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Juniper NETWORKS SSR1300 Smart Router User Guide

Contents

Juniper NETWORKS SSR1300 Smart Router

Product Information

Specifications

- **Model:** Cloud-Ready SSR1300

Product Usage Instructions

Step 1: Begin

Meet the Cloud-Ready SSR1300

The Cloud-Ready SSR1300 is a versatile device that allows you to access applications over a LAN network segment. Before you begin using the SSR1300, you need to claim the device and set up your organization and sites.

Claim Your Appliance

To claim your SSR1300, 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 following the instructions in the Create a Mist Account and Organization section.
3. Select your organization.
4. Tap "Claim Devices to Org".
5. Scan the QR code on your SSR1300. The app will automatically claim the device and add it to your organization's inventory.
6. On the Organization screen, tap "Device Inventory" and verify that the SSR1300 is listed.

Step 2: Up and Running

Now that you have claimed your SSR1300, you can proceed with the setup process.

Add the Network

To begin your WAN design, follow these steps

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

Add Applications

To add applications to your SSR1300, follow these steps

1. Select Organization > Applications from the menu on the left.
2. Click "Add Applications" in the upper-right corner of the Applications page.
3. Enter the application details.
4. Click "Add".

Create a WAN Edge Template

To create a WAN Edge template for your SSR1300, follow these steps

1. Select Organization > Templates from the menu on the left.

2. Click "Add Template" in the upper-right corner of the Templates page.

3. Enter a name for the template.

4. Select the network and applications you want to associate with the template.

5. Click "Add".

Assign the Template to a Site

To assign the WAN Edge template to a site, follow these steps

1. Select Organization > Sites from the menu on the left.

2. Select the desired site.

3. Click "Edit" next to the site details.

4. Under "WAN Edge", select the template you created.

5. Click "Save".

Assign the SSR1300 to a Site

To assign the SSR1300 to a site, follow these steps

1. Select Organization > Inventory from the menu on the left.

2. Select the SSR1300 from the inventory list.

3. Click "Assign to Site" and select the desired site.

4. Click "Save".

Install the SSR1300 in a Rack

To install the SSR1300 in a rack, follow these steps

1. Prepare the rack space for the SSR1300.

2. Mount the SSR1300 in the rack using the provided mounting brackets.

3. Secure the SSR1300 in place.

Connect Your SSR1300 to the Mist Cloud

To connect your SSR1300 to the Mist Cloud, make sure it is powered on and connected to the internet. The device will automatically establish a connection with the Mist Cloud.

FAQ

- **Q: How do I claim multiple devices?**

  A: When purchasing multiple devices, you will receive an activation code along with your purchase order (PO) information. Make a note of this code and follow the instructions in the Enter the Mist Claim Code section to claim each device.

- **Q: How do I claim a single device?**

  A: Locate the QR code on your device and make a note of the alphanumeric claim code directly above it. Follow the instructions in the Enter the Mist Claim Code section to claim your device.

Quick Start

Cloud-Ready SSR1300

IN THIS GUIDE

Step 1: Begin

IN THIS SECTION

In this guide, we provide a simple, three-step path, to quickly get the Juniper Networks® SSR1300 appliance up and running on 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 SSR1300
The SSR1300 is a 1 U fixed configuration appliance that's ideal for medium data center or campus deployments. Powered by the Juniper® Session Smart Router (SSR) software, the SSR1300 provides secure and resilient WAN connectivity.
The SSR1300 has four 1 GbE ports, four 1/10 GbE SFP+ ports, four 10 GbE SFP+ ports, a management port (for Mist operations), 128 GB of memory, and a 256 GB enterprise-grade solid-state drive (SSD) for storage.

Claim Your Appliance

IN THIS SECTION

The SSR1300 comes ready to manage using the Juniper Mist™ Cloud portal.
To add the SSR1300 to your organization's WAN Edge inventory, you must enter the SSR1300 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" on page 3.
- 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 427YYQFLKKV6F8N. See "Enter the Mist Claim Code" on page 3.

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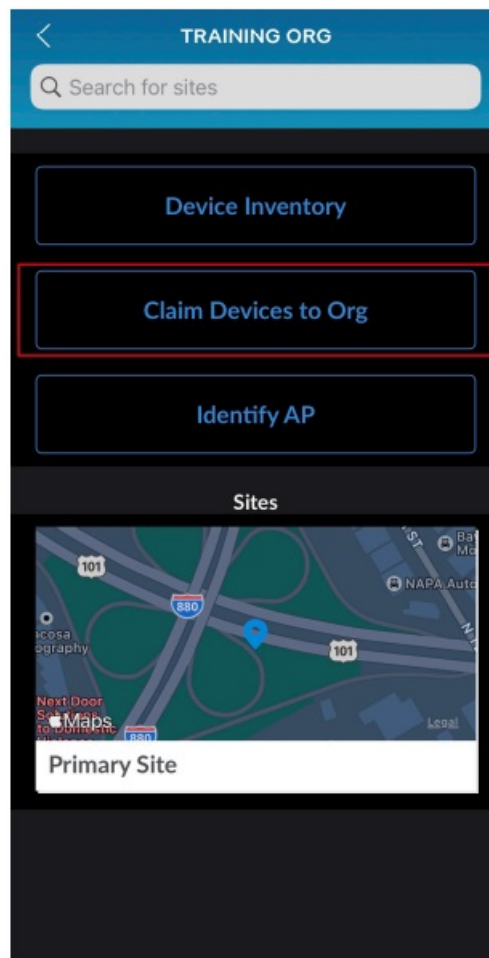
4. Scan the QR code. The app automatically claims the device and adds it into your organization's inventory.
5. On the Organization screen, tap Device Inventory → Routers → Unassigned.
   Review the MAC address.

Onboarding Complete!
Fantastic, the SSR1300 is in your inventory! To provision the SSR1300, see "Step 2: Up and Running" on page 5.

Enter the Mist Claim Code

- Claiming a 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 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 SSR1300 Activation code or claim code and click Add.

5. Clear the Assign claimed WAN Edges to site check box to place the SSR1300 in the inventory. The SSR1300 is assigned to a site later, see "Assign the SSR1300 to a Site" on page 11.
6. Click the Claim button to claim the SSR1300 into your inventory.

Video: Add the Claim Information in Mist

Onboarding Complete!
Fantastic, the SSR1300 is in your inventory! To provision the SSR1300, see "Step 2: Up and Running" on page 5.

Step 2: Up and Running

SUMMARY

The SSR1300 is onboarded to the Juniper Mist™ Cloud. To provision the SSR1300 with ZTP, log in to your Mist portal and begin the WAN configuration.
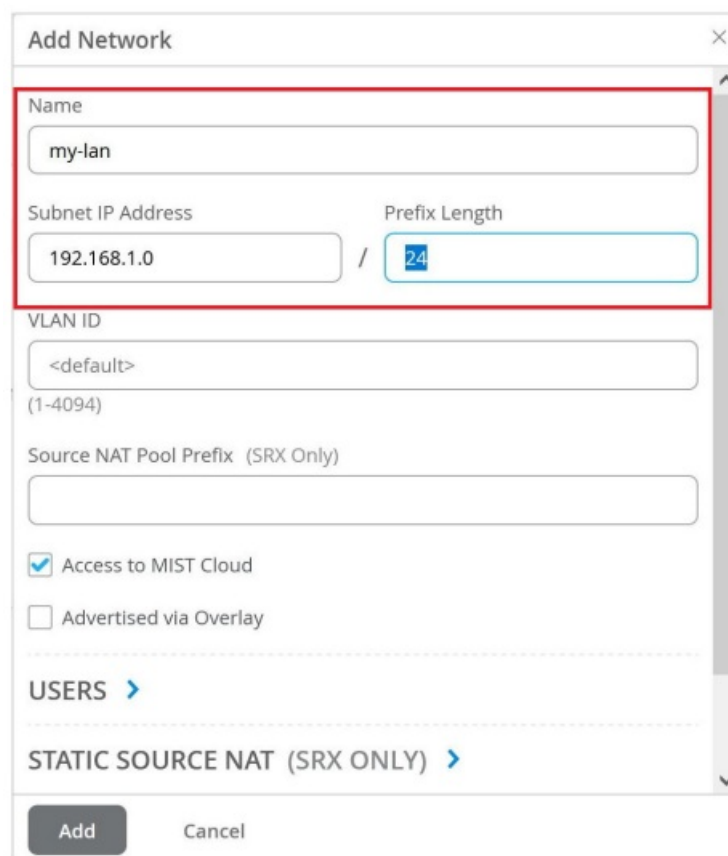
IN THIS SECTION

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.

5. Click Add.

   Excellent! This network is now defined for use across the entire organization, including the template that you

   will apply to your SSR1300.

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.

5. Click Add.

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

Create a WAN Edge Template

IN THIS SECTION

Excellent! Now you have the SSR1300 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 SSR1300 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 xe-0/0/0 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 SSR1300.

1. Scroll to the LAN section of the template, and click Add LAN.

    Video: Add LAN Configuration

2. From the Network dropdown menu, select your network segment to associate it with the LAN port.
3. Enter the interface for the LAN port, for example, xe-0/0/3.
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.

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 SSR1300 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 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" on page 6.

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 SSR1300 with a site.

Assign the SSR1300 to a Site

After the SSR1300 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 SSR1300 is shown as Unassigned.

2. Select the SSR1300 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 SSR1300 if it is using Session Smart Router software version 5.4.4. This allows the SSR1300 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 SSR1300 will not be managed by Mist.

4. Click Assign to Site.

   Video: Assign the SSR1300 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 SSR1300, and the Insights view to view events and activity.

Install the SSR1300 in a Rack

Install the SSR1300 in a rack and connect it to power. For instructions see the hardware guide on the Juniper Mist Supported Hardware page.

Connect Your SSR1300 to the Mist Cloud

Your SSR1300, uses port labelled MGMT (mgmt-0/0/0) as the default port to contact Mist for zero-touch provisioning (ZTP). It uses port 0/3 (xe-0/0/3) to connect to the LAN.

1. Connect the MGMT port to an Ethernet link that can assign a DHCP address to the SSR1300 and provide connectivity to the Internet and Mist.

   NOTE: For management, you can connect the SSR1300 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 0/3 to your LAN devices, such as

- Mist-managed Juniper EX switches
- Mist APs
- User devices
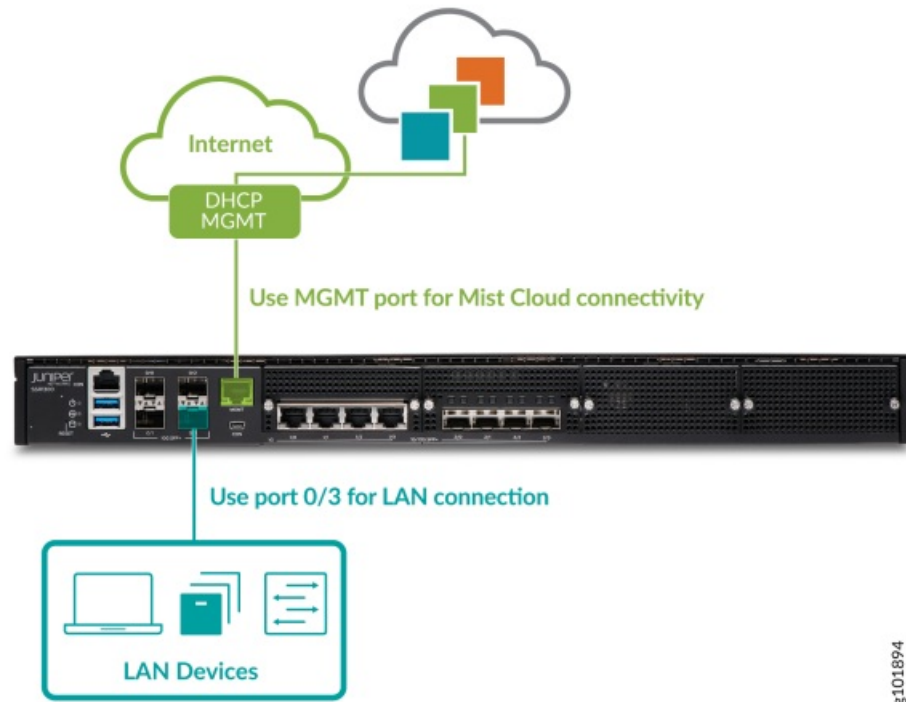
3. Power on the SSR1300.

Great job! Your SSR1300 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.

Step 3: Keep Going

SUMMARY
Congratulations! Now that you've done the initial configuration, your SSR1300 is ready to use. Here are some things you can do next:

IN THIS SECTION

What's Next?

If you want to	Then
Understand the various configurations available on the SSR1300	See Configuration Management on the SSR
Configure essential user access and authentication features	See Access Management

If you want to	Then
Upgrade the software	See Upgrading the SSR Networking Platform

General Information
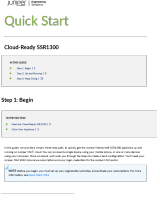
If you want to	Then
See all documentation available for the SSR1300	See the SSR1300 Documentation in the Juniper Networks TechLibrary
See all documentation available for SSR software	Visit Session Smart Router (formerly 128T)
Stay up-to-date with new and changed features and known and resolved issues	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 and concise 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

Documents / Resources

[Juniper NETWORKS SSR1300 Smart Router](#) [pdf] User Guide
SSR1300, SSR1300 Smart Router, Smart Router, Router

References

- [**Get Started with Free Juniper Training**](#)
- [**Mist Systems**](#)
- [**Session Smart Router (formerly 128T) Documentation | Juniper Networks**](#)
- [**SSR1300 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**](#)