

Chapter 9

Determine ATM Interface Type

This chapter describes how to determine the type of Asynchronous Transfer Mode (ATM) interface on your router. (See Table 18.)

Table 18: Checklist for Determining ATM Interface Type

Determine ATM Interface Type Tasks	Command or Action
Determine the ATM Interface Type and Configuration on page 80	
1. Determine the ATM Interface Type on page 80	show chassis hardware
2. Check that the ATM Configuration Is Correct on page 81	
a. Check the Configuration of an ATM1 Interface on page 81	show configuration interfaces <i>at-fpc/pic/port</i>
b. Check the Configuration of an ATM2 IQ Interface on page 82	show configuration interfaces <i>at-fpc/pic/port</i>
Examples of Incorrect Configurations of ATM Options on page 83	
1. Check the Configuration of the VCI on an ATM1 Interface on page 83	show configuration interfaces <i>at-fpc/pic/port</i> show interfaces terse <i>at-fpc/pic/port</i> edit edit interfaces <i>interface-name</i> atm-options vpi <i>vpi-identifier</i> maximum-vcs <i>maximum-vcs</i> show commit show configuration interfaces <i>at-fpc/pic/port</i> run show interfaces terse <i>at-fpc/pic/port</i>
2. Check the Configuration of the VCI on an ATM2 IQ Interface on page 84	show configuration interfaces <i>at-fpc/pic/port</i> show interfaces terse <i>at-fpc/pic/port</i> edit edit interfaces <i>interface-name</i> atm-options vpi <i>vpi-identifier</i> delete maximum-vcs show commit show configuration interfaces <i>at-fpc/pic/port</i> run show interfaces terse <i>at-fpc/pic/port</i>
3. Check the Configuration of Promiscuous Mode on an ATM2 IQ Interface on page 86	show configuration interfaces <i>at-fpc/pic/port</i> show interfaces terse <i>at-fpc/pic/port</i> edit set interfaces <i>interface-name</i> atm-options pic-type atm 2 show commit show configuration interfaces <i>at-fpc/pic/port</i> run show interfaces terse <i>at-fpc/pic/port</i>

Determine the ATM Interface Type and Configuration

Purpose When you know the type of ATM interface on your router, you can configure it with the correct configuration options.

Steps To Take For ATM1 and ATM2 intelligent queuing (IQ) interfaces, the JUNOS software does not determine from the interface name *at-fpc/pic/port* whether your routing platform has an ATM1 or ATM2 IQ Physical Interface Card (PIC) installed. To determine the type of ATM interface on your router and to check your ATM interface configuration, follow these steps:

1. Determine the ATM Interface Type on page 80
2. Check that the ATM Configuration Is Correct on page 81

Step 1: Determine the ATM Interface Type

Action To determine the type of ATM interface on your router, use the following JUNOS command-line interface (CLI) operational mode command:

```
user@host> show chassis hardware
```

Sample Output

```
user@host> show chassis hardware
Hardware inventory:
Item Version Part number Serial number Description
Chassis 50992 M10
Midplane REV 03 710-001950 HB2090
Power Supply B Rev 04 740-002497 LJ23082 AC
Display REV 04 710-001995 HC5151
Routing Engine 9700000792694801 RE-2.0
FEB REV 06 710-003310 HH0211 E-FEB
FPC 0 E-FPC
PIC 0 REV 06 750-002992 HP2711 4x F/E, 100 BASE-TX
PIC 1 REV 02 750-005718 BE6774 1x OC-12 ATM-II IQ, MM
PIC 3 REV 04 750-002971 HC8106 4x OC-3 SONET, MM
FPC 1 E-FPC
PIC 1 REV 03 750-000612 AA7399 2x OC-3 ATM, MM
PIC 3 REV 02 750-000618 AE2070 4x T3
```

What It Means The sample output shows the hardware inventory. The ATM2 IQ interface is in Flexible PIC Concentrator (FPC) slot 0, and PIC slot 1, which translates to *at-fpc/pic/port* or *at-0/1/0*. The ATM1 interface name is *at-1/1/0*.

Step 2: Check that the ATM Configuration Is Correct

Purpose The supported set of configuration options varies between the ATM1 and ATM2 IQ interfaces. If you configure an ATM1 interface using ATM2 IQ configuration options, the configuration does not commit. The same occurs if you configure an ATM2 IQ interface with ATM1 options. See the *JUNOS Network Interfaces and Class of Service Configuration Guide* for more information on the options supported for ATM1 and ATM2 IQ interfaces.

Steps To Take To check the configuration of an ATM interface, follow these steps:

1. Check the Configuration of an ATM1 Interface on page 81
2. Check the Configuration of an ATM2 IQ Interface on page 82

Check the Configuration of an ATM1 Interface

Purpose The JUNOS software assumes an ATM1 interface configuration if you include the maximum-vcs statement without the pic-type statement at the [edit interfaces at-fpc/pic/port atm-options] hierarchy level,

Action To check the configuration of an ATM1 interface, use the following JUNOS CLI operational mode command:

```
user@host> show configuration interfaces at-fpc/pic/port
```

Sample Output 1 user@host> show configuration interfaces at-0/1/0

```
atm-options {
  vpi 1 {
    maximum-vcs 1024;
  }
}
unit 100 {
  vci 1.100;
  family inet {
    address 25.25.25.2/30;
  }
}
```

Sample Output 2 user@host> show configuration interfaces at-1/0/0

```
atm-options {
  pic-type atm1;
  vpi 0 maximum-vcs 256;
  vpi 1 maximum-vcs 512;
}
```

What It Means The sample output shows the correct configuration of an ATM1 interface. Sample output 1 shows the maximum-vcs statement configured on an ATM interface. Because the pic-type statement is not included in the configuration, this interface is assumed to be an ATM1 interface. Use the show chassis hardware command to verify that the interface is an ATM1. Otherwise this could be the incorrect configuration of an ATM2 IQ interface. Sample output 2 shows the correct configuration of an ATM1 interface with the pic-type statement and the maximum-vcs statement.

See the *JUNOS Network Interfaces and Class of Service Configuration Guide*, for more information on configuring ATM1 interfaces.

Check the Configuration of an ATM2 IQ Interface

Purpose ATM2 IQ interfaces must *not* have the maximum-vcs statement included in the configuration.

Action To check the configuration on an ATM2 IQ interface, use the following CLI operational mode command:

```
user@host> show configuration interfaces at-fpc/pic/port
```

Sample Output 1 user@host> show configuration interfaces at-0/1/0

```
atm-options {
  vpi 1;
}
unit 100 {
  vci 1.100;
  family inet {
    address 25.25.25.1/30;
  }
}
```

Sample Output 2 user@host> show configuration interfaces at-2/2/0

```
atm-options {
  pic-type atm2;
  vpi 1;
}
unit 100 {
  encapsulation ether-over-atm-llc;
  vci 1.100;
  shaping {
    vbr peak 66k sustained 66k burst 40;
  }
  family inet {
    address 192.168.5.1/24;
  }
}
[...Output truncated...]
```

What It Means The sample output shows the correct configuration of an ATM2 IQ interface. The first example shows that the interface at-0/1/0 has ATM options configured and the logical interface at-0/1/0.100. Sample output 2 shows another interface at-2/2/0 with the PIC type configured.



NOTE: The ATM2 IQ interface does *not* have the maximum-vcs statement included in the configuration.

See the *JUNOS Network Interfaces and Class of Service Configuration Guide*, for more information on configuring ATM2 IQ interfaces.

Examples of Incorrect Configurations of ATM Options

Purpose Even though ATM1 and ATM2 IQ interfaces may be configured with the incorrect options, the configuration may commit but the logical interface may not come up. Here are some examples of incorrectly configured options:

1. Check the Configuration of the VCI on an ATM1 Interface on page 83
2. Check the Configuration of the VCI on an ATM2 IQ Interface on page 84
3. Check the Configuration of Promiscuous Mode on an ATM2 IQ Interface on page 86

Check the Configuration of the VCI on an ATM1 Interface

Purpose If your configuration of the virtual channel identifier (VCI) is incorrect, the logical interface is not created.

Action To check that VCI is configured correctly on your ATM1 interface, follow these steps:

1. Check the configuration with the following JUNOS CLI operational mode command:

```
user@host> show configuration interfaces at-fpc/pic/port
```

For example, the following output shows an *incorrectly* configured ATM1 interface:

```
user@host> show configuration interfaces at-1/2/0
atm-options {
  vpi 1;
} <<< the maximum-vcs statement is missing
unit 100 {
  vci 1.100;
  family inet {
    address 25.25.25.2/30;
  }
}
```

2. Check if the logical interface unit 100 is created with the following command:

```
user@host> show interfaces terse at-fpc/pic/port
```

For example, the following output shows that the link is not created:

```
user@host> show interfaces terse at-1/2/0
Interface      Admin Link Proto Local      Remote
at-1/2/0       up    up
<<< missing logical interface at-1/2/0.100
```

3. Include the maximum-vcs statement in the configuration:

```
user@host> edit
user@host# edit interfaces interface-name atm-options vpi vpi-identifier
maximum-vcs maximum-vcs
user@host# show
user@host# commit
```

For example, the following output shows a *correctly* configured ATM1 interface:

```
user@host> show configuration interfaces at-0/1/0
atm-options {
  vpi 1 {
    maximum-vcs 1024;
  }
}
unit 100 {
  vci 1.100;
  family inet {
    address 25.25.25.2/30;
  }
}
```

4. Check that the logical interface is created with the following command:

```
user@host> run show interfaces terse at-fpc/pic/port
```

For example, the following output shows that the link is created:

```
user@host# run show interfaces terse at-1/2/0
Interface      Admin Link Proto Local      Remote
at-1/2/0       up   up
at-1/2/0.100   up   up   inet 25.25.25.2/30
```

What It Means The steps above show that initially the logical interface at-1/2/0.100 is not created because the maximum-vcs statement is not included in the ATM1 configuration. When that statement is included, the logical interface is created.

Check the Configuration of the VCI on an ATM2 IQ Interface

Purpose If your configuration of the VCI is incorrect, the logical interface is not created.

Action To check that VCI is configured correctly on your ATM2 IQ interface, follow these steps:

1. Check the configuration with the following JUNOS CLI operational mode command:

```
user@host> show configuration interfaces at-fpc/pic/port
```

For example, the following output shows an *incorrectly* configured ATM2 IQ interface:

```
user@host> show configuration interfaces at-0/1/0
atm-options {
  vpi 1 {
    maximum-vcs 200; <<< incorrectly included
  }
}
```

```

}
unit 100 {
  vci 1.100;
  family inet {
    address 25.25.25.1/30;
  }
}

```

2. Check if the logical interface unit 100 is created with the following command:

```
user@host> show interfaces terse at-fpc/pic/port
```

For example, the following output shows that the link is not created:

```

user@host> show interfaces terse at-0/1/0
Interface      Admin Link Proto Local      Remote
at-0/1/0       up   up
<<< missing logical interface at-0/1/0.100

```

3. Delete the incorrect maximum-vcs statement from the configuration:

```

user@host> edit
user@host# edit interfaces interface-name atm-options vpi vpi-identifier
user@host# delete maximum-vcs
user@host# show
user@host# commit

```

For example, the following output shows a *correctly* configured ATM2 IQ interface:

```

user@host> show configuration interfaces at-0/1/0
atm-options {
  vpi 1 {
  }
}
unit 100 {
  vci 1.100;
  family inet {
    address 25.25.25.1/30;
  }
}

```

4. Check that the logical interface is created with the following command:

```
user@host> show interfaces terse at-fpc/pic/port
```

For example, the following output shows that the link is created:

```

user@host> show interfaces terse at-0/1/0
Interface      Admin Link Proto Local      Remote
at-0/1/0       up   up
at-0/1/0.100   up   up   inet 25.25.25.1/30

```

What It Means The steps above show that initially the logical interface at-0/1/0.100 is not created because the maximum-vcs statement is included in the ATM2 IQ configuration. When that statement is deleted, the logical interface is created.

Check the Configuration of Promiscuous Mode on an ATM2 IQ Interface

Purpose If your configuration of promiscuous mode is incorrect, the logical interface is not created. ATM2 IQ interfaces must have the `pic-type atm2` statement included if you are including the `promiscuous-mode` statement in the configuration.

Action To check that promiscuous mode is configured correctly on your ATM2 IQ interface, follow these steps:

1. Check the configuration with the following JUNOS CLI operational mode command:

```
user@host> show configuration interfaces at-fpc/pic/port
```

For example, the following output shows promiscuous mode *incorrectly* configured on an ATM2 IQ interface:

```
user@host> show configuration interfaces at-1/2/0
encapsulation atm-ccc-cell-relay;
atm-options {
  promiscuous-mode { <<< the pic-type statement is missing
    vpi 1;
  }
}
unit 1 {
  vpi 1;
}
```

2. Check if the logical interface unit 1 is created with the following command:

```
user@host> run show interfaces terse at-fpc/pic/port
```

For example, the following output shows that the link is not created:

```
user@host# run show interfaces terse at-0/1/0
Interface      Admin Link Proto Local      Remote
at-0/1/0       up   up
<<< missing logical interface at-0/1/0.1
```

3. Include the `pic-type` statement in the configuration:

```
user@host> edit
user@host# set interfaces interface-name atm-options pic-type atm2
user@host# show
user@host# commit
```


For example, the following output shows promiscuous mode correctly configured on an ATM2 IQ interface:

```
user@host> show configuration interfaces at-0/1/0
encapsulation atm-ccc-cell-relay;
atm-options {
    pic-type atm2;
    promiscuous-mode {
        vpi 1;
    }
}
unit 1 {
    vpi 1;
}
```

4. Check that the logical interface is created with the following command:

```
user@host> run show interfaces terse at-fpc/pic/port
```

For example, the following output shows that the link is created:

```
user@host# run show interfaces terse at-0/1/0
Interface      Admin Link Proto Local      Remote
at-0/1/0       up   up
at-0/1/0.1     up   up   ccc
```

What It Means The steps above show that initially the logical interface at-0/1/0.1 is not created because the pic-type statement is not included with the promiscuous-mode statement in the ATM2 IQ configuration. When that statement is included, the logical interface is created.

