Engineering
Simplicity

Quick Start

Onboard SRX Series Firewalls to Juniper Security Director

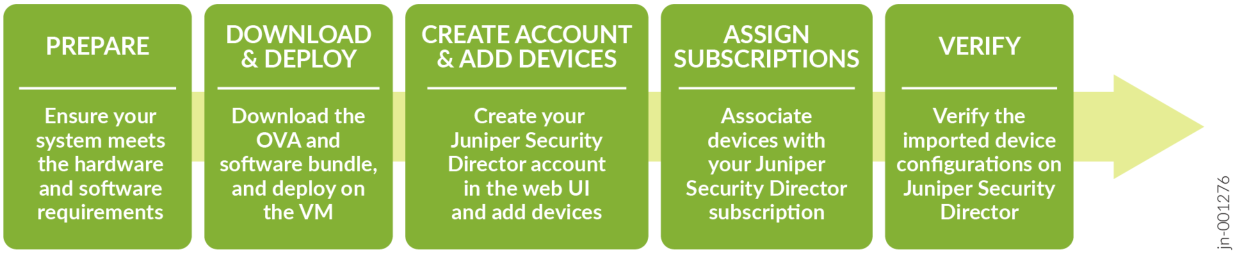
IN THIS GUIDE

Step 1: Begin

IN THIS SECTION

You can install Juniper Security Director on-premises and manage SRX Series Firewalls and vSRX Virtual Firewalls through a centralized web interface. This guide walks you through installing Juniper Security Director, onboarding your devices, and configuring Juniper Security Director to manage your devices.

Here's the high-level order of installation and device onboarding workflow.


PREPARE
Ensure your system meets the hardware and software requirements
DOWNLOAD & DEPLOY
Download the OVA and software bundle, and deploy on the VM
CREATE ACCOUNT & ADD DEVICES
Create your Juniper Security Director account in the web UI and add devices
ASSIGN SUBSCRIPTIONS
Associate devices with your Juniper Security Director subscription
VERIFY
Verify the imported device configurations on Juniper Security Director
jn-001276

Prepare to Install Juniper Security Director

Hardware Requirements

Table 1: Hardware Requirements for ESXi Server

VM Configuration	Device Management Capability	Log Analytics and Storage Capability
VM Configuration 1 • 16 vCPU • 80 GB RAM • 2.1 TB storage	• Up to 1000 devices • Up to 10000 policy rules per device • Up to 6000 NAT rules per device • Up to 1000 VPNs per device/system	• Up to 17000 logs per second • Out of the total 2.1 TB storage, 1.5 TB is dedicated for log analytics.
VM Configuration 2 • 40 vCPU • 208 GB RAM • 4.2 TB storage	• Up to 3000 devices • Up to 20000 policy rules per device • Up to 10000 NAT rules per device • Up to 1500 VPNs per device/system	• Up to 40000 logs per second • Out of the total 4.2 TB storage, 3.5 TB is dedicated for log analytics.

Table 1: Hardware Requirements for ESXi Server *(Continued)*

VM Configuration	Device Management Capability	Log Analytics and Storage Capability
NOTE: • We do not recommend hyperthreading on VMware hypervisor (ESXi) Server. You must use dedicated resources for CPU, RAM, and storage. • We do not recommend sharing resources. • You can switch from VM configuration 1 to VM configuration 2, if necessary. However, once you switch to VM configuration 2, you cannot revert to VM configuration 1.		

Software Requirements

- Juniper Security Director runs on a VMware hypervisor (ESXi) Server. Use vCenter and vSphere version 7.0 and later. You must deploy the OVA through vCenter Server only. We do not support OVA deployment on ESXi directly.
- You must have the following dedicated IP addresses in the same subnet:
  - **Management IP address**—IP address for the VM that provides access to the Juniper Security Director CLI.
  - **UI virtual IP address**—Virtual IP address to access the Juniper Security Director GUI.
  - **Device connection virtual IP address**—Virtual IP address to establish connection between the managed devices and Juniper Security Director.
  - **Log collector virtual IP address**—Virtual IP address to receive logs from devices.

  To ensure a smooth deployment of the OVA, you must make sure that the UI virtual IP address, device connection virtual IP address, and log collector virtual IP address are accessible through the default gateway. Additionally, verify that the Fully Qualified Domain Names (FQDN) associated with these IP addresses can be resolved before you start the OVA deployment process.
- Ensure that you have access to SMTP, NTP, and DNS servers from the VM network (Juniper Security Director).

  NOTE: We support NTP server with IPv4 address only.

Download the OVA and Software Bundle

1. Download the **Juniper Security Director OVA** (.ova file) from https://support.juniper.net/support/downloads/?p=security-director-on-prem to a webserver or your local machine. To avoid connectivity issues, download the OVA directly to your local machine.

2. Download the **Juniper Security Director Software Bundle** (.tgz file) to your local machine from https://support.juniper.net/support/downloads/?p=security-director-on-prem and then transfer the file to your staging server.

   A staging server is an intermediate server where the software bundle is downloaded and is accessible from the VM.

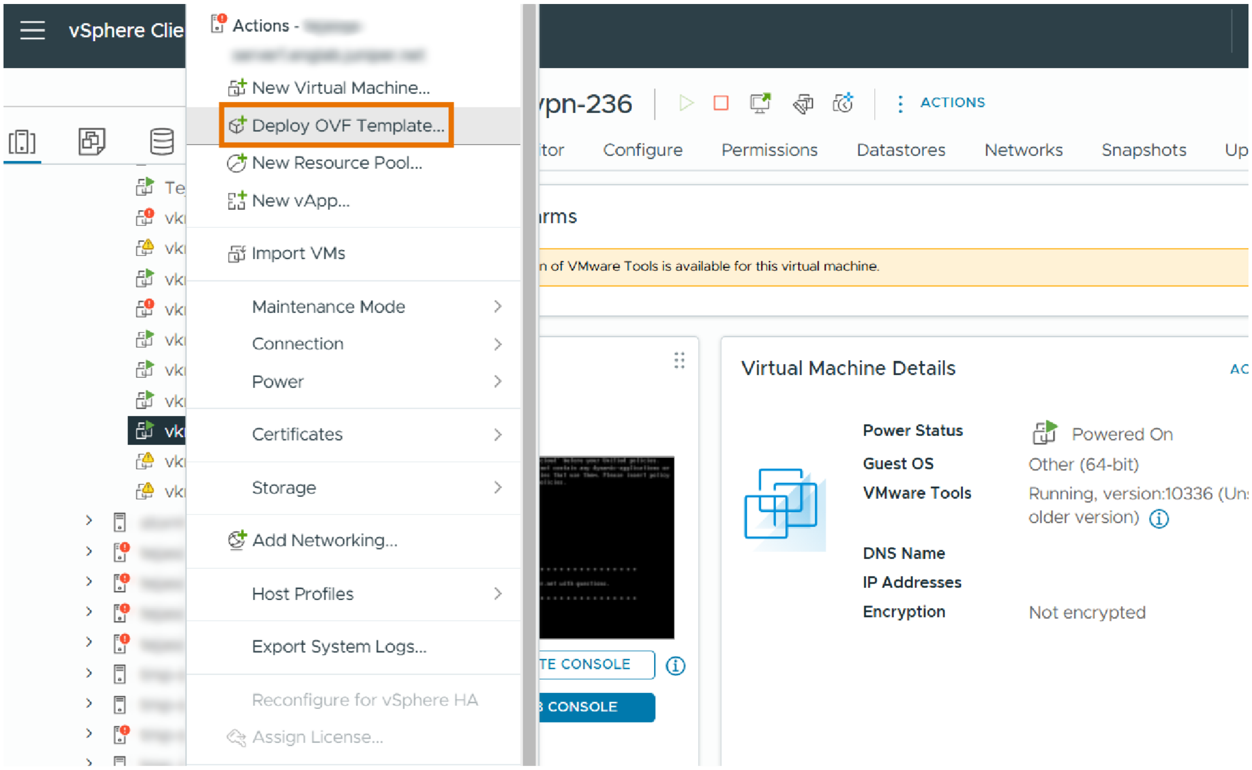
   The staging server must support software bundle download from the Juniper Security Director VM through Secure Copy Protocol (SCP). Before you deploy the VM, you must have the details of the staging server, including the SCP username and password.

Deploy the VM

1. Open the vSphere Client.

2. Right-click the inventory object that is a valid parent object of a VM and select **Deploy OVF Template**.

Figure 1: Deploy OVF Template



Power Status	Powered On
Guest OS	Other (64-bit)
VMware Tools	Running, version:10336 (Un older version)
DNS Name	
IP Addresses	
Encryption	Not encrypted

3. On the **Select an OVF template** page:

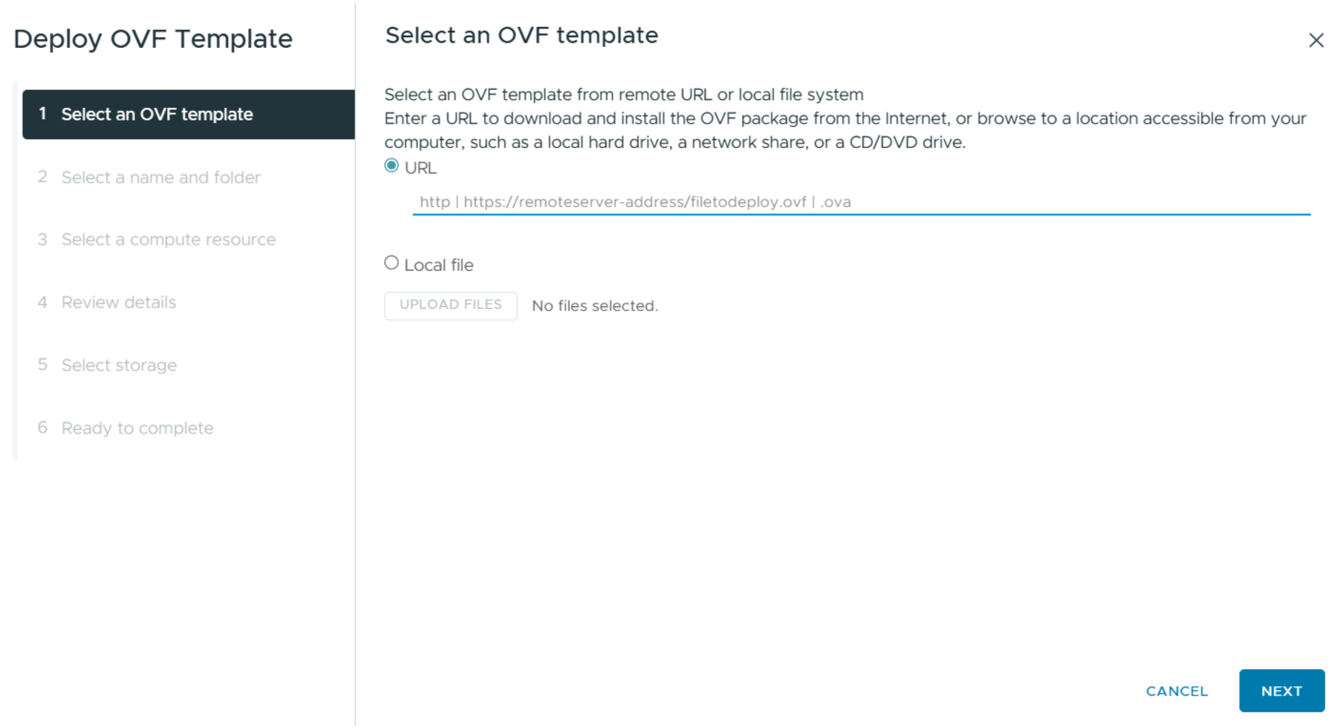
   - Enter the webserver OVA URL, where you have downloaded the OVA. The system might warn you about source verification. Click **Yes**.

> ⓘ **NOTE**: Ensure that firewall rules do not block image access from the vSphere cluster.

OR

- Select the **Local file** option and click **UPLOAD FILES** to choose the OVA file from your local machine.

Figure 2: Select or Upload OVF File



Deploy OVF Template

1 Select an OVF template
2 Select a name and folder
3 Select a compute resource
4 Review details
5 Select storage
6 Ready to complete

Select an OVF template

Select an OVF template from remote URL or local file system

Enter a URL to download and install the OVF package from the Internet, or browse to a location accessible from your computer, such as a local hard drive, a network share, or a CD/DVD drive.

● URL

http | https://remoteserver-address/filetodeploy.ovf | .ova

○ Local file

UPLOAD FILES No files selected.

4. On the **Select a name and folder** page, enter the VM name and select the location for the VM.

5. On the **Select a compute resource** page, select the compute resource for the host on which the VM will be deployed.

6. On the **Review details** page, review the details of the resources to be provisioned.

7. On the **License agreements** page, select the check box to accept the license agreements.

8. On the **Select storage** page, select the storage for the configuration and the virtual disk format. We recommend you to use virtual disk format as Thick provision and select storage with at least 1.5 TB of capacity.

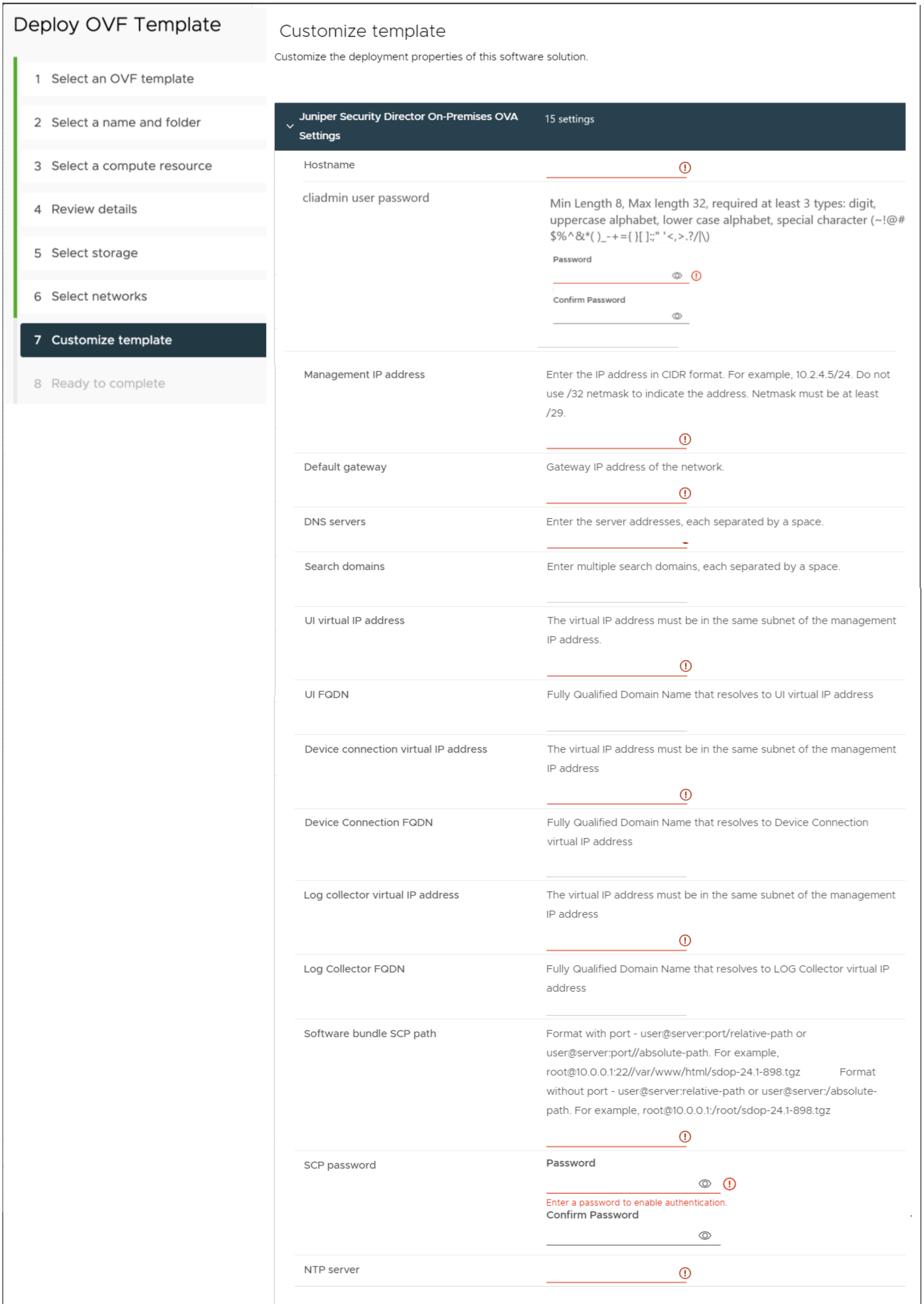
> ⓘ **NOTE**: We do not recommend thin provisioning. If you choose thin provisioning and the actual disk space available is low, the system might encounter problems once the disk is full.

9. On the **Select networks** page, select the network to configure IP allocation for static addressing.

10. On the **Customize template** page, configure Juniper Security Director on-premise OVA parameters.

NOTE: Prepare all details for the Custom template page in advance. The OVF template will timeout after 6 to 7 minutes.

Figure 3: Customize OVF Template



Deploy OVF Template

1 Select an OVF template

2 Select a name and folder

3 Select a compute resource

4 Review details

5 Select storage

6 Select networks

7 Customize template

8 Ready to complete

Customize template

Customize the deployment properties of this software solution.

Juniper Security Director On-Premises OVA Settings 15 settings

Hostname

cliadmin user password

Min Length 8, Max length 32, required at least 3 types: digit, uppercase alphabet, lower case alphabet, special character (~!@#$%^&*( )_-+={ }[ ]:;" '<,>.?/|\)

Password

Confirm Password

Management IP address

Enter the IP address in CIDR format. For example, 10.2.4.5/24. Do not use /32 netmask to indicate the address. Netmask must be at least /29.

Default gateway

Gateway IP address of the network.

DNS servers

Enter the server addresses, each separated by a space.

Search domains

Enter multiple search domains, each separated by a space.

UI virtual IP address

The virtual IP address must be in the same subnet of the management IP address.

UI FQDN

Fully Qualified Domain Name that resolves to UI virtual IP address

Device connection virtual IP address

The virtual IP address must be in the same subnet of the management IP address

Device Connection FQDN

Fully Qualified Domain Name that resolves to Device Connection virtual IP address

Log collector virtual IP address

The virtual IP address must be in the same subnet of the management IP address

Log Collector FQDN

Fully Qualified Domain Name that resolves to LOG Collector virtual IP address

Software bundle SCP path

Format with port - user@server:port/relative-path or user@server:port//absolute-path. For example, root@10.0.0.1:22//var/www/html/sdop-24.1-898.tgz Format without port - user@server:relative-path or user@server:/absolute-path. For example, root@10.0.0.1:/root/sdop-24.1-898.tgz

SCP password

Password

Enter a password to enable authentication.

Confirm Password

NTP server

NOTE:

- The **cliadmin user password** field does not strictly validate password requirements. However, during the installation process, the system enforces strict validations and rejects the password that does not meet the specified requirements, causing installation failure. To avoid issues during installation, ensure that the password meets these criteria:

  - Must be at least 8 characters long and not more than 32 characters.

  - Must not be dictionary words.

  - Must include at least three of the following:

    - Numbers (0-9)

    - Uppercase letters (A-Z)

    - Lowercase letters (a-z)

    - Special characters (~!@#$%^&*()_-+={}[];:"'<,>.?/|\)

- **UI FQDN**, **Device Connection FQDN**, and **Log Collector FQDN** fields are optional. However, we highly recommend you to use Fully Qualified Domain Name (FQDN). Ensure that the FQDN is:

  - Valid and follows the domain naming conventions.

  - Complete, including the domain and subdomain details.

  - Resolvable, that is, DNS can correctly map the FQDN to an IP address.

  An incorrect FQDN results in issues that require re-installation of the VM.

  If the IP addresses are incorrect, you won't be able to start an SSH connection to the VM. You can only access the VM through the web portal.

- The **Software bundle SCP path** refers to the location of the Juniper Security Director software bundle (.tgz file) on your staging server. Make sure you have downloaded the **Juniper Security Director Software Bundle** (.tgz file) to your local machine from Juniper Software Downloads page and transferred it to your staging server. The staging server serves as an intermediary to store and make the software bundle accessible to the VM. The staging server must support software bundle download from the Juniper Security Director VM through SCP. Before deploying the VM, ensure you have the details of the staging server, including the SCP username and password.

11. On the **Ready to complete** page, review all the details and if required, go back and edit the VM parameters. These network parameters cannot be changed from the VM configuration after successful installation. However, network parameters can be changed from the CLI. Click **Finish** to begin the OVA deployment.

    You can monitor the OVA deployment progress status in the Recent Tasks window at the bottom of your screen till it is 100% complete. The Status column shows the deployment complete percentage.

    Congratulations! Now the OVA deployment is complete.

12. Click the triangle icon (▷) next to the VM name to power on the VM.

    NOTE: By default, the VM will be deployed with the smallest resource configuration as mentioned in "Hardware Requirements" on page 2. Adjust the resources to match other resource configurations using the VMware Edit VM settings.

    For a successful installation, the resource allocation must match "Hardware Requirements" on page 2.

Once the VM powers on, navigate to the **Summary** tab and click **LAUNCH WEB CONSOLE** to monitor the software bundle installation status.

NOTE: Avoid performing any operation on the console until the installation is complete.

A successful installation requires approximately 30 minutes. If the installation lasts longer, check the Web console for potential errors. You can ssh to the VM IP using the **cliadmin** user and the password you configured during the OVA deployment. Then, use the **show bundle install status** command to check the installation status.

You can view the installation progress on the console. After the installation is complete, the console displays *Successfully installed software bundle on the cluster* and the VM reboots.

Congratulations! The software bundle installation is now complete.

Step 2: Up and Running

IN THIS SECTION

Create Organization Account and Add Devices

Before You Begin

The following ports must be opened:

- Inbound port 443 for users' connection to Web is associated to the UI virtual IP address.

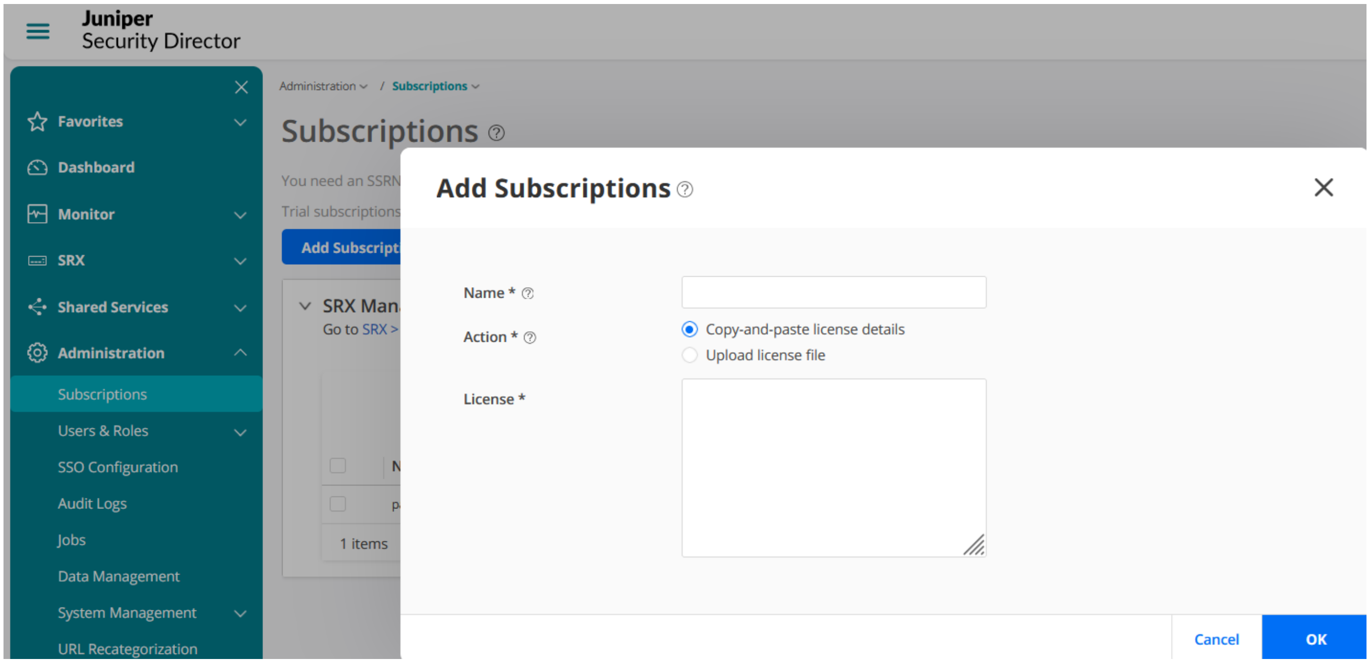
- Outbound port 25 for outbound to configured mail server is associated to the Management IP address.

- Inbound port 7804 from all managed devices is associated to the device connection virtual IP address.

- Outbound port 443 for signature download URL is associated to the Management IP address.

- Inbound port 6514 for inbound connection for traffic log is associated to the log collector virtual IP address.

1. Enter the UI virtual IP address or FQDN (domain name) in a browser to access the Juniper Security Director login page. Follow on-screen instructions to create and activate your account. For details, see Log In to the Juniper Security Director Web UI.
2. Login to Juniper Security Director, click **Add Subscriptions**. You can also use a 60-day trial subscription that is available by default.



Action *: ● Copy-and-paste license details ○ Upload license file

3. Enter a name for the subscription and select either of the following options:

   a. **Copy-and-paste license details**—Copy license key and paste in the **License** field.

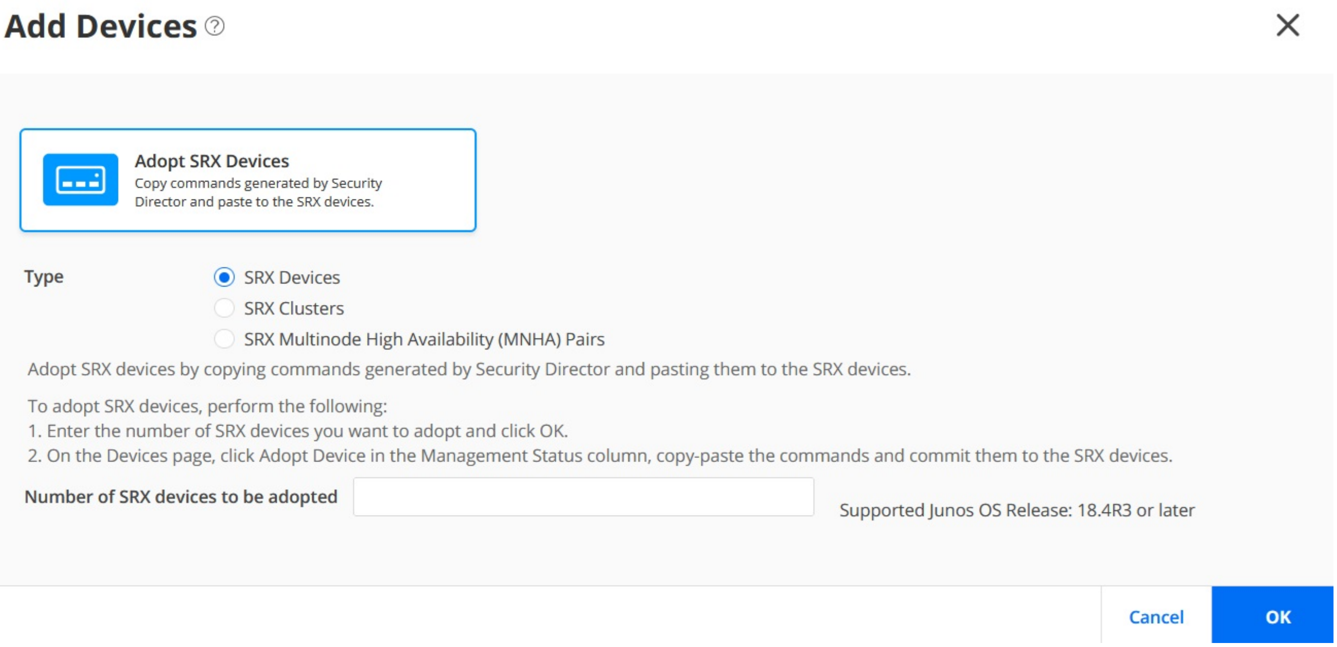
   b. **Upload license file**—Click **Browse** and navigate to the license.txt file. Click **Open**. Please note you can upload only .txt file.

4. Click **OK**. You can view your added subscriptions from **Subscriptions** > **SRX Management Subscriptions.** If you do not see your subscriptions, go to **Administration** > **Jobs** page to view the status.
5. Select **SRX** > **Device Management** > **Devices**, and click the + icon to add your devices.

NOTE: To know about supported devices, see Juniper Security Director Supported Firewalls.

6. Click **Adopt SRX Devices** and select one of the following:

   - **SRX Devices**
   - **SRX Clusters**
   - **SRX Multinode High Availability (MNHA) Pairs**



Add Devices

Adopt SRX Devices
Copy commands generated by Security Director and paste to the SRX devices.

Type
● SRX Devices
○ SRX Clusters
○ SRX Multinode High Availability (MNHA) Pairs

Adopt SRX devices by copying commands generated by Security Director and pasting them to the SRX devices.

To adopt SRX devices, perform the following:
1. Enter the number of SRX devices you want to adopt and click OK.
2. On the Devices page, click Adopt Device in the Management Status column, copy-paste the commands and commit them to the SRX devices.

Number of SRX devices to be adopted

Supported Junos OS Release: 18.4R3 or later

   Follow the on-screen instructions to continue. For details, see Add Devices.

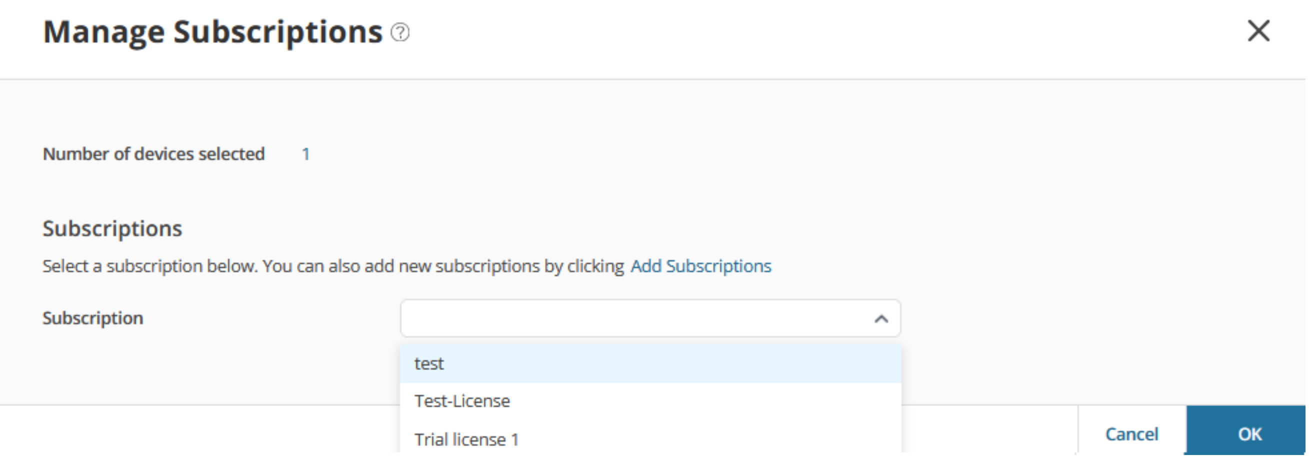
7. Copy and paste commands from the devices page to the SRX Series Firewall or the primary cluster device console. Then commit the changes. It will take few seconds for device discovery. After device discovery is successful, verify the following fields on the **Devices** page:

   - **Management Status** changes from **Discovery in progress** to **Up**.
   - **Inventory Status** and **Device Config Status** changes from **Out of Sync** to **In Sync**.

NOTE: In case of discovery failure, go to the **Administration** > **Jobs** page and view the status.

Associate Devices with Your Juniper Security Director Subscription

1. Go to **SRX** > **Device Management** > **Devices** select the device, and click **Manage Subscriptions**. Follow the on-screen instructions.



Manage Subscriptions

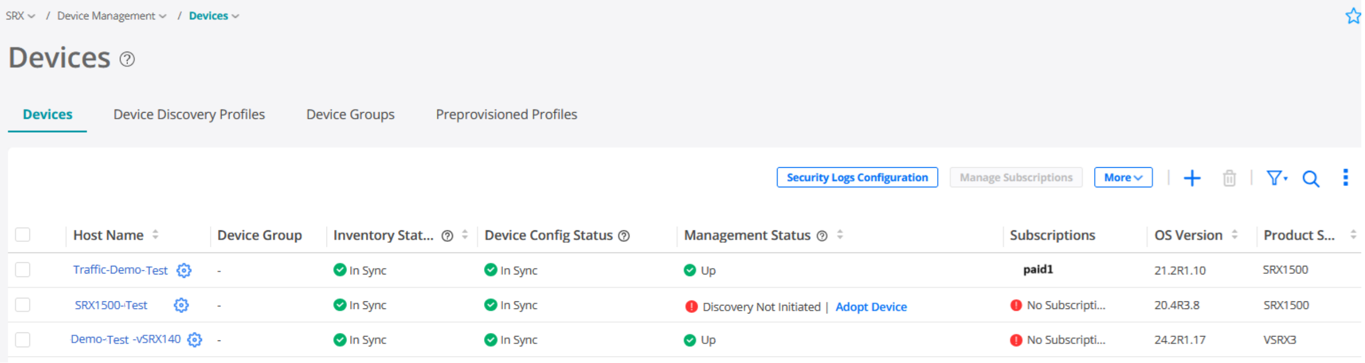
Number of devices selected 1

Subscriptions

Select a subscription below. You can also add new subscriptions by clicking Add Subscriptions

Subscription

2. Verify that **Subscriptions** column displays the subscription name for your device. Congratulations! You have successfully associated your device to Juniper Security Director.



SRX / Device Management / Devices
Devices
Devices
Device Discovery Profiles
Device Groups
Preprovisioned Profiles
Security Logs Configuration
Manage Subscriptions
More

□	Host Name	Device Group	Inventory Stat...	Device Config Status	Management Status	Subscriptions	OS Version	Product S...
□	Traffic-Demo-Test	-	✓ In Sync	✓ In Sync	✓ Up	paid1	21.2R1.10	SRX1500
□	SRX1500-Test	-	✓ In Sync	✓ In Sync	! Discovery Not Initiated | Adopt Device	! No Subscripti...	20.4R3.8	SRX1500
□	Demo-Test -vSRX140	-	✓ In Sync	✓ In Sync	✓ Up	! No Subscripti...	24.2R1.17	VSRX3

Verify Configuration on Adopted Devices

Verify your device configurations in Juniper Security Director.

- Go to **SRX** > **Security Policy** > **SRX Policy** and verify the imported security policies.
- Go to **SRX** > **NAT Policy** > **NAT** and verify the imported NAT policies.
- Go to **SRX** > **Device Management** > **Devices**, click **Security Logs Configuration**, and verify the security log configurations.

If you've set up security policy, NAT, IPSec VPN, and logs on the device, these configurations will be imported into Juniper Security Director.

Step 3: Keep Going

IN THIS SECTION

What's Next?

If You Want To	Then
Create or import a security policy, add a rule to the security policy, and deploy the security policy on the devices.	See Security Policies Overview
Create a NAT policy, add a rule to the NAT policy, and deploy the NAT policy on the devices.	See NAT Policies Overview
Set up the Content Security profiles to secure your network from multiple security threat types.	See Content Security Overview
View the traffic logs and network events including viruses found, interfaces that are down, number of attacks, and sessions.	See About the Session Page and About the All Security Events Page
Monitor the status of the CPU, disk space, storage database, and services running on the Juniper Security Director VM.	System Overview
Configure log level settings, generate and download system logs to troubleshoot the issues related to Juniper Security Director.	See About System Logs Page

General Information

If You Want To	Then
See all the available documentation for Juniper Security Director.	Visit Juniper Security Director