JUNIPER NETWORKS | Engineering Simplicity

Quick Start

vSRX on Google Cloud Platform

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Step 1: Begin

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In this guide, we provide a simple, three-step path, to quickly deploy the Juniper Networks® vSRX Virtual Firewall on your network. We've simplified and shortened the deployment and configuration steps, and included how-to videos. You'll learn how to prepare for and deploy the vSRX on the Google Cloud Platform, and how to do a basic configuration.

Meet the vSRX

Juniper Networks vSRX Virtual Firewall is a virtual security appliance that provides security and networking services at the perimeter or edge in virtualized private or public cloud environments. vSRX runs as a virtual machine (VM) on a standard

x86 server. vSRX is built on Junos OS and delivers networking and security features similar to those available on the software releases for the SRX Series Services Gateways.

The Juniper vSRX is available on the Google Cloud Platform (GCP) Marketplace. You can use the GCP Marketplace to set up your vSRX as a VM running on a Google Compute Engine instance.

Get Ready

Before you begin deployment, you'll need to do the following:

- Familiarize yourself with your vSRX VM license agreement. See Requirements for vSRX on Google Cloud Platform.
- Set up a Google account with an identity and access management (IAM) role with all required permissions to access, create, modify, and delete Compute Engine Instances and Storage Service.
- Create Google's Virtual Private Cloud (VPC) objects. For this, have the private IP addresses for all network and management devices handy.
- Create an SSH public and private key pair.

Generate SSH Keys

You'll need to generate a private and public SSH key pair as follows:

1. Generate the public key and the private key.
   - If you are using Linux or MacOS: Use the ssh-keygen tool to create the key pair in your .ssh directory. In the following sample, **gcp-user-1** is name of the key file and **gcp-user** is the username.

     ```
     ssh-keygen -t rsa -f ~/.ssh/gcp-user-1 -C gcp-user
     ```

   - If you are using Windows: Use the PuTTY Key Generator to create the key pair.
2. Copy your public key in a text editor. You'll need this key later while deploying vSRX in the GCP Marketplace.
3. Save your private key in .ppk format. You'll need this key later to authenticate the vSRX instance.

Create VPC Networks

You'll need to create the VPC networks and subnetworks before you start deploying your vSRX VM on GCP Marketplace.

1. Log in to the Google Cloud console.
2. In the left side of the navigation area, click **VPC network** under NETWORKING.
3. Select **VPC network**.
4. In the top pane, click **CREATE VPC NETWORK**.
5. Enter a name for the network.
6. Create a subnet with the following details:
   - **Name**—Name of the subnetwork.
   - **IP Address**—Assign an IP address range for creating interface subnetworks. This range is used for your internal network, so ensure that the address range does not overlap with other subnets.
   - **Region**—Select the region where you want to launch your vSRX VM.
   - **Private Google Access**—Retain the default value Off.
   - **Flow logs**—Retain the default value Off.
7. Click **Create**.

We recommend that you create a minimum of three VPC networks. The vSRX VM uses the first VPC network you create as the management interface and assigns the ge-0/0/0 and ge-0/0/1 interfaces to the remaining two VPC networks.

Deploy vSRX on Google Cloud Platform

Here's how to deploy vSRX from the GCP Marketplace:

1. Log in to the Google Cloud Platform console.
2. In the left side of the navigation area, select the **Marketplace**.
3. In the Search box, enter vSRX.
4. Click one of the following options based on your licensing requirements.

   For the purpose of the example setup, we're using the **vSRX Next Generation Firewall** option.

   - vSRX Next Generation Firewall

- vSRX Next Generation Firewall BYOL
- vSRX Next Generation Firewall with Antivirus Protection

5. Click **Launch**. The New vSRX Next Generation Firewall deployment page appears.

6. Provide the details for the vSRX VM.
   - **Deployment Name**—Enter a unique name for your vSRX VM.
   - **Zone**—Select a zone for your vSRX VM. For a list of supported zones, see Regions and Zones.
   - **Machine type**—Select a machine type based on the system requirements for your license. See Requirements for vSRX on Google Cloud Platform.
   - **SSH key**—Paste your public SSH key that you created earlier.
     - Paste the key after the text *gcp-user*.
     - Retain the default option Block project-wide SSH keys.
   - **Network interfaces**—Select the VPC network and the subnets. Note that you can add only those subnets that you've created for the selected zone for this vSRX VM.
   - **IP Forwarding**—Retain the default value On. This is a mandatory requirement for the vSRX VM.
   - **Enable External IP**—Select the **ephemeral** option. This setting allows the GCP to provide an ephemeral IP address to act as the external IP address.
   - **Allow HTTP traffic from the Internet**—Retain the default value as selected. We recommend *not* providing HTTP access unless absolutely necessary.
   - **Allow TCP port 22 traffic from the Internet**—Retain the default value as selected. For security reasons, we recommend that you limit the SSH access only to the specific IP address to access the vSRX instance.
7. Accept **GCP Marketplace Terms of Service**.

8. Click **Deploy**.

   You can see the progress of your vSRX deployment on the GCP console. When the deployment is complete, a message appears on the screen to let you know the deployment was successful. You'll also receive an e-mail notification.

9. Click your VM under vSRX Next Generation Firewall to view the details. You can view your VM details by navigating to the Compute Engine under COMPUTE in the left side of the navigation area.

10. Make note of the external IP address, shown under Network interfaces. You'll need this address later to log in to your vSRX instance using the CLI.

Now that you've completed the deployment of the vSRX VM, let's get you up and running!

Step 2: Up and Running

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The first thing you'll want to do is to access the CLI using SSH and set the root administrator password. This allows other users to access the vSRX VM.

Access the vSRX CLI

Log in to the vSRX instance from the command line using the private SSH key you generated in Step 1.

- If you are using Linux or MAC OS: In your SSH tool, connect to the External IP for the management interface, and specify the path to your private key.
- If you are using Windows: Open a terminal emulator installed on your laptop, such as PuTTY or SecureCRT and connect to the vSRX instance.
  1. Go to Session and enter the external IP address for the vSRX instance in the Host name (or IP address) field. This is the same IP address that you noted previously.
  2. Navigate to **Connections**>**SSH**>**Auth**.
  3. In the Private key file for authentication field, click **Browse** to select your private key in .ppk format stored in your local system.
  4. Click **Open** to connect to your vSRX instance.

Set a Password for the Root User

1. Log in as **gcp-user**. There is no password.

   login as: gcp-user

2. Enter configuration mode.

   gcp-user> edit

```
Entering configuration mode
```

3. Add a password to the root administration user account. Enter a plain text password.

   ```
   [edit]
   gcp-user# set system root-authentication plain-text-password
   ```

   ```
   New password:
   Retype new password:
   ```

4. (Optional) Enable J-Web access.

   ```
   [edit]
   gcp-user# set system services web-management http
   gcp-user# set system services web-management https
   ```

   Use the GCP firewall rules to limit the management access to the specific IP addresses on a vSRX instance to access J-Web on the public IP address.

   You must create the GCP firewall rules for the management VPC network to allow the protocols and ports necessary for managing the vSRX instance. To do that, in GCP console, navigate to **VPC network** > **Firewall rules** and start creating rules.

5. Commit the configuration.

   ```
   [edit]
   gcp-user# commit
   ```

You can now log in to the vSRX instance with the CLI and continue customizing the configuration. See Configuring vSRX Using the CLI.

Step 3: Keep Going

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Congratulations! vSRX is ready to roll. You'll find that the vSRX has a wide range of features and configuration options that are covered in-depth through the Juniper TechLibrary. Here are some things you can do next.

What's Next?

If you want to	Then
Download, activate, and manage your software licenses to unlock additional features for your vSRX	See Licenses for vSRX in the Juniper Licensing Guide
Configure OpenStack Neutron plug-ins to integrate EX, MX, QFX, and SRX devices with your network	See Juniper Networks OpenStack Neutron Plug-in
Deploy vSRX for specific private and public cloud platforms	See the vSRX Deployment Guide for Private and Public Cloud Platforms
See a list of supported features on vSRX	Visit the Feature Explorer
Access vSRX using J-Web	See Configuring vSRX Using the J-Web Interface

General Information

If you want to	Then
See all documentation available for vSRX	Visit the vSRX page in the Juniper Networks TechLibrary
Find more in-depth information about deploying vSRX	See vSRX Deployment Guides
Learn about new and changed features, limitations, and known and resolved problems in vSRX	Visit the Junos OS for vSRX Release Notes
See, automate, and protect your network with Juniper Security	Visit the Security Design Center

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
Watch a video that shows you how to set up vSRX virtual firewall using Google Cloud Platform (GCP) marketplace	**Video:** Deploying vSRX Virtual Firewalls on Google Cloud Platform
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