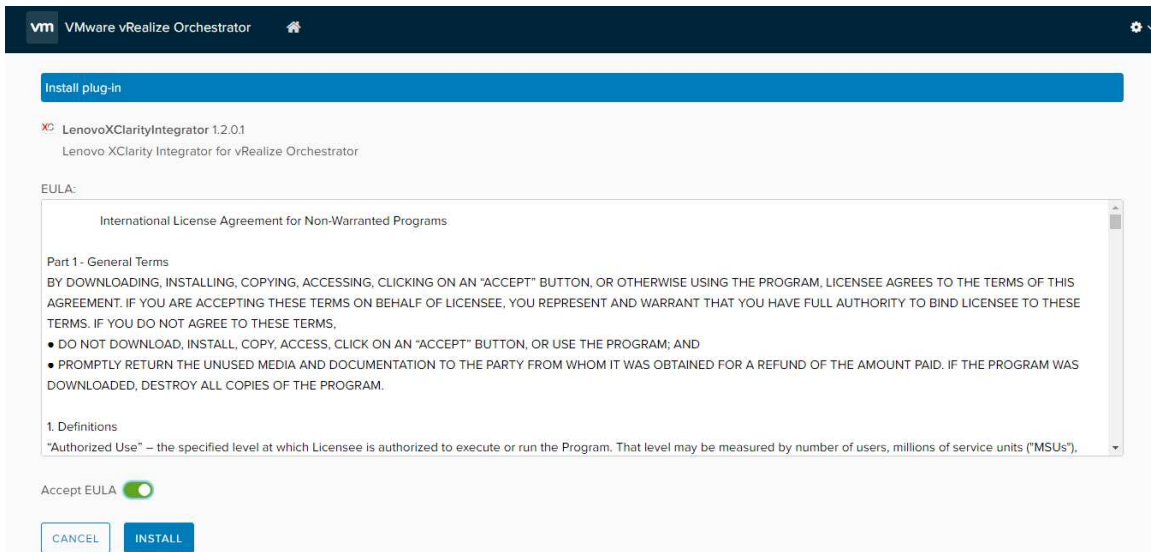
Step 8.   Read the end-user license, select**Accept EULA** to proceed, and then click **INSTALL**.

Step 9.   Wait for about a few minutes.

The VMware vRealize Orchestrator server will restart. Then, you can log in to the Orchestrator client and start using the plug-in. On successful installation, the plugin is added to the plugins list as follows.
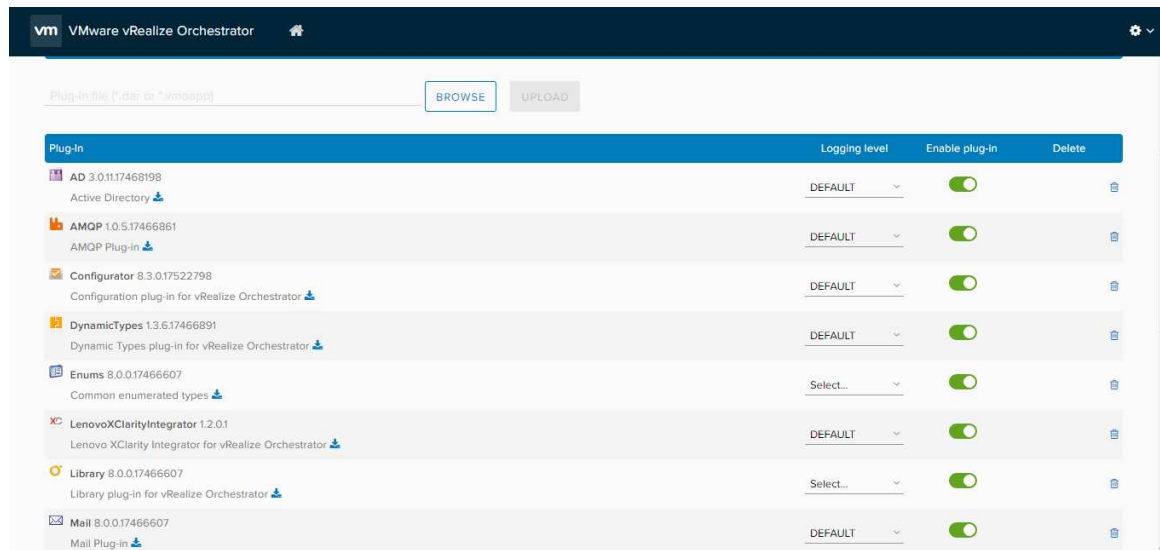
Removing the plug-in

This topic provides the procedure for uninstalling the .vmoapp plug-in.

Procedure

Uninstallation of the <.vmoapp> plug-in follows standard plug-in uninstallation steps. For instructions, see the VMware vRealize Orchestrator online documentation: Delete a Plug-In.

Chapter 3.   Using the plug-in

The plug-in runs via the vRealize Orchestrator client, which is automatically installed with the VMware vRealize Orchestrator package.

The client enables you to:
- Run workflows
- Schedule workflows
- Manage user permissions
- Develop workflows and actions

Ensure that you have met the "Prerequisites" on page 9 for using the plug-in.

For more information about using vRealize Orchestrator client, refer to the Using the VMware vRealize Orchestrator Client document on the VMware vRealize Orchestrator Documentation.

Prerequisites

This topic lists prerequisites for using the plug-in.

- Install VMware vRealize Orchestrator
- Ensure that VMware vCenter is available and has been added to vRealize Orchestrator.

  To add vCenter server instance, navigate to the Library tab by clicking **Library ➔ vCenter ➔ configuration ➔ Add a vCenter Server instance**.

Using the plug-in inventory

Lenovo XClarity Integrator for VMware vRealize Orchestrator lists all servers in Lenovo XClarity Administrator instances that are connected in the **Inventory** view.

About this task

You can use the **Inventory** view to add authorization elements or to run workflows on Lenovo XClarity Administrator managed server objects.

You can enable the Use contextual menu in the Inventory option to display the workflows that are available for an Inventory object. When the option is enabled and you right-click an object in the Orchestrator inventory, all available workflows for the object are displayed.

Procedure

Step 1.   Log into the vRealize Orchestrator client as an administrator.

Step 2.   Click the **Inventory** view in the vRealize Orchestrator client. The right pane displays the inventory.
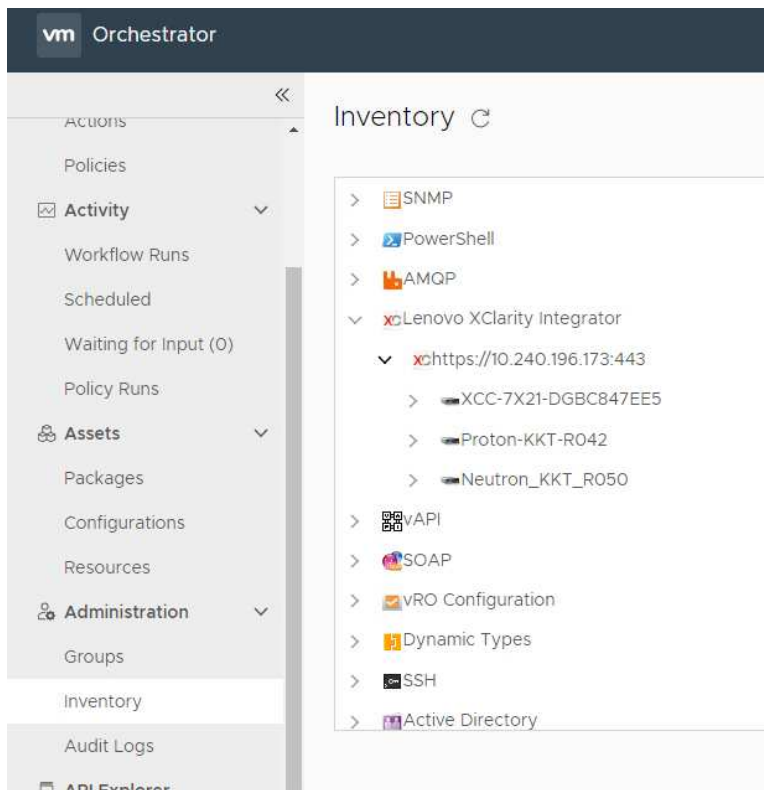
Step 3. In the hierarchical list, select **Library ➜ Lenovo XClarity Integrator** and expand the selection.

Using the plug-in Workflow library

This topic describes the Workflow library.

About this task

The **Workflow** library contains workflows that allow you to run automated processes related to the management of Lenovo XClarity Administrator instances.

Procedure

Step 1. Run and log into the vRealize Orchestrator client as an administrator.

Step 2. Click the **Workflows** view in the Orchestrator client.

Step 3. In the hierarchical list, select **Library ➜ Lenovo XClarity Integrator** and expand the selection.

Step 4. Right-click the workflow you want to run, click **Run**, and follow the prompts on the wizard.For a list of workflows and their descriptions, refer to "Workflows" on page 10.

Workflows

This topic lists workflows that combine multiple actions to perform a task.

You can use the workflows as building blocks for creating complex custom solutions. By combining standard workflows, you can automate multistep processes.

Table 4. Standard workflow names and descriptions

Workflow name	Description
Provision a new server	Deploy a server pattern and then deploy ESXi on the server.
Provision a new server and add to vCenter	Deploy a server pattern on the server, then deploy ESXi and add it to a vCenter cluster.
Provision a new server with interaction	Provision a new server with interaction in the inventory.
Assign a configuration pattern	Assign a configuration pattern to the Lenovo host.
Deploy ESXi server	Install ESXi in the host.
Deploy ESXi server with static IP	Install ESXi with a static IP in the Lenovo host.
Get available servers	Retrieve a list of servers that have not been added to the Lenovo XClarity Administrator.
Get server MAC addresses	List a server's MAC addresses.
Get server patterns	Retrieve all server patterns that have been created in Lenovo XClarity Administrator instances.
Restart server	Restart the server
De-assign a configuration pattern	Unassign a configuration pattern from a server.
Register XClarity Administrator with vRO Plugin	Register the Lenovo XClarity Administrator with vRO plug-in.
Deploy ESXi server with VLAN tagging.	Deploy the ESXi server that supports VLAN tagging for ESXi hosts.
Unregister XClarity Administrator	Unregister the Lenovo XClarity Administrator from the vRO plug-in.

Chapter 4. Troubleshooting

This section provides troubleshooting information that will help you to resolve problems with Lenovo XClarity Integrator for VMware vRealize Orchestrator.

Logging

vRealize Orchestrator provides the facility for troubleshooting issues using logs.

For details to enable logging, how to change log levels, and log file location, see VMware vRealize Orchestrator Documentation documents.

The Lenovo XClarity Integrator for VMware vRealize Orchestrator supports the following log levels:
- Info
- Debug
- Error

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