

## Chapter 6

# Check Router Configuration

This chapter describes how to check the configuration on your router. (See Table 20.)

**Table 20: Checklist for Checking the Router Configuration**

Check Router Configuration Tasks	Command or Action
Display the Current Active Router Configuration on page 50	show configuration
Display a Specific Configuration Hierarchy on page 54	show configuration <i>statement-path</i>
Display Additional Information about the Configuration on page 54	[edit] show < <i>hierarchy-level</i> >   display detail

## Display the Current Active Router Configuration

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**Action** To display the current, active router configuration, use the following command-line interface (CLI) operational mode command:

```
user@host> show configuration
```

**Sample Output**

```
user@host> show configuration
version "5.6I0";
groups {
  global {
    system {
      host-name potter;
      domain-name harry.potter.net;
      domain-search [ harry.potter.net potter.net hryptr.net ];
      backup-router 10.110.12.254;
      time-zone America/Los_Angeles;
      debugger-on-panic;
      debugger-on-break;
      dump-on-panic;
      authentication-order [ tacplus password radius ];
      root-authentication {
        encrypted-password "$1$OFf5.$I7.kUgMmx/4WKwUAG"; # SECRET-DATA
      }
      name-server {
        172.17.28.101;
        172.17.28.100;
      }
      radius-server {
        10.168.5.73 {
          secret "$9$Nd-YoDjq.PT4oZjik5T369pBIhS1L7dC"; # SECRET-DATA
          timeout 5;
          retry 3;
        }
      }
      tacplus-server {
        10.168.5.73 {
          secret "$9$.539IRSM8701lMX-2gqmfTz6"; # SECRET-DATA
          timeout 15;
          single-connection;
        }
      }
      login {
        class superuser-local {
          permissions all;
        }
        class wheel {
          permissions [ admin clear field floppy interface maintenance
network reset routing shell snmp system trace view ];
        }
        class readonly {
          permissions [ interface network routing system trace view ];
        }
        user rpe {
          uid 1230;
          class superuser;
          shell csh;
          authentication {
            encrypted-password FN5oyk/qZ07F2; # SECRET-DATA
          }
        }
      }
    }
  }
}
```

[...output truncated...]

```

    }
  }
}
static-host-mapping {
  crater sysid 0102.5524.5045;
  badlands sysid 0102.5524.5046;
  [...output truncated...]
}
services {
  finger;
  ftp;
  rlogin;
  rsh;
  ssh;
telnet;
}
syslog {
  user * {
    any emergency;
  }
  host log {
    any notice;
    pfe info;
    interactive-commands any;
  }
  file messages {
    any notice;
    authorization info;
    pfe info;
    archive world-readable;
  }
  file security {
    interactive-commands any;
    archive world-readable;
  }
  file white_bx {
    daemon notice;
    archive size 40m world-readable;
  }
}
processes {
  routing enable;
  snmp enable;
  tnp-process enable;
  ntp enable;
  inet-process enable;
  mib-process enable;
  management enable;
  watchdog enable;
}
ntp {
  boot-server ntp.juniper.net;
  server 172.17.27.46;
}
}
chassis {
  dump-on-panic;
}
snmp {
  location "Systest lab";
  contact "Brian Matheson";
  interface fxp0.0;
  community public {

```

```

        authorization read-only;
    }
    community private {
        authorization read-write;
    }
}
routing-options {
    static {
        /* corporate and alpha net */
        route 172.16.0.0/12 {
            next-hop 10.168.14.254;
            retain;
            no-readvertise; [...output truncated...]
        }
    }
}
}
re1;
}
apply-groups [ global re0 re1 ];
chassis {
    fpc 0 {
        pic 0 {
            mlfrr-uni-nni-bundles 4;
        }
    }
}
interfaces {
    ls-0/0/0:0 {
        encapsulation multilink-frame-relay-uni-nni;
        unit 0 {
            dlci 100;
            family inet {
                address 10.53.99.2/32 {
                    destination 10.53.99.1;
                }
            }
        }
    }
    ct3-0/1/0 {
        partition 1 interface-type t1;
        partition 2 interface-type t1;
        partition 3 interface-type t1;
        partition 4 interface-type t1;
    }
    t1-0/1/0:1 {
        encapsulation multilink-frame-relay-uni-nni;
        unit 0 {
            family mlfrr-uni-nni {
                bundle ls-0/0/0:0;
            }
        }
    }
}
routing-options {
    static {
        route 10.1.1.0/24 next-hop 10.53.99.1;
    }
    autonomous-system 69;
    forwarding-table {
        export p1b;
    }
}
}

```

```

protocols {
  bgp {
    disable;
    group int {
      type internal;
      neighbor 10.255.14.30;
      [...output truncated...] }
  }
  isis {
    disable;
    interface all {
      level 1 disable;
    }
    interface fxp0.0 {
      disable;
    }
  }
  inactive: ospf {
    traffic-engineering;
    reference-bandwidth 4g;
    area 0.0.0.0 {
      interface all;
      interface fxp0.0 {
        disable;
      }
    }
  }
}
policy-options {
  policy-statement pplb {
    then {
      load-balance per-packet;
    }
  }
}
[...Output truncated...]

```

**What It Means** The sample output shows the current, active configuration for the router. When displaying the configuration, the CLI indents each subordinate hierarchy level, inserts braces to indicate the beginning and end of each hierarchy level, and places semicolons at the end of statements that are at the lowest level of the hierarchy.

The configuration statements appear in a fixed order. Interfaces appear alphabetically by type, and then in numerical order by slot number, Physical Interface Card (PIC) number, and port number.

## Display a Specific Configuration Hierarchy

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**Action** To view a specific configuration hierarchy, use the following CLI operational mode command;

```
user@host> show configuration statement-path
```

**Sample Output**

```
user@host> show configuration protocols bgp
group ebgp {
  type external;
  peer-as 65001;
  neighbor 10.168.20.1;
}
```

**What It Means** The sample output shows the active configuration under the [protocol bgp] hierarchy level.

## Display Additional Information about the Configuration

---

**Purpose** You can display additional information when you are not sure of the meaning of configuration statements and what permission bits are required to add and modify them.

**Action** To display additional information about the entire configuration, use the following CLI configuration mode command:

```
user@host# show | display detail
```

To display additional information about a specific hierarchy, use the following CLI configuration mode command:

```
user@host# show <hierarchy-level> | display detail
```

**Sample Output** The following sample output is for the first command. The output for a particular hierarchy appears similar to its section in this sample output.

```
user@host> edit
user@host# show | display detail
##
## version: Software version information
## require: system
##
version "3.4R1 [tlim]";
system {
##
## host-name: Host name for this router
## match: ^[:a\lum:]._-$
## require: system
##
host-name router-name;
##
## domain-name: Domain name for this router
## match: ^[:a\lum:]._-$
## require: system
##
domain-name isp.net;
```

```

##
## backup-router: Address of router to use while booting
##
backup-router 10.168.100.1;
root-authentication {
    ##
    ## encrypted-password: Crypted password string
    ##
    encrypted-password "$1$BYJQE$/ocQof8pmcm7MSGK0"; # SECRET-DATA
}
##
## name-server: DNS name servers
## require: system
##
name-server {
    ##
    ## name-server: DNS name server address
    ##
    208.197.1.0;
}
login {
    ##
    ## class: User name (login)
    ## match: ^[:alnum:][_~]+$
    ##
    class superuser {
        ##
        ## permissions: Set of permitted operation categories
        ##
        permissions all;
    }
}
...
##
## services: System services
## require: system
##
services {
    ## services: Service name
    ##
    ftp;
    ##
    ## services: Service name
    ##
    telnet;
    ##
}
syslog {
    ##
    ## file-name: File to record logging data
    ##
    file messages {
        ##
        ## Facility type
        ## Level name
        ##
        any notice;
        ##
        ## Facility type
        ## Level name
        ##
        authorization info;
    }
}

```

```

}
chassis {
  alarm {
    sonet {
      ##
      ## lol: Loss of light
      ## alias: loss-of-light
      ##
      lol red;
    }
  }
}
interfaces {
  ##
  ## Interface name
  ##
  at-2/1/1 {
    atm-options {
      ##
      ## vpi: Virtual path index
      ## range: 0 .. 255
      ## maximum-vcs: Maximum number of virtual circuits on this VP
      ##
      vpi 0 maximum-vcs 512;
    }
    ##
    ## unit: Logical unit number
    ## range: 0 .. 16384
    ##
    unit 0 {
      ##
      ## vci: ATM point-to-point virtual circuit identifier ([vpi.]vci)
      ## match: ^([[:digit:]]+.){0,1}[[:digit:]]+$
      ##
      vci 0.128;
    }
  }
  ...
}

```

**What It Means** The sample output shows additional information that includes the help string explaining each configuration statement, and the permission bits required to add and modify the configuration statement.