

Chapter 4

Interfaces Configuration Statements

When configuring the interfaces, you can configure the interfaces that are currently present in the router (that is, the PICs that are already installed in the router) as well as interfaces that you might be adding at some future time (that is, PICs that you plan to install). To determine which interfaces are currently installed in the router, use the `show interfaces terse` command from the top-level CLI. If an interface is listed in the output, it is installed in the router. If an interface is not listed, it is not present.

The router software automatically configures the router's management Ethernet interface, `fxp0`, which is an out-of-band management interface, and the internal Ethernet interface, `fxp1`, which connects the Routing Engine to the control board (SCB, SSB, FEB, or SFM). The software also automatically configures one loopback interface, `lo0`.

Complete Interfaces Configuration Statements

To configure router interfaces, you include statements at the [edit interfaces] hierarchy level of the configuration:

```
interfaces {
  traceoptions {
    flag flag <flag-modifier> <disable>;
  }
  interface-name {
    disable;
    description text;
    atm-options {
      vpi vpi-identifier max-vcs maximum-vcs;
      ilmi;
    }
    clocking clock-source;
    dce;
    e1-options {
      fcs (32 | 16);
      framing (g704 | unframed);
      idle-cycle-flag (flags | ones);
      loopback (local | remote);
      start-end-flag (shared | filler);
      timeslots slot-number;
    }
    e3-options {
      bert-algorithm algorithm;
      bert-error-rate rate;
      bert-period seconds;
      compatibility-mode (digital-link | kentrox);
      fcs (32 | 16);
      idle-cycle-flag value;
    }
  }
}
```

```

    loopback (local | remote);
    (payload-scrambler | no-payload-scrambler);
    start-end-flag value;
}
encapsulation type;
fastether-options {
    (loopback | no-loopback);
    source-address-filter {
        mac-address;
    }
    (source-filtering | no-source-filtering);
}
gigether-options {
    (flow-control | no-flow-control);
    (loopback | no-loopback);
    source-address-filter {
        mac-address;
    }
    (source-filtering | no-source-filtering);
}
hold-time up milliseconds down milliseconds;
keepalives <down-count number> <interval seconds> <up-count number>;
link-mode mode;
mac mac-address;
mtu bytes;
no-keepalives;
no-traps;
receive-bucket {
    overflow (tag | discard);
    rate percentage;
    threshold number;
}
sonet-options {
    aps {
        advertise-interval milliseconds;
        authentication-key key;
        force;
        hold-time milliseconds;
        lockout;
        neighbor address;
        paired-group group-name;
        protect-circuit group-name;
        request;
        revert-time seconds;
        working-circuit group-name;
    }
    bytes {
        e1-quiet value;
        f1 value;
        f2 value;
        s1 value;
        z3 value;
        z4 value;
    }
    fcs (32 | 16);
    loopback (local | remote);
    path-trace trace-string;
    (payload-scrambler | no-payload-scrambler);
    rfc-2615;
    (z0-increment | no-z0-increment);
}
speed (10m | 100m);
t1-options {

```

```

buildout (0-133 | 133-266 | 266-399 | 399-532 | 532-655);
byte-encoding (nx64 | nx56);
fcs (32 | 16);
framing (sf | esf);
idle-cycle-flag (flags | ones);
invert-data;
line-encoding (ami | b8zs);
loopback (local | remote);
start-end-flag (shared | filler);
timeslots slot-number;
}
t3-options {
  bert-algorithm algorithm;
  bert-error-rate rate;
  bert-period seconds;
  (cbit-parity | no-cbit-parity);
  compatibility-mode (digital-link | kentrox | larscom) <subrate value>;
  fcs (32 | 16);
  (feac-loop-respond | no-feac-loop-respond);
  idle-cycle-flag value;
  (long-buildout | no-long-buildout);
  loopback (local | remote);
  (payload-scrambler | no-payload-scrambler);
  start-end-flag value;
}
traceoptions {
  flag flag <flag-modifier> <disable>;
}
transmit-bucket {
  overflow (tag | discard);
  rate percentage;
  threshold number;
}
vlan-tagging;
unit logical-unit-number {
  disable;
  dcli dcli-identifier;
  encapsulation type;
  inverse-arp;
  multicast-dcli dcli-identifier;
  multicast-vci vpi-identifier.vci-identifier;
  multipoint;
  no-traps;
  oam-liveness {
    up-count cells;
    down-count cells;
  }
  oam-period seconds;
  point-to-point;
  shaping {
    (cbr rate | vbr peak rate sustained rate burst length);
    queue-length number;
  }
}
tunnel {
  source source-address;
  destination destination-address;
  ttl number;
}
vci vpi-identifier.vci-identifier;
vlan-id number;
family family {
  filter {
    input filter-name;
  }
}

```

