encore!networks™

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C2C Wake-Up Ping

This document provides guidelines for configuring a C2C™ or another BANDIT chassis to send a wake-up ping across a cellular network.

If a connection to a cellular network is not active (that is, if a device has not been sending or receiving data for awhile), the network may consider the device asleep and may reduce bandwidth for the device's connection. When the device resumes sending data through the network, the network will re-allocate bandwidth to the connection. However, until full bandwidth has been re-established, any data sent might be lost. In that case, the first part of a message might be lost.

If a connection has been asleep, a wake-up ping can send a packet across the cellular network to a destination device. (The location of the destination device is unimportant; however, the connection to that device must be across the cellular network.) As stated earlier, when the network sees that traffic needs to traverse it, it assigns bandwidth to pass that traffic. Because a wake-up ping lets the connection re-establish bandwidth before any data are sent, all parts of a message can be received.

Note: The destination for the wake-up ping and the destination for subsequent data do not have to be the same.

5.1 Configuring a Wake-Up Ping

To configure the BANDIT device to send a wake-up ping, perform the following steps.

1 Log into the BANDIT device.

Note: For details of C2C log-in and configuration, see the *C2C Configuration Guide*.

❖ After a successful log-in, the Main Menu is displayed.

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```
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 :
```

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

❖ The Typical Configurations Menu is displayed.

```
C2C Telnet
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
M) MODEM  : Telnet Terminal       MODEM                         INTERNAL
O) WIRELESS : Point-to-Point        WIRELESS                      INTERNAL
P) More Ports...

Enter Choice :
```

Note: This procedure configures the BANDIT device to send the ping. The procedure assumes that the wake-up ping always originates from the BANDIT; it does not address configuration of a remote device (which may or may not be a BANDIT device).

2 On the Typical Configurations Menu, select the **Wireless** port.

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

```
C2C Telnet
Logical Port Attribute Menu
---------------------------
1) Protocol         : Point-to-Point
2) Global Paths
3) Dialup  Configuration
4) External Dial Devices : Enabled
5) Undefine Current Logical Port

Enter Choice :
```

3 On the Logical Port Attribute Menu, select **Dialup Configuration**.

❖ The port's Dialup Configuration Menu is displayed.

```
C2C Telnet
Dialup Configuration : WIRELESS
-------------------------------
1) Dial Mode : DIALOUT
2) Primary Phone Number : #777
3) Secondary Phone Number :
4) Redial Timer Seconds : 10
5) Number of Redials : 65530
6) Dialup Port Priority : Low
7) Toll Saver : Disabled
8) Toll Saver Timeout : 180
9) Maximum Number of Successful Calls Allowed In a Minute : 25

A) Reset after dis-connection :  Disabled
B) GPRS/EDGE Context AT Command :
C) V.42 Functionality : Enabled
D) Dialout Mode : NORMAL
E) OTA : Enabled
F) Wakeup IP address : 0.0.0.0

Enter Choice :
```

4 On the Dialup Configuration Menu, select **Wake-Up IP Address**.

❖ The Menu to Configure IP Addresses for the Wake-Up Feature is displayed.

```
C2C Telnet
Configure the IP addresses for Wakeup feature
---------------------------------------------
1) Wakeup Feature Source IP address : 0.0.0.0
2) Wakeup Feature Dest IP address : 0.0.0.0

Enter Choice :
```

Note: A ping always has a source IP address and a destination IP address. Only configuration of the destination IP address is mandatory. The default source is the current device—that is, if you do not enter a source IP address, the BANDIT device will use its system address as the source address.

5 On the Menu to Configure IP Addresses for the Wake-Up Feature, do the following:

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a Select **Wake-Up Feature Source IP Address**. The source IP address represents the device that will send the ping.

❖ The following prompt is displayed.

```
Enter Wakeup Feature Source IP Address (N.N.N.N) :
```

b Type the BANDIT device's public IP address and press the **Enter** key.

❖ The menu is redisplayed, showing the IP address that you typed.

Note: In the example, *a.b.c.d* represents the source IP address. Get all IP addresses from your network administrator.

```
C2C Telnet
Configure the IP addresses for Wakeup feature
-------------------------------------------
1) Wakeup Feature Source IP address : a.b.c.d
2) Wakeup Feature Dest IP address : 0.0.0.0

Enter Choice :
```

c Select **Wake-Up Feature Dest [Destination] IP Address**. The destination IP address represents the device that will receive the ping.

❖ The following prompt is displayed.

Note: The prompt might say "Source IP Address" even if you selected **Dest**ination. However, the entry will be placed in the field you selected (Source or Destination).

```
Enter Wakeup Feature Source IP Address (N.N.N.N) :
```

d Type the public IP address for the device that will receive the ping, and press the **Enter** key.

❖ The menu is redisplayed, showing the IP address that you typed.

Note: In the example, *e.f.g.h* represents the destination IP address. Get all IP addresses from your network administrator.

```
C2C Telnet
Configure the IP addresses for Wakeup feature
-------------------------------------------
1) Wakeup Feature Source IP address : a.b.c.d
2) Wakeup Feature Dest IP address : e.f.g.h

Enter Choice :
```

6 When you have finished configuring the wake-up ping, press the **Escape** key.

❖ The Dialup Configuration Menu is redisplayed, showing the wake-up IP address for the destination device.

Note: In the example, *e.f.g.h* represents the IP address for the destination device. Get all IP addresses from your network administrator.

```
Dialup Configuration : WIRELESS
--------------------------------
1) Dial Mode : DIALOUT
2) Primary Phone Number : #777
3) Secondary Phone Number :
4) Redial Timer Seconds : 10
5) Number of Redials : 65530
6) Dialup Port Priority : Low
7) Toll Saver : Disabled
8) Toll Saver Timeout : 180
9) Maximum Number of Successful Calls Allowed In a Minute : 25

A) Reset after dis-connection :  Disabled
B) GPRS/EDGE Context AT Command :
C) V.42 Functionality : Enabled
D) Dialout Mode : NORMAL
E) OTA : Enabled
F) Wakeup IP address : e.f.g.h

Enter Choice :
```

When the cellular wireless modem goes off hook (that is, when that modem opens communication), the wake-up ping is sent out. In response to the ping crossing the cellular wireless network, that network allocates bandwidth so that the connection can carry the data sent out after the ping.

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

8 On the Main Menu, select **Write Configuration**.

❖ The configuration is saved.

9 Then, on the Main Menu, select **Reset Unit**.

❖ The BANDIT device uses the saved configuration.

❖ After inactivity over its connection to the cellular network, this BANDIT device will send a wake-up ping, allowing the cellular network to re-establish bandwidth before the BANDIT sends any data.