
Serial Port Security in the BANDIT III

This document discusses an automatic security feature, preset for all BANDIT III chassis at shipment, to protect asynchronous communication between the serial ports of two BANDIT III chassis. This BANDIT III feature is available in ELIOS software release 435 and later.

After you configure the BANDIT III's serial port for an asynchronous protocol, the BANDIT III will lock the serial port if the port's cable is removed from the local BANDIT III or the remote BANDIT III. In that case, the port will not send or accept transmissions, even if a cable is placed back into the port, until the user okays resumption of the port's activity. This protects information from being diverted if the serial port's cable is removed from the remote BANDIT III and connected to a different device.

The sample application works in the following way:

- The 56k CSU/DSU port (in the expansion slot) is configured to carry Frame Relay between two BANDIT III chassis.

Note: You do not have to use a Frame Relay connection; that is merely the protocol used in this example. (Our example does not include configuration of the CSU/DSU port. That port's configuration is not affected by the serial port locking feature.)

- The serial port is configured for Asynchronous Encapsulation.
- A logical port—for example, Logical Port 1—is configured for asynchronous encapsulation over Frame Relay.
- The BANDIT III software monitors its ports. When the serial port's Data Terminal Ready (DTR) signal is down, the software assumes that the port's cable has been removed, so the software shuts down traffic through the port. This prohibits traffic flow if a new cable is attached to the port.

Note: SNMP and syslog messages typically are not involved; the serial traffic just shuts down when the cable is disconnected. However, if you like, you can enable an SNMP trap or configure a syslog message destination or both to indicate that the serial cable has been disconnected.

The following sections describe how to configure the serial port and how an event of serial port locking progresses and resolves.

- [*Configuring the Port Structure*](#)
- [*Serial Port Locking*](#)

7.1 Configuring the Port Structure

The following steps list the minimum configuration for the serial port. Review the [Port Configuration](#) Module to prepare a complete configuration for the port. At minimum, make sure you perform the procedures in the following sections:

- [Configuring the BANDIT III's IP Address](#)
- [Configuring the Serial Port for Asynchronous Encapsulation](#)
- [Configuring a Global Path from the Serial Port to a Logical Port](#)
- [Configuring a Logical Port for Frame Relay](#)

Note: If you wish to receive a notice of the locked state, perform the procedure in [Setting Up Alarm Notification](#).

7.1.1 Configuring the BANDIT III's IP Address

- 1 On the Main Menu, select **Typical Configurations**.

```
Main Menu
-----
1) QuickStart Config Builder

2) Typical Configurations
3) Advanced Configurations
4) Tools

V) View Current Unit Status
F) Cellular Fast Connect
L) Load Factory Defaults
P) Load Plug and Play Defaults
W) Write Configuration
R) Reset Unit
X) eXit Session
S) Statistics
Y) sYstem Administration

Enter Choice :
```

❖ The Typical Configurations Menu is displayed.

```
Typical Configurations Menu
-----
1) System Configuration
2) IP Interfaces
3) IP Static Routes
4) VPN Profiles
5) IP/VPN Policies
6) NAT Profiles
7) OSPF/BGP Configuration
8) DNS/DHCP Servers
9) Configure Firewall
A) IP QoS (Quality of Service)
B) GPS Geo-Fencing

L) LAN      : EtherNet          DHCP Server 192.168.10.1  ETHERNET
W) WAN      : EtherNet          DHCP Client 0.0.0.0        ETHERNET
M) MODEM    : Point-to-Point    MODEM                          INTERNAL
S) SERIAL   : UNDEFINED         SERIAL
E) EXPANSION : EtherNet          No DHCP                          FXB/ETHERNET
R) RDU/IDU Ports...
P) More Ports...

Enter Choice :
```

2 On the Typical Configurations Menu, select **System Configuration**.

❖ The Menu to Configure System Parameters is displayed.

```
Configure System Parameters
-----
1) System IP Address : 192.168.10.1
2) System Name      : FAST3

Enter Choice :
```

3 On the Menu to Configure System Parameters, select **System IP Address**.

❖ The following prompt is displayed. It might already include an IP address.

```
Enter Local IP Address (N.N.N.N) :
```

4 If the IP address is correct, press the **Enter** key. Otherwise, backspace over the address, type in the correct IP address, and press **Enter**.

❖ The Menu to Configure System Parameters is redisplayed, with the IP address that you specified.

5 Optional: On the Menu to Configure System Parameters, select **System Name**.

❖ The following prompt is displayed. It might already include a name for the BANDIT III.

```
Enter Local BANDIT Name (Maximum 15 characters):
```

- 6 If the name is correct, press the **Enter** key. Otherwise, backspace over the name, type in the correct name, and press **Enter**.
 - ❖ The Menu to Configure System Parameters is redisplayed, with the system name that you specified.
- 7 Do all of the following:
 - a Press the **Escape** key until you reach the Main Menu.
 - b On the Main Menu, select **Reset Unit**.
 - c When the system asks whether to save the configuration, answer **y (yes)**.
 - d When the chassis restarts, log in again and continue to the next procedure.

7.1.2 **Configuring the Serial Port for Asynchronous Encapsulation**

- 1 On the Main Menu, select **Typical Configurations**.

```
Main Menu
-----
1) QuickStart Config Builder

2) Typical Configurations
3) Advanced Configurations
4) Tools

V) View Current Unit Status
F) Cellular Fast Connect
L) Load Factory Defaults
P) Load Plug and Play Defaults
W) Write Configuration
R) Reset Unit
X) eXit Session
S) Statistics
Y) sYstem Administration

Enter Choice :
```

- ❖ The Typical Configurations Menu is displayed.

```
Typical Configurations Menu
-----
1) System Configuration
2) IP Interfaces
3) IP Static Routes
4) VPN Profiles
5) IP/VPN Policies
6) NAT Profiles
7) OSPF/BGP Configuration
8) DNS/DHCP Servers
9) Configure Firewall
A) IP QoS (Quality of Service)
B) GPS Geo-Fencing

L) LAN      : EtherNet          DHCP Server 192.168.10.1  ETHERNET
W) WAN      : EtherNet          DHCP Client 0.0.0.0       ETHERNET
M) MODEM    : Point-to-Point    MODEM                INTERNAL
S) SERIAL   : UNDEFINED         SERIAL
E) EXPANSION : EtherNet         No DHCP              FXB/ETHERNET
R) RDU/IDU Ports...
P) More Ports...

Enter Choice :
```

2 On the Typical Configurations Menu, select **Serial Port**.

❖ The port's Logical Port Attribute Menu is displayed.

```
Logical Port Attribute Menu
-----
1) Protocol      : UNDEFINED
2) Global Paths
3) Undefine Current Logical Port

Enter Choice :
```

Note: At this point, the protocol for the serial port is **Undefined**.

3 On the Logical Port Attribute Menu, select **Protocol**.

❖ The port's Logical Port Protocol Selection Menu is displayed.

```
Logical Port Protocol Selection Menu
```

```
-----  
1) Frame Relay  
2) Point-to-Point (PPP)  
3) PPPoF(PPP over FR)  
4) MultiLink PPP  
5) X.25+  
6) SDLC Routing  
7) SDLC 1490 Configuration  
8) Byte Sync Encapsulation  
9) ALC  
A) Bit Sync Encapsulation  
B) Asynchronous Encapsulation  
C) Serial Line IP (SLIP)  
D) Async Burroughs Poll/Select  
E) Sync Burroughs Poll/Select  
F) Bisync  
G) Telnet Terminal  
H) XXX PAD  
I) X.42 Spoofing  
J) Diagnostic Async  
K) CDC  
L) Voice/PCM Encapsulation
```

```
Enter Choice :
```

4 On the Logical Port Protocol Selection Menu, select **Asynchronous Encapsulation**.

❖ The Menu of Asynchronous Encapsulation Parameters is displayed. The menu indicates the port you are configuring.

```
Asynchronous Encapsulation Parameters : SERIAL
```

```
-----  
1) Speed : 9600  
2) Data Bits : 8  
3) Parity : None  
4) Stop Bits : 1  
5) Max Idle (chars) : 3  
6) Flow Control : OFF  
7) Flow Control Type : RTS/CTS  
8) Break Length : 200 ms.  
9) GPT Name :  
A) Priority : High  
B) Connection ID : 1  
C) Max Buffer Length : 0(Default)  
D) Telnet Term Logical Port : N/A
```

```
Enter Choice :
```

5 Continue to *Configuring a Global Path from the Serial Port to a Logical Port*.

7.1.3 Configuring a Global Path from the Serial Port to a Logical Port

Note: You reached this procedure as part of the continuation of the procedure in [Configuring the Serial Port for Asynchronous Encapsulation](#). (In that procedure, you selected asynchronous encapsulation as the serial port's protocol.)

6 Do the following to create a global path:

a On the Menu of Asynchronous Encapsulation Parameters, select **GPT Name** (Global Path Name).

❖ The following prompt asks which global path you wish to use for this port.

```
Enter Path Name (1 to 10 Characters):
```

b Type a name for the global path—for this example, we type **GRE**. Then press the **Enter** key.

❖ If the path name already exists, the Global Paths Table is displayed. Because this is a new path name, the following message is displayed.

```
Path Name Does Not Exist In GPT Table.
```

❖ Then the system asks whether to add this path name to the Global Path Table.

```
To Add Global Path Entry, Press 'Y'or <enter>. Press Escape Otherwise.
```

c Type **y** (yes).

❖ The Menu for Global Path Types is displayed.

```
Global Path Types
-----
1) X25 SVC
2) X25 PVC
3) Frame Relay PVC
4) Port Type
5) IP/UDP
6) FR Multicast Path

Enter Choice : (1 to 6)[1] :
```

d On the Menu for Global Path Types, select **Frame Relay PVC**.

❖ The following prompt asks which port to send this path through.

```
Enter Port Number (S(SERIAL),R = IDU/IDU Ports,1-75):
```

e Type a number for a Logical Port. For this exercise, type the number 1 (for Logical Port 1).

❖ The following prompt asks which Frame Relay data link connection identifier (DLCI) to use.

```
Enter FR DLCI Number (16-1007) :
```

f Type the DLCI that your network administrator received from the Frame Relay carrier, and press the **Enter** key.

❖ The following message indicates that the path has been added to the Global Paths Table.

```
GPT Entry added.
```

❖ Then the Menu of Asynchronous Encapsulation Parameters is redisplayed, listing the global path that you defined.

```
Asynchronous Encapsulation Parameters : SERIAL
```

```
-----  
1) Speed : 9600  
2) Data Bits : 8  
3) Parity : None  
4) Stop Bits : 1  
5) Max Idle (chars) : 3  
6) Flow Control : OFF  
7) Flow Control Type : RTS/CTS  
8) Break Length : 200 ms.  
9) GPT Name : GRE  
A) Priority : High  
B) Connection ID : 1  
C) Max Buffer Length : 0(Default)  
D) Telnet Term Logical Port : N/A
```

```
Enter Choice :
```


- 7 If you need to change any other parameter value on the Menu of Asynchronous Encapsulation Parameters, select that parameter and change its value. (See [Asynchronous Encapsulation](#) for details of configuring the protocol.)
 - ❖ The Menu of Asynchronous Encapsulation Parameters is redisplayed after each parameter change.
- 8 When you have finished configuring parameters on the Menu of Asynchronous Encapsulation Parameters, press the **Escape** key.
 - ❖ The Logical Port Attribute Menu is redisplayed, listing the protocol that you specified.

```
Logical Port Attribute Menu
-----
1) Protocol          : Asynchronous Encapsulation
2) Global Paths
3) Undefine Current Logical Port

Enter Choice :
```

- 9 Press the **Escape** key.
 - ❖ The Typical Configurations Menu is redisplayed, listing the protocol that you specified for the serial port.

```
Typical Configurations Menu
-----
1) System Configuration
2) IP Interfaces
3) IP Static Routes
4) VPN Profiles
5) IP/VPN Policies
6) NAT Profiles
7) OSPF/BGP Configuration
8) DNS/DHCP Servers
9) Configure Firewall
A) IP QoS (Quality of Service)
B) GPS Geo-Fencing

L) LAN      : EtherNet          DHCP Server 192.168.10.1  ETHERNET
W) WAN      : EtherNet          DHCP Client 0.0.0.0      ETHERNET
M) MODEM    : Point-to-Point    MODEM                INTERNAL
S) SERIAL   : Asynchronous EncapsulationSERIAL
E) EXPANSION : EtherNet          No DHCP                FXB/ETHERNET
R) RDU/IDU Ports...
P) More Ports...

Enter Choice :
```

- 10 Press the **Escape** key.
 - ❖ The Main Menu is redisplayed.

```

Main Menu
-----
1) QuickStart Config Builder

2) Typical Configurations
3) Advanced Configurations
4) Tools

V) View Current Unit Status
F) Cellular Fast Connect
L) Load Factory Defaults
P) Load Plug and Play Defaults
W) Write Configuration
R) Reset Unit
X) eXit Session
S) Statistics
Y) sYstem Administration

Enter Choice :

```

11 To view the Global Paths Table, do the following:

a On the Main Menu, select **Advanced Configurations**.

❖ The Advanced Configurations Menu is displayed.

```

Advanced Configurations
-----
1) Physical Configurations
2) Data Configurations
3) Local Address
4) Routing
5) Global Paths

Enter Choice :

```

b On the Advanced Configurations Menu, select **Global Paths**.

❖ The Global Paths Table is displayed.

Note: The global path you entered in [Step 6](#) is included in the table.

Entry	Path Name	PathType	Port	DLCI
1	GRE	FR PVC	Port 1	16

Entry	Path Name	PathType	Port
2	LAN	PORT TYPE LAN	
3	WAN	PORT TYPE WAN	
4	MODEM	PORT TYPE MODEM	
5	DMZ	PORT TYPE DMZ	

Add, Modify, or Delete an Entry? (Enter A, M, or D):

12 Do all of the following:

- a** Press the **Escape** key until you reach the Main Menu.
- b** On the Main Menu, select **Reset Unit**.
- c** When the system asks whether to save the configuration, answer **y (yes)**.
- d** When the chassis restarts, log in again and continue to the next procedure.

7.1.4 Configuring a Logical Port for Frame Relay

1 On the Main Menu, select **Typical Configurations**.

```
Main Menu
-----
1) QuickStart Config Builder

2) Typical Configurations
3) Advanced Configurations
4) Tools

V) View Current Unit Status
F) Cellular Fast Connect
L) Load Factory Defaults
P) Load Plug and Play Defaults
W) Write Configuration
R) Reset Unit
X) eXit Session
S) Statistics
Y) sYstem Administration

Enter Choice :
```

❖ The Typical Configurations Menu is displayed.

```

Typical Configurations Menu
-----
1) System Configuration
2) IP Interfaces
3) IP Static Routes
4) VPN Profiles
5) IP/VPN Policies
6) NAT Profiles
7) OSPF/BGP Configuration
8) DNS/DHCP Servers
9) Configure Firewall
A) IP QoS (Quality of Service)
B) GPS Geo-Fencing

L) LAN      : EtherNet          DHCP Server 192.168.10.1  ETHERNET
W) WAN      : EtherNet          DHCP Client 0.0.0.0          ETHERNET
M) MODEM    : Point-to-Point    MODEM                          INTERNAL
S) SERIAL   : UNDEFINED         SERIAL
E) EXPANSION : EtherNet          No DHCP                          FXB/ETHERNET
R) RDU/IDU Ports...
P) More Ports...

Enter Choice :

```

2 On the Typical Configurations Menu, select **System Configuration**.

❖ The Typical Configurations Menu's Logical Port Overview Screen is displayed.

```

Typical Configurations Menu
-----
1) Ports 1 to 20
2) Ports 21 to 40
3) Ports 41 to 60
4) Ports 61 to 75

Enter Choice :

```

3 You need to configure the same logical port that you selected in [Configuring a Global Path from the Serial Port to a Logical Port](#). In our example, that is Logical Port 1. On the Typical Typical Configurations Menu's Logical Port Overview Screen, select **Ports 1 to 20**.

❖ The Logical Port Protocol Menu for the selected ports is displayed.

```
Logical Port Protocol      Mapped To      Port Interfaces
-----
1) UNDEFINED
2) UNDEFINED
3) UNDEFINED
4) UNDEFINED
5) UNDEFINED
6) UNDEFINED
7) UNDEFINED
8) UNDEFINED
9) UNDEFINED
10) UNDEFINED
11) UNDEFINED
12) UNDEFINED
13) UNDEFINED
14) UNDEFINED
15) UNDEFINED
16) UNDEFINED
17) UNDEFINED
18) UNDEFINED
19) UNDEFINED
20) UNDEFINED

Enter Port :
```

- 4 You need to configure the same logical port that you selected in [Configuring a Global Path from the Serial Port to a Logical Port](#). In our example, that is Logical Port 1. On the Logical Port Protocol Menu, select port number 1. (Note that the port is currently **Undefined**.)

❖ The port's Logical Port Attribute Menu is displayed.

```
Logical Port Attribute Menu
-----
1) Protocol          : UNDEFINED
2) Global Paths
3) Undefine Current Logical Port

Enter Choice :
```

- 5 On the Logical Port Attribute Menu, select **Protocol**.

❖ The Logical Port Protocol Selection Menu is displayed.

```
Logical Port Protocol Selection Menu
```

- ```

1) Frame Relay
2) PPPoF(PPP over FR)
3) MultiLink PPP
4) X.25+
5) ALC
6) Asynchronous Encapsulation
7) Telnet Terminal
8) XXX PAD
9) X.42 Spoofing
A) Diagnostic Async
B) CDC
C) Voice/PCM Encapsulation
```

```
Enter Choice :
```

**6** On the Logical Port Protocol Selection Menu, select **Frame Relay**.

❖ The Menu of Frame Relay Management Parameters is displayed. The menu indicates the port number that you are configuring.

```
Frame Relay Management Parameters : Port 1
```

- ```
-----  
1) Type      : Frame Relay over IP  
2) IP Address : 0.0.0.0  
3) Local IP Address : 0.0.0.0  
4) Protocol  : Adaptive Management - User  
5) Value N1  : 6  
6) Value N2  : 3  
7) Value N3  : 4  
8) Timer T1  : 10  
9) Timer T2  : 15  
A) Priority / CIR Enforcement : Disabled  
B) High to Medium Ratio : 4:1  
C) Medium to Low Ratio : 4:1  
D) DLCI CIR Information  
E) FRF-12 Fragmentation : Disabled
```

```
Enter Choice :
```

7 Do the following:

a On the Menu of Frame Relay Management Parameters, select **IP Address**.

❖ The prompt for a destination address is displayed.

```
Enter Destination IP Address (N.N.N.N) :
```

b Type the remote BANDIT III's IP address, and press the **Enter** key.

❖ The Menu of Frame Relay Management Parameters is redisplayed. The menu displays the destination IP address that you specified.

c On the Menu of Frame Relay Management Parameters, select **Local IP Address**.

❖ The prompt for the local address is displayed.

```
Enter Local IP Address (N.N.N.N)(0.0.0.0 for system to decide) :
```

Note: You can leave the value of the **Local IP Address** at **0.0.0.0**; in that case, the address that you specified in [Configuring the BANDIT III's IP Address](#) will be used. However, if you wish to specify an IP different from the system IP address, you can type it here.

This example configures the IP address (although it is the same as the system address).

d Type the IP address for this BANDIT chassis (the local device), and press the **Enter** key.

❖ The Menu of Frame Relay Management Parameters is redisplayed. The menu displays the IP address that you specified.

e On the Menu of Frame Relay Management Parameters, select **Protocol**.

Note: On the Menu of Frame Relay Management Parameters, a parameter might be followed by its current value—for example, **Adaptive Management - User**.

❖ The Frame Relay Management Protocol Menu is displayed.

```
Frame Relay Management Protocol
-----
1) ANSI T1.617 Annex D - User
2) CCITT Q.933 Annex A - User
3) LMI - User
4) Adaptive Management - User
5) ANSI T1.617 Annex D - Network
6) CCITT Q.933 Annex A - Network
7) LMI - Network
8) Adaptive Management - Network
9) None

Enter Choice :
```

f On the Frame Relay Management Protocol Menu, select **None**.

❖ The Menu of Frame Relay Management Parameters is redisplayed, listing **None** as the value of this menu's parameter **Protocol**.

```
Frame Relay Management Parameters : Port 1
-----
```

```
1) Type      : Frame Relay over IP
2) IP Address : 0.0.0.0
3) Local IP Address : 0.0.0.0
4) Protocol  : None
5) Value N1  : 0
6) Value N2  : 0
7) Value N3  : 0
8) Timer T1  : 0
9) Timer T2  : 0
A) Priority / CIR Enforcement : Disabled
B) High to Medium Ratio : 4:1
C) Medium to Low Ratio : 4:1
D) DLCI CIR Information
E) FRF-12 Fragmentation : Disabled
```

```
Enter Choice :
```

g If you need to change the value for any other parameter on the Menu of Frame Relay Management Parameters, select that parameter and change its value.

h When you have finished configuring the parameters, press the **Enter** key.

❖ The Logical Port Attribute Menu is redisplayed.

8 Do all of the following:

a Press the **Escape** key until you reach the Main Menu.

b On the Main Menu, select **Reset Unit**.

c When the system asks whether to save the configuration, answer **y (yes)**.

d When the chassis restarts, log in again and continue to the next procedure.

7.1.5 Setting Up Alarm Notification

If you wish, you can do the following to set up alarm notification:

- [Enabling the SNMP Trap](#)
- [Enabling the Syslog Feature](#)
- [Enabling the Alarm](#)

7.1.5.1 Enabling the SNMP Trap

To set up an SNMP trap for this feature, see [Predefined SNMP Traps](#). When you enable SNMP, the Frame Relay traps (including the traps named **FRportmgmtup** and **FRportmgmtdown**) are enabled.

7.1.5.2 Enabling the Syslog Feature

To enable the syslog feature, follow the procedures in [Using the Syslog Feature](#).

7.1.5.3 Enabling the Alarm

To enable the alarm, see [Configuring Alarm Ports in the BANDIT III](#).

7.2 Serial Port Locking

The following sections describe how the serial port locks, how to resolve the locked state, and how to view or verify the serial port's state.

- [Automatic Port Locking](#)
- [Viewing the Serial Port's State](#)
- [Resolving the Serial Port Lock and Resetting the Serial Port to an Unlocked State](#)
- [Verifying That the Serial Port is Open](#)

7.2.1 Automatic Port Locking

The following sequence of events illustrates how serial port locking works.

- 1 The serial cable is disconnected from the remote or local BANDIT III's DB25 serial port.
 - ❖ The BANDIT III senses that the Data Terminal Ready signal (DTR, pin 20 on the DB25 connector) goes from high to low. The BANDIT III assumes that the cable has been disconnected from the port.
- 2 BANDIT III breaks the serial communication, to interrupt data flow.
 - ❖ If a cable (even the same cable) is connected to the serial port, the port will not pass traffic.
 - ❖ You (the customer) will see that the communication is lost (that is, you will notice that the port is not sending data).
 - ❖ If you have enabled SNMP, an alarm message will be sent to the SNMP Manager.
 - ❖ If you have enabled syslog, a message will be sent to syslog.

7.2.2 Viewing the Serial Port's State

You can verify the serial port's state by doing the following.

- 1 On the Main Menu, select **System Administration**.

```
Main Menu
-----
1) QuickStart Config Builder

2) Typical Configurations
3) Advanced Configurations
4) Tools

V) View Current Unit Status
F) Cellular Fast Connect
L) Load Factory Defaults
P) Load Plug and Play Defaults
W) Write Configuration
R) Reset Unit
X) eXit Session
S) Statistics
Y) sYstem Administration

Enter Choice :
```

- ❖ The System Administration Menu is displayed.

```
System Administration
-----
1) User Management
2) SNMP Configuration
3) Database Management
4) Telnet Terminal
5) Port Data Capture
6) SNMP Triggered TRAPS
7) RADIUS Authentication

B) Config Banner
C) Copy Configuration
F) Flash RDU
N) Network Download
R) Remote Logging
U) Upgrade Code
V) VPN Commands
O) Ospf/Bgp Log
W) Wireless Options
L) Port Lockup Control

Enter Choice :
```

- 2 On the System Administration Menu, select **Port Lockup Control**.

- ❖ The screen displays messages similar to the following messages.

```
box/port tampering lockup      = Enabled
local serial port tampered     = FALSE
remote box tampered            = TRUE
remote serial port tampered    = TRUE

Press C to Clear the Lockup or Press Any Key to continue.
```

- ❖ One or more items are TRUE, so port lockup is **enabled**.

Note: If you have enabled an SNMP trap for this condition, or if you have configured a syslog site to receive alarm messages, a message will be sent. (An associated SMNP Manager application can read the SNMP trap message.)

You can also check the syslog statistics to see whether a port has locked. For information on view those statistics, see [Syslog Statistics](#).

- 3 Do one of the following:

- a If you have resolved the lockup, press the **C** key to clear the lockup.
- b If you have not yet resolved the lockup, press any key (except the **C** key) to continue. Follow the procedure in [Resolving the Serial Port Lock and Resetting the Serial Port to an Unlocked State](#).

7.2.3 Resolving the Serial Port Lock and Resetting the Serial Port to an Unlocked State

Do the following to resolve the serial port lock and reset its state.

- 1 Send a representative to the affected local or remote site to investigate the cause of the lockup.
- 2 After the representative has determined the reason for the port lock and has verified that the proper cable is connected or reconnected, do one of the following:
 - a Power cycle the BANDIT III (that is, remove the BANDIT III's power cable, then reconnect it to the BANDIT III).
 - or
 - b On the BANDIT's Main Menu, select **Reset Unit**.
 - or
 - c Log in from a remote site, display the BANDIT's Main Menu, and select **Reset Unit**.
- 3 When the remote BANDIT III is back on line, wait at least 5 minutes after the reset. (It is okay if the BANDIT menus exit because of inactivity.) When you are sure that everything is back to normal, then the local BANDIT III can clear the locked state by following the procedure in [Viewing the Serial Port's State](#).
 - ❖ After pressing **C**, the following message should be displayed.

```
box/port tampering lockup      = Enabled
local serial port tampered     = FALSE
remote box tampered            = FALSE
remote serial port tampered    = FALSE

Press C to Clear the Lockup or Press Any Key to continue.
```

- ❖ All items are **FALSE** (that is, no tampering has been detected), but the serial port lock is still **Enabled** (so the serial port is still locked).
- 4 Press **C** to clear the lockup.
 - ❖ At this point the serial communication will be back on line. The application should already be working. You can verify this by looking at the port's transmission statistics, described in [Verifying That the Serial Port is Open](#).
- Note:** You do not need to save the configuration after clearing the lock.
- 5 If you follow the procedure in [Viewing the Serial Port's State](#) again, the following message should be displayed.

```
box/port tampering lockup      = Disabled
local serial port tampered     = FALSE
remote box tampered            = FALSE
remote serial port tampered    = FALSE

Press C to Clear the Lockup or Press Any Key to continue.
```

❖ All items are **FALSE** (that is, no tampering has been detected), and the serial port lock is **Disabled**, so the serial port can send traffic. This is the port's normal, active state, allowing traffic to travel through the connection.

7.2.4 Verifying That the Serial Port is Open

1 On the Main Menu, select **Statistics**.

❖ The Statistics Menu is displayed.

```
Statistics
-----
1) Logical Ports

A) Alarms
B) BANDIT Triggers
C) LLC
D) Display Syslog Messages
G) GPS Status
I) IP
L) Loader
M) MODEM
P) ICMP
Q) QLLC
R) RADIUS
S) SNMP
T) TCP
U) UDP
V) VPN Statistics
W) SNA sWitching
Y) Display All Statistics
Z) Clear All Statistics

Enter Choice :
```

2 On the Statistics Menu, select **Logical Ports**.

❖ The Logical Port Statistics Menu is displayed.

```

Logical Port Statistics  Attached To  IP Address  Port Interfaces
-----
C) Comm/Supervisor      Comm/Sup    DCE
M) Point-to-Point      MODEM      INTERNAL
L) EtherNet            No DHCP    ETHERNET
W) EtherNet            No DHCP    ETHERNET
S) UNDEFINED           SERIAL
E) EtherNet            No DHCP    FXB/ETHERNET
R) RDU/IDU Stats : Reinitializing or disabled
P) More Ports ...

Enter Choice :

```

3 On the Logical Port Statistics Menu, select **More Ports**.

❖ The Port Overview Selection Menu for Logical Ports Statistics is displayed.

```

Logical Port Statistics
-----
1) Ports 1 to 20
2) Ports 21 to 40
3) Ports 41 to 60
4) Ports 61 to 75

Enter Choice :

```

4 On the Port Overview Selection Menu for Logical Ports Statistics, select **Ports 1 to 20**.

❖ The Logical Ports Statistics Menu for Logical Ports 1 to 20 is displayed.

```

Logical Port Statistics  Mapped To  Port Interfaces
-----
1) Frame Relay          Port 1
2) UNDEFINED
3) UNDEFINED
4) UNDEFINED
5) UNDEFINED
6) UNDEFINED
7) UNDEFINED
8) UNDEFINED
9) UNDEFINED
10) UNDEFINED
11) UNDEFINED
12) UNDEFINED
13) UNDEFINED
14) UNDEFINED
15) UNDEFINED
16) UNDEFINED
17) UNDEFINED
18) UNDEFINED
19) UNDEFINED
20) UNDEFINED

Enter Choice :

```

- 5 On the Logical Ports Statistics Menu for Logical Ports 1 to 20, select port number 1.

Note: In *Configuring a Logical Port for Frame Relay*, we configured this port to use the **Frame Relay** protocol.

❖ The current transmission statistics for the port are displayed.

Note: The **Management Status** message **Receiving Polls** indicates that the connection is up. You can also see that the port is passing traffic.

```
Port      : Port 1
Protocol  : Frame Relay

Management Protocol: ANSI T1.617 Annex D - Network
Management Status: Receiving Polls

Total Frames Received          28764
Total Frames Transmitted       22812

Management Frames Received     327
Rx Management Frames with Errors 0
Management Frames Transmitted  327

DISCARDED FRAMES:
Rx Low Buffers:                0
Rx Non-Routable IP:            0
Rx Non-Routable IPX:           0
Rx Non-Routable Encapsulation: 0
Rx Inactive DLCIs:             0   Tx Inactive DLCIs: 0

Press Any Key to Continue ...
```

- 6 Press any key (except the **Escape** key) to see more statistics for the port.

```
Last Invalid DLCI Received: NONE

Press Any Key to Continue ...
```

- 7 Press any key (except the **Escape** key) to see more statistics for the port.

```
Enter "C" to Clear Statistics, "ESC" to Return
And Any Other Key to Refresh Statistics
```

- 8 Do one of the following:

- a Press any key (except the **Escape** key) to refresh statistics for the port.
- b When you have verified that the serial port is passing traffic, and when you have finished reviewing the statistics, press the **Escape** key until you reach the Main Menu.