JUNIPER NETWORKS | Engineering Simplicity

Virtual Lightweight Collector Deployment Guide

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The information in this document is current as of the date on the title page.

YEAR 2000 NOTICE

Juniper Networks hardware and software products are Year 2000 compliant. Junos OS has no known time-related limitations through the year 2038. However, the NTP application is known to have some difficulty in the year 2036.

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About This Guide

Use this guide to install the Juniper Networks® Virtual Lightweight Collector (vLWC) on a VMWare infrastructure, perform initial software configuration, and troubleshoot issues with the vLWC network. After completing the installation and basic configuration procedures coverd in this guide, refer to the JSI Day One+ guide for information about further software configuration. See also: https://www.juniper.net/documentation/product/us/en/juniper-support-insights/.

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PART

Introduction

Virtual Lightweight Collector Overview

IN THIS SECTION

Overview

The Juniper Networks® Virtual Lightweight Collector (vLWC) is a VMware-ready data collection tool for the Juniper Support Insights. The vLWC is an alternative solution to the physical Lightweight Collector (LWC). It brings the capabilities of the LWC in a virtual package to free physical rack space in your data center by making use of your existing VMware infrastructure.

Juniper Support Insights (JSI) is a cloud-based solution that provides IT and network operations teams with actionable operational insights into Junos devices on customer networks. JSI aims to transform the customer support experience by providing insights that help improve the network performance and uptime.

The vLWC as a data collection tool is installed on the customer's premises. This provides an added security to the data being collected as the data is locally collected and encrypted.

Virtual Network Interfaces for vLWC

The Virtual Lightweight Collector (vLWC) is installed with three network interfaces where two of the interfaces are the internal and external ports. The third interface is the management interface which will be used to access the vLWC through a JSI shell or a Captive Portal web page to configure network settings and troubleshoot issues. See Table 1 on page 3.

Table 1: Network Interfaces for vLWC

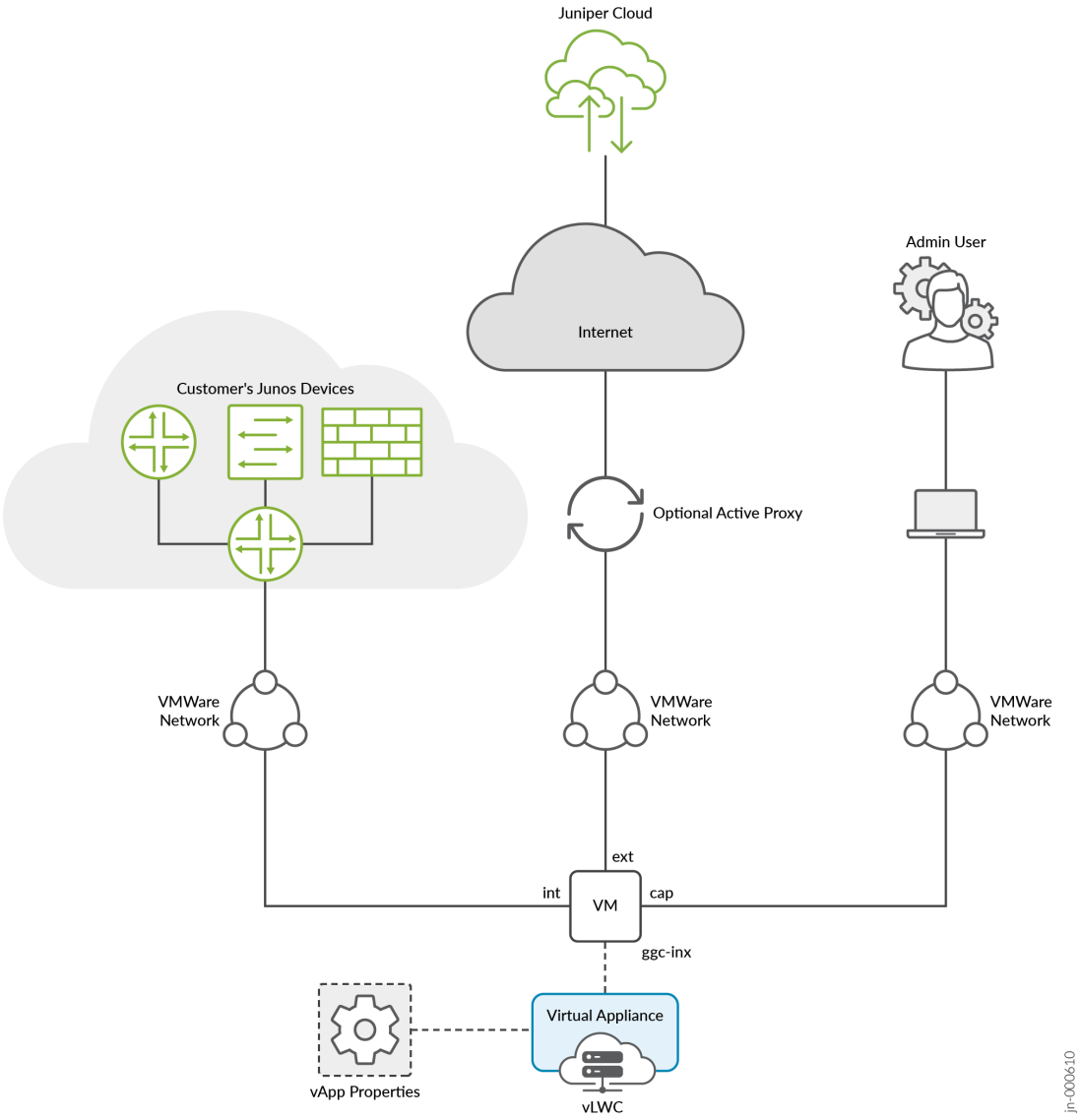
Interface	Interface Name	Description
Internal	int	Internal network used to access the Junos devices being monitored by JSI. This network should not have access to the Internet.
External	ext	External network with HTTP/HTTPS and DNS Internet connectivity used to connect to Juniper Cloud directly or through an active proxy server.
Management	cap	Management network used to access JSI shell or Captive Portal webpage. Port requirements: • Port 443/HTTPS for the Captive Portal webpage • Port 22/SSH for the JSI shell

vLWC Installation Overview

The vLWC solution is a single VMWare vApp Open Virtual Appliance (OVA) file deployed on a VMWare virtual network. Anyone with an experience in deploying vApp on VMWare can deploy vLWC. You must configure the network interfaces (int, ext, and cap) to proper networks before the installation process of deploying the OVA file. Once installed in the VMWare environment, the vLWC vApp OVA package will consist of the vApp itself and a virtual machine (VM) named **ggc-lnx** attached to the vApp. The **ggc-lnx** VM runs the vLWC software and performs the data collection.

The following figure shows the overall deployment architecture for the vLWC, and how the vApp, VM, network interfaces, and VMware networks relate to each other:

Figure 1: vLWC Deployment Architecture



System Requirements

IN THIS SECTION

Before installing the vLWC software in a VMware environment, your system must meet the requirements described in the following sections.

VMWare Requirements

Currently, VMware is the only supported environment for vLWC, where it is deployed as a vApp OVA. To run this vApp, your VMware environment must meet the following minimum requirements:

- VMware vCenter Server access (using VMware vSphere Client, version 6.7.0 or later)
- Three VM networks (for internal, external and management interfaces)
- Connectivity from internal VM network to Junos devices
- Connectivity from external VM network to Internet or active proxy server
- Support for VMXNET3 network adapters

Hardware Requirements

The **ggc-lnx** VM that runs the vLWC can be deployed in a small or large hardware configuration. Your system must meet the minimum hardware requirements for the VM to run properly for the desired scale of Junos devices being collected from. See Table 2 on page 6.

Table 2: Hardware Requirements

Configuration Type	Total Devices Supported	**Number of vCPUs**	**Memory**	**Storage**
Small	Up to 10,000 devices	6 CPUs	16 GB RAM	400 GB disk space
Large	Up to 20,000 devices	12 CPUs	32 GB RAM	400 GB disk space

WARNING: The vLWC can experience data collection issues if your system does not meet the minimum requirements. A lack of CPU and/or memory resources can cause the vLWC to go into a holding pattern and stop collecting data.

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PART

Install

Before You Install

IN THIS SECTION

To successfully install and deploy the vLWC, you must have VMWare vSphere installed on a single ESXi server, VMWare vCenter Server, and you must meet the hardware requirements listed in "Hardware Requirements" on page 5. You must also have one network with Internet connectivity either directly or through an active proxy server along with the other requirements listed in "VMWare Requirements" on page 5.

Prepare VMware vSphere

Before you begin the installation process for vLWC, you must prepare your VMware vSphere:

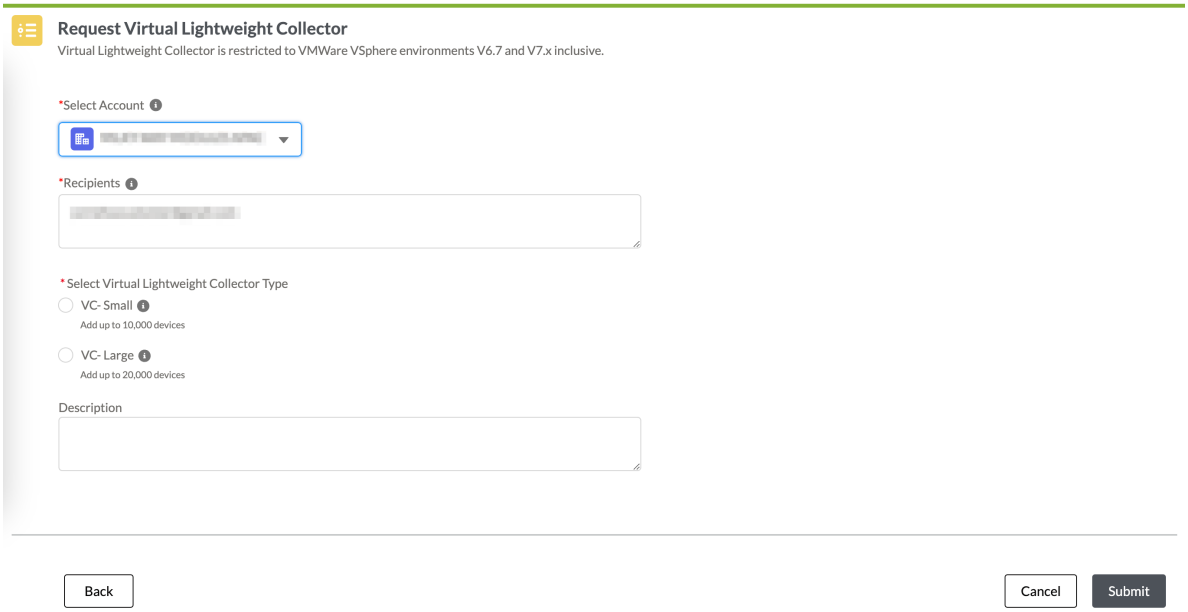
- Make sure that you are able to connect to the vSphere and login to the vCenter Server. As the vLWC will be deployed as a vApp in the vCenter Server, an active user on the vSphere with privileges to deploy vApps is required for this installation process.
- Make sure that all the networks are created in vCenter Server to attach the three network interfaces in the vLWC. These networks need to be setup and functional before vLWC is installed. For more information, see "Virtual Network Interfaces for vLWC " on page 2.

Download vLWC Software

The vLWC software will be provided to you by Juniper Networks® as a single downloadable OVA file. Follow the steps below to request and download the vLWC software:

1. Visit the vLWC request page on Juniper Support Portal at https://supportportal.juniper.net/s/vlwc-form.
2. Fill the fields in the Request Virtual Lightweight Collector page with the necessary information. See Table 3 on page 10.

Figure 2: Request Virtual Lightweight Collector page



3. Verify the information in the form and click **Submit**.

   An OVA file will be created specifically for your installation. The OVA file contains your serial number as an encrypted vApp property that will be installed to the vLWC during the initial boot process of the VM. Once the OVA file is created, you will receive an email with a link.

   > **NOTE**: You can deploy only one vLWC OVA image with a unique serial number in your network. Deploying multiple vLWC OVA images with the same serial number is not supported. If you want to deploy multiple instances of vLWC in your network (example: vLWC for production and lab), you must request a separate vLWC OVA image by submitting another request form.

4. Open the email you received from Juniper Support Portal, and click the link to visit the download portal where you can download the vLWC software.

5. Download the vLWC software from the download portal.

   > **NOTE**: Ensure that you have a stable Internet connection to download the vLWC software as the file size can be between 2 GB and 3 GB approximately.

6. Once the vLWC software is downloaded, refer "Install vLWC and Verify Installation" on page 10 to install the vLWC software and verify your installation.

Table 3: Fields on the Request Virtual Lightweight Collector Page

Field	Description
Select Account	Account to associate with the vLWC. Default: Primary account.
Recipients	Email IDs associated with the selected account that will receive the vLWC download link. These recipients can onboard devices in the vLWC.
Select virtual Lightweight Collector Type	Hardware configuration for the desired scale of Junos devices being collected from. Values include: • VC-Small—Configuration can support up to 10,000 devices. • VC-Large—Configuration can support up to 20,000 devices. See "Hardware Requirements" on page 5.
Description	(Optional) A custom description for the vLWC setup.

Install vLWC and Verify Installation

SUMMARY

This section explains how you can install the vLWC vApp on a VMWare environment and verify your installation.

IN THIS SECTION

Install vLWC using vCenter Server

To install the vLWC vApp using the vCenter Server:

1. Login to the vCenter Server using your username and password in the vSphere Client.

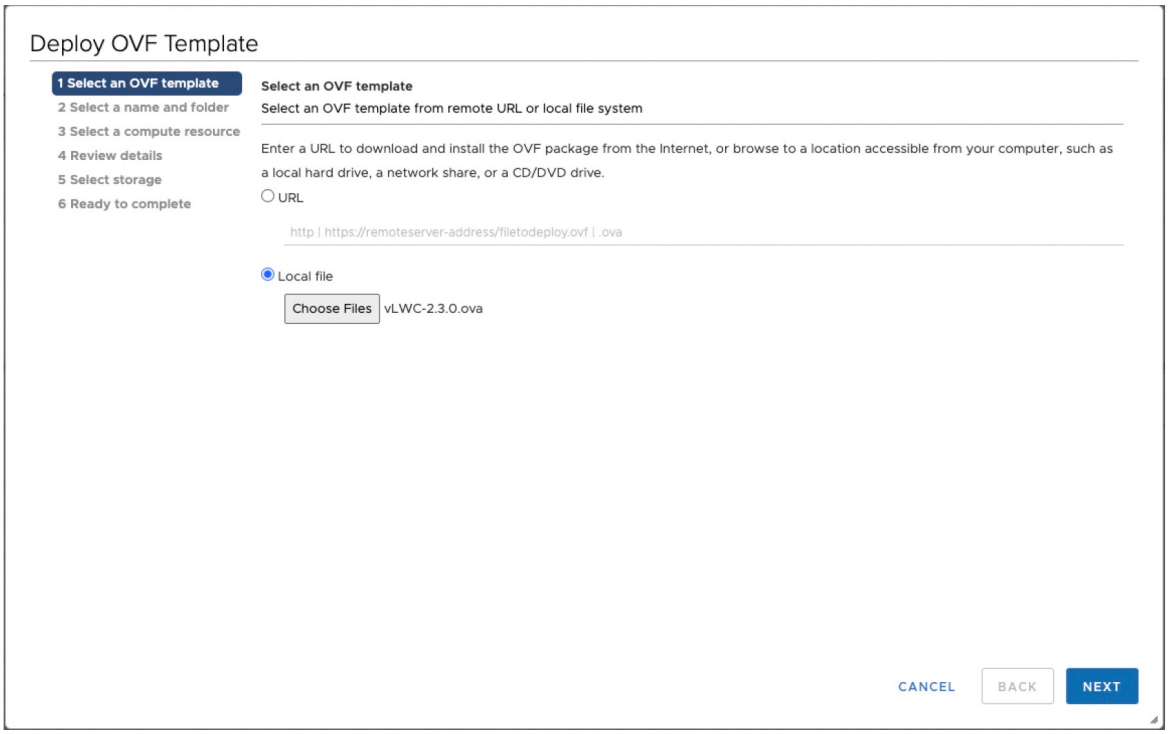
2. Click **Menu > Hosts and Clusters**.

   The Hosts and Clusters page opens. This page lists all your data centers and clusters on the left pane.

3. Right-click your data center and click **Deploy OVF Template...** from the **Actions** menu.

   The Deploy OVF Template page opens.

4. Depending on where your OVA file is available, select the **URL** option and provide the URL to the OVA file, or select the **Local file** option and click **Choose Files** to browse the local drive and upload the vLWC OVA image. Click **Next**.



   The Select a name and folder page opens.

5. Enter a unique name for the vLWC vApp. Select the data center where you want the vApp installed and click **Next**.

   The Select a compute resource page opens.

   The vLWC vApp name that you enter is for easy identification only, and has no effect on the vLWC. The default vLWC vApp name is the OVA file name.

6. Select the compute resource (a specific host or a cluster) where you want to install the vApp installed, and click **Next**.
   The Review details page opens.

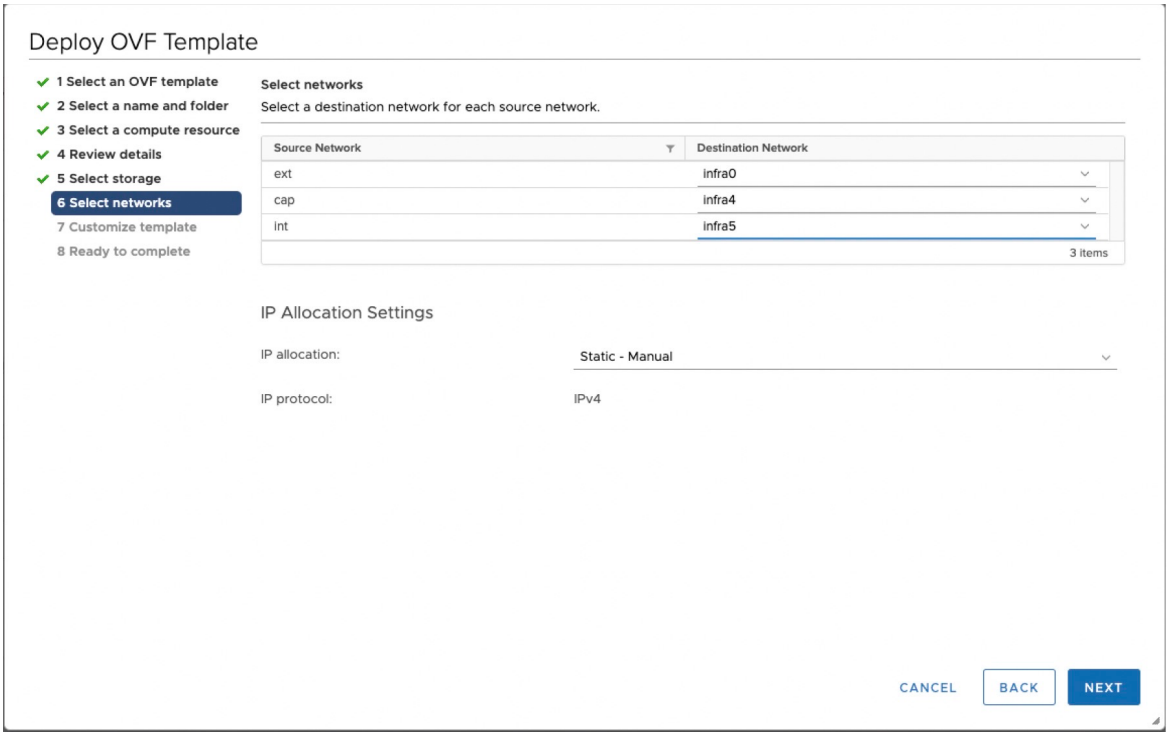
7. Verify the details listed on this page to make sure everything looks correct with the product, version, vendor, downloaded vApp file size, and the storage capacity of the virtual disk. Once you have verified the details, click **Next**.

   The Select storage page opens.

8. Select the datastore you want to use for storing the virtual disk of the vLWC. Select **Thick Provision Eager Zeroed** as the virtual disk format. Select your VM storage policy and click **Next**.

   The Select networks page opens.

9. Select the VMWare network to attach to each network interface using the Destination Network drop-down for each of the source network. You can ignore the IP allocation settings as they are not used by the vLWC. Click **Next**.

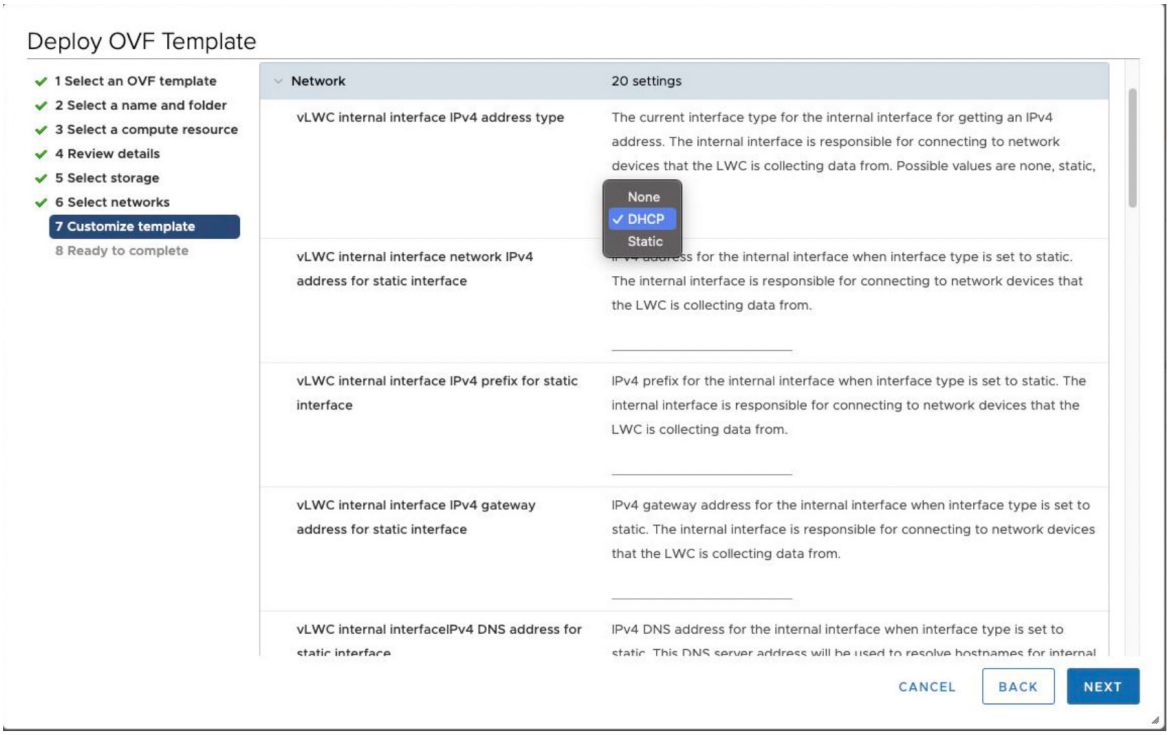


   The Customize template page opens.

10. Specify the network settings for each vLWC interface over a series of 20 vApp properties. For each interface, select the correct address type. For static address, specify the necessary settings for that interface. You can use the same DNS server for all interfaces.

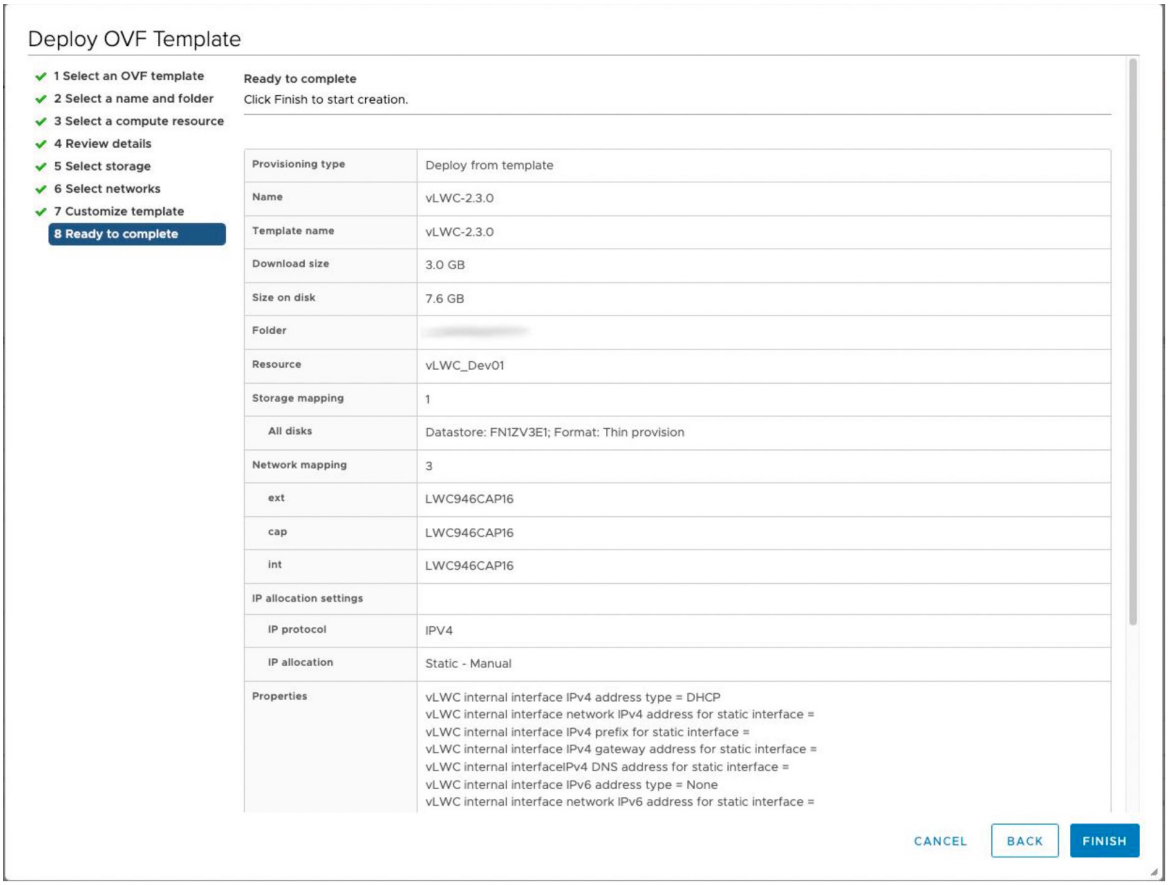
Interface	Supported IP Address
Internal	IPv4 or IPv6 address
External	IPv4 address only
Management	IPv4 address only

   Once you have configured your network, click **Next**.



The Ready to complete page opens.

11. Verify the configured settings for the vApp deployment and click **Finish** to start the deployment of the vLWC.



12. Wait for VMWare to deploy the vApp. You should see progress bars in the recent tasks section indicating the progress of the vApp deployment. This process can take approximately 30 minutes or more depending on the speed of your cluster, datastores, and your connection to the vSphere.

NOTE:

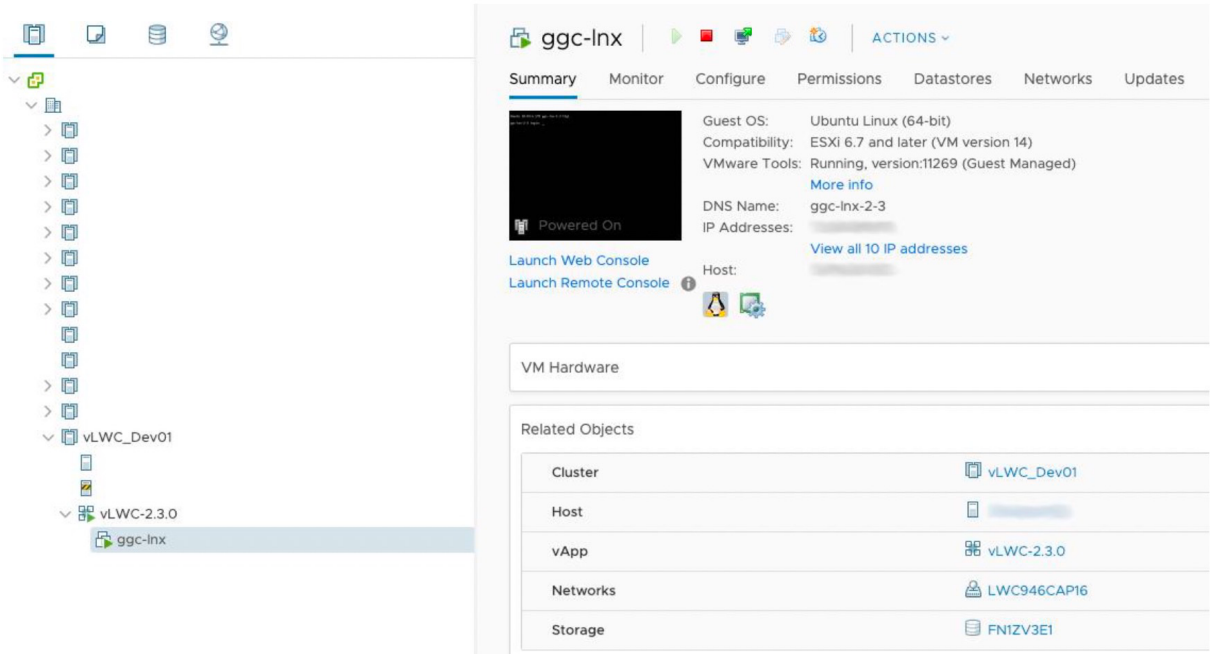
- If you encounter the error message "*Failed to deploy OVF package. ThrowableProxy.cause The operation is not supported on the object. The operation failed due to The operation is not supported on the object.*", ensure that DRS is enabled for the cluster in which you are deploying the vApp.
- If you encounter any other error when you click **Finish**, it is possible that you took too long to complete the steps above and the deployment process timed out. You can reattempt the deployment process if this happens and if you encounter an error for the second time, open a Juniper TAC case for assistance.

13. Once deployment is complete, to start vLWC, you can right-click the newly created vApp and click **Power > Power On** from the Actions menu.

Verify Installation

Once installation is complete and vLWC is powered on, you can confirm a successful deployment through the Summary page of the VM. The Summary page of the **ggc-lnx** VM is located under the vLWC vApp entry. It should show an Ubuntu Linux (64-bit) VM running with VMWare tools also running along with the IP addresses assigned to the VM in the IP addresses list. See Figure 3 on page 15.

Figure 3: ggc-lnx VM Summary page



From the Summary page, you can also launch a console connection to the VM and view the current network status through the JSI Shell.

3

PART

Configure

vLWC Configuration Overview

IN THIS SECTION

Once the vLWC vApp is installed, you can now configure the Virtual Lightweight Collector (vLWC). It is recommended that you review the "Internal and External Network Requirements" on page 17 before you configure.

You can configure vLWC using one of the following methods:

- JSI Shell; see "Configure Network Settings through JSI Shell" on page 18.
- Captive Portal web page; see "Configure Network Settings through Captive Portal" on page 23.
- vCenter Server; see "Modify vApp Properties" on page 29.

Internal and External Network Requirements

vLWC requires:

- An internal network port that connects the vLWC to the Juniper devices on the network.
- An external network port that connects the vLWC to the Juniper Virtual Private Cloud.

Before connecting the vLWC to the internal network, ensure that you have:

- A DHCP or static IP address.
- IP connectivity to the Domain Name Server (DNS), all the direct devices on the network, and bastion hosts used (if applicable) to access the devices.

> **NOTE**: Bastion hosts utilize a SOCKS5 proxy server to reach target devices in the customer's network. Bastion hosts also support connection hopping, where an SSH session is first established with a customer's Linux-based device, which then initiates a subsequent SSH session to the target device.

- Enabled NETCONF in the Junos OS configuration of all target Juniper devices. The vLWC uses SSH credentials to connect to the devices on the network and, if used, bastion hosts.

  See also Establish an SSH Connection for a NETCONF Session.

- Enabled SFTP for the Remote Connectivity Suite over port 22 only for file collection.

  See also Configure Incoming SFTP Connections.

Before connecting the vLWC to the external network, ensure that you have:

- A DHCP or static IP address.
- A DNS server in case you have selected a static address. In case of any subsequent change to the DNS, you must inform Juniper about it and get it updated. Otherwise, the vLWC might lose connectivity to the external endpoints.

  The vLWC supports real static, private static, or DHCP addresses. It prefers Network Address Translation (NAT).

- Accessibility to the DNS and IP addresses specified in Table 4 on page 18 through the IP addresses assigned to external port on the vLWC.

  Table 4: Outbound Connectivity Requirements

Description	DNS Name	IP Address	Port
Juniper cloud	AWSProxy-prod.jssprod.junipercloud.net	52.223.32.79, 35.71.174.221, 35.164.173.102, 52.26.8.178, 54.149.201.209	443

Configure Network Settings through JSI Shell

SUMMARY

This section provides information on the JSI Shell.

IN THIS SECTION

JSI Shell Overview

The JSI Shell is an SSH menu system for the vLWC. It allows you to view the current network settings and network status through an SSH login. You can use the JSI Shell as an alternate option to configure network settings. You can interact with the JSI Shell menu system through the keyboard. See Table 5 on page 19.

Table 5: Keyboard Navigation

Key	Action
Up and Down arrow keys, or number press	Navigate to an option.
Enter key	Select the option.
Esc key	Go back to the previous menu or exit the shell depending on what menu you are currently in.

Login to JSI Shell

You can access the JSI Shell using one of the following ways:

- SSH to the configured IP address of the management (cap) interface.
- Through the VMWare console, if networking has not been setup successfully on the management (cap) interface.

  To login to the console, click **ggc-lnx** VM under the vLWC vApp and click either **Launch Web Console** or **Launch Remote Console** in the Summary tab to open the login prompt for the vLWC.

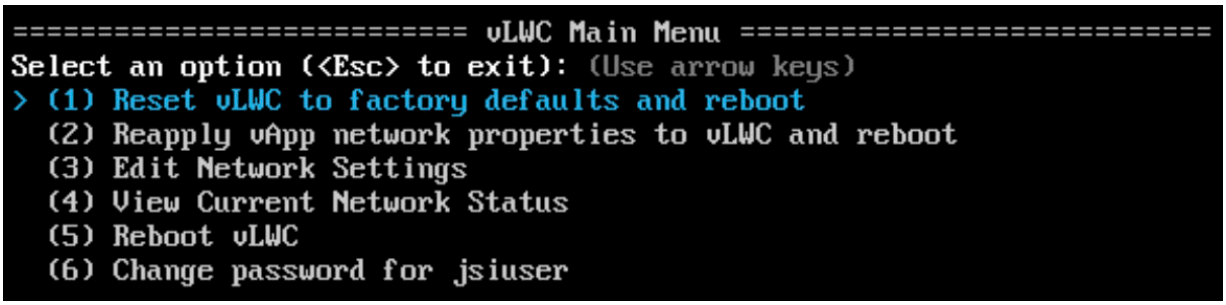
  Use **jsiuser** and the default password to log into the JSI Shell.

NOTE: To obtain the default password to log into the Web console, see KB77944.

Change the default login password and set a new password after you log in to the Web console. See "Change JSI Shell Login Password" on page 20.

On successful login, the vLWC Main Menu (JSI Shell) screen appears. See Figure 4 on page 20.

Figure 4: vLWC Main Menu (JSI Shell)



Change JSI Shell Login Password

You can change the login password for **jsiuser** from the JSI Shell Main Menu screen. To change the password, select **Change password for jsiuser** from the vLWC Main Menu screen (using the arrow key or pressing 6 on the keyboard), press Enter, and follow the prompts to specify the new password.

Configure Network Settings

You can configure the following network settings from the JSI Shell:

- Interfaces—Internal (int), External (ext), Management (cap)

NOTE: While configuring the internal, external, and management interfaces, you must ensure that the subnet of the IP address assigned to the internal network port, external network port, and captive portal are different from each other.

NOTE: You must connect to the captive portal from a local IP address. Connection to the captive portal from the browser will fail if the connection request originates from a non-local network.

- Active proxy

Follow the steps below to configure the network settings:

1. Login to the vLWC Main Menu (JSI Shell). See "Login to JSI Shell" on page 19.
2. Select **Edit Network Settings** (using the arrow key or pressing 3 on the keyboard) from the vLWC Main Menu screen.

   The vLWC Edit Network Settings Menu screen appears. See Figure 5 on page 21.

Figure 5: vLWC Edit Network Settings Menu

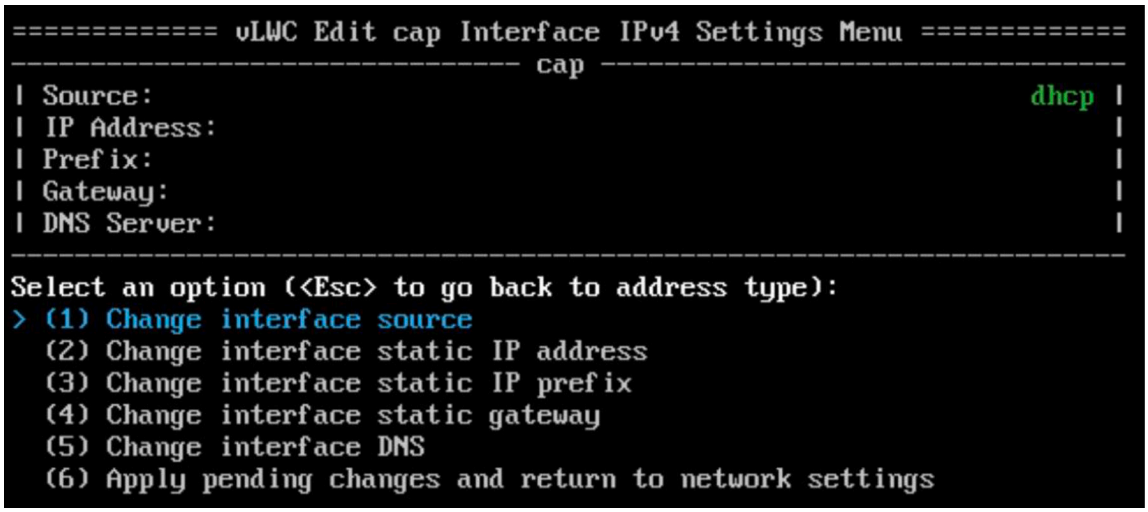
3. To change the various interface settings:
   a. Select the interface you want to edit (options one to three) from the vLWC Edit Network Settings Menu screen.

   b. Select the appropriate options from the series of menus presented after which a vLWC Edit *interface* Settings Menu screen appears for the interface you selected.

      The upper half of the display lists the current network settings.

      The following image provides an example of the vLWC Edit *interface* Settings Menu screen for a cap interface with IPv4 address:

Figure 6: vLWC Edit Menu (JSI Shell)



c. Use the options displayed in the bottom half of the display to modify the network settings. You can select an appropriate option and configure the new value when the prompt appears.

   The updated values will appear in the upper half of the display.

d. Once you have made all the changes, select **Apply pending changes and return to network settings** to apply your changes.

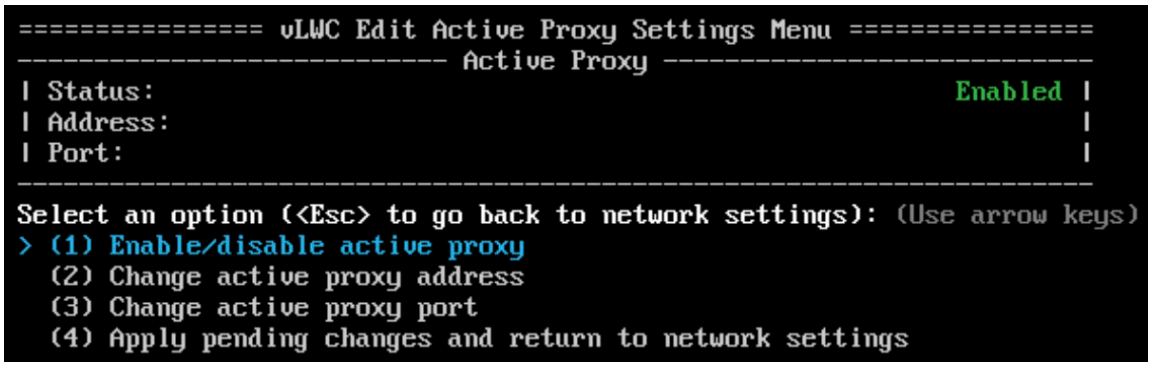
> **NOTE**: You can exit the settings from one interface and work on another interface without losing your changes. You can then apply all changes at the same time.

4. To change the active proxy settings:

   a. Select **Change active proxy** (using the arrow key or pressing 4 on the keyboard) from the vLWC Edit Network Settings Menu screen.

      The vLWC Edit Active Proxy Settings Menu screen appears. The upper half of the display lists the current active proxy settings. See Figure 7 on page 23.

Figure 7: vLWC Edit Active Proxy Settings Menu



b. You can enable or disable the active proxy (option 1), or configure the active proxy settings from the vLWC Edit Active Proxy Settings Menu screen.

NOTE: The vLWC's external interface must be able to reach the URL, or IP address and port used for the active proxy.

NOTE: If you choose to use an active proxy, ensure that it forwards all the traffic from the vLWC to the AWS cloud proxy (see Outbound Connectivity Requirements for information on the AWS cloud proxy URL and ports). Juniper cloud services blocks all the inbound traffic coming through any path other than the AWS cloud proxy.

NOTE: After applying changes, if the network does not work as intended, reboot the vLWC.

Configure Network Settings through Captive Portal

NOTE: You must connect to the captive portal from a local IP address. Connection to the captive portal from the browser will fail if the connection request originates from a non-local network.

You can use the Captive Portal web page to configure the following elements:

- **External Network**—Connect the vLWC to Juniper Cloud. You can use the External Network configuration to perform device provisioning.
- **Internal Network**—Connects the vLWC to the Juniper devices on your network.
- **Active Proxy**—Use an active proxy in your network infrastructure to control access to the Internet. Configuring an active proxy is optional.

To configure the network settings on vLWC:

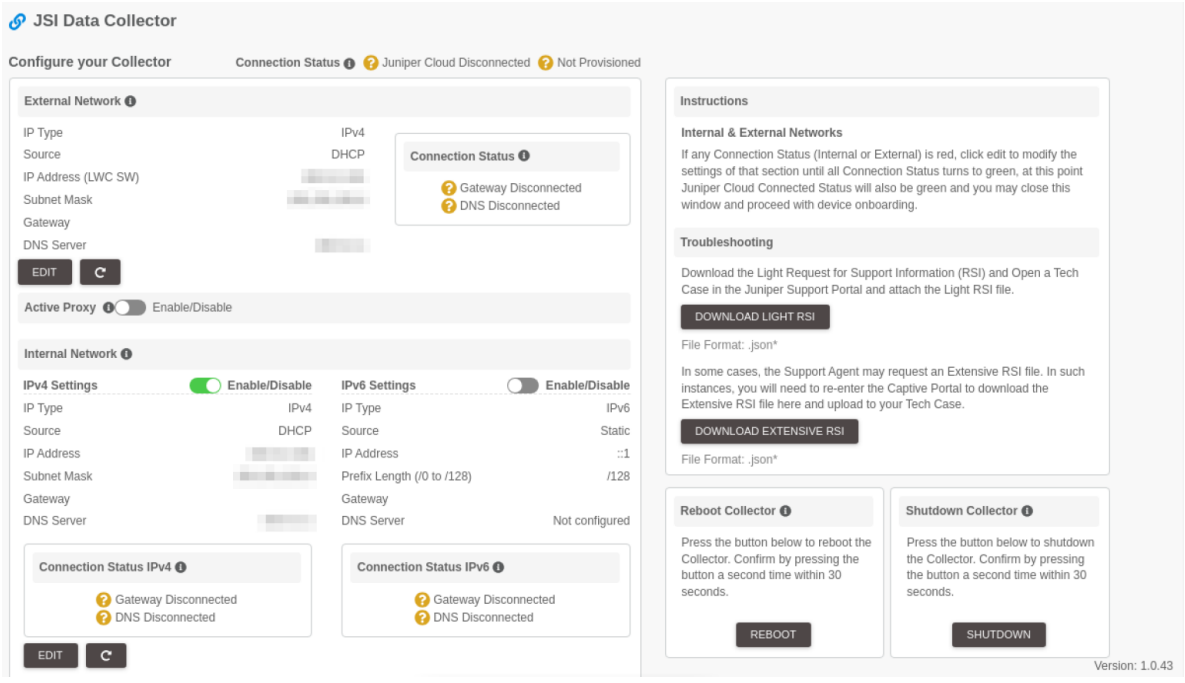
1. Open a browser on your computer and enter the URL https:// *cap_interface_address* in the address bar, where *cap_interface_address* can be the configured static IP address, or the IP address assigned by the DHCP server to the management (cap) interface.

   The **JSI Data Collector** login page appears.
2. Enter the vLWC serial number in the **Serial Number** field and click **Submit** to log in.

   NOTE:
   versionserialversionserial

   On successful login, the **JSI Data Collector** page appears.

   The following image displays the JSI Data Collector page when the vLWC is not connected.



NOTE: If the default DHCP configuration on the vLWC is successful, the Captive Portal web page shows the vLWC's connection status as connected, and populates the fields in all the configurations sections appropriately.

Click the **Refresh** icon under the External Network or Internal Network sections to refresh the current connection states for that section.

The **JSI Data Collector** page displays configuration sections for the following:

- **External Network**—Lets you configure external network port that connects the vLWC to the Juniper's Cloud. Supports DHCP and static addressing. The External Network configuration is used to perform device provisioning.
- **Internal Networks**—Lets you configure the internal network port that connects the vLWC to the Juniper devices on the network. Supports DHCP and static addressing.
- **Active Proxy**—Lets you configure the active proxy IP address as well as the port number if your network infrastructure controls access to the Internet though an active proxy. You need not configure this element if you are not using an active proxy.

3. Click the **Edit** button under the element that needs to be updated.

   You need to modify the fields in:

   - The **Internal Network** and **External Network** sections if their connection states indicate that they are disconnected.
   - The **Active Proxy** section if you are using an active proxy. This section is collapsed by default if an active proxy is disabled or not configured. To configure, click **Enable/disable** to expand the **Active Proxy** section.

     Active proxy uses SOCKS5 proxies to route connections to the target Juniper devices in the customer's network.

     NOTE: If you choose to use an active proxy, ensure that it forwards all the traffic from the vLWC to the AWS cloud proxy. Juniper cloud services blocks all the inbound traffic coming through any path other than the AWS cloud proxy.

     NOTE: If you choose to use an active proxy, ensure that the vLWC's external interface IP configuration can reach the active proxy's URL or IP address.

NOTE:

- You must use a different subnet for the IP address assigned to the internal network, external network, and the management (cap) interface. This applies to both DHCP and static configurations.

4. After modifying the fields, click **Update** to apply the changes and return to the homepage (the JSI Data Collector page).

   If you want to discard your changes, click **Cancel**.

   If the vLWC connects to the gateway and DNS successfully, the respective configuration element (internal or external network section) on the JSI Data Collector homepage shows the connection status as **Gateway Connected** and **DNS Connected** with green tick marks against them.

   The JSI Data Collector homepage displays the **Connection Status** as:

   - **Juniper Cloud Connected** if the external connectivity to the Juniper Cloud is established and the active proxy (if applicable) settings are correctly configured.
   - **Cloud Provisioned** if the device is connected to Juniper Cloud and has completed the Zero Touch Experience (ZTE) process. After the Cloud connection status becomes **Juniper Cloud Connected**, it takes about 10 minutes for the provision status to become **Cloud Provisioned**.

   The following image displays the JSI Data Collector page when the vLWC is connected successfully.

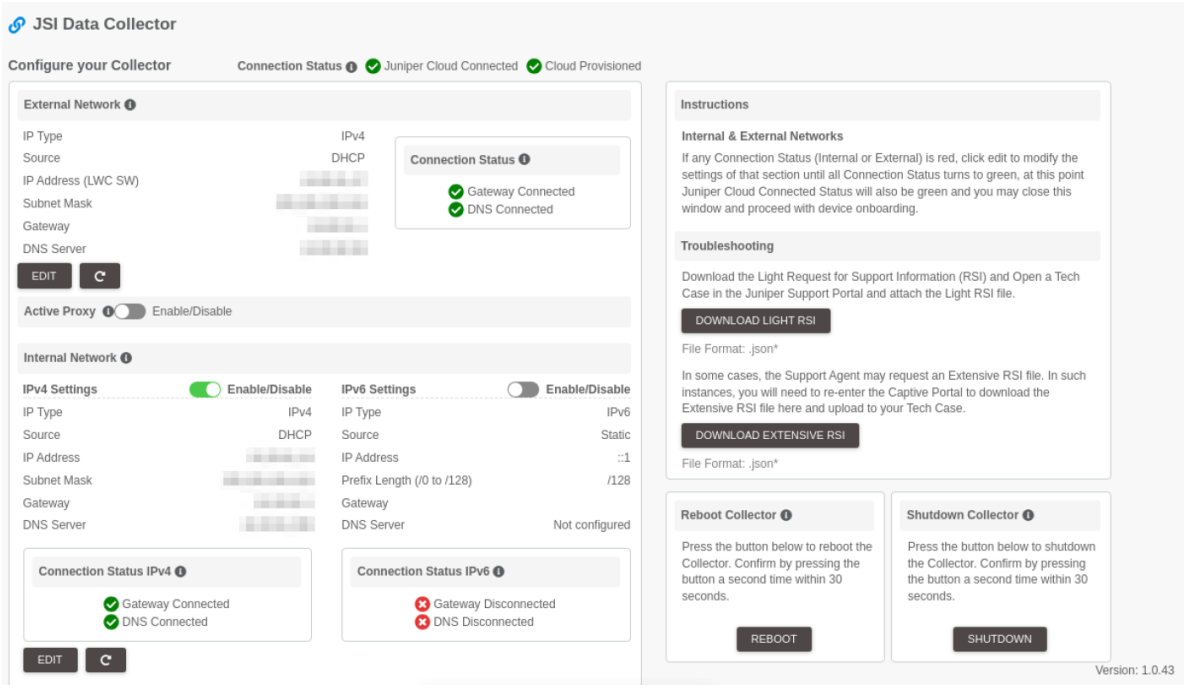


Table 6: Fields in the Configure Your Collector section on the JSI Data Collector page

Field	Description
External Network	
IP Type	Select an IP address version: • IPv4
Source	Select an IP address assignment type. • DHCP—This option is enabled by default. • Static—If you select this option, you must enter the IP addresses manually.
IP Address (LWC)	Applicable only if you selected **Static** as **Source**. Enter the IP Address of the vLWC device.
Subnet Mask	Applicable only if you selected **Static** as **Source**. Enter the subnet mask address. The subnet of the IP address assigned to the internal network port must be different from the subnet of the IP address assigned to the external network port. This applies to both DHCP and static configurations.
Gateway	Applicable only if you selected **Static** as **Source**. Enter the IP address of the default gateway connected to the vLWC.
DNS Server	Enter the DNS server IP address.
Active Proxy	
IP Address	If you want to add an active proxy, enter the IP address of the proxy.
Port	Enter the port number used for the active proxy.

Table 6: Fields in the Configure Your Collector section on the JSI Data Collector page *(Continued)*

Field	Description
Internal Network	
IP Type	Select an IP address version: • IPv4 • IPv6
Source	Select an IP address assignment type. • DHCP—This option is enabled by default. • Static—If you select this, you must enter the IP addresses manually.
IP Address	Applicable only if you selected **Static** as **Source**. Enter the IP Address of the LWC device.
Subnet Mask	Applicable only if you selected **Static** as **Source**. Enter the subnet mask address. The subnet of the IP address assigned to the internal network port must be different from the subnet of the IP address assigned to the external network port. This applies to both DHCP and static configurations.
Gateway	Applicable only if you selected **Static** as **Source**. Enter the IP address of the default gateway connected to the LWC.
DNS Server	Enter the DNS server IP address.

Modify vApp Properties

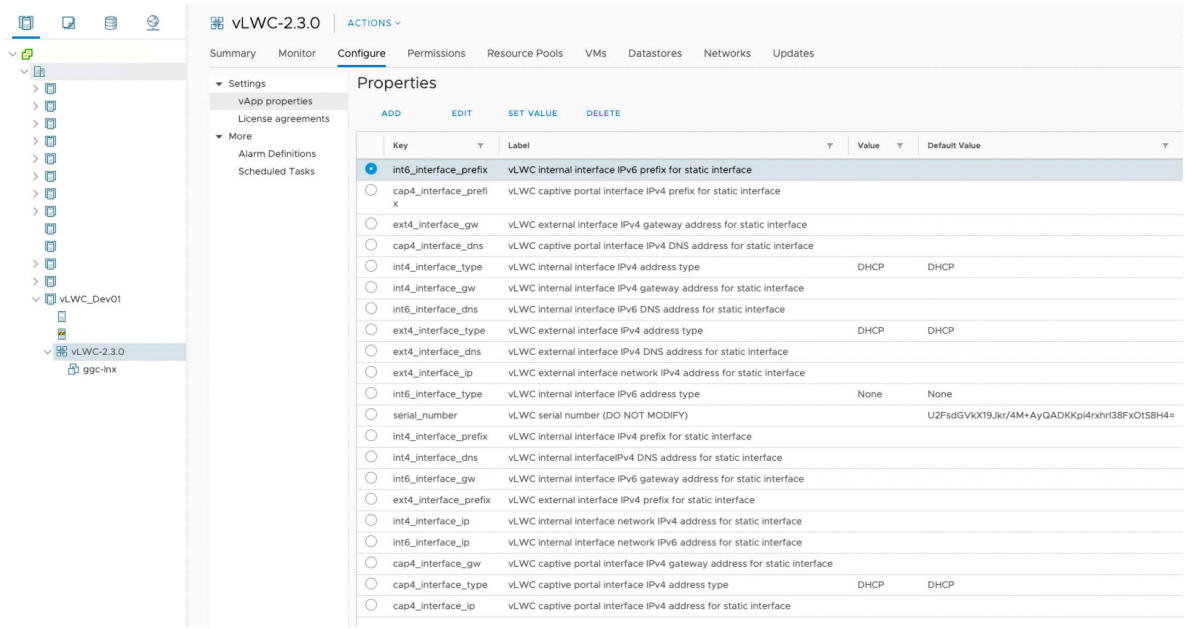
You can modify any vLWC network settings that you had configured in the Customize template page during the installation of your vLWC vApp from the vCenter Server.

> ⚠ **CAUTION**: It is recommended that you prefer the JSI Shell or the Captive Portal web page to modify the network settings, if possible. Changes made to the vApp properties through the vCenter Server will overwrite all existing settings in the vLWC with the property values, and you will have to change all settings to the correct values. Only use this method as a last resort if you are unable to establish connectivity to the management (cap) interface.

To modify the vApp properties from the vCenter Server:

1. Click **Menu > Hosts and Clusters**.

   The Hosts and Clusters page opens. This page lists all your data centers and clusters on the left pane including your vLWC vApp.
2. Select the vLWC vApp in the list of hosts and clusters.
3. Right-click your vLWC vApp and click **Power > Power Off** from the Actions menu to power off the vApp.
4. Once the vApp is powered off, click the Configure tab in the vApp window.
5. Click **Settings > vApp properties** from the left-pane.
   A list of all the vApp properties that were configured in step 10 of the vLWC vApp installation process will appear.



6. Select the vApp property and click **Set Value** at the top of the list. In the window that appears, enter the new value for the vApp property. Repeat this step for all the required properties.

   NOTE: While configuring the internal, external, and management interfaces, you must ensure that the subnet of the IP address assigned to the internal network port, external network port, and captive portal are different from each other.

7. Once all the properties are updated, right-click your vLWC vApp from the list of hosts and clusters and click **Power > Power On**.
   The vLWC will reboot with the updated network configuration to ensure that all the changes are applied correctly.

4

PART

Troubleshoot

Troubleshoot Network Settings

IN THIS SECTION

If you face connectivity issues with the vLWC, you can troubleshoot the vApp VM using the Captive Portal webpage or the JSI Shell.

You can check the status of the management (cap) interface by accessing the Captive Portal at https://*cap_interface_address* from the web browser. For more information on accessing the Captive Portal, see "Configure Network Settings through Captive Portal" on page 23.

If the management (cap) interface is not accessible, you can access the JSI Shell through the VMware console. This option will always work even if none of the network interfaces are functioning properly. You can use the JSI Shell menu system to check the current network status of the vLWC interfaces and also change the network settings of any of the interfaces (external, internal, management).

Reset Network Settings to Factory Default

You can use the JSI Shell to reset the network settings of vLWC to factory default of DHCP for IPv4 on all interfaces, and reboot the vLWC to apply the changes. To perform this operation, select **Reset vLWC to factory defaults and reboot** option from the vLWC Main Menu (JSI Shell). Select **Yes** in the confirmation prompt.

On confirmation, you will see the output of scripts performing the reset operation. This operation may take some time and vLWC reboots once the reset operation is complete. After vLWC reboots, you can log back in to the JSI Shell and check the network status to confirm if IP addresses are received through DHCP.

Reapply vApp Properties

You can force VMware to reload the current vApp property settings in the following cases:

- When the vApp properties modified through the vCenter Server did not get applied properly.
- When you need to revert the network changes made through the Captive Portal or JSI Shell to what was set in the vApp properties.

To perform this operation, select **Reapply vApp network properties to vLWC and reboot** option from the vLWC Main Menu (JSI Shell). Select **Yes** in the confirmation prompt.

On confirmation, you will see the output of scripts reapplying the vApp properties. This operation may take some time and vLWC reboots to ensure that the settings are applied correctly.

Display Network Status

You can confirm the current network status of the vLWC by selecting the **View Current Network Status** option from the vLWC Main Menu (JSI Shell). vLWC performs reachability test on the network. This operation might take some time to complete. Once the tests complete, the JSI Shell will display the network status for each interface that is currently configured and operational in the vLWC Network Status screen. For more information on each field, refer Table 7 on page 33.

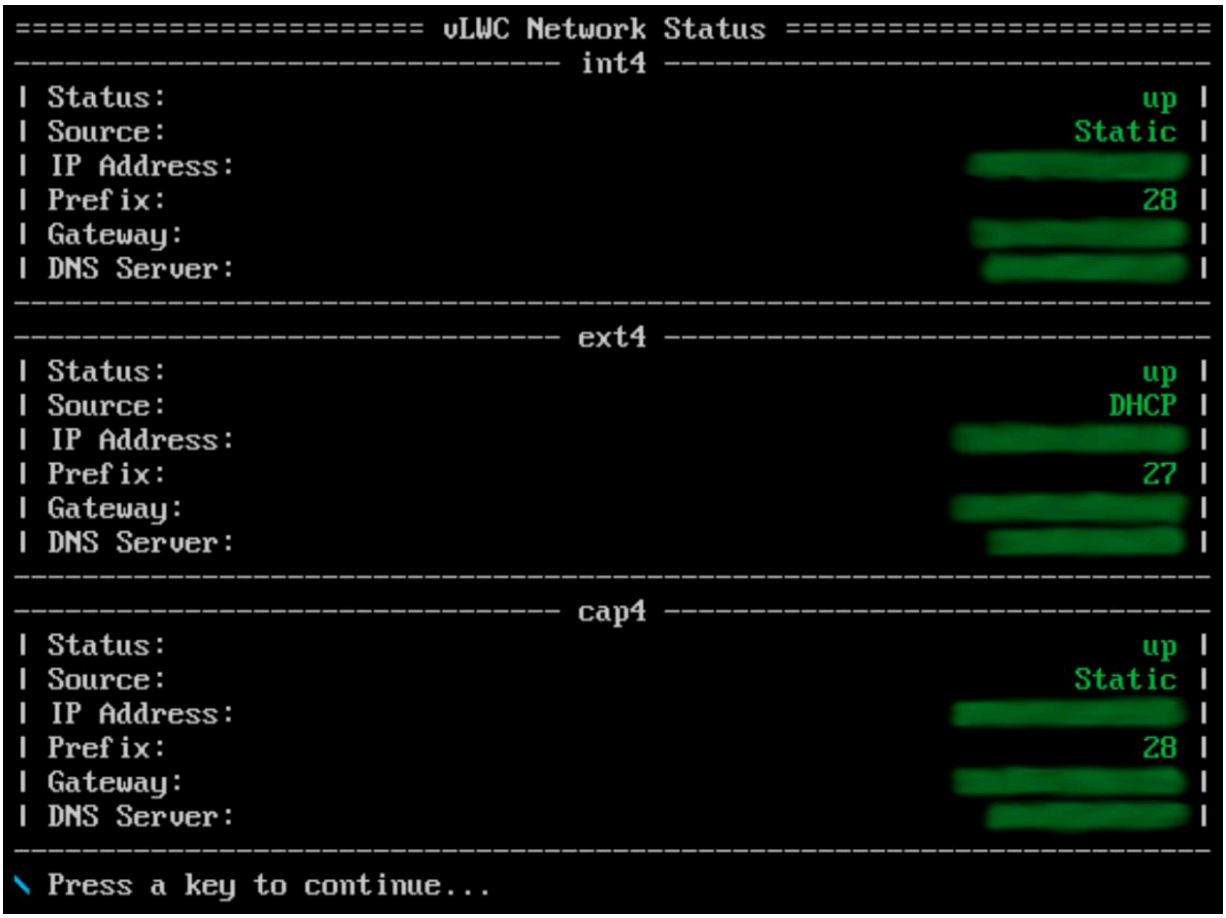
Table 7: vLWC Network Status

Field	Description
Status	The current status of the interface, and whether the network gateway can be reached.
Source	Where the interface is getting its IP information from. Can be either DHCP or Static.
IP Address	Current static IP address assigned to the interface, or the DHCP address assigned by the DHCP server.
Prefix	Current static IP prefix assigned to the interface or the DHCP prefix assigned by the DHCP server.

Table 7: vLWC Network Status *(Continued)*

Field	Description
Gateway	Current gateway address assigned to the interface or the DHCP gateway assigned by the DHCP server.
DNS Server	Current DNS server assigned to the interface or the DHCP DNS provided by the DHCP server. **NOTE**: vLWC currently supports only one DNS server per interface.

Figure 8: vLWC Network Status (JSI Shell)



Reboot the vLWC

Reboot the vLWC if the network settings that you modify do not apply properly to the underlying Operating System of the vLWC. If you face issues while applying new network settings, always attempt a vLWC reboot and confirm if the new network settings are applied before continuing with the other troubleshooting options.

You can reboot the vLWC in one of the following ways:

- **JSI Shell**—Select **Reboot vLWC** (using the arrow key or pressing 5 on the keyboard) from the vLWC Main Menu, press, and confirm reboot.
- **Captive Portal**—Click **REBOOT** in the Captive Portal webpage.
- **vCenter Server**—Right-click **ggc-lnx** VM and click **Power > Restart Guest OS** from the Actions menu to restart the VM.

Contact Juniper Support

If the vLWC does not connect to the cloud, you can click **Download Light RSI** in the Captive Portal webpage to download the light RSI file, create a Tech Case in the Juniper Support Portal, and attach the downloaded RSI file to the case.

In some cases, the Juniper support engineer may ask you to attach the Extensive RSI file to the case. To download it, click **Download Extensive RSI**.