



JuniPer Cloud-Ready SSR1500 Session Smart Router User Guide

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JuniPer Cloud-Ready SSR1500 Session Smart Router



Product Information

Specifications

- **Product Name:** Cloud-Ready SSR1500
- **Compatibility:** Mist AI App
- **Operating System:** Mac OS, Android

Product Usage Instructions

Step 1: Begin

Meet the Cloud-Ready SSR1500

The Cloud-Ready SSR1500 is a device that can be connected to the Mist AI App. Before you begin, make sure to set up your organization and sites, and activate your subscriptions. For more information on how to do this, refer to the Quick Start: Mist guide.

Claim Your Appliance

To claim your SSR1500 appliance, follow these steps:

1. Download the Mist AI App from the Mac App Store or Google Play Store.
2. Open the Mist AI app and log in using your account credentials. If you don't have an account, create one by following the instructions in the "Create a Mist Account and Organization" section.
3. Select your organization.
4. Tap on "Claim Devices to Org".
5. Scan the QR code on your SSR1500 device using the app. The device will be automatically claimed and added to your organization's inventory.
6. In the Organization screen, tap on "Device Inventory > Routers > Unassigned". Review the MAC address to ensure the onboarding process is complete.

Once you have successfully claimed your SSR1500, you can proceed to the next step.

Step 2: Up and Running

The SSR1500 is now onboarded to the Juniper Mist™ Cloud. To provision the SSR1500 with ZTP (Zero Touch Provisioning), follow these instructions:

Add the Network

To begin your WAN design, you need to identify the network that will be used for accessing applications over a LAN network segment.

Here's how:

1. Select “Organization > Networks” from the menu on the left.
2. Click on “Add Networks” in the upper-right corner of the Networks page.
3. Enter a name for the network.
4. Enter the network subnet (e.g., 192.168.1.0/24).
5. Click “Add”.

Congratulations!

You have now defined a network that can be used across your entire organization, including the template that will be applied to your SSR1500.

Add Applications

To add applications to your SSR1500, follow these steps:

1. Open your Mist portal.
2. Select “Applications” from the menu on the left.
3. Click on “Add Applications” in the upper-right corner of the Applications page.
4. Enter the necessary details for your application, such as name, type, and configuration settings.
5. Click “Add”.

Repeat these steps for each application you want to add to your SSR1500.

Create a WAN Edge Template

To create a WAN Edge template for your SSR1500, follow these instructions:

1. Select “Templates” from the menu on the left.
2. Click on “Add Template” in the upper-right corner of the Templates page.
3. Enter a name for the template.
4. Configure the WAN settings, such as IP address, subnet, gateway, and DNS server.
5. Click “Save”.

Assign the Template to a Site

To assign the WAN Edge template to a site, use the following steps:

1. Select “Sites” from the menu on the left.
2. Click on the desired site.
3. Under the “WAN Edge” section, click on “Assign Template”.
4. Select the template you created in the previous step.
5. Click “Save”.

Assign the SSR1500 to a Site

To assign the SSR1500 to a specific site, follow these instructions:

1. Select “Sites” from the menu on the left.
2. Click on the desired site.
3. Under the “WAN Edge” section, click on “Assign WAN Edges”.
4. Enter the SSR1500 activation code or claim code.

5. Click “Add”.
6. Clear the “Assign claimed WAN Edges to site” check box to place the SSR1500 in the inventory.
7. Click “Claim” to add the SSR1500 to your inventory.

Install the SSR1500 in a Rack

To install the SSR1500 in a rack, follow the installation instructions provided in the product manual.

Connect Your SSR1500 to the Mist Cloud

To connect your SSR1500 to the Mist Cloud, make sure it is properly connected to the internet and follow the instructions provided in the product manual.

FAQ

- **Q: Where can I download the Mist AI App?**

A: You can download the Mist AI App from the Mac App Store or the Google Play Store.

- **Q: How do I create a Mist Account and Organization?**

A: To create a Mist Account and Organization, follow the instructions provided in the user manual.

- **Q: How do I provision the SSR1500?**

A: To provision the SSR1500, follow the instructions provided in Step 2: Up and Running in the user manual.

In this guide, we provide a simple, three-step path, to quickly get the Juniper Networks® SSR1500 appliance up and running on the Juniper Mist™ cloud. You can on-board a single device using your mobile phone, or one or more devices using your computer. Once on board, we'll walk you through the steps to create a basic configuration. You'll need your Juniper Mist WAN Assurance subscription and your login credentials for the Juniper Mist portal.

NOTE:

Before you begin, you must set up your organization and sites, and activate your subscriptions. For more information, see [Quick Start: Mist](#).

Meet the Cloud-Ready SSR1500

- The SSR1500 is a 1 U fixed configuration appliance that's ideal for extra large data centers or campus deployments. Powered by the Juniper® Session Smart Router (SSR) software, the SSR1500 provides secure and resilient WAN connectivity.
- The SSR1500 has four 1 GbE ports, twelve 1/10/25 GbE SFP28 ports, a management port (for Mist operations), 512 GB of memory, and a 1 TB enterprise-grade solid-state drive (SSD) for storage.



Claim Your Appliance

- The SSR1500 comes ready to manage using the [Juniper Mist™ Cloud](#) portal.
- To add the SSR1500 to your organization's WAN Edge inventory, you must enter the SSR1500 claim information into Mist. The claim code label (QR code sticker) on the front panel has the claim information.

To enter the claim information, do one of the following:

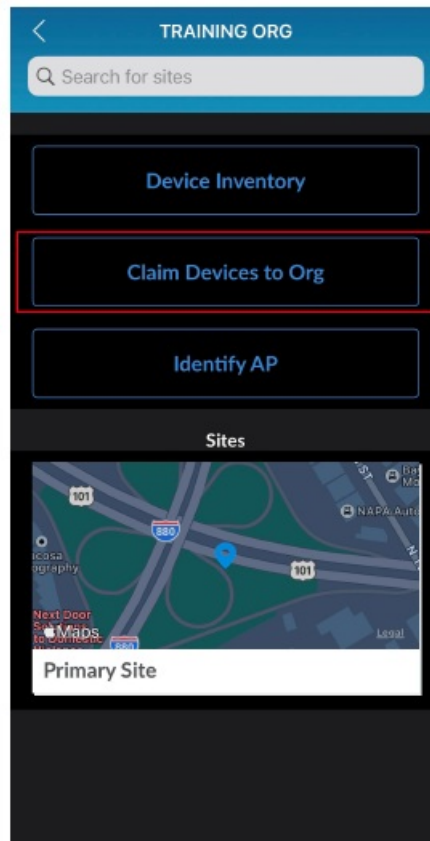
- Scan the QR code with the Mist AI mobile application. See “[Mist AI App QR Scan](#)”.
- Manually enter the claim code in Mist. The claim code is the number above the QR code. For example: In this picture, the claim code is FVDHMB5NGFEVY40. See “[Enter the Mist Claim Code](#)”.



Mist AI App QR Scan

You can download the Mist AI App from the [Mac App Store](#) or from [Google Play Store](#).

1. Open the Mist AI app and log in using your account credentials. If you do not have an account, see [Create a Mist Account and Organization](#).
2. Select your organization.
3. Tap Claim Devices to Org.



4. Scan the QR code. The app automatically claims the device and adds it into your organization's inventory.
5. On the Organization screen, tap Device Inventory → Routers → Unassigned. Review the MAC address.

Onboarding Complete!

Fantastic, the SSR1500 is in your inventory! To provision the SSR1500, see “Step 2: Up and Running” on page 5.

Enter the Mist Claim Code

- **Claiming multiple devices**—When you purchase multiple devices, we provide you with an activation code

along with your PO information. Make a note of this code.

- **Claiming a single device**—Locate the QR code on your device and make a note of the alphanumeric claim code directly above it.

1. Open the Juniper Mist™ Cloud portal and log in to your account. If you do not have an account, see [Create a Mist Account and Organization](#).
2. Select Organization > Inventory from the menu on the left, then select the WAN Edges tab at the top.
3. Click Claim WAN Edges in the upper right portion of the inventory screen.
4. Enter the SSR1500 Activation code or claim code and click Add.

Claim Wan Edges and Activate Subscriptions

Enter WAN Edge claim codes or Activation codes

Add

Site Assignment

☒ Assign claimed WAN Edges to site

Primary Site

Name Generation

☐ Generate names for WAN Edges, with format:

Format includes arbitrary text and any/none of these options

[site]

site name

[site.4]

last (1-9) characters of site name

[mac]

MAC address

[mac.3]

last (2-3) bytes of MAC address

[ctr]

incrementing counter

[ctr.3]

counter with (2-6) fixed digits

Manage Configuration

☒ Manage configuration with Mist

Root Password

....

Reveal

Existing gateway configuration will be overwritten with Mist configuration. Do not attempt to configure the gateway via CLI once it is managed by Mist. Root password will be configured by the site(under site settings) to which the gateway is assigned.

Claim

Cancel

5. Clear the Assign claimed WAN Edges to site check box to place the SSR1500 in the inventory. The SSR1500 is assigned to a site later, see [“Assign the SSR1500 to a Site”](#).
6. Click the Claim button to claim the SSR1500 into your inventory.

- **Video:** [Add the Claim Information in Mist](#)

Onboarding Complete!

Fantastic, the SSR1500 is in your inventory! To provision the SSR1500, see [“Step 2: Up and Running”](#).

Up and Running

SUMMARY

The SSR1500 is onboarded to the [Juniper Mist™ Cloud](#). To provision the SSR1500 with ZTP, log in to your Mist portal and begin the WAN configuration.

Add the Network

To begin your WAN design, identify the network to be used for accessing applications over a LAN network segment.

1. Select Organization > Networks from the menu on the left.
2. Click Add Networks in the upper-right corner of the Networks page.
 - **Video:** [Access the Add Networks Page](#).
3. Enter a name for the network.
4. Enter the network subnet. For example, 192.168.1.0/24.

The screenshot shows the 'Add Network' dialog box. The 'Name' field contains 'my-lan'. The 'Subnet IP Address' field contains '192.168.1.0' and the 'Prefix Length' field contains '24'. These fields are highlighted with a red border. The 'VLAN ID' field contains '<default>' and '(1-4094)' below it. The 'Source NAT Pool Prefix (SRX Only)' field is empty. The 'Access to MIST Cloud' checkbox is checked, and the 'Advertised via Overlay' checkbox is unchecked. At the bottom, there are 'Add' and 'Cancel' buttons. There are also links for 'USERS >' and 'STATIC SOURCE NAT (SRX ONLY) >'.

5. **Click Add.**

Excellent! This network is now defined for use across the entire organization, including the template that you will apply to your SSR1500.

Add Applications

Define the applications for the WAN to deliver, starting with the Internet.

1. Select Organization > Applications from the menu on the left.
2. Click Add Applications in the upper-right corner of the Applications page.
 - **Video:** [Access the Add Applications Page](#)
3. Enter the name of the application. For example, Internet.
4. Enter 0.0.0.0/0, or all IPv4 address space in the IP Addresses field.

The screenshot shows a web-based configuration window titled "Add Application". It contains several input fields and a radio button group. The "Name" field is filled with "internet". The "Type" section has three radio buttons: "Custom Apps" (selected), "Apps", and "App Categories". The "IP Addresses" field contains "0.0.0.0/0". Below it, the text "(comma-separated)" is visible. The "Domain Names" field is empty, with "(comma-separated)" below it. At the bottom, there are "Add" and "Cancel" buttons. A red rectangle highlights the "Name", "Type", and "IP Addresses" sections.

5. Click Add.

Nice! Your organization is now set up to provide access to the Internet.

Create a WAN Edge Template

Excellent!

Now you have the SSR1500 waiting to be claimed, a network for your LAN, and an application. Next, you need to create a WAN Edge template that ties them all together! Templates are reusable and keep the configuration consistent for every SSR1500 you deploy.

Create a Template

To create a Template:

1. Select Organization > WAN Edge Templates from the menu on the left.
2. Click Create Template in the upper-right corner of the WAN Edge Templates page.
3. Enter a name for the template.
4. Click Create.
5. Enter the NTP and DNS information for the WAN edge device as per your network requirements.
 - **Video:** [Create the Template](#)

Configure the WAN Port

The first thing to do in your template is to specify which port to use for the WAN.

1. Scroll to the WAN section of the template, and click Add WAN.
2. Enter the name for the WAN port. For example, wan1.
 - **Video:** [Add WAN Configuration](#)
3. Enter the interface as ge-0/1/0 to designate it as a WAN port.

4. Click Add.

Configure the LAN Port

Next, associate your LAN network segment with the appropriate port on the SSR1500.

1. Scroll to the LAN section of the template, and click Add LAN.
 - **Video:** [Add LAN Configuration](#)
2. From the Network drop-down menu, select your network segment to associate it with the LAN port.
3. Enter the interface for the LAN port, for example, xe-0/2/1.
4. Enter 192.168.1.1 as the IP Address that needs to be assigned to the WAN edge device .1 for use as the gateway in the network.
5. Enter /24 as the Prefix Length.

Add LAN Configuration

Network
my-lan

☐ Custom VR (SRX Only)

Interface
xe-0/2/1
(ge-0/0/1 or ge-0/0/1-5 or reth0, comma separated values supported for aggregation)

☐ Port Aggregation (SRX Only)

☐ Redundant BETA

IP Address
192.168.1.1
(Subnet IP: 192.168.1.0)

Prefix Length
24
(Subnet Prefix Length: 24)

Redirect Gateway (SSR Only)

Untagged VLAN (SRX Only)

6. Select Server under DHCP to provide DHCP services to endpoints on this network.
7. Give your DHCP server an address pool starting with 192.168.1.100 and ending with 192.168.1.200.
8. Enter 192.168.1.1 as the gateway to be assigned to DHCP clients.
9. Finally, enter the IP addresses for the DNS Servers to be assigned to clients on the network. For example, 8.8.8.8, 8.8.4.4.

Add LAN Configuration

DHCP
☐ None ☐ Relay ☒ Server

IP Start
192.168.1.100

IP End
192.168.1.200

Gateway
192.168.1.1

DNS Servers
8.8.8.8, 8.8.4.4
(Comma seperated list of IP Addresses)

DNS Suffix (SRX Only)

10. Click Add.

Your template has the WAN and LAN information. Now, you need to tell the SSR1500 how to use the information to connect users to applications. This is done using traffic steering and application policies.

Configure Traffic Steering Policy

To configure the Traffic Steering policy:

1. Scroll to the Traffic Steering section of the template, and click Add Traffic Steering.
 - **Video:** [Add Traffic Steering Policy](#)
2. Enter a name for the steering policy, for example, local breakout.
3. Click Add Paths to give your steering policy a path to send traffic.
4. Select WAN as the path type, and select your WAN interface. For applications that use the policy, this indicates you want the traffic to be sent directly out of the local WAN interface.
5. Click the ✓ button in the upper right corner of the Add Path panel, and then click Add at the bottom of the Add Traffic Steering side panel.

Configure the Application Policy

To configure Application policy:

1. Scroll to the Application Policies section of the template, and click Add Application Policy.
 - **Video:** [Add Application Policy](#)
2. Enter a string in the Name column, and click the check mark to the right of your entry.
3. Select your LAN network from the Network column drop-down list. Select Allow from the Action column drop-down list.
4. Select your application from the Applications column drop-down list. For example, application Internet that you created in "[Add Applications](#)".
5. Select your local breakout steering policy from the Traffic Steering column drop-down list.
 - **Video:** [Configure the Application Policy](#)

Almost there!

You now have a working WAN Edge template that you can apply to many sites and appliances across your organization.

Assign the Template to a Site

Now that you have set up the template, you need to save and assign it to the site where your WAN edge device will be deployed.

1. Scroll to the top of the page and click Save.
2. Click the Assign to Site button, and select the site to which you want to apply the template configuration.

Great work! All that remains is to associate the SSR1500 with a site.

Assign the SSR1500 to a Site

After the SSR1500 is onboarded to the Mist cloud, you'll need to assign it to a site so you can begin to manage the configuration and gather data in Mist cloud.

1. Select Organization > Inventory. The status of the SSR1500 is shown as Unassigned.
2. Select the SSR1500 and from the More drop-down list, select Assign to Site.
3. Select the site from the Site list.
 - **NOTE:** Under Manage Configuration, do not check the Manage Configuration with Mist checkbox for the SSR1500 if it is using Session Smart Router software version 5.4.4. This allows the SSR1500 to reach out to the conductor IP address specified when the site was created to receive configuration information.
 - If you are onboarding a Mist-managed appliance using Session Smart Router software version 6.0, select Manage Configuration with Mist. If you do not select Manage Configuration with Mist, the SSR1500 will not be managed by Mist.
4. Click Assign to Site.
 - **Video:** [Assign the SSR1500 to a Site](#)

The site assignment takes a few minutes. After the site is fully onboarded, use the Mist WAN Edge – Device View to access the SSR1500, and the Insights view to view events and activity.

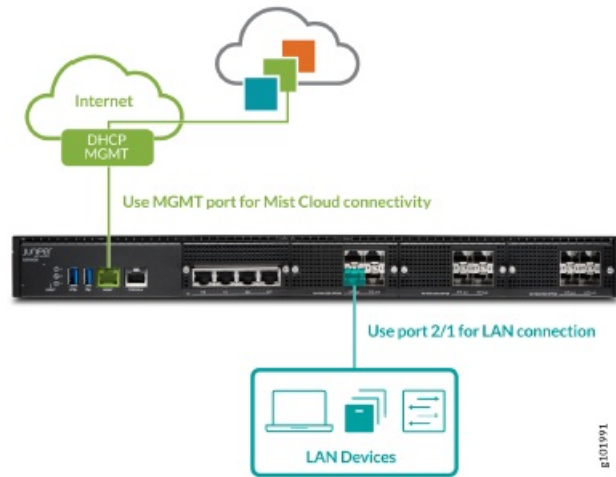
Install the SSR1500 in a Rack

Install the SSR1500 in a rack and connect it to power. For instructions see the hardware guide on the [Juniper Mist Supported Hardware](#) page.

Connect Your SSR1500 to the Mist Cloud

Your SSR1500 uses a port labeled MGMT (mgmt-0/0/0) as the default port to contact Mist for zero-touch provisioning (ZTP). It uses port 2/1 (xe-0/2/1) to connect to the LAN.

1. Connect the MGMT port to an Ethernet link that can assign a DHCP address to the SSR1500 and provide connectivity to the Internet and Mist.
 - **NOTE:** For management, you can connect the SSR1500 to Mist using the MGMT port. You can also connect to Mist from one of the WAN ports only when the MGMT port is disconnected or does not have a valid DHCP leased address and default route.
 - Do not change the Mist management port once your appliance is powered on and connected to the Mist Cloud instance.
2. Connect port 2/1 to your LAN devices, such as
 - Mist-managed Juniper EX switches
 - Mist APs
 - User devices



3. Power on the SSR1500.

- **Great job!** Your SSR1500 is now connected to the Mist cloud! In just a few minutes, Mist will send the template-driven configuration down to your device. Once the configuration has been applied, it will begin forwarding sessions from LAN to WAN as described by your policy.
- Go to the WAN Edges menu on the Mist sidebar, select your device, and watch events as the device completes ZTP.
- As your client devices connected to the LAN are assigned addresses from the WAN Edge DHCP server and begin sending sessions, telemetry will populate the insights page, and Marvis will start analyzing it on your behalf.

Keep Going

SUMMARY

Congratulations! Now that you've done the initial configuration, your SSR1500 is ready to use. Here are some things you can do next:

What's Next

If you want to	Then
Understand the various configurations available on the SSR1500	See Configuration Management on the SSR
Configure essential user access and authentication features	See Access Management
Upgrade the software	See Upgrading the SSR Networking Platform

General Information

If you want to	Then
See all documentation available for the SSR1500	See the SSR1500 Documentation in the Juniper Networks TechLibrary
See all documentation available for SSR software	Visit Session Smart Router (formerly 128T)
Stay up-to-date with new and changed features and known and resolved issues	See the SSR Release Notes


Learn with Videos

Here are some great video and training resources that will help you expand your knowledge of SSR Software.

If you want to	Then
Get short tips and instructions that provide quick answers, clarity, and insight into specific features and functions of Juniper technologies	See Learning with Videos on 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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Documents / Resources

	JuniPer Cloud-Ready SSR1500 Session Smart Router [pdf] User Guide JuniPer Cloud-Ready SSR1500 Session Smart Router, Juniper Cloud-Ready SSR1500, Session Smart Router, Smart Router, Router
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References

- [Get Started with Free Juniper Training](#)
- [Mist Systems](#)
- [Session Smart Router \(formerly 128T\) Documentation | Juniper Networks](#)
- [SSR1500 Documentation | Juniper Networks](#)
- [Mist | Quick Start | Step 1: Begin | Juniper Networks](#)
- [Juniper Mist Supported Hardware | Mist | Juniper Networks](#)
- [Configuration Management on the SSR | SSN Docs](#)

- [📖 Upgrading the SSR Networking Platform | SSN Docs](#)
- [📖 SSR 5.4 Release Notes | SSN Docs](#)
- [User Manual](#)

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