

Configuring a Deployed M-series or MX-series Device for Importing to NSM

A deployed device is a device you are currently using in your network. Before you can add a deployed device to NSM, you must configure the following parameters on the device, regardless of the static or dynamic nature of the IP address:

- The management interface (fxp0) with the IP address of the device
- A user with full administrative privileges for the NSM administrator
- A physical connection to your network with access to network resources
- Connectivity to the NSM device server, which can be with a static IP address
- Telnet or SSHv2, and NETCONF protocol over SSH

To configure these parameters, perform the following tasks:

- Configure an IP Address and a User with Full Administrative Privileges for the Device on page 1
- Check Network Connectivity on page 1
- Check Connectivity to the NSM Server on page 2
- Configure a Static Route to the NSM Server on page 2
- Establish a Telnet or an SSHv2, and a NETCONF protocol over SSH Connection to the NSM Server on page 3

Configure an IP Address and a User with Full Administrative Privileges for the Device

Purpose Before you can add an M-series or MX-series device to NSM, you must have an IP address configured on the management interface (fxp0) and a user with full administrative privileges for the NSM administrator.

Action Generally when you install the JUNOS software, you configure the router from scratch and at that point you configure the management interface (fxp0) with the IP address and a user with full administrative privileges.

For information on configuring the router from scratch, see the *JUNOS System Basics Configuration Guide*.

For step-by-step instructions on reconfiguring names, addresses, and the root password after reinstalling the JUNOS software, see “Configure Names and Addresses” and “Set the Root Password.”

Check Network Connectivity

Purpose Establish that the M-series or MX-series device has a connection to your network.

Action To check that the device has a connection to your network, log on to the M-series or MX-series device and issue a `ping` command to a system on your network:

```
root@> ping address
```

If there is no response, verify that there is a route to the *address* using the `show route` command. If the address is outside your `fxp0` subnet, add a static route.

Check Connectivity to the NSM Server

Purpose Establish that the M-series or MX-series device has a connection to the NSM server.

Action To check that the device has a connection to the NSM server, log on to the M-series or MX-series device and issue a `ping` command to the IP address of the NSM server:

```
root@> ping address
```

If there is no response, verify that there is a route to the *address* using the `show route` command. If the address is outside your `fxp0` subnet, add a static route to the NSM server.

Configure a Static Route to the NSM Server

Purpose When your M-series or MX-series device and the NSM server are in different subnets, you can install a static route on the device to connect to the NSM server. The static route is installed in the routing table only when the route is active; that is, the list of next-hop routers configured for that route contains at least one next hop on an operational interface.

Action To configure a static route, follow these steps:

1. Log on to the M-series or MX-series device and, in configuration mode, go to the following hierarchy level:

```
[edit]
user@host# edit routing-options
```

2. Configure a static route to the NSM server with the `retain` option so that the static route remains in the forwarding table when the routing protocol process shuts down normally:

```
[edit routing-options]
user@host# set static route destination-prefix next-hop address retain
```

3. Configure the `no-readvertise` option so that the route is not eligible for readvertisement by dynamic routing protocols:

```
[edit routing-options]
user@host# set static route destination-prefix next-hop address no-readvertise
```

4. Verify the configuration:

```
user@host# show
```

5. Commit the configuration:

```
user@host# commit
```

6. Verify the connection to the NSM server:

```
user@host# run ping destination
```

```
Sample Output user@host> edit
Entering configuration mode

[edit]
user@host# edit routing-options

[edit routing-options]
user@host# set static route 192.193.60.181/32 next-hop 192.193.76.254

[edit routing-options]
user@host# set static route 192.193.60.181/32 retain

[edit routing-options]
user@host# set static route 192.193.60.181/32 no-readvertise

[edit routing-options]
user@host# show
static {
}
  route 192.193.60.181/32 {
    next-hop 192.193.76.254;
    retain;
    no-readvertise;
  }
}

[edit routing-options]
user@host# commit
commit complete

[edit routing-options]
user@host# run ping 192.193.60.181
PING 192.193.60.181 (192.193.60.181): 56 data bytes
64 bytes from 192.193.60.181: icmp_seq=0 ttl=64 time=23.050 ms
64 bytes from 192.193.60.181: icmp_seq=1 ttl=64 time=18.129 ms
64 bytes from 192.193.60.181: icmp_seq=2 ttl=64 time=0.304 ms
^C
--- 192.193.60.181 ping statistics ---
3 packets transmitted, 3 packets received, 0% packet loss
round-trip min/avg/max/stddev = 0.304/13.828/23.050/9.771 ms
```

Meaning The sample output shows that a static route (192.193.60.181/32) to the NSM server is configured and committed, and that there is a connection between the router and the server because the ping command shows that three packets were transmitted and received.

Establish a Telnet or an SSHv2, and a NETCONF protocol over SSH Connection to the NSM Server

To configure an M-series or MX-series device before adding it to NSM, take the following steps:

1. Log on to the M-series or MX-series device.
2. In configuration mode, go to the following hierarchy level:

```
[edit system services]
```

3. At the [edit system services] hierarchy level, enter the following commands:

```
user@host# set ftp
```

```
user@host# set ssh protocol-version v2
```

```
user@host# set telnet
```

```
user@host# set netconf ssh
```

4. Verify the configuration:

```
user@host# show
```

5. Commit the configuration:

```
user@host# commit
```

Sample Output

```
[edit]
user@host# edit system services

[edit system services]
user@host# set ftp

[edit system services]
user@host# set ssh protocol-version v2

[edit system services]
user@host# set telnet

[edit system services]
user@host# set netconf ssh

[edit system services]
user@host# show
ftp;
ssh {
  protocol-version v2;
}
telnet;
netconf {
  ssh;
}

[edit system services]
user@host# commit
commit complete
```

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