

CTM-200 Event Logger and Reporting



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|-----------|---------------------------|
| Model | Chameleon CTM-200 gateway |
| Revision: | Rev 1.0 |

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Revision Control

| Description | Revision | Date |
|------------------|----------|---------------|
| Customer Release | Rev 1.0 | Oct. 17, 2011 |

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I Overview

The Chameleon CTM-200 gateway has an event logger and reporting feature, which logs and optionally reports important firmware events such as cellular network connection going offline or online, firmware-generated power cycles, georoute violations, etc.

This application note provides a description of the CTM-200 events logged, event report configuration examples, and an event logger and reporting command reference.

This feature is supported in CTM-200 firmware versions r2.0.4.2480 and above.

2 Events

Events are always logged to the CTM event log file.

To report only a subset of events, use **cmd event loglevel n**, where n is the log level.

- A log level of 2 will report events with log level 1 and 2.
- A log level of 10 will report events with log level 1, 2, and 10.

| CTM-200 Events | Log Level | Description |
|----------------|-----------|------------------------------------|
| CELL_OFFLINE | 10 | Cellular modem device disconnected |
| CELL_ONLINE | 1 | Cellular modem device connected |

| | | |
|-----------------------|----|--------------------------------------|
| CONFUPGRADE | 1 | Gateway configuration upgraded |
| ENTER_LPM | 2 | Low-power/standby mode entered |
| ENTER_ALLOWED_ZONE | 1 | Georoute allowed zone entered |
| EXIT_ALLOWED_ZONE | 1 | Georoute allowed zone exited |
| ENTER_RESTRICTED_ZONE | 1 | Georoute restricted zone entered |
| EXIT_RESTRICTED_ZONE | 1 | Georoute restricted zone exited |
| IGN_OFF | 2 | Ignition turned off |
| IGN_ON | 2 | Ignition turned on |
| POWER_UP | 10 | Gateway powered up |
| PWR_CYCLE:desc | 1 | Gateway power cycle with description |
| RF_ENABLE | 2 | RF switch activated |
| RF_DISABLE | 2 | RF switch deactivated |
| WIFI_OFFLINE | 2 | Wi-Fi device disconnected |
| WIFI_ONLINE | 2 | Wi-Fi device connected |
| UPGRADEFW | 1 | Gateway firmware upgraded |

3 CTM-200 Configuration

3.1 Command Line Configuration

From the command line, to dump the entire contents of the event log use the command **cmd event dump**

To send an email message containing the CTM-200 event log, first configure the device's SMTP email server using **cmd emailsrv** and then run **cmd event dump [email address]**, e.g.

```
cmd emailsrv 1.2.3.4
cmd event dump jsmith@mail.com
```

To configure an event report to be sent when a CTM-200 event occurs, configure a general report and set this report to trigger when events are logged, e.g.

```
cmd event report 1 2
cmd repremip 2 1.2.3.4
cmd repreport 2 8888
cmd reptype 2 0 3
cmd save
```

The time stored in the event log can be changed via the device embedded web page under the Config | TimeZone page.

Please refer to the event logger command reference for command details.

3.2 Web Page Configuration

Event logging and reports can also be configured in the CTM-200's embedded web page under the Reports | Events.

The device's SMTP email server can be configured in the Reports | Main page.

The time stored in the event log can be changed via the device embedded web page under the Config | TimeZone page.

4 Event Logger Command Reference

event dump [-f or -h N] [-l or -t N] [-raw] [EVENT_FILTER] [email@address]

Displays the event log with Unix timestamps converted to human readable date strings.

Where:

-f to -h: dump first (head) N lines from the event log

-l to -t: dump last (tail) N lines from the event log

-raw: dump file in raw format, no conversion of Unix timestamps

[EVENT_FILTER]: up to 4 event filters can be defined, eg. [PWR_CYCLE]. Only events that match the filter(s) will be displayed. This can also be applied to events within the -f / -l range.

[email@address]: email the event log. SMTP server must be configured using **cmd emailsrv**, the event log will be emailed to the specified recipient.

Examples:

1. Dump the last 100 lines of the event log:

```
cmd event dump -l 100
```

2. Dump the entire content of the event log:

```
cmd event dump
```

Example output:

```
Fri Sep 30 04:06:22 UTC 2011 [53]:POWER_UP
Fri Sep 30 04:06:27 UTC 2011 [58]:IGN_ON
Fri Sep 30 04:07:19 UTC 2011 [114]:CELL_ONLINE after 1 mins 1 secs offline
Fri Sep 30 05:05:24 UTC 2011 [3600]:HEALTH
Fri Sep 30 06:05:39 UTC 2011 [7200]:HEALTH
Fri Sep 30 07:05:39 UTC 2011 [10800]:HEALTH
Fri Sep 30 08:05:40 UTC 2011 [14400]:HEALTH
Fri Sep 30 09:05:40 UTC 2011 [18000]:HEALTH
Fri Sep 30 10:05:41 UTC 2011 [21600]:HEALTH
Fri Sep 30 11:05:42 UTC 2011 [25200]:HEALTH
Fri Sep 30 12:05:40 UTC 2011 [28800]:HEALTH
Fri Sep 30 13:05:44 UTC 2011 [32400]:HEALTH
Fri Sep 30 14:05:44 UTC 2011 [36000]:HEALTH
```

Note: the time stored in the event log can be changed via the device embedded web page Config -> TimeZone page

The event dump file is stored in non-volatile memory space within the CTM-200 file system
/etc/ctm_event_log

event healthinterval n

This command defines the interval (seconds) between HEALTH status reports.

Where:

n number of seconds between reports (default 14400 or 4 hr, where $600 \leq n \leq 86400$)

Examples:

1. Define a health report to be sent every 8 hours:

```
cmd event healthinterval 28800
```

2. Query the current health interval time:

```
cmd event healthinterval
```

A **cmd save** followed by a powercycle (**cmd pwr mode 2**) is required for this command to take effect.

Example output:

```
CTM200 : 356215040095550
[152038] Wed Sep 28 17:28:24 UTC 2011
HEALTH
uptime 1 day, 18:13,
online 266 min 30 secs
```

event logclear

Clears the event log file.

A **cmd save** followed by a powercycle (**cmd pwr mode 2**) is required for this command to take effect.

event loglevel n

Set the event reporting level, default is 1

CTM-200 Firmware Events

| CTM-200 Events | Log Level |
|----------------|-----------|
| CELL_OFFLINE | 10 |
| CELL_ONLINE | 1 |

| | |
|-----------------------|----|
| CONFUPGRADE | 1 |
| ENTER_LPM | 2 |
| ENTER_ALLOWED_ZONE | 1 |
| EXIT_ALLOWED_ZONE | 1 |
| ENTER_RESTRICTED_ZONE | 1 |
| EXIT_RESTRICTED_ZONE | 1 |
| IGN_OFF | 2 |
| IGN_ON | 2 |
| POWER_UP | 10 |
| PWR_CYCLE:desc | 1 |
| RF_ENABLE | 2 |
| RF_DISABLE | 2 |
| WIFI_OFFLINE | 2 |
| WIFI_ONLINE | 2 |
| UPGRADEFW | 1 |

Where:

n log level (default = 1)

Examples:

1. Set the loglevel to 2:

```
cmd event loglevel 2
```

2. Query the current loglevel:

```
cmd event loglevel
```

A **cmd save** followed by a powercycle (**cmd pwr mode 2**) is required for this command to take effect.

event minoffline n

Sets the minimum time interval(seconds) before reporting a CELL_ONLINE event. Default is 120 (2 minutes). By increasing the time for this command CELL_ONLINE events will only be generated by after continuous connectivity.

Where:

n number of seconds(default 120)

Examples:

1. Define a minimum time of 300 (5 minutes) before a CELL_ONLINE event is generated:

```
cmd event minoffline 300
```

2. Query the current minimum time interval:

```
cmd event minoffline
```

A **cmd save** followed by a powercycle (**cmd pwr mode 2**) is required for this command to take effect.

event eventreport [r1] [r2] [r3] [r4] [r5] [r6] [r7] [r8]

Associate up to 8 general reports with the event server

Where:

r1 defines the general report to use for event reports

Examples:

1. Report the event(s) using general reports 1 and 2:

```
cmd event report 1 2
OK
```

2. Query the current event report configuration:

```
cmd event report
cmd event report 1
OK
```

A **cmd save** followed by a powercycle (**cmd pwr mode 2**) is required for this command to take effect.

5 Technical Support

**Cypress Solutions Service
Support Group**

1.877.985.2878 or 604.294.4465

9.00am to 5.00pm PST

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