Release Notes for EHWIC-3G-HSPA-U

Contents

Introduction

This document describes the release features of the Universal High Speed Packet Access (HSPA-U) version of the 3G wireless Enhanced High-Speed WAN Interface Cards (EHWICs), a multiband, multiservice WAN card for use over GSM networks

Note EHWIC cards support Cisco IOS Software Release 15.1(3)T or higher.

For more information about this release, see www.cisco.com/go/3g.

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New Features

This section describes the new features in this release.

SMS

This feature enables the router to send and receive Short Message Service (SMS) messages. This feature also enables the router to save and store the SMS messages in an FTP server.

Note SMS is enabled by default. However, you need to define the FTP server to store incoming and outgoing SMS messages.

The following example shows you how to configure this feature for GSM:

```
chat-script gsm "" "atdt*98*1#" TIMEOUT 180 "CONNECT"
!
!
license udi pid CISCO1941W-A/K9 sn FTX140682QP
hw-module ism 0
!
redundancy
!
controller Cellular 0/0
 gsm sms archive path ftp://avatar:avatar@10.10.10.100/c1941
!
interface Loopback1
 ip address 1.1.1.1 255.255.255.255
!
interface GigabitEthernet0/1
 ip address 10.10.10.8 255.255.255.0
 duplex auto
 speed auto
!
interface Cellular0/0/0
 ip address negotiated
 encapsulation ppp
 load-interval 30
 dialer in-band
 dialer idle-timeout 0
 dialer string gsm
 dialer-group 1
 no peer default ip address
 async mode interactive
 fair-queue 64 16 0
 ppp chap hostname isp.cingular
 ppp chap password 0 cingular1
 ppp ipcp dns request
 ppp timeout retry 120
 ppp timeout ncp 30
 routing dynamic
!
```

```
ip forward-protocol nd
!
no ip http server
no ip http secure-server
!
ip route 0.0.0.0 0.0.0.0 Cellular0/0/0
!
dialer-list 1 protocol ip permit
!
control-plane
!
!
line con 0
 exec-timeout 0 0
line aux 0
line 0/0/0
 script dialer gsm
 login
 modem InOut
 no exec
 transport input all
 transport output all
 speed 237000
line 67
 no activation-character
 no exec
 transport preferred none
 transport input all
 transport output pad telnet rlogin lapb-ta mop udptn v120 ssh
line vty 0 4
 password lab
 login
 transport input all
!
exception data-corruption buffer truncate
scheduler allocate 20000 1000
ntp server 10.10.10.100 prefer
end
```

The following examples shows you how to send SMS messages:

router#**cellular** *<slot#>* **gsm sms send** *<phone number> <message content>*

Note There is a limit of 160 characters per SMS send message.

The following examples shows you how to delete SMS messages:

router#**cellular** *<slot#>* **gsm sms delete** {**all** | *<message ID>}*

The following examples shows you how to display SMS messages:

router#**cellular** *<slot#>* **gsm sms view** {**summary** | **all** | *<message ID>*}

The following examples shows you how to archive SMS messages:

router(config-controller)#**gsm sms archive path** *<FTP-path>*

Note You can use the call screening command **dialer caller** *number* **callback** to authenticate SMS messages that you can use to establish data connections.

GPS

This feature enables Global Positioning System (GPS) standalone and NMEA data.

The following example shows you how to configure this feature:

```
router(config)#controller cellular 0/0
router(config-controller)#gsm gps mode standalone
...
controller Cellular 0/0
 gsm gps mode standalone
!
router(config-controller)#gsm gps nmea
...
controller Cellular 0/0
 gsm gps nmea
!
```

The following example shows you how to display GPS data:

```
router#show cellular <slot#> gps
GPS Info
-------------
GPS State: GPS enabled
GPS Mode Configured: standalone
Latitude: 37 Deg 24 Min 59 Sec North
Longitude: 121 Deg 55 Min 8 Sec West
Timestamp (GMT): Thu Jul 29 11:08:39 2010
Fix type: 3D, Height: -6 m
Heading: 408, Velocity Horiz: 3, Velocity Vert: 0
Satellite Info
----------------
Satellite #13, elevation 75, azimuth 46, SNR 21
...

router#show cellular <slot#> gps detail
GPS Info
-------------
GPS State: GPS enabled
GPS Mode Configured: standalone
Latitude: 37 Deg 24 Min 59 Sec North
Longitude: 121 Deg 55 Min 7 Sec West
Timestamp (GMT): Thu Jul 29 22:17:57 2010
Fix type: 3D, Height: 12 m
Heading: 0, Velocity Horiz: 0, Velocity Vert: 0
HEPE: 2680 cm
Uncertainty Info:
  Angle: 0 deg, A: 24 m, Position: 12 m, Vertical: 12 m
Satellite Info
----------------
Satellite #7, elevation 16, azimuth 123, SNR 14 *
...
```

Note Obtaining a GPS-fixed location requires a supported GPS antenna to be connected to the DIV/GPS port.

Note Obtaining a GPS-fixed location using the Standalone mode can take up to 12 minutes. This depends on the location and type of antenna used.

3G WWAN MIB Persistence

This feature allows you to retain 3G WWAN MIB object values and trap settings across router reloads.

Before configuring 3G WWAN MIB, you should perform some SNMP pre-configuration to avoid getting warning messages. The following is an example of SNMP pre-configuration:

```
snmp-server community public RO
snmp-server community private RW
snmp-server enable traps c3g
```

The following example shows you how the settings that you need to configure this feature:

```
controller Cellular 0/2
    gsm event rssi onset mib-trap All-gsm
    gsm event rssi onset threshold -84
    gsm event rssi abate mib-trap All-gsm
    gsm event rssi abate threshold -82
    gsm event temperature onset mib-trap
    gsm event temperature onset threshold 41
    gsm event temperature abate mib-trap
    gsm event temperature abate threshold 40
    gsm event modem-state mib-trap down
    gsm event modem-state mib-trap up
    gsm event service mib-trap
    gsm event network mib-trap
    gsm event connection-status mib-trap All-gsm
    !
```

Remotely Initiated Data Call Back Using SMS

This feature remotely brings up the cellular interface by sending SMS messages over GSM networks.

The following example shows you how to configure this feature:

> **Note** In this example, the phone number of the administrator who wants to remotely bring up the link using SMS is 408-123-4567 on a GSM network. Replace this number with your own number.

```
chat-script wcdma "" "atdt*99#" TIMEOUT 180 "CONNECT"

interface Loopback1
 ip address 1.1.1.1 255.255.255.0
interface Cellular0/1/0
     ip address negotiated
 ip virtual-reassembly in
 encapsulation ppp
 load-interval 30
 dialer in-band
 dialer pool-member 1
 dialer idle-timeout 0
 no peer default ip address
 async mode interactive
 ppp chap hostname abc.cell.org
 ppp chap password 0 nopassword
 ppp ipcp dns request
 routing dynamic

interface Dialer1
 ip address negotiated
 encapsulation ppp
 dialer pool 1
 dialer idle-timeout 0
 dialer string wcdma
 dialer caller 4081234567 callback
 dialer-group 1
 ppp chap hostname abc.cell.org
     ppp chap password 0 nopassword
 ppp ipcp dns request

ip route 0.0.0.0 0.0.0.0 Dialer1
!
access-list 1 permit any
dialer-list 1 protocol ip list 1
!
line 0/1/0
 script dialer wcdma
 login
 modem InOut
     no exec
     transport input all
     transport output all
```

To test this example, send an SMS message from phone number 408-123-4567. This brings the cellular link up.

List of New Commands

The following is a list of the new commands supported by the EHWIC-3G-HSPA-U card:

- cellular gsm sms delete
- cellular gsm sms send
- cellular gsm sms view
- debug cellular messages gps
- debug cellular messages nmea
- debug cellular messages sms
- gsm event connection-status mib-trap
- gsm event ecio abate
- gsm event ecio onset
- gsm event modem-state mib-trap
- gsm event network mib-trap
- gsm event rssi abate
- gsm event rssi onset
- gsm event service mib-trap
- gsm event temperature abate
- gsm event temperature onset
- gsm gps mode standalone
- gsm gps nmea
- gsm sms archive path
- show cellular gps
- show cellular sms

These commands are described in the *Configuring Cisco EHWIC-3G-HSPA-U* guide.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

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