

Chapter 18

Configure Basic System Management

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Configure the Router's Name and Addresses

For the router, you can do the following:

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Configure the Router's Name

To configure the router's name, include the host-name statement at the [edit system] hierarchy level:

```
[edit system]  
host-name host-name;
```

Map the Router's Name to IP Addresses

To map a router's host name to one or more IP addresses, include the `inet` statement at the [edit system static-host-mapping *host-name*] hierarchy level:

```
[edit system]
static-host-mapping {
  host-name {
    inet [ address ];
    alias [ alias ];
  }
}
```

The *host-name* is the name you specified in the host-name statement.

For each host, you optionally can specify one or more aliases.

Configure an ISO Sysid

For IS-IS to operate on the router, you must configure a system identifier (sysid). The sysid is commonly the Media Access Control (MAC) address or the IP address expressed in binary-coded decimal (BCD). For more information, see the *JUNOS Internet Software Configuration Guide: Routing and Routing Protocols*.

To configure an ISO sysid, include the `sysid` statement at the [edit system static-host-mapping *host-name*] hierarchy level:

```
[edit system]
static-host-mapping {
  host-name {
    sysid system-identifier;
  }
}
```

The *host-name* is the name you specified in the host-name statement.

system-identifier is the ISO sysid. It is the 6-byte sysid portion of the IS-IS NSAP. We recommend that you use the host's IP address represented in binary-coded decimal (BCD). For example, the IP address 192.168.1.77 would be 1921.6800.1077 in BCD.

Example: Configure a Router's Name, IP Address, and Sysid

Configure the router's name, map the name to an IP address and alias, and configure a sysid:

```
[edit]
user@host# set system host-name router-sj1
[edit]
user@host# set system static-host-mapping router-sj1 inet 192.168.1.77
[edit]
user@host# set system static-host-mapping router-sj1 alias sj1
[edit]
user@host# set system static-host-mapping router-sj1 sysid 1921.6800.1077
[edit]
user@host# show
system {
  host-name router-sj1;
  static-host-mapping {
    router-sj1 {
      inet 192.168.1.77;
      alias sj1;
      sysid 1921.6800.1077;
    }
  }
}
```

Configure the Router's Domain Name

For each router, you should configure the name of the domain in which the router is located. This is the default domain name that is appended to host names that are not fully qualified. To configure the domain name, include the domain-name statement at the [edit system] hierarchy level:

```
[edit system]
domain-name domain-name;
```

Example: Configure the Router's Domain Name

Configure the router's domain name:

```
[edit]
user@host# set system domain-name company.net
[edit]
user@host# show
system {
  domain-name company.net;
}
```

Configure Which Domains to Search

If your router is included in several different domains, you can configure those domain names to be searched.

To configure more than one domain to be searched, include the `domain-search` statement at the `[edit system]` hierarchy level:

```
[edit system]
domain-search [domain-list];
```

The domain list can contain up to six domain names, with a total of up to 256 characters.

Example: Configure Which Domains to Search

Configure two domains to be searched:

```
[edit system]
domain-search [domainone.net domainonealternate.com]
```

Configure a DNS Name Server

To have the router resolve host names into addresses, you must configure one or more DNS name servers by including the `name-server` statement at the `[edit system]` hierarchy level:

```
[edit system]
name-server {
    address;
}
```

Example: Configure a DNS Name Server

Configure two DNS name servers:

```
[edit]
user@host# set system name-server 192.168.1.253
[edit]
user@host# set system name-server 192.168.1.254
[edit]
user@host# show
system {
    name server {
        192.168.1.253;
        192.168.1.254;
    }
}
```

Configure a Backup Router

During the time that the router is booting, the routing protocol process (`rpd`) is not running; therefore, the router has no static or default routes. To allow the router to boot and to ensure that the router is reachable over the network if the routing protocol process fails to start properly, you configure a backup router, which is a router that is directly connected to the local router (that is, on the same subnet).

To configure a backup router, include the `backup-router` statement at the [edit system] hierarchy level:

```
[edit system]
  backup-router address <destination destination-address>;
```

By default, all hosts (default route) are reachable through the backup router. To eliminate the risk of installing a default route in the forwarding table, include the `destination` option, specifying an address that is reachable through the backup router. Specify the address in the format `network/mask-length` so that the entire network is reachable through the backup router.

When the routing protocols start, the address of the backup router is removed from the local routing and forwarding tables. To have the address remain in these tables, configure a static route for that address by including the `static` statement at the [edit routing-options] hierarchy level.

Example: Configure a Backup Router

Configure a backup router and have its address remain in the routing and forwarding tables:

```
[edit]
system {
  backup-router 192.168.1.254 destination 208.197.1.0/24;
}
routing-options {
  static {
    route 208.197.1.0/24 {
      gateway 192.168.1.254;
      retain;
    }
  }
}
```

Configure the System Location

To configure the physical location of the system, include the `location` statement at the [edit system] hierarchy level:

```
[edit system]
location {
  altitude feet;
  country-code code;
  hcoord horizontal-coordinate;
  lata service-area;
  latitude degrees;
  longitude degrees;
  npa-nxx number;
  postal-code postal-code;
  vcoord vertical-coordinate;
}
```

Configure the Root Password

The JUNOS software is preinstalled on the router. When the router is powered on, it is ready to be configured. Initially, you log into the router as the user “root” with no password. After you log in, you should configure the root (superuser) password by including the root-authentication statement at the [edit system] hierarchy level:

```
[edit system]
root-authentication {
  (encrypted-password "password" | plain-text-password);
  ssh-rsa "public-key";
}
```

If you configure the plain-text-password option, you are prompted to enter and confirm the password:

```
[edit system]
user@host# set root-authentication plain-text-password
New password: type password here
Retype new password: retype password here
```

To load an SSH key file, enter the load-key-file command. If you load the SSH keys file, the contents of the file are copied into the configuration immediately after you enter the load-key-file statement. To view the SSH keys entries, use the configuration mode show command. For example:

```
[edit system]
user@host# set root-authentication load-key-file my-host:ssh/identity.pub
file.19692 | 0 KB | 0.3 KB/s | ETA: 00:00:00 | 100%
[edit system]
user@host# show
root-authentication {
  ssh-rsa "1024 35 972763820408425105546822675724986424163032220740496252839
03820386901415845349641700196106083587229615634757849182736033612764418
74265946893207739108344810126831259577226254616679992783161235004386609
15866283822489746732605661192181489539813965561563786211940327687806538
16960202749164163735913269396344008443 boojum@juniper.net"; # SECRET-DATA
}
```

Example: Configure the Root Password

Configure an encrypted password:

```
[edit]
user@host# set system root-authentication encrypted-password "$1$14c5.$sBopasddsdfs0"
[edit]
user@host# show
system {
  root-authentication {
    encrypted-password "$1$14c5.$sBopasddsdfs0";
  }
}
```

Configure a plain-text password:

```
[edit]
user@host# set system root-authentication plain-text-password
New password: type root password
Retype new password: retype root password
```

```
[edit]
user@host# show
system {
  root-authentication {
    encrypted-password "$1$14c5.$sBopasddsdfs0";
  }
}
```

Compress the Current Configuration File

By default, the current operational configuration file is uncompressed, and is stored in the file `juniper.conf`, in the `/config` file system, along with the last three committed versions of the configuration. However, with large networks, the current configuration file might exceed the available space in the `/config` file system. Compressing the current configuration file allows the file to fit in the file system, typically reducing the size of the file by 90 percent. When the current operational configuration file reaches 3 MB in size, you might want to begin compressing the file. To determine the size of the files in the `/config` file system, issue the file list `/config detail` command.

To compress the current configuration file, include the `compress-configuration-files` statement at the `[edit system]` hierarchy level:

```
[edit system]
compress-configuration-files;
```

The current configuration file is compressed on the second commit of the configuration after the first commit is made to include the `compress-configuration-files` statement:

```
[edit system]
user@host# set compress-configuration-files
user@host# commit
commit complete
user@host# commit
commit complete
```

For more information on how configurations are stored, see “How the Configuration Is Stored” on page 80.

