

# Juniper SRX320 Setup Guide (Basic Network)

This guide will help you configure your Juniper SRX320 router with the following features:

- **Three VLANs:** Home, Guest, and IoT
- **Firewall Rules:** Optimized for streaming and gaming
- **Traffic Prioritization:** Using Quality of Service (QoS)

## Prerequisites

1. **Juniper SRX320:** Ensure your SRX320 is powered on and connected to your network.
2. **J-Web Interface:** Access the router through a web browser at `http://<SRX320-IP>`.
3. **Basic Network Setup:** Have an existing internet connection and basic understanding of network configurations.

## Step-by-Step Setup

### Step 1: Access Juniper SRX320

1. **Open a web browser** and navigate to the SRX320's IP address.
2. **Log in** using the default credentials or your configured admin username and password.

### Step 2: Configure VLANs

1. **Navigate to:** `Network > Interfaces`.
2. **Create VLANs** for Home, Guest, and IoT.

#### Home VLAN

- **VLAN ID:** 10
- **Interface:** `ge-0/0/1.10`
- **IP Address:** `192.168.10.1/24`

#### Guest VLAN

- **VLAN ID:** 20

- **Interface:** ge-0/0/1.20
- **IP Address:** 192.168.20.1/24

## IoT VLAN

- **VLAN ID:** 30
- **Interface:** ge-0/0/1.30
- **IP Address:** 192.168.30.1/24

## Step 3: Configure DHCP for Each VLAN

1. **Navigate to:** Network > DHCP Server.
2. **Configure DHCP** for each VLAN.

### Home VLAN DHCP

- **Interface:** ge-0/0/1.10
- **Pool:** 192.168.10.10 to 192.168.10.100

### Guest VLAN DHCP

- **Interface:** ge-0/0/1.20
- **Pool:** 192.168.20.10 to 192.168.20.100

### IoT VLAN DHCP

- **Interface:** ge-0/0/1.30
- **Pool:** 192.168.30.10 to 192.168.30.100

## Step 4: Configure Security Zones

1. **Navigate to:** Security > Security Zones.
2. **Create security zones** for each VLAN.

### Home Zone

- **Zone Name:** home
- **Interfaces:** Add ge-0/0/1.10

### Guest Zone

- **Zone Name:** guest
- **Interfaces:** Add ge-0/0/1.20

### IoT Zone

- **Zone Name:** iot

- **Interfaces:** Add `ge-0/0/1.30`

## Step 5: Configure Firewall Policies

1. **Navigate to:** `Security > Policies`.
2. **Create policies** to manage traffic between zones.

### Allow Traffic from Home to Internet

- **Source Zone:** home
- **Destination Zone:** untrust
- **Policy:** Allow

### Allow Traffic from Guest to Internet

- **Source Zone:** guest
- **Destination Zone:** untrust
- **Policy:** Allow

### Allow Traffic from IoT to Internet

- **Source Zone:** iot
- **Destination Zone:** untrust
- **Policy:** Allow

### Deny Traffic Between VLANs

- **Source Zone:** home
- **Destination Zone:** guest, iot
- **Policy:** Deny
- **Source Zone:** guest
- **Destination Zone:** home, iot
- **Policy:** Deny
- **Source Zone:** iot
- **Destination Zone:** home, guest
- **Policy:** Deny

## Step 6: Configure Traffic Prioritization (QoS)

1. **Navigate to:** `Network > Quality of Service`.
2. **Create QoS profiles** to prioritize gaming and streaming traffic.

### Create Classifiers for Gaming and Streaming

- **Classifier Name:** gaming
  - **DSCP:** 46 (EF for low latency)
  - **Application:** Match traffic to gaming servers

- **Classifier Name:** streaming
  - **DSCP:** 34 (AF41 for streaming)
  - **Application:** Match traffic to streaming services

### Apply Classifiers to Interfaces

- Apply the classifiers to the interfaces connected to your gaming and streaming devices.

## Step 7: Apply and Test Configuration

1. **Review all configurations** and apply changes.
2. **Test the network:**
  - Verify that devices on each VLAN receive the correct IP addresses.
  - Test internet connectivity for devices on each VLAN.
  - Ensure that gaming and streaming traffic is prioritized as expected.

## Additional Tips

- **Secure Access:** Change the default admin password and restrict management access to trusted IPs.
- **Regular Backups:** Backup your configuration regularly to prevent data loss.
- **Firmware Updates:** Keep the SRX320 firmware updated for security and performance enhancements.

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