

# Day One+

# JSI on Juniper Support Portal Quick Start (vLWC)

#### IN THIS GUIDE



# Step 1: Begin

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In this guide, we provide a simple, three-step path, to quickly get you up and running with the Juniper Support Insight (JSI) solution. We've simplified and shortened the installation and configuration steps.

## Meet Juniper Support Insights

Juniper® Support Insights (JSI) is a cloud-based support solution that gives IT and network operations teams operational insights into their networks. JSI aims to transform the customer support experience by providing Juniper and its customers with insights that help improve the network performance and uptime. JSI collects data from Junos

OS-based devices on customer networks, correlates it with Juniper-specific knowledge (such as service contract status, and End of Life and End of Support states), and then curates that into actionable insights.

#### Virtual Lightweight Collector

The Virtual Lightweight Collector (vLWC) is a VMware-ready data collection tool that gathers operational data from Juniper devices on customer networks. JSI uses this data to provide IT and network operations teams with actionable operational insights into the onboarded Juniper devices on customer networks. The vLWC uses your existing VMWare infrastructure to provide a virtualized solution while offering the capabilities of the LWC.

At a high level, getting started with the JSI solution involves the following steps:

- 1. Installing and configuring a Virtual Lightweight Collector (vLWC)
- 2. Onboarding a set of Junos devices to JSI to initiate data collection
- 3. Viewing notifications about device onboarding and data collection
- 4. Viewing operational dashboards and reports



**NOTE**: This Quick Start guide assumes that you have ordered the JSI-vLWC solution, which is available as part of Juniper Care support service, and that you have an active contract. If you have not ordered the solution, please contact your Juniper Account or Services teams. Accessing and using JSI is subject to the Juniper Purchase and License Agreement (JPLA). For general information on JSI, see Juniper Support Insights Datasheet.

## Install and Configure the Virtual Lightweight Collector

In this guide, we show you how to install and configure the vLWC on a VMWare environment.

**Before You Begin** 

To successfully install and deploy vLWC, you must meet the following requirements:

- VMware vCenter Server access (using VMware vSphere Client, version 6.7.0 or later)
- One of the following minimum 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.

• Three VM network interfaces:

Connectivity	Interface Name	Description
Internal	int	Internal network 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 to connect to Juniper Cloud directly or through an active proxy server.
Management	сар	<ul> <li>Connectivity to the management network host services:</li> <li>Port 443/HTTPS for the Captive Portal web page</li> <li>Port 22/SSH for the JSI shell</li> </ul>

**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 (management) portal are different from each other.

• The vLWC software that is provided as a single downloadable OVA file. To download, visit the vLWC request page on Juniper Support Portal at https://supportportal.juniper.net/s/vlwc-form, submit a form with the requested

information, and receive a link over an email to download the vLWC software. Refer Download vLWC Software for more information.

**NOTE**: The OVA file will be created specifically for your installation. It contains your serial number as an encrypted vApp property that will be used during the initial boot process of the VM.

**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.

• Support for VMXNET3 network adapters.

Here's how to install vLWC using the vCenter Server:

- 1. Login to the vCenter Server using your username and password in the vSphere Client.
- Click Menu > Hosts and Clusters to open the Hosts and Clusters page.
   The Hosts and Clusters page lists all your data centers and vSphere clusters on the left pane.
- 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.

Select an OVF template 2 Select a name and folder	Select an OVF template Select an OVF template from remote URL or local file system
<ul><li>3 Select a compute resource</li><li>4 Review details</li><li>5 Select storage</li><li>6 Ready to complete</li></ul>	Enter a URL to download and install the OVF package from the Internet, or browse to a location accessible from your computer, such a a local hard drive, a network share, or a CD/DVD drive. O URL http://remoteserver-address/filetodeploy.ovf  .ova
	Local file     Choose Files     vLWC-2.3.0.ova
	CANCEL BACK NE

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 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.

- 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 the 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**.

3 Select a compute resource       4 Review details       Source Network <ul> <li>Source Network</li> <li>Select storage</li> <li>ext</li> <li>infra0</li> <li>cap</li> <li>infra4</li> <li>infra5</li> </ul> 7 Customize template         Infra4         Infra5           8 Ready to complete         IP Allocation Settings         IP allocation:         Static - Manual           IP protocol:         IP v4         IP v4         IP v4         IP v4	3 items
Select storage     ext     infra0       6 Select networks     infra4       7 Customize template     infra5       8 Ready to complete     IP Allocation Settings       IP allocation:     Static - Manual       IP protocol:     IPv4	3 items
6 Select networks       cap       infra4         7 Customize template       int       infra5         8 Ready to complete       IP Allocation Settings       IP allocation:       Static - Manual         IP protocol:       IP v4	3 items
Infra5       IP Allocation Settings       IP allocation:       IP protocol:   IP 4	3 items
IP Allocation Settings IP allocation: IP protocol: IP v4	3 items
IP Allocation Settings IP allocation: Static - Manual IP protocol: IPv4	
IP protocol: IPv4	

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

elect an OVF template	✓ Network	20 settings			
<ul> <li>3 Select a compute resource</li> <li>4 Review details</li> <li>5 Select storage</li> <li>6 Select networks</li> <li>7 Customize template</li> <li>8 Ready to complete</li> </ul>	vLWC internal interface IPv4 address type	The current interface type for the internal interface for getting an IPv4 address. The internal interface is responsible for connecting to network devices that the LWC is collecting data from. Possible values are none, static None			
7 Customize template 8 Ready to complete	vLWC internal interface network IPv4 address for static interface	Static in wasserss for the internal interface when interface type is set to static. The internal interface is responsible for connecting to network devices that the LWC is collecting data from.			
	vLWC internal interface IPv4 prefix for static interface	IPv4 prefix for the internal interface when interface type is set to static. The internal interface is responsible for connecting to network devices that the LWC is collecting data from.			
	vLWC internal interface IPv4 gateway address for static interface	IPv4 gateway address for the internal interface when interface type is set to static. The internal interface is responsible for connecting to network devices that the LWC is collecting data from.			
	vLWC internal interfaceIPv4 DNS address for	IPv4 DNS address for the internal interface when interface type is set to			

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.

<ol> <li>Select an OVF template</li> <li>Select a name and folder</li> <li>Select a compute resource</li> </ol>	Ready to complete Click Finish to start creati	on.	
4 Review details	Provisioning type	Deploy from template	
6 Select networks	Name	vLWC-23.0	
7 Customize template 8 Ready to complete	Template name	vLWC-2.3.0	
	Download size	3.0 GB	
	Size on disk	7.6 GB	
	Folder	1.00000000	
	Resource	vLWC_Dev01	
	Storage mapping	1	
	All disks	Datastore: FN1ZV3E1; Format: Thin provision	
	Network mapping	3	
	ext	LWC946CAP16	
	cap	LWC946CAP16	
	int	LWC946CAP16	
	IP allocation settings		
	IP protocol	IPV4	
	IP allocation	Static - Manual	
	Properties	vLWC internal interface IPv4 address type = DHCP vLWC internal interface network IPv4 address for static interface = vLWC internal interface IPv4 prefix for static interface = vLWC internal interface IPv4 gateway address for static interface = vLWC internal interfaceIPv4 DNS address for static interface = vLWC internal interface IPv6 address type = None vLWC internal interface network IPv6 address for static interface =	

**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. To start vLWC, you can right-click the newly created vApp and click **Power On** from the Actions menu.

The vLWC is now installed and running in your environment. To confirm, you can view the summary page of the **ggc-Inx** VM 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.

	🔓 ggc-lnx 🛛 🕨 🖷 👼 🚳 🛛 actions -
~ <b>@</b>	Summary Monitor Configure Permissions Datastores Networks Updates
	Guest OS: Ubuntu Linux (64-bit) Compatibility: ESXi 6.7 and later (VM version 14) VMware Tools: Running, version:11269 (Guest Managed) More info DNS Name: ggc-Inx-2-3 IP Addresses: Launch Web Console
	Launch Remote Console  Host:
> []] ~ []] vLWC_Dev01	Related Objects
	Cluster
✓ ₩ vLWC-2.3.0	Host
🔓 ggc-inx	vApp  R vLWC-2.3.0
	Networks 🙆 LWC946CAP16
	Storage FNIZV3E1

## Configure the Virtual Lightweight Collector

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- Configure Network Settings through Captive Portal | 11
- Configure Network Settings Through JSI Shell | 13

Once the vLWC vApp is installed, you can add or modify various vLWC settings through the Captive Portal web page (see "Configure Network Settings through Captive Portal" on page 11) or the JSI Shell (see "Configure Network Settings Through JSI Shell" on page 13).

**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.

Before you configure the Lightweight Collector (LWC), refer to the "Internal and External Network Requirements" on page 10.

#### **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 1 on page 10 through the IP addresses assigned to external port on the vLWC.

#### **Table 1: 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 Captive Portal**

Here's how to view network status and configure network settings using the vLWC Captive Portal webpage:

 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.

On successful login, the JSI Data Collector page appears.

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

🦻 JSI Data Collector						
Configure your Collector	Connection Stat	us 🚯 🕜 Ju	niper Cloud Disconne	ected 🕜 Not Provisioned		
External Network 🕕					Instructions	
IP Type Source IP Address (LWC SW) Subnet Mask Gateway DNS Server	-	IPv4 DHCP	Connection Statu ? Gateway ? DNS Dis	IS O	Internal & External Networks If any Connection Status (Internal or Exter settings of that section until all Connection Juniper Cloud Connected Status will also I window and proceed with device onboardi Troubleshooting	nal) is red, click edit to modify the Status turns to green, at this point be green and you may close this ng.
EDIT C Active Proxy C Enable/Disable					Download the Light Request for Support In Case in the Juniper Support Portal and att DOWNLOAD LIGHT RSI File Format: .json*	nformation (RSI) and Open a Tech ach the Light RSI file.
IPv4 Settings E IP Type Source IP Address	Enable/Disable IPv4 DHCP	IPv6 Sett IP Type Source IP Addres	i <b>ngs</b> s	Enable/Disable IPv6 Static ::1	In some cases, the Support Agent may rec instances, you will need to re-enter the Ca Extensive RSI file here and upload to your DOWNLOAD EXTENSIVE RSI File Format: .json*	quest an Extensive RSI file. In such ptive Portal to download the Tech Case.
Subnet Mask Gateway DNS Server Connection Status IPv4 ①		Prefix Ler Gateway DNS Serv	er ction Status IPv6	/128 Not configured	Reboot Collector ① Press the button below to reboot the Collector. Confirm by pressing the button a second time within 30	Shutdown Collector  Press the button below to shutdown the Collector. Confirm by pressing the button a second time within 30
G Gateway Disconnected     ONS Disconnected     DNS Disconnected     EDIT     C	d		<ul> <li>Gateway Disc</li> <li>DNS Disconn</li> </ul>	connected	seconds.	seconds.

**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 your 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 (see Outbound Connectivity Requirements table in "Internal and External Network Requirements" on page 10 for 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**: If you choose to use an active proxy, ensure that the LWC'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.

JSI Data Collector				
nfigure your Collector Connection St	atus 🕦 📀 Juniper Cloud Connecte	ed 📀 Cloud Provisioned		
External Network 🕕			Instructions	
IР Туре	IPv4		Internal & External Networks	
Source	DHCP Connection Status	s <b>O</b>	If any Connection Status (Internal or Ex	ternal) is red, click edit to modify the
IP Address (LWC SW)	Gateway	v Connected	settings of that section until all Connecti Juniper Cloud Connected Status will also	ion Status turns to green, at this point
Subnet Mask	Oliveration of the second seco	onnected	window and proceed with device onboa	rding.
Gateway				
DNS Server			Troubleshooting	
EDIT			Download the Light Request for Suppor Case in the Juniper Support Portal and	t Information (RSI) and Open a Tech attach the Light RSI file.
Active Proxy I Enable/Disable			DOWNLOAD LIGHT RSI	-
Internal Network ()			File Format: .json*	
IPv4 Settings Enable/Disable	IPv6 Settings	Enable/Disable	In some cases, the Support Agent may instances, you will need to re-enter the	request an Extensive RSI file. In such Captive Portal to download the
IP Type IPv4	IP Туре	IPv6	Extensive RSI file here and upload to ye	pur Tech Case.
Source DHCP	Source	Static	DOWNLOAD EXTENSIVE RSI	
IP Address	IP Address	::1	File Format: .ison*	
Subnet Mask	Prefix Length (/0 to /128)	/128		
Gateway	Gateway		Behast Collector	Shutdown Collector
DNS Server	DNS Server	Not configured	Report Collector	Shutdown Collector
Connection Status IPv4 0	Connection Status IPv6		Press the button below to reboot the Collector. Confirm by pressing the button a second time within 30	Press the button below to shutdown the Collector. Confirm by pressing the button a second time within 30
<ul> <li>⊘ Gateway Connected</li> <li>⊘ DNS Connected</li> <li>⊗ DNS Donnected</li> <li>⊗ DNS Disconnected</li> </ul>		onnected	REBOOT	SHUTDOWN
EDIT C				V

If the vLWC does not connect to the cloud, click **Download Light RSI** 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 might ask you to attach the Extensive RSI file to the case. To download it, click the **Download Extensive RSI**.

#### **Configure Network Settings Through JSI Shell**

The JSI Shell is an SSH menu system for the vLWC. In addition to viewing the network status, you can use the JSI Shell to view and modify the network settings for the internal network, external network, optional active proxy and the management (cap) interface. See Configure Network Settings through JSI Shell for more information.

# Step 2: Up and Running

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Now that you've deployed the Virtual Lightweight Collector (vLWC), let's get you up and running with Juniper Support Insights (JSI) on Juniper Support Portal!

## **Access Juniper Support Insights**

To access Juniper Support Insights (JSI), you must register on the User Registration portal. You also require a user role (Super Admin, Admin or Standard) assigned. To get a user role assigned, contact Juniper Customer Care or your Juniper Services team.

JSI supports the following user roles:

- Standard-The Standard users can view the device onboarding details, operational dashboards, and reports.
- Admin— The Admin users can onboard devices, perform JSI management functions, view the operational dashboards and reports.
- Super Admin—The Super Admin users can perform all the functions as a regular admin, and also manage the JSI roles to grant and revoke access (from Insights menu > Advanced Settings > User Role Management page).

**NOTE**: Users managed by the super admin must be associated with the same account as the LWC. To locate a user, the super admin must enter the full email address (example: jsiuser@email.com) in the search field of the **User Role Management** page. If searching for the user by their full email address does not yield any results, contact your Juniper Services team for assistance.

Here's how to access JSI:

- 1. Log in to Juniper Support Portal (supportportal.juniper.net) by using your Juniper Support Portal credentials.
- 2. On the Insights menu, click:
  - Dashboards to view of a set of operational dashboards and reports.
  - Device Onboarding to perform device onboarding to initiate data collection.
  - Device Notifications to view notifications about device onboarding, data collection, and errors.
  - Collector to view the details of the vLWC associated with the account.

• **Remote Connectivity** to view and manage Remote Connectivity Suite requests for a seamless device data collection process.

JUNIPEr Support Portal	Home Knowle	dge Insights ^	Cases More ∨	Q 1	CORNELIUS CUSTO
All Open Case: Record Cou	S Avaiting Cas @ Dispatch @ In Process @ Pending Clos @ Submitted @	Dashboard Device Onboarding Device Notification Collector Remote Connectivity Advanced Settings	Line Item Status	Assets Announced EOL Record Court 432 432 Broduct Series ACX Broduct Series ACX CX-Series CX-Series Broduct Refileo SRX-Series SRX-Series T-Series Broduct Series CX-SA CX-S	

## View the Virtual Lightweight Collector Connection Status

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You can view the Virtual Lightweight Collector (vLWC) connection status on the following portals:

- Juniper Support Portal
- The vLWC Captive Portal webpage and vLWC JSI Shell. The Captive Portal webpage and JSI Shell provides a more detailed view, and has options that let you change the vLWC configuration settings and perform troubleshooting.

#### View the Connection Status on Juniper Support Portal

Here's how to view the vLWC connection status on Juniper Support Portal:

- 1. On Juniper Support Portal, click Insights > Collector.
- Check the summary table to see the Connection Status of the vLWC. The status should be shown as Connected.
   If the status is shown as Disconnected, check if the vLWC is installed and powered on.

#### View the Connection Status on the Captive Portal

See "Configure Network Settings through Captive Portal" on page 11 for more information.

#### View the Connection Status on the JSI Shell

See "Configure Network Settings Through JSI Shell" on page 13 for more information.

## **Onboard Devices**

You'll need to onboard devices to initiate a periodic (daily) data transfer from the devices to the Juniper Cloud. Here's how to onboard devices in a JSI setup that uses a vLWC:

**NOTE**: You must be an admin user to onboard a device.

**NOTE**: Ensure that the NETCONF SSH subsystem is configured on your Juniper devices (on port 22) to onboard these devices to JSI. JSI supports NETCONF SSH sessions on port 22 only. JSI NETCONF sessions on other ports, such as port 830, are currently not supported.

**NOTE**: For information on Junos configurations and permissions required for JSI, see the FAQ - What permissions does the JSI user need in Junos to operate JSI?

Here's how to onboard devices to JSI:

- 1. On Juniper Support Portal, click Insights > Device Onboarding.
- Click New Device Group. The following image represents the device onboarding page with some sample data filled in.

Device Group 🥑				
Device Group		Device List ① * IP Address	*Collector Name	
Name Data Center Device Group		192.0.2.0, 192.0.2.1	OD1120AN0169	×
Description		Upload Target URL	*Site ID  00000050001	×
		Upload Files Or drop files		
Credentials		Download Sample CSV The		
Add Credential Existing Credentials				
Selected Credential				Back to list
* Credential Name 🕚		Select Credential Type	* User Name	
▶ testuser	×	<ul> <li>User Name / Password</li> <li>SSH Key</li> </ul>	mypassword	
			• Password	
Connections 📀				
Add Connection Existing Connections Existing Bastion Ho	ost			
Select Connection Type 🚯				
Direct      Via Bastion Host				

3. In the Device Group section, enter the following details for the devices to be associated with the LWC:

Submit

- **Name**—A name for the device group. A Device Group is a collection of devices with a set of common credentials and modes of connection. The operational dashboards and reports use the device groups to provide a segmented view of the data.
- IP Address—IP addresses of the devices to be onboarded. You can provide a single IP address or a list of IP addresses. Alternatively, you can upload the IP addresses through a CSV file.
- **Collector Name**—Automatically populated if you have only a single vLWC. If you have multiple vLWCs, select from the list of available vLWCs.
- Site ID—Automatically populated if you have only a single Site ID. If you have multiple Site IDs, select from the list of available Site IDs.
- **4.** In the **Credentials** section, create a set of new credentials or select from the existing device credentials. JSI supports SSH keys or usernames and passwords.
- **5.** In the **Connections** section, define a connection mode. You can add a new connection or choose from the existing connections to connect the device to the vLWC. You can connect the devices directly or through a set of bastion hosts. You can specify a maximum of five bastion hosts.

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.

6. After entering the data, click **Submit** to initiate device data collection for the device group.

## **View Notifications**

Juniper Cloud notifies you about the device onboarding and data collection status. Notification could also contain information about errors that need to be addressed. You can receive notifications in your email, or view them on Juniper Support Portal.

Here's how to view notifications on Juniper Support Portal:

- 1. Click Insights > Device Notifications.
- 2. Click a Notification ID to view the content of the notification.

JUſ	NETWORKS   Support	rt Home	Knowledge	Insights A	Ca	ases Mo	re 🗸				۹	ŧ		NELIUS	6 C
Device N All 🚽 50+ items	s • Sorted by Created Date	Filtered by All device notific	Dashboard Device Onboarding						Q. Searc	ch ti	nis list.		墩	• C'	
	Notification Id 🛛 🗸	Y Type Name	~	Device Notification	~	Collector	~	Account	-	Туре	~	Create	d Date 🕹	~	
1	M-0000154649	New Measurement Data	a Available	Collector		DD1720AN0111		JSI Test Account RCS				9/1/202	3 12:35 AM		
2	M-0000154648	New Measurement Data	a Available	Remote Connectivity		DD1720AN0111		JSI Test Account RCS				9/1/202	3 12:31 AM		
з	M-0000154647	New Measurement Data	a Available	0000002040		DD1720AN0111		JSI Test Account RCS				8/31/20	23 11:35 PM		
4	M-0000154646	New Measurement Data	a Available	0000002040		DD1720AN0111		JSI Test Account RCS				8/31/20	23 11:31 PM		

## View Operational Dashboards and Reports

The JSI operational dashboards and reports are dynamically updated based on a periodic (daily) device data collection, which is initiated when you onboard a device. The dashboards and reports provide a set of current, historic, and comparative data insights into the devices' health, inventory, and lifecycle management. The insights include the following:

- Software and hardware systems inventory (chassis to component level detail covering serialized and non-serialized items).
- Physical and logical interface inventory.
- Configuration change based on commits.
- Core files, alarms, and Routing Engine health.
- End of Life (EOS) and End of Service (EOS) exposure.

Juniper manages these operational dashboards and reports.

Here's how to view the dashboards and reports on Juniper Support Portal:

1. Click Insights > Dashboard.

The **Operational Daily Health Dashboard** is displayed. This dashboard includes charts that summarize the KPIs associated with the account, based on the last collection date.

JUNIP	er			Op	erational	Daily Health Das	hboard		Last Colle	ction 06/01	1 Card	rine:
Device Group	8		Date of			Compared act			My Time zone			
Al		Ŷ	Last Collection			Prior Day		v	UTC			~
Node	1,026	<b>7</b> 2	Orassis	1,833	•	FPC	132	<b>A</b> 0	РІС	1,093		2
	3,774 days		2-	$\overline{\bigcirc}$	-2	down 2,44	Hysed Interface	- up 4.534		Lagout Interface are: 45 1,116	)	
	PPD_PAB-GIS_EX			~			~			- 40	un .	
SRX SRX QFX 58 MX 18 Other 5	250	1,522	DC-EST2-851 FT-R-MN-RT C-805-43-R R-805-65-K RRT-NT-J678		100% 100% 100% 100%	DS-YTH-95 CoLo-4573- CB5-45490 EST-E87-W UT4-KL03		755 175 475 485	DT-MY-495 WST-63-H., GBO-536477 MT-56368 RTH467			16 15 15
•Mager • Mana		Alume Timelin	e - (kine 05, 2022)					Node Court and Upti	ne (Top Major Release	ei -		
4 2 3 500 AM	6.30 AM 200	AM 2	5 30 AM 800 A	M 8.30 AM	900	12.3 11 15.1 18.2 20.2 444 12.1	100 49 48 47	24 10	9) 			

2. From the Reports menu on the left, select the dashboard or report you want to view.

Dashboard	Reports ^	Favorite	$\checkmark$		Add to Favorites	PDF	L PPT	
	Report types							
	Standard							
JUNIPER	Inventory		Exposure		Health		Routing	
- NETWORKS	Hardware Inventory	*	Proactive Bug Notification (PBN) Review and Analysis	*	Device Timeline		ISIS	
Device Group	Hardware Hierarchy	*	Security Advisories and Vulnerabilities	*	Alarm Details	*	OSPF	
	Device Management Inventory		Hardware EOL-EOS Status	*	Commit History		BGP	
Node	Compare Hardware		Software EoE-EoS	*	Coredump		RSVP	
Node	Search Hardware	*	Suggested Software Releases		System Report			
Longe	Physical Interface		Serial Number Exception		Routing Engine Health	*		
	Logical Interface							
35	Asset and Contract	*						
uranus-no <sup>-</sup>	License	☆						
Chassis Count	[Top Products]		CPU % - Top 5		Memory % - Top 5		Temperature - Top 5	
MX	25 nep	tune-east-9 otune-north	44% 38%	mars-sout saturn-so	heast 57% uth-1 54%		venus-west-137 50°C moon-west-140 49°C	

The reports typically consist of a set of filters, an aggregated summary view, and a detailed tabular view based on the data collected. A JSI report has the following features:

- Interactive views—Organize the data in a meaningful way. For example, you can create a segmented view of the data, click through, and mouse-over for additional details.
- Filters—Filter data based on your requirements. For example, you can view data specific to one or more device groups for a specific collection date and a comparison period.
- Favorites—Tag reports as favorites for ease of access.
- PDF, PTT, and Data formats—Export the reports as PDF or PTT files, or in data format. In data format, you can
  download the report fields and values for each report component (for example, chart or table) by using the Export
  Data option as shown below:

shboard .	Reports	$\sim$	Favorite	/		Add to Favorite	s 🛃 PDF 🛃 PPT	
					To export data in CSV for	nat, On Mouse hove	r any visuals/table and select three do	ots in the top-right side to view "Export Data" or
				Comm	it History		Last Collection: J	un 17 🎢 Clear Filter
Device Group	Host	Use	r	Chassis Serial Nun	nber Log Contains		Commit Date UTC Range	My Time zone
All $\checkmark$	All	$\sim$ Al	$\sim$	All	∽ All	$\sim$	Last $\checkmark$ 1 Weeks	✓ UTC ✓
								P Export data
Commit Time Local	Host		Chassis Serial Number	User	Log	Client	Comment	aj Export data

## Prepare for a Remote Connectivity Suite Request

#### IN THIS SECTION

View RCS Requests | 20

Configure RCS Device Settings | 22

The JSI Remote Connectivity Suite (RCS) is a cloud-based solution that streamlines the support and troubleshooting process between Juniper support and customers by making the device data collection process seamless. Instead of iterative exchanges between Juniper support and the customer to obtain the right device data, RCS retrieves this in the background automatically. This timely access to essential device data facilitates swift troubleshooting of the issue.

At a high level, the RCS request process involves the following steps:

- 1. Submit a technical support case through the customer portal.
- **2.** A Juniper support engineer will contact you about your technical support case. If necessary, the Juniper support engineer may propose an RCS request to retrieve device data.
- **3.** Depending on the rules from the RCS settings (**Ask Approval** enabled), you may receive an email containing a link to authorize the RCS request.
  - a. If you consent to share the device data, click the link in the email, and approve the request.
- 4. The RCS request will be scheduled for a specified time and the device data is securely relayed to Juniper support.

**NOTE**: You must have JSI administrator privileges to configure RCS device settings, and approve or deny RCS requests.

NOTE: The Remote Connectivity Suite supports SFTP sessions on port 22 only for file collection.

## **View RCS Requests**

Here's how to view RCS requests on Juniper Support Portal:

 On Juniper Support Portal, click Insights > Remote Connectivity to open the Remote Connectivity Requests Lists page.

The Remote Connectivity Requests Lists page lists all the RCS requests made. You can use the drop-down list on the top left corner of the page to customize your viewing preference.

Remote Connectivity Re Recently Viewe	eque: ed	sts ▼									ŵ •
Log Request Id	~	Туре	Approval Status	~	Related Case Number	/	Device Serial Number 🛛 🗸	Log Request Create Date/ 🗸	Created By	~	
LR-000271		Core File Collection	Approved		TEST-2023-0831-634439			8/31/2023 10:56 AM	Ray Smith		
LR-000270		RSI Collection	Approved		TEST-2023-0831-634439			8/31/2023 10:35 AM	Ray Smith		
LR-000220		RSI Collection	Pending Approval		TEST-2023-0823-634289			8/29/2023 7:20 AM	George Wilson		
LR-000222		RSI Collection	Pending Approval		TEST-2023-0823-634289			8/29/2023 7:52 AM	Jane Miller		
	Remote Connectivity Re Recently Viewer ns Log Request Id LR-000270 LR-000220 LR-000220	Remote Connectivity Reque: Recently Viewed ns Log Request Id ∨ LR-000270 LR-000220 LR-000220 LR-000222	Remote Connectivity Requests       Recently Viewed ▼       ns       Log Request Id     ✓       LR-000271     Core File Collection       LR-000270     RSI Collection       LR-000220     RSI Collection       LR-000222     RSI Collection	Remote Connectivity Requests       Recently Viewed V       Type V     Approval Status       Log Request Id     V     Type V     Approval Status       LR-000271     Core File Collection     Approved       LR-000270     RSI Collection     Approved       LR-000220     RSI Collection     Pending Approval       LR-000222     RSI Collection     Pending Approval	Remote Connectivity Requests       Recently Viewed V       Representation of the second	Remote Connectivity Requests         Recently Viewed ×         Iss         Log Request Id v       Type v       Approval Status v       Related Case Number v         LR-000271       Core File Collection       Approved       TEST-2023-0831-634439         LR-000270       RSI Collection       Approved       TEST-2023-0831-634439         LR-000220       RSI Collection       Pending Approval       TEST-2023-0823-634289         LR-000222       RSI Collection       Pending Approval       TEST-2023-0823-634289	Remote Connectivity Requests         Recently Viewed         ns         Log Request Id       Type       Approval Status       Related Case Number          LR-000271       Core File Collection       Approved       TEST-2023-0831-634439          LR-000270       RSI Collection       Approved       TEST-2023-0831-634439          LR-000220       RSI Collection       Approved       TEST-2023-0832-634289          LR-000222       RSI Collection       Pending Approval       TEST-2023-0823-634289	Remote Connectivity Requests         ns         log Request Id v       Type v       Approval Status v       Related Case Number v       Device Serial Number v         LR-000271       Core File Collection       Approved       TEST-2023-0831-634439       Image: Collection v         LR-000270       RSI Collection       Approved       TEST-2023-0831-634439       Image: Collection v         LR-000220       RSI Collection       Pending Approval       TEST-2023-0823-634289       Image: Collection v         LR-000220       RSI Collection       Pending Approval       TEST-2023-0823-634289       Image: Collection v	Remote Connectivity Requests         Request ly Viewed ×         Isset viewed ×         Isset viewed ×         Isset viewed ×       Isset viewed ×       Isset viewed ×       Isset viewed ×         Isset Request ld ×       Type ×       Approval Status ×       Related Case Number ×       Device Serial Number ×       Isget Request Create Date/ ×         I R-000270       Core File Collection       Approved       TEST-2023-0831-634439       6/31/2023 10:35 AM       6/31/2023 10:35 AM	Remote Connectivity Requests         Request J Viewed	Reveared y Viewed vi

2. Click the Log Request Id of an RCS request to open the Remote Connectivity Requests Detail page.

From the Remote Connectivity Requests Detail page, you can view the RCS request details and perform the following tasks:

- Modify the serial number.
- Adjust the requested date and time (set to a future date/time).

**NOTE**: If the time zone is not specified in your user profile, the default time zone is Pacific Time (PT).

- Append notes.
- Approve or deny the RCS request.

JUNPER Support Home	e Knowledge	Insights 🗸	Cases More v	Q 🌲 🙆 John Smith
Remote Connectivity Request				
RCS Type	Requested		Status	Access Request Date and Time
RSI Collection	Ray Smith		Document Uploaded	8/31/2023, 10:40:00 AM
JTAC Notes				
RSI Request for 12:40pm CST				
✓ Case Details				
Case Number		Case Type		Serial Number / Software Support Ref No
TEST-2023-0831-634439		Tech		
Software		Versiom		System/Router Name
		19.4		a10-40
Summary				
8/31 RCS Test				
imes  Requested Serial Number				
Serial Number/Software Support Ref No.		Software		Product Series
		17.3R2.10		EX
Platform		System/Router Name		
SRX1500		cdo-SRX1500-r001		
Change Serial Number or SSRN				
Approval Details				
I would like to change the requested Date & Ti	me			
Notes 🜒				
Back				Deny Approve

## **Configure RCS Device Settings**

-

You can configure both RCS collection and core file collection preferences from the RCS settings page. Here's how to configure the Remote Connectivity RSI Collection settings on Juniper Support Portal:

- 1. On Juniper Support Portal, click Insights > Remote Connectivity to open the Remote Connectivity Requests Lists page.
- **2.** Click **Settings** on the top right corner of the page. The Remote Connectivity RSI Collection Settings page opens. This page enables you to set global collection permissions and create permission exceptions based on different criteria.

Remote Connectivity Configure your log collection	<b>Settings</b> settings. Set global permissions or create collec	tion rules by day, devic	e, or device group.			Account Name 🚯	
System Log Collection	Global Collection Permissions						
RSI Collection	* Select the default collection permiss	ions for all devices and	device groups. 🚺				
Ad hoc Commands	Ask Approval	Always Allow	Always Deny				Edi
Core File Collection	Day and Time Dulas. Croate energing	day and time arrestion		solone			
	Day	Duration	s to your global collection perm	Permission Type	~	Notes	V Action
			Ν	o items to display.			
	Device Group Rules Create separate	collection rules for spe	ecific device groups. 🚯				Add
	Device Group Name	~	Permission Type	~	Notes		∽ Action
			Ν	o items to display.			
	Device List Rules Create separate co	llection rules for specif	īc devices. 👔				Add
	Device List	~	Permission Type	~	Notes		∽ Action
			N	o items to display.			

- **3.** Global collection permissions are configured at an account level. For multiple JSI-connected accounts, you can select the account using the Account Name drop-down list on the top right corner of the page.
- **4.** To configure global collection permission, click **Edit** in the Global Collection Permissions section and change permission to one of the following:
  - Ask Approval—An approval request is sent to the customer when Juniper support initiates an RCS request. This is the default setting when no permission is explicitly selected.
  - Always Allow-RCS requests initiated by Juniper support are automatically approved.
  - Always Deny–RCS requests initiated by Juniper support are automatically declined.

**NOTE**: When you have the global collection permission, and one or more exceptions configured with conflicting permissions, the following order of precedence will apply:

- Device list rules
- Device group rules
- Day and time rules
- Global collection permission
- **5.** To create exceptions based on specific day and time, click **Add** in the Date and Time Rules section. The Day and Time Rules Settings page opens.

You can configure an exception based on days and duration, and click **Save** to save the exception and return to the Remote Connectivity RSI Collection Settings page.

Remote Connectivit	y Settings	Account Name
Configure your log collection	settings. Set global permissions or create collection rules by day, device, or device group.	En
stem Log Collection	*Select Days	
	<ul> <li>Monday</li> <li>Wednesday</li> <li>Friday</li> </ul>	
RSI Collection	✓ Tuesday ✓ Thursday Sunday	
Ad hoc Commands	Saturday	
	Set your duration	
Core File Collection	* Start Time * End Time	
	9:00 AM (3) 5:00 PM (3) All Day	
	* Select Permission Type	
	Ask Approval     Always Allow     Always Deny	
	Notes	
		Cancel

6.

**NOTE**: Before configuring collection rules for device groups, ensure that a device group already exists for the account.

To create separate collection rules for specific device groups, click **Add** in the Device Group Rules section. The Device Group Rules Settings page opens.

You can configure the collection rule for a specific device group, and click **Save** to save the rule and return to the Remote Connectivity RSI Collection Settings page.

Remote Connectivity	Settings		Account Name 🕚
Configure your log collection s	ettings. Set global permissions or create collection rules by day, device, or device gro	p.	T
System Log Collection			
RSI Collection	Select Device Groups		
Ad hoc Commands	Device Group Name     JSAS-Junos	✓ Description	~
Core File Collection	*Select Permission Type		
	Ask Approval     Always Allow     Always Allow	ays Deny	
	Notes		
			Cancel Save

**7.** To create separate collection rules for individual devices, click **Add** in the Device List Rules section. The Device List Rules Settings page opens.

You can configure the collection rule for individual devices, and click **Save** to save the rule and return to the Remote Connectivity RSI Collection Settings page.

Configure your log collection	/ Settings settings. Set global permissions or create collection rules by day, device, or device group.	Account Name ①
System Log Collection RSI Collection Ad hoc Commands Core File Collection	Device List     IP Addresses (IPV4 or IPV6)     OR     192.168.0.1	Upload IP Addresses File in CSV Format
	* Select Permission Type  Ask Approval Always Allow Always Deny  Notes	
		Cancel Save

## Step 3: Keep Going

#### IN THIS SECTION

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- General Information | 26
- Learn with Videos | 26

Congratulations! Your JSI solution is now up and running. Here are some of the things you can do next.

## What's Next?

If you want to	Then
Onboard additional devices or edit the existing onboarded devices.	Onboard additional devices by following the procedure explained here: "Onboard Devices" on page 16
View the operational dashboards and reports.	See "View Operational Dashboards and Reports" on page 18
Manage your notifications and email subscriptions.	Log into the Juniper Support Portal, navigate to <b>My Settings</b> and select <b>Insights</b> to manage your notifications and email subscriptions.
Get help with JSI.	Check for solutions in the FAQs: Juniper Support Insights and the Lightweight Collector and Knowledge Base (KB) articles. If FAQ or KB articles do not address your issues, contact Juniper Customer Care.

## **General Information**

If you want to	Then
See all documentation available for Juniper Support Insights (JSI)	Visit the JSI Documentation page in the Juniper TechLibrary
Find more in-depth information about installing the Virtual Lightweight Collector (vLWC)	See the Virtual Lightweight Collector Deployment Guide.

## Learn with Videos

Our video library continues to grow! We've created many, many videos that demonstrate how to do everything from install your hardware to configure advanced Junos OS network features. Here are some great video and training resources that will help you expand your knowledge of Junos OS.

If you want to	Then
Get short and concise tips and instructions that provide quick answers, clarity, and insight into specific features and functions of Juniper technologies	See Learning with Juniper on the Juniper Networks main YouTube page
View a list of the many free technical trainings we offer at Juniper	Visit the Getting Started page on the Juniper Learning Portal

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