Frame Relay-ATM Interworking Commands

Use the commands described in this chapter to configure FRF.5 Frame Relay-ATM Network Interworking and FRF.8 Frame Relay-ATM Service Interworking.

For Frame Relay-ATM configuration information and examples, refer to the “Configuring Frame Relay-ATM Interworking” chapter in the Cisco IOS Wide-Area Networking Configuration Guide.
**clp-bit**

To set the ATM cell loss priority (CLP) field in the ATM cell header, use the `clp-bit` connect submode command. To disable ATM CLP bit mapping, use the `no` form of this command.

```
clp-bit { 0 | 1 | map-de }
no clp-bit { 0 | 1 | map-de }
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>The CLP field in the ATM cell header is always set to 0.</td>
</tr>
<tr>
<td>1</td>
<td>The CLP field in the ATM cell header is always set to 1.</td>
</tr>
<tr>
<td>map-de</td>
<td>The discard eligible (DE) field in the Frame Relay header is mapped to the CLP field in the ATM cell header.</td>
</tr>
</tbody>
</table>

**Defaults**

The default is set to `map-de`.

**Command Modes**

FRF.5 connect submode

FRF.8 connect submode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1(2)T</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

This command maps from Frame Relay to ATM.

**Examples**

**FRF.5 Example**

The following example sets the CLP field in the ATM header to 1 for FRF.5:

```
Router(config)# connect network-1 vc-group network-1 ATM3/0 1/35
Router(config-frf5)# clp-bit 1
```

**FRF.8 Example**

The following example sets the CLP field in the ATM header to 1 for FRF.8:

```
C3640(config)# connect service-1 Serial1/0 16 ATM3/0 1/32 service-interworking
C3640(config-frf8)# clp-bit 1
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>connect (FRF.5)</td>
<td>Connects a Frame Relay DLCI or VC group to an ATM PVC.</td>
</tr>
<tr>
<td>de-bit map-clp</td>
<td>Sets the Frame Relay DE bit field in the Frame Relay cell header.</td>
</tr>
</tbody>
</table>
connect (FRF.5)

To configure an FRF.5 one-to-one connection between two Frame Relay end users over an intermediate ATM network, or an FRF.5 many-to-one connection between two Frame Relay end users over an intermediate ATM network, use the `connect` global configuration command. To remove a connection, use the `no` form of this command.

```
connect connection-name {vc-group group-name | FR-interface FR-DLCI} ATM-interface
ATM-VPI/VCI network-interworking
```

```
no connect connection-name {vc-group group-name | FR-interface FR-DLCI} ATM-interface
ATM-VPI/VCI network-interworking
```

### Syntax Description

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>connection-name</code></td>
<td>Specifies a connection name. Enter as a 15-character maximum string.</td>
</tr>
<tr>
<td><code>vc-group group-name</code></td>
<td>Specifies a VC group name for a many-to-one FRF.5 connection. Enter as an 11-character maximum string.</td>
</tr>
<tr>
<td><code>FR-interface</code></td>
<td>Specifies the Frame Relay interface type and number, for example, <code>serial1/0</code>.</td>
</tr>
<tr>
<td><code>FR-DLCI</code></td>
<td>Specifies the Frame Relay data-link connection identifier (DLCI) in the range from 16 to 1007.</td>
</tr>
<tr>
<td><code>ATM-interface</code></td>
<td>Specifies the ATM interface type and number, for example, <code>atm1/0</code>.</td>
</tr>
<tr>
<td><code>ATM-VPI/VCI</code></td>
<td>Specifies the ATM virtual path identifier/virtual channel identifier (VPI/VCI). If a VPI is not specified, the default VPI is 0.</td>
</tr>
<tr>
<td><code>network-interworking</code></td>
<td>Specifies FRF.5 network interworking. Not a valid keyword if the <code>vc-group</code> keyword is specified.</td>
</tr>
</tbody>
</table>

### Defaults

No default behavior or values.

### Command Modes

Global configuration

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1(2)T</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Usage Guidelines

Use the `connect` command to connect a group of Frame Relay DLCIs to an ATM PVC.

To disconnect the FRF.5 interworking connection, use the `shutdown` connect subcommand.

### Examples

The following example shows how to create an FRF.5 one-to-one connection:

```
router(config)# interface serial0
router(config-if)# frame-relay interface-dlci 100 switched
router(config-if)# interface atm3/0
router(config-if)# pvc 0/32
```
**Frame Relay-ATM Interworking Commands**

**connect (FRF.5)**

```
router(config-if-atm-vc)# encapsulation aal5mux frame-relay
router(config)# connect serial0 100 atm3/0 0/32 network-interworking
router(config-frf5)# clp-bit 1
router(config-frf5)# de-bit map-clp
```

The following example shows how to create an FRF.5 many-to-one connection:

```
router(config)# interface serial0
router(config-if)# frame-relay interface-dlci 100 switched
router(config)# vc-group friends
router(config-vc-group)# serial0 16 16
router(config-vc-group)# serial0 17 17
router(config-vc-group)# serial0 18 18
router(config-vc-group)# serial0 19 19
router(config)# interface atm3/0
router(config-if)# pvc 0/32
router(config-if-atm-vc)# encapsulation aal5mux frame-relay
router(config)# connect vc-group friends atm3/0 0/32
router(config-frf5)# de-bit map-clp
```

<table>
<thead>
<tr>
<th>Related Commands</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>encapsulation aal5</strong></td>
<td>Configures the AAL and encapsulation type for an ATM PVC, SVC, or VC class.</td>
<td></td>
</tr>
<tr>
<td><strong>pvc</strong></td>
<td>Creates an ATM PVC on a main interface or subinterface; enters interface-ATM-VC configuration mode.</td>
<td></td>
</tr>
<tr>
<td><strong>vc-group</strong></td>
<td>Assigns multiple Frame Relay DLCIs to a VC group.</td>
<td></td>
</tr>
</tbody>
</table>
connect (FRF.8)

To configure an FRF.8 one-to-one mapping between a Frame Relay data-link connection identifier (DLCI) and an ATM permanent virtual circuit (PVC), use the `connect` global configuration command. To remove a connection, use the `no` form of this command.

```
connect connection-name FR-interface FR-DLCI ATM-interface ATM-VPI/VCI service-interworking
no connect connection-name FR-interface FR-DLCI ATM-interface ATM-VPI/VCI service-interworking
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>connection-name</code></td>
<td>Specifies a connection name. Enter as a 15-character maximum string.</td>
</tr>
<tr>
<td><code>FR-interface</code></td>
<td>Specifies the Frame Relay interface type and number, for example, <code>serial1/0</code>.</td>
</tr>
<tr>
<td><code>FR-DLCI</code></td>
<td>Specifies the Frame Relay data-link connection identifier (DLCI) in the range 16 to 1007.</td>
</tr>
<tr>
<td><code>ATM-interface</code></td>
<td>Specifies the ATM interface type and number, for example <code>atm1/0</code>.</td>
</tr>
<tr>
<td><code>ATM-VPI/VCI</code></td>
<td>Specifies the ATM virtual path identifier/virtual channel identifier (VPI/VCI). If a VPI is not specified, the default VPI is 0.</td>
</tr>
<tr>
<td><code>service-interworking</code></td>
<td>Specifies FRF.8 service interworking.</td>
</tr>
</tbody>
</table>

**Defaults**

No default behavior or values.

**Command Modes**

Global configuration

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1(2)T</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

Use the `connect` command to connect a Frame Relay DLCI to an ATM PVC.

To disconnect the FRF.8 interworking connection, use the `shutdown` `connect` subcommand.

**Examples**

The following example shows how to create an FRF.8 connection:

```
router(config)# interface serial0
router(config-if)# frame-relay interface-dlci 100 switched
router(config-if)# interface atm1/0
router(config-if)# pvc 0/32
router(config-if-atm-vc)# encapsulation aal5mux fr-atm-srv
router(config)# connect service-1 Serial0 100 ATM1/0 0/32 service-interworking
router(config-frf8)# efc1-bit map-fecn
```
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>clp-bit</strong></td>
<td>Sets the ATM CLP field in the ATM cell header.</td>
</tr>
<tr>
<td><strong>de-bit map-clp</strong></td>
<td>Sets the EFCEI bit field in the ATM cell header.</td>
</tr>
<tr>
<td><strong>encapsulation aal5</strong></td>
<td>Configures the AAL and encapsulation type for an ATM PVC, SVC, or VC class.</td>
</tr>
<tr>
<td><strong>pvc</strong></td>
<td>Creates an ATM PVC on a main interface or subinterface; enters interface-ATM-VC configuration mode.</td>
</tr>
</tbody>
</table>
**de-bit**

To set the Frame Relay discard eligible (DE) bit field in the Frame Relay cell header for FRF.8 service interworking, use the `de-bit` connect submode command. To disable or reset Frame Relay DE bit mapping, use the `no` form of this command.

```
de-bit {0 | 1 | map-clp}
no de-bit {0 | 1 | map-clp}
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>The DE field in the Frame Relay header is always set to 0.</td>
</tr>
<tr>
<td>1</td>
<td>The DE field in the Frame Relay header is always set to 1.</td>
</tr>
<tr>
<td>map-clp</td>
<td>The DE field is set to 1 when one or more cells belonging to a frame has its cell loss priority (CLP) field set.</td>
</tr>
</tbody>
</table>

**Defaults**

The default is set to `map-clp`.

**Command Modes**

FRF.8 connect submode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1(2)T</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

This command maps from ATM to Frame Relay.

**Examples**

The following example sets the DE bit field in the Frame Relay cell header to 1:

```
Router(config)# connect service-1 serial1/0 16 atm3/0 1/32 service-interworking
Router(config-frf8)# de-bit 1
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>clp-bit</td>
<td>Sets the ATM CLP field in the ATM cell header.</td>
</tr>
<tr>
<td>connect (FRF.8)</td>
<td>Connects a Frame Relay DLCI to an ATM PVC.</td>
</tr>
<tr>
<td>de-bit map-clp</td>
<td>Sets the EFCI bit field in the ATM cell header.</td>
</tr>
</tbody>
</table>
**de-bit map-clp**

To set Frame Relay discard eligible (DE) bit mapping for FRF.5 network interworking, use the `de-bit map-clp` connect submode command. To disable or reset Frame Relay DE bit mapping, use the `no` form of this command.

```
de-bit map-clp
no de-bit map-clp
```

**Syntax Description**

This command has no arguments or keywords.

**Defaults**

No default behavior or values.

**Command Modes**

FRF.5 connect submode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1(2)T</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

In the default state, the DE bit in the Frame Relay header is set to 1 when one or more ATM cells belonging to a frame has its cell loss priority (CLP) field set to 1, or when the DE field of the Frame Relay service specific convergence sublayer (FR-SSCS) protocol data unit (PDU) is set to 1.

When the `no de-bit map-clp` command is entered, the FR-SSCS PDU DE field is copied unchanged to the Q.922 core frame DE field, independent of CLP indications received at the ATM layer.

**Examples**

The following example creates a connection that connects the virtual circuit (VC) group named friends to ATM PVC 0/32 and configures FR DE field mapping to match the ATM CLP field:

```
router(config)# vc-group friends
router(config-vc-group)# serial0 16 16
router(config-vc-group)# serial0 17 17
router(config-vc-group)# serial0 18 18
router(config-vc-group)# serial0 19 19
router(config)# interface atm3/0
router(config-if)# pvc 0/32
router(config-if-atm-vc)# encapsulation aal5mux frame-relay
router(config)# connect vc-group friends atm3/0 0/32
router(config-frf5)# de-bit map-clp
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>clp-bit</td>
<td>Sets the ATM CLP field in the ATM cell header.</td>
</tr>
<tr>
<td>connect (FRF.5)</td>
<td>Connects a Frame Relay DLCI or VC group to an ATM PVC.</td>
</tr>
<tr>
<td>vc-group</td>
<td>Assigns multiple Frame Relay DLCIs to a VC group.</td>
</tr>
</tbody>
</table>
**efci-bit**

To set the explicit forward congestion indication (EFCI) bit field in the ATM cell header for FRF.8 service interworking, use the `efci-bit` connect submode command. To disable or reset this bit, use the `no` form of this command.

```
efci-bit {0 | map-fecn}

no efci-bit {0 | map-fecn}
```

### Syntax Description

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>0</code></td>
<td>The EFCI field in the ATM cell header is set to 0.</td>
</tr>
<tr>
<td><code>map-fecn</code></td>
<td>The EFCI field in the ATM cell header is set to 1 when the forward explicit</td>
</tr>
<tr>
<td></td>
<td>congestion notification (FECN) field in the Frame Relay header is set.</td>
</tr>
</tbody>
</table>

### Defaults

The default is 0.

### Command Modes

FRF.8 connect submode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1(2)T</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Usage Guidelines

This command maps from Frame Relay to ATM.

### Examples

The following example creates a connection that connects Frame Relay DLCI 100 to ATM PVC 0/32, and sets the EFCI field in the ATM cell header to 1 when the FECN field in the Frame Relay header is set:

```
router(config)# interface atm1/0
router(config-if)# pvc 0/32
router(config-if)# encapsulation aal5mux fr-atm-srv
router(config)# connect serial0 100 atm1/0 0/32 service-interworking
router(config-frf8)# efci-bit map-fecn
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>clp-bit</td>
<td>Sets the ATM CLP field in the ATM cell header.</td>
</tr>
<tr>
<td>connect (FRF.8)</td>
<td>Connects a Frame Relay DLCI to an ATM PVC.</td>
</tr>
<tr>
<td>connect (FRF.5)</td>
<td>Sets the Frame Relay DE bit field in the Frame Relay cell header.</td>
</tr>
<tr>
<td>service translation</td>
<td>Allows mapping between encapsulated ATM PDUs and encapsulated Frame Relay PDUs.</td>
</tr>
</tbody>
</table>
service translation

To enable upper layer user protocol encapsulation for Frame Relay-to-ATM Service Interworking (FRF.8) feature, which allows mapping between encapsulated ATM protocol data units (PDUs) and encapsulated Frame Relay PDUs, use the `service translation` command in FRF.8 connection mode. To disable upper layer user protocol encapsulation, use the `no` form of this command.

```
service translation

no service translation
```

**Syntax Description**
This command has no arguments or keywords.

**Defaults**
The default state is `service translation`.

**Command Modes**
FRF.8 connect submode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1(2)T</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**
The `no service translation` command disables mapping between encapsulated ATM PDUs and encapsulated Frame Relay PDUs.

**Examples**
The following example shows an FRF.8 configuration with service translation disabled:

```
Router# show running-configuration

Building configuration...

Current configuration:

connect service-1 Serial1/0 16 ATM3/0 1/32 service-interworking
no service translation
efci-bit map-fecn
```

The following example shows how to configure service translation on the connection named service-1:

```
Router(config)# connect service-1 serial1/0 16 ATM3/0 1/32 service-interworking
Router(config-frf8)# service translation
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>clp-bit</td>
<td>Sets the ATM CLP field in the ATM cell header.</td>
</tr>
<tr>
<td>connect (FRF.5)</td>
<td>Sets the Frame Relay DE bit field in the Frame Relay cell header.</td>
</tr>
<tr>
<td>de-bit map-clp</td>
<td>Sets the EFCI bit field in the ATM cell header.</td>
</tr>
</tbody>
</table>
show connect (FR-ATM)

To display statistics and other information about Frame-Relay-to-ATM Network Interworking (FRF.5) and Frame Relay-to-ATM Service Interworking (FRF.8) connections, use the show connect EXEC command.

```
show connect [all | element | id ID | name | port port]
```

### Syntax Description

+ **all** (Optional) Displays information about all Frame Relay-to-ATM connections.
+ **element** (Optional) Displays information about the specified connection element.
+ **id ID** (Optional) Displays information about the specified connection identifier.
+ **name** (Optional) Displays information about the specified connection name.
+ **port port** (Optional) Displays information about all connections on an interface.

### Defaults

Default state is `show connect all`.

### Command Modes

EXEC

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1(2)T</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Examples

#### FRF.5 Examples

The following example displays information about all FRF.5 connections:

```
C3640# show connect all

ID   Name               Segment 1            Segment 2           State
========================================================================
5    network-1         VC-Group network-1   ATM3/0 1/34          UP
```

The following example displays information about the specified FRF.5 connection identifier:

```
C3640# show connect id 5

FR/ATM Network Interworking Connection: network-1
  Status - UP
  Segment 1 - VC-Group network-1
  Segment 2 - ATM3/0 VPI 1 VCI 34
  Interworking Parameters -
    de-bit map-clp
    clp-bit map-de
```
**FRF.8 Examples**

The following example displays information about the specified FRF.8 connection identifier:

```
C3640# show connect id 10
```

FR/ATM Service Interworking Connection: service-1
Status - UP
Segment 1 - Serial1/0 DLCI 16
Segment 2 - ATM3/0 VPI 1 VCI 32
Interworking Parameters -
  service translation
efci-bit 0
de-bit map-clp
clp-bit map-de

The following example displays information about the FRF.8 connection on an interface:

```
C3640# show connect port atm3/0
```

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
<th>Segment 1</th>
<th>Segment 2</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>service-1</td>
<td>Serial1/0 16</td>
<td>ATM3/0 1/32</td>
<td>UP</td>
</tr>
</tbody>
</table>

Table 38 describes the fields seen in these displays.

### Table 38  show connect Field Descriptions

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>Arbitrary connection identifier assigned by the operating system.</td>
</tr>
<tr>
<td>Name</td>
<td>Assigned connection name.</td>
</tr>
<tr>
<td>Segment 1 or 2</td>
<td>Frame Relay or ATM interworking segments.</td>
</tr>
<tr>
<td>State or Status</td>
<td>Status of the connection, UP, DOWN, or ADMIN DOWN.</td>
</tr>
</tbody>
</table>

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>connect (FRF.8)</td>
<td>Connects a Frame Relay DLCI to an ATM PVC.</td>
</tr>
<tr>
<td>show atm pvc</td>
<td>Displays all ATM PVCs, SVCs, and traffic information.</td>
</tr>
<tr>
<td>show frame-relay pvc</td>
<td>Displays statistics about Frame Relay interfaces.</td>
</tr>
</tbody>
</table>
show vc-group

To display the names of all virtual circuit (VC) groups, use the `show vc-group` EXEC command.

```
show vc-group [group-name]
```

**Syntax Description**

- **group-name**: (Optional) Name defined by the `vc-group` command. If this argument is not specified, the names of all VC groups in the system are displayed.

**Defaults**

The names of all VC groups in the system are displayed.

**Command Modes**

EXEC

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1(2)T</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

The following example shows the default display of the `show vc-group` EXEC command:

```
Router# show vc-group
Name of All VC Groups:
----------------------
network-1
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show atm pvc</code></td>
<td>Displays all ATM PVCs, SVCs, and traffic information.</td>
</tr>
<tr>
<td><code>show frame-relay pvc</code></td>
<td>Displays statistics about Frame Relay interfaces.</td>
</tr>
<tr>
<td><code>vc-group</code></td>
<td>Assigns multiple Frame Relay DLCIs to a VC group.</td>
</tr>
</tbody>
</table>
**shutdown (FR-ATM)**

To shut down a Frame Relay-ATM Network Interworking (FRF.5) connection or a Frame Relay-ATM Service Interworking (FRF.8) connection, use the `shutdown` connect submode command. To disable disconnection, use the `no` form of this command.

```
shutdown

no shutdown
```

**Syntax Description**

This command has no arguments or keywords.

**Defaults**

No default behavior or values.

**Command Modes**

FRF.5 connect submode
FRF.8 connect submode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1(2)T</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

An FRF.5 or FRF.8 connection must be manually shut down once the interworking connection is created by use of the `shutdown` connect subcommand.

**Examples**

**FRF.5 Shutdown Example**

The following example shows how to shut down an FRF.5 connection:

```
Router(config)# connect network-2 interface serial0/1 16 atm3/0 0/32 network-interworking
Router(config-frf5)# shutdown
```

**FRF.8 Shutdown Example**

The following example shows how to shut down an FRF.8 connection:

```
Router(config)# connect serial0 100 atm3/0 1/35 service-interworking
Router(config-frf8)# shutdown
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>connect (FRF.5)</code></td>
<td>Connects a Frame Relay DLCI or VC group to an ATM PVC.</td>
</tr>
</tbody>
</table>
vc-group

To assign multiple Frame Relay data-link connection identifiers (DLCIs) to a virtual circuit (VC) group for Frame Relay-to-ATM Network Interworking (FRF.5), use the `vc-group` global configuration mode command. To disable the VC group assignments, use the `no` form of this command.

```
vc-group group-name

no vc-group group-name
```

The `vc-group` command requires the use of the following command in VC-group configuration mode to provide a map between Frame Relay DLCIs and Frame Relay-SSCS DLCIs:

```
FR-interface-name FR-DLCI [FR-SSCS-DLCI]
```

### Syntax Description

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>group-name</code></td>
<td>A VC group name entered as an 11-character maximum string.</td>
</tr>
</tbody>
</table>

The following syntax description applies to the VC-group entries:

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>FR-interface-name</code></td>
<td>Frame Relay interface; for example, <code>serial0/0</code>.</td>
</tr>
<tr>
<td><code>FR-DLCI</code></td>
<td>Frame Relay DLCI number in the range 16 to 1007.</td>
</tr>
<tr>
<td><code>FR-SSCS-DLCI</code></td>
<td>(Optional) Frame Relay SSCS DLCI number in the range of 16 to 991. Default is 1022.</td>
</tr>
</tbody>
</table>

### Defaults

No default behavior or values.

### Command Modes

Global configuration

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1(2)T</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Usage Guidelines

This command specifies the Frame Relay DLCIs in the VC group and maps them to the Frame Relay-SSCS DLCIs. If the optional FR-SSCS DLCI value is not specified, its value is the same as the Frame Relay DLCI.

### Examples

The following example shows how to configure an FRF.5 many-to-one connection. The `vc-group` command maps Frame Relay DLCI 16, 17, 18, and 19 to a VC group named “friends”:

```
Router(config)# vc-group friends
Router(config-vc-group)# serial0 16 16
Router(config-vc-group)# serial0 17 17
Router(config-vc-group)# serial0 18 18
Router(config-vc-group)# serial0 19 19
```
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show vc-group</code></td>
<td>Displays the names of all VC groups.</td>
</tr>
</tbody>
</table>