



Multi-Access Gateway – controller

Release 25.7

Log Events Reference Guide

3HE 21154 AAAB TQZZA

Edition: 01

July 2025

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1 Getting started

Find general information about this guide.

1.1 About this guide

This guide provides descriptions of event notifications that are forwarded to a destination such as a file or an SNMP trap. Properties that are reported include alarm or raising event name, raising condition, and clearing event information. The information is intended to assist with identifying and responding to the event notifications.

Command outputs shown in this guide are examples only; actual displays may differ depending on supported functionality and user configuration.

The CLI trees and command descriptions can be found in the *MAG-c CLI Reference Guide*.



Note: This guide generically covers content for the release specified on the title page of the guide, and may also contain some content that will be released in later maintenance loads. See the applicable *MAG-c Release Notes* for information about features supported in each load of the software release.



Note: The information in this guide is intended to be used in conjunction with the SR OS software user guides. The SR OS software user guides describe SR OS service features that are supported by the MAG-c. See the *7450 ESS*, *7750 SR*, *7950 XRS*, and *VSR Documentation Suite Overview Card 20.10.R1* for specific guide titles.

1.2 Conventions

This section describes the general conventions used in this guide.

1.2.1 Precautionary and information messages

The following information symbols are used in the documentation.



DANGER: Danger warns that the described activity or situation may result in serious personal injury or death. An electric shock hazard could exist. Before you begin work on this equipment, be aware of hazards involving electrical circuitry, be familiar with networking environments, and implement accident prevention procedures.



WARNING: Warning indicates that the described activity or situation may, or will, cause equipment damage, serious performance problems, or loss of data.



Caution: Caution indicates that the described activity or situation may reduce your component or system performance.



Note: Note provides additional operational information.



Tip: Tip provides suggestions for use or best practices.

1.2.2 Options or substeps in procedures and sequential workflows

Options in a procedure or a sequential workflow are indicated by a bulleted list. In the following example, at step 1, the user must perform the described action. At step 2, the user must perform one of the listed options to complete the step.

Example: Options in a procedure

1. User must perform this step.
2. This step offers three options. User must perform one option to complete this step.
 - This is one option.
 - This is another option.
 - This is yet another option.

Substeps in a procedure or a sequential workflow are indicated by letters. In the following example, at step 1, the user must perform the described action. At step 2, the user must perform two substeps (a. and b.) to complete the step.

Example: Substeps in a procedure

1. User must perform this step.
2. User must perform all substeps to complete this action.
 - a. This is one substep.
 - b. This is another substep.

2 Log events overview

Log events have common elements or properties but are formatted in a way appropriate for the specific destination whether recorded to a file or sent as an SNMP trap.

Logs can be directed to memory, a console, a session, a local file, a syslog server, or an SNMP manager. All application-generated events have the following properties:

- a time stamp in UTC or local time
- the generating application
- a unique event ID within the application
- a router name identifying the VRF-ID that generated the event
- a subject identifying the affected object
- a short text description

See the associated SNMP notification definition in the SR OS MIBs for more information about the variables found in the message format strings.

The general format for a log event with either a memory, console, or file destination is as follows:

```
nnnn YYYY/MM/DD HH:MM:SS.SS TZONE <severity>: <application> #<event_id> <router-name>
<subject>
<message>
```

The following is a log event example:

```
252 2013/05/07 16:21:00.76 UTC WARNING: SNMP #2005 Base my-interface-abc
"Interface my-interface-abc is operational"
```

The following table lists the specific elements that compose the general format.

Table 1: Log entry field descriptions

Label	Description
nnnn	The log entry sequence number
YYYY/MM/DD	The UTC or local date stamp for the log entry <div> <div>YYYY</div> <div>Year</div> </div> <div> <div>MM</div> <div>Month</div> </div> <div> <div>DD</div> <div>Date</div> </div>
HH:MM:SS.SS	The UTC time stamp for the event <div> <div>HH</div> <div>Hours (24-hour format)</div> </div> <div> <div>MM</div> <div>Minutes</div> </div> <div> <div>SS.SS</div> <div>Seconds</div> </div>

Label	Description
TZONE	The time zone (for example, UTC, EDT) as configured by the configure log log-id x time-format command
<severity>	The severity level of the event <ul style="list-style-type: none"> • CRITICAL • MAJOR • MINOR • WARNING • INFO • CLEARED
<application>	The name of the application generating the log message
<event_id>	The application's event ID number for the event
<router>	The router name representing the VRF-ID that generated the event; some examples include: Base, management, and vprn348
<subject>	The subject or affected object for the event
<message>	A text description of the event

The following table lists the sources that trigger an event.

Table 2: Log event sources

Event source	Description
Security events	Events pertaining to attempts to breach system security
Change events	Events pertaining to the configuration and operation of the node
Main events	Events pertaining to applications that are not assigned to other event categories or sources
Debug events	Events pertaining to trace or other debugging information

2.1 Viewing log events

- View all the log events.

```
show log event-control
```

**Note:**

- You can use this command and specify an application (for example, subscriber management).
- When an L precedes an event, it indicates that this event does not generate an SNMP notification.
- The event severity can be modified whether the event is generated or dropped.
- The severity of an SNMP trap is assigned by the SNMP manager.
- By default, all events are throttled at 2000 per second. System throttle or event-specific throttle can be modified.
- A maximum of 100 log IDs can be configured and filters can be used to specify the application, event ID, event severity, forward or drop the matching event, and so on, by applying those to a set of logs. Each log ID is configured by specifying an event source and the log destination.



Note: Logs with ID 99 and 100 are default logs directed to memory that contain the main events. The log with ID 100 has a filter applied to match events with severity greater than or equal to major.

Example

```
show log event-control
=====
Log Events
=====
Application
ID#      Event Name                                P    g/s    Logged    Dropped
-----
APPLICATION_ASSURANCE:
  4401 tmnxBsxIsaAaGrpFailureV2                MA    thr         0         0
  4402 tmnxBsxIsaAaGrpFailureClearV2           WA    thr         0         0
<snip>
MOBILE_GATEWAY:
  2001 tmnxMobGwPathMgmtPeerState              WA    thr         0         0
  2002 tmnxMobGwDiameterPeerState              WA    thr         0         0
L 2003 tmnxMobGwCpmRestartUpdate               WA    thr         0         0
...
...
...
=====
```

- View a specific log event.

```
show log log-id log-id
```

Example

```
show log log-id 99
=====
Event Log 99
=====
Description : Default System Log
Memory Log contents [size=500 next event=183 (not wrapped)]
182 2017/09/12 18:46:25.66 EDT WARNING: SNMP #2005 Base xyz
"Interface xyz is operational"
```

```
181 2017/09/12 18:45:53.97 EDT WARNING: SNMP #2005 Base system
"Interface system is operational"
```

- View the log collector information.

```
show log log-collector
```

Example

```
show log log-collector
=====
Log Collectors
=====
Main                               Logged : 191          Dropped : 0
  Dest Log Id: 99      Filter Id: 0      Status: enabled     Dest Type: memory
  Dest Log Id: 100     Filter Id: 1001    Status: enabled     Dest Type: memory
  Dest Log Id: 90      Filter Id: 0      Status: enabled     Dest Type: snmp
  Dest Log Id: 20      Filter Id: 100    Status: enabled     Dest Type: file
  Dest Log Id: 5       Filter Id: 0      Status: enabled     Dest Type: syslog
Security                           Logged : 28 Dropped : 0
  Dest Log Id: 90      Filter Id: 0      Status: enabled     Dest Type: snmp
  Dest Log Id: 20      Filter Id: 100    Status: enabled     Dest Type: file
  Dest Log Id: 5       Filter Id: 0      Status: enabled     Dest Type: syslog
Change                             Logged : 451 Dropped : 0
  Dest Log Id: 90      Filter Id: 0      Status: enabled     Dest Type: snmp
  Dest Log Id: 20      Filter Id: 100    Status: enabled     Dest Type: file
  Dest Log Id: 5       Filter Id: 0      Status: enabled     Dest Type: syslog
Debug                               Logged : 0 Dropped : 0
LI                                  Logged : 65 Dropped : 0
=====
```

- Create and configure filters.

```
configure log filter filter-id
```



Note: The MAG-c also supports log events generated by the 7750 SR OS. See the SR OS documentation for more information about the SNMP notifications from SR OS.

2.2 Log event configuration

2.2.1 Configuring SNMP as the log destination

You can specify SNMP as the destination for log events.

About this task

The MAG-c supports SNMPv1, SNMPv2, and SNMPv3 with the underlying system being based on SNMPv3. SNMPv1 and SNMPv2 are implemented by creating communities based on SNMPv3. Logical objects, for example VPRNs and interfaces, are assigned an index during the boot sequence based on their order in the configuration file. To maintain this index after a reboot, SNMP persistence must be enabled in the BOF. When enabled, and an **admin save** command is issued, the persistent indexes are stored in a .ndx file, which has the same name as the configuration file.

Procedure

Step 1. Enable persistent indexes in the BOF.

```
bof persist on
```

Step 2. Save the BOF.

```
bof save
```

Step 3. Configure the SNMP packet size.

```
configure system snmp packet-size bytes
```

Example

```
configure system snmp packet-size 9212
```

Step 4. Enable SNMP.

```
configure system snmp no shutdown
```

Step 5. Configure an SNMP community.

```
configure system security snmp community community-string access-permissions
version version
```

Example

```
configure system security snmp community test rwa version v2c
```

Step 6. Save the configuration.

```
admin save
```

Step 7. View the SNMP status.

```
show system information
```

If the SNMP configuration is successful, the **SNMP Index Boot Status** field in the output of the command must indicate **Persistent**.

Example

```
# show system information
=====
System Information
=====
System Name       : cses-V20
System Type       : 7750 SR-12
Chassis Topology  : Standalone
System Version    : B-0.0.I2946
System Contact    :
System Location   :
System Coordinates :
System Active Slot : A
System Up Time    : 64 days, 18:33:04.70 (hr:min:sec)
```



```

Configuration-mode      : classic
Configuration-oper-mode: classic
SNMP Port               : 161
SNMP Engine ID          : 0000197f0000d814ff000000
SNMP Engine Boots       : 1
SNMP Max Message Size   : 1500
SNMP Admin State        : Enabled
SNMP Oper State         : Enabled
SNMP Index Boot Status  : Persistent
SNMP Sync State         : N/A
...
...
=====

```

Step 8. View the SNMP counters used for requests, responses, and traps.

```
show snmp counters
```

Example

```

# show snmp counters
=====
SNMP counters:
=====
  in packets : 107
-----
    in gets : 46
    in getnexts : 0
    in getbulks : 0
    in sets : 61
  out packets: 107
-----
    out get responses : 107
    out traps : 0
  variables requested: 24
  variables set : 84
-----
  Failed requests due to lock being taken by netconf
  failed sets : 0
=====

```

2.2.2 Configuring an SNMP trap destination

An SNMP trap destination is a log with SNMP set as the destination.

About this task

In this example, the SNMP trap is configured as follows:

- log ID 90
- target name set to “manager”
- IP address 192.0.2.255
- SNMP version SNMPv2
- community name set to “community”

Procedure

Step 1. Create an SNMP trap group.

```
configure log snmp-trap-group log-id
```

Example

```
configure log snmp-trap-group 90
```

Step 2. Configure the SNMP trap group.

```
snmp-trap-group log-id trap-target name address ip-address [snmpv1|snmpv2|snmpv3]  
  notify-community communityName|snmpv3SecurityName
```

Example

```
snmp-trap-group 90 trap-target "manager" address 192.0.2.255 snmpv2c notify-community  
  community
```

Step 3. Create a log ID.

```
configure log log-id
```

Use the log ID configured for the SNMP trap group in step 1.

Example

```
configure log 90
```

Step 4. Configure the log ID.

```
log-id log-id to snmp size
```

Specify SNMP as the destination and the number of events.

Example

```
log-id 90 to snmp 3000
```

Step 5. View the configured SNMP trap destination.

```
show log snmp-trap-group log-id
```

Example

```
# show log snmp-trap-group 90
=====
SNMP Trap Groups
=====
id      name
port      address
-----
90      manager
162      192.0.2.255
=====
```



Note: By default, Nokia NSP NFM-P uses log ID 98.

2.2.3 Configuring a file as the log destination

You can specify a file as the log destination.

About this task

The filename follows the format `logeeff-timestamp`, where:

<code>ee</code>	The log ID (<i>log-id</i>)
<code>ff</code>	The file ID (<i>log-file-id</i>)

In this example, the destination file is configured as follows:

- file ID 10
- storage location CF1:
- rollover of records 1440 minutes and retention 168 hours
- linked to log ID 20, which receives event logs from the main, security, and changed source streams (see [Table 2: Log event sources](#))
- log ID 20 directed to file ID 10

Procedure

Step 1. Create a log file.

```
configure log file-id log-file-id
```

Example

```
configure log file-id 10
```

Step 2. Configure the storage location of the log file.

```
configure log file-id log-file-id location
```

Example

```
configure log file-id 10 location cf1:
```

Step 3. Configure the rollover and retention duration of the log file.

```
configure log file-id log-file-id rollover minutes [retention] hours
```

Example

```
configure log file-id 10 rollover 1440 retention 168
```

Step 4. Create a log ID.

```
configure log log-id
```

Example

```
configure log 20
```

Step 5. Configure the source streams for the log ID.

```
configure log log-id from
```

Example

```
configure log 20 from main security change
```

Step 6. Configure the destination type of the log.

```
configure log log-id to file log-file-id
```

Example

```
configure log 20 to file 10
```

2.2.4 Configuring a syslog as the log destination

You can specify a syslog as the log destination.

About this task

In this example, the syslog is configured as follows:

- syslog ID 5
- syslog host address 10.10.1.1
- linked to log ID 5, which receives event logs from the main, security, and changed source streams (see [Table 2: Log event sources](#))

Procedure**Step 1.** Create a syslog.

```
configure log syslog syslog-id
```

Example

```
configure log syslog 5
```

Step 2. Configure the storage location of the syslog.

```
configure log syslog syslog-id address ip-address
```

Example

```
configure log syslog 5 address 10.10.1.1
```

Step 3. Create a log ID.

```
configure log log-id
```

Example

```
configure log 5
```

Step 4. Configure the source streams for the log ID.

```
configure log log-id from
```

Example

```
configure log 5 from main security change
```

Step 5. Configure the destination type of the log ID.

```
configure log log-id to syslog syslog-id
```

Example

```
configure log 5 to syslog 5
```

2.2.5 Debugging an application

You can debug an application using a log with the debug trace specified as the event source. Although you can debug an application in the current session window, using a log as the destination is more useful for reviewing the log.

About this task

Note: The steps in this section only describe the procedure for configuring a log file that stores the output of debug commands. See the *MAG-c Control Plane Function Guide* for more information about how to enable and use the **call-insight** and PDN **debug** commands.

In this example, application debugging is configured as follows:

- file ID 10
- storage location CF2:
- linked to log ID 30, which receives event logs from the debug trace (see [Table 2: Log event sources](#))
- log ID 30 directed to file ID 10



Caution: Debug commands must be used with caution. Nokia recommends disabling debugging after any debug operation has been finished. The **no debug** command disables all the enabled debug commands.

Procedure

Step 1. Create a log file.

```
configure log file-id log-file-id
```

Example

```
configure log file-id 10
```

Step 2. Configure the storage location of the log file.

```
configure log file-id log-file-id location
```

Example

```
configure log file-id 10 location cf2:
```

Step 3. Create a log ID.

```
configure log log-id
```

Example

```
configure log 30
```

Step 4. Configure the source stream for the log ID.

```
configure log log-id from
```

Example

```
configure log 30 from debug-trace
```

Step 5. Configure the destination type of the log.

```
configure log log-id to file log-file-id
```

Example

```
configure log 30 to file 10
```

2.3 Sample log event

In this guide, each log event is described in a separate table.

The following table contains a sample log event entry for the tmnxMobGwBngLockoutLimitExceeded log event.

Table 3: *tmnxMobGwBngLockoutLimitExceeded* properties

Property name	Value
Application name	MOBILE_CUPS_BNG
Event ID	2007
Event name	tmnxMobGwBngLockoutLimitExceeded
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.120
Default severity	warning
Source stream	main
Message format string	The maximum number of BNG sessions in locked-out or monitored state is exceeded <i>\$tmnxMobGwNtfyInformation\$</i>
Cause	While the maximum number of BNG sessions in monitored or locked-out state is in use, a new session must be monitored or locked out.
Effect	Another session being monitored or locked out is prematurely released to accommodate the new session.
Recovery	Recovery is not necessary.

The table title for a log event entry is the event name. Each entry contains the information described in the following table.

Table 4: *Log entry field descriptions*

Label	Description
Application name	The name of the application generating the log message
Event ID	The application event ID number for the event
Event name	The name of the event
SNMP notification prefix and OID	The prefix and OID of the SNMP notification associated with the log event
Default severity	The default severity level of the event <ul style="list-style-type: none"> • CRITICAL • MAJOR • MINOR • WARNING • INFO • CLEARED

Label	Description
Source stream	<p>The event source</p> <ul style="list-style-type: none">• main• security• change• debug <p>See Table 2: Log event sources for more information.</p>
Message format string	A text description of the event
Cause	The cause of the event
Effect	The effect of the event
Recovery	How to recover from this event, if necessary

3 Log events

Get a summary of the supported alarms and raising events and detailed descriptions per alarm and event object.

3.1 MC_REDUNDANCY

3.1.1 tmnxMcMobileBothLockedToMaster

Table 5: tmnxMcMobileBothLockedToMaster properties

Property name	Value
Application name	MC_REDUNDANCY
Event ID	5002
Event name	tmnxMcMobileBothLockedToMaster
SNMP notification prefix and OID	TIMETRA-MC-REDUNDANCY-MIB.tmnxMcMobRedundancy Notifications.6
Default severity	minor
Source stream	main
Message format string	For peers \$tmnxMcPeerIpAddrForNotify\$ and \$tmnxMcPeerSrcIpAddr\$ both nodes locked to the active operational role
Cause	A misconfiguration, to enable mc-master-lock on both Primary and Secondary geo-redundancy nodes is ONLY allowed when mc-mobile link between the geo-redundancy nodes is down and both have turned into the active operational role. When the mc-mobile link comes UP, the notification tmnxMcMobileBothLockedToMaster is generated indicating both the Primary and Secondary nodes are locked in the active operational role. Under steady state, that is, mc-mobile link between the geo-redundancy nodes is UP and peering is successful, mc-master-lock CLI configuration is allowed only on the node in the active operational role.
Effect	The geo-redundancy link will not be established as these mobile-gateways cannot be peered.
Recovery	Diagnose and fix the mc-master-lock misconfiguration.

3.1.2 tmnxMcMobileGeoRedChgInfo

Table 6: tmnxMcMobileGeoRedChgInfo properties

Property name	Value
Application name	MC_REDUNDANCY
Event ID	2040
Event name	tmnxMcMobileGeoRedChgInfo
SNMP notification prefix and OID	TIMETRA-MC-REDUNDANCY-MIB.tmnxMcMobRedundancy Notifications.2
Default severity	major
Source stream	main
Message format string	Gw- \$tmnxMcPeerMobileMGId\$, Src Address- \$tmnxMcPeerSrcIpAddr\$, CPM Geo-Red State-\$tmnxMcPeerMobileMGCPMGeoRedState\$, Mob GW Geo Red State- \$tmnxMcPeerMobileMGGeoRedState\$, Number of Hot Groups-\$tmnxMcPeerMobileMGNumHotGroups\$ (\$tmnxMcPeerMGHotGroupList\$), Number Of Warm Groups- \$tmnxMcPeerMobileMGNumWarmGroups\$ (\$tmnxMcPeerMGWarmGroupList\$), Number Of Cold Groups-\$tmnxMcPeerMobileMGNumColdGroups\$ (\$tmnxMcPeerMGColdGroupList\$), Peer Address-\$tmnxMcPeerIpAddr\$, Peer State-\$tmnxMcPeerMobileMGPeerState\$, Peer State Reason- \$tmnxMcPeerMobileMGPeerStChgRsn\$
Cause	The chassis or the CPM changed its geo-redundancy state or the peer connection status changed.
Effect	If the chassis state or the CPM state has changed to "cold" or "warm" the system is no longer in geo-redundant state. If the peer state is "disconnected" the system is no longer in a geo-redundant state.
Recovery	Diagnose what caused this state change. Bring the peer and/or peer-link up and ensure that the chassis and CPM geo-redundancy states are "hot".

3.1.3 tmnxMcMonitorMclcrAlarm

Table 7: tmnxMcMonitorMclcrAlarm properties

Property name	Value
Application name	MC_REDUNDANCY
Event ID	5001

Property name	Value
Event name	tmnxMcMonitorMclcrAlarm
SNMP notification prefix and OID	TIMETRA-MC-REDUNDANCY-MIB.tmnxMcMobRedundancyNotifications.5
Default severity	minor
Source stream	main
Message format string	The monitor-mc-icr alarm occurred on interface <i>\$vRtrIfIndex\$</i> for the reason <i>\$tmnxMcMonitorMclcrAlarmRsnCode\$</i> .
Cause	Generated with the following reason codes: 1. tmnxMcMonitorMclcrAlarmRsnCode trafficDetected the reference point traffic detected on the standby node reaches the configured monitor-mc-redirect high threshold vRtrIfMonMcRedirectHighThresh. 2. tmnxMcMonitorMclcrAlarmRsnCode trafficCleared the reference point traffic is below the configured monitor-mc-redirect low threshold vRtrIfMonMcRedirectLowThresh.
Effect	A network configuration issue or a partial network failure is detected.
Recovery	Diagnose and fix the partial network failure.

3.2 MOBILE_CUPS_BNG

3.2.1 tmnxMobBngStaticSeOperStateUp

Table 8: *tmnxMobBngStaticSeOperStateUp* properties

Property name	Value
Application name	MOBILE_CUPS_BNG
Event ID	2012
Event name	tmnxMobBngStaticSeOperStateUp
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.150
Default severity	warning
Source stream	main
Message format string	Static session <i>\$tmnxMobGwNtfySessionName\$</i> is <i>\$tmnxMobGwNtfyTruthValue\$</i> operational
Cause	The operational state of a static CUPS BNG session changes.

Property name	Value
Effect	When the operational state of a static CUPS BNG session is down, the user associated with the session is disconnected.
Recovery	The recovery action depends on the cause.

3.2.2 tmnxMobGwBngLockoutLimitExceeded

Table 9: *tmnxMobGwBngLockoutLimitExceeded* properties

Property name	Value
Application name	MOBILE_CUPS_BNG
Event ID	2007
Event name	tmnxMobGwBngLockoutLimitExceeded
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.120
Default severity	warning
Source stream	main
Message format string	The maximum number of BNG sessions in locked-out or monitored state is exceeded <i>\$tmnxMobGwNtfyInformation\$</i>
Cause	While the maximum number of BNG sessions in monitored or locked-out state is in use, a new session must be monitored or locked out.
Effect	Another session being monitored or locked out is prematurely released to accommodate the new session.
Recovery	Recovery is not necessary.

3.2.3 tmnxMobGwBngNatPrefixRevocation

Table 10: *tmnxMobGwBngNatPrefixRevocation* properties

Property name	Value
Application name	MOBILE_CUPS_BNG
Event ID	2009
Event name	tmnxMobGwBngNatPrefixRevocation
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.133

Property name	Value
Default severity	minor
Source stream	main
Message format string	CUPS BNG NAT Prefix revocation : MSCP \$tmnxMobGwNtfyMscpld\$ Realm \$tmnxMobGwNtfyNwRealmName\$ pool \$tmnxMobGwNtfyPoolName\$ Gw \$tmnxMobGwNtfyGatewayld\$, UP \$tmnxMobGwNtfyUpPeerAddress\$, prefix \$tmnxMobGwNtfyAddr\$/\$tmnxMobGwNtfyPfxLength\$, reason ' \$tmnxMobGwNtfyRevocationReason\$'
Cause	An error occurred during NAT audit between MSCP and OAM or ODSA can't ack the prefix.
Effect	The session will be deleted.
Recovery	N/A

3.2.4 tmnxMobGwBngResFsgUpfChange

Table 11: tmnxMobGwBngResFsgUpfChange properties

Property name	Value
Application name	MOBILE_CUPS_BNG
Event ID	2010
Event name	tmnxMobGwBngResFsgUpfChange
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.134
Default severity	warning
Source stream	main
Message format string	UP resiliency: UP change: Gw \$tmnxMobGwNtfyGatewayld\$, UP group \$tmnxMobGwNtfyCupsBngUpGroup\$, FSG \$tmnxMobGwNtfyFsgld\$, primary UP \$tmnxMobGwNtfyUpf1\$ (health \$tmnxMobGwNtfyUpf1Health\$), secondary UP \$tmnxMobGwNtfyUpf2\$ (health \$tmnxMobGwNtfyUpf2Health\$), previous primary UP \$tmnxMobGwNtfyUpf1Prev\$, previous secondary UP \$tmnxMobGwNtfyUpf2Prev\$
Cause	The value of TIMETRA-MOBILE-PDN-MIB::tmnxMobPdnBngResFsgPrimUpf or TIMETRA-MOBILE-PDN-MIB::tmnxMobPdnBngResFsgSecUpf has changed.
Effect	If it is the primary UPF that changed, the traffic associated with this Fate Sharing Group is now going through another UPF system. If it is the secondary UPF that changed and if the pair is hot-standby, another UPF system now keeps track of sessions state.

Property name	Value
Recovery	No recovery actions are required.

3.2.5 tmnxMobGwBngResFsgUpfError

Table 12: tmnxMobGwBngResFsgUpfError properties

Property name	Value
Application name	MOBILE_CUPS_BNG
Event ID	2011
Event name	tmnxMobGwBngResFsgUpfError
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.149
Default severity	warning
Source stream	main
Message format string	UP resiliency: UP error: Gw \$tmnxMobGwNtfyGatewayId\$, UP group \$tmnxMobGwNtfyCupsBngUpGroup\$, FSG \$tmnxMobGwNtfyFsgId\$, \$tmnxMobGwNtfyTruthValue\$ UP \$tmnxMobGwNtfyUpf1\$: \$tmnxMobGwNtfyError\$\$tmnxMobGwNtfyInformation\$
Cause	This system, acting as a CUPS Control Plane, has requested a UP to modify (including create/delete) a Fate Sharing Group, and the UP reported an error.
Effect	If the UP is the active UPF for this Fate Sharing Group, the role of active UPF is transferred to the UPF that was previously the active UPF.
Recovery	No recovery actions are required.

3.2.6 tmnxMobGwBngSessCreateUpfNonResp

Table 13: tmnxMobGwBngSessCreateUpfNonResp properties

Property name	Value
Application name	MOBILE_CUPS_BNG
Event ID	2002
Event name	tmnxMobGwBngSessCreateUpfNonResp
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.106

Property name	Value
Default severity	minor
Source stream	main
Message format string	CUPS BNG Session create UP non-response for: Gw \$tmnxMobGwNtfyGatewayId\$, VRtr \$tmnxMobGwNtfyVrtrId\$, UP \$tmnxMobGwNtfyUpPeerAddress\$, node-ID \$tmnxMobGwNtfyPeerNodeId\$, session key: L2-access-id \$tmnxMobGwNtfyCupsBngSessKeyL2Acc\$, s-vlan \$tmnxMobGwNtfyCupsBngSessKeySVlan\$, c-vlan \$tmnxMobGwNtfyCupsBngSessKeyCVlan\$, mac \$tmnxMobGwNtfyCupsBngSessKeyMac\$, circuit-id '0x\$tmnxMobGwNtfyCupsBngSessKeyCirlId\$', remote-id '0x \$tmnxMobGwNtfyCupsBngSessKeyRemId\$'
Cause	A Create Session Request sent to the UP is not acknowledged with a response message.
Effect	The session in setup is cancelled on the CP. The UP might have a lingering session state.
Recovery	The operator's assistance is needed to remove any session state lingering on the UP.

3.2.7 tmnxMobGwBngSessDuplAttr

Table 14: tmnxMobGwBngSessDuplAttr properties

Property name	Value
Application name	MOBILE_CUPS_BNG
Event ID	2008
Event name	tmnxMobGwBngSessDuplAttr
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.132
Default severity	minor
Source stream	main
Message format string	CUPS BNG Session setup duplicate session identification attribute detected: Gw \$tmnxMobGwNtfyGatewayId\$, VRtr \$tmnxMobGwNtfyVrtrId\$, UP \$tmnxMobGwNtfyUpPeerAddress\$, node-ID \$tmnxMobGwNtfyPeerNodeId\$, L2-access-id \$tmnxMobGwNtfyCupsBngSessKeyL2Acc\$, s-vlan \$tmnxMobGwNtfyCupsBngSessKeySVlan\$, c-vlan \$tmnxMobGwNtfyCupsBngSessKeyCVlan\$, mac \$tmnxMobGwNtfyCupsBngSessKeyMac\$, circuit-id '0x\$tmnxMobGwNtfyCupsBngSessKeyCirlId\$', remote-id '0x \$tmnxMobGwNtfyCupsBngSessKeyRemId\$', up-group '\$tmnxMobGwNtfyCupsBngUpGroup\$'

Property name	Value
Cause	A session is setup with attributes which conflict with other active sessions' unique session identification attributes or attribute combinations.
Effect	The setup session is not available for external targeting based on session attribute identification.
Recovery	In case external targeting capability is required, the operator's assistance is needed to clear the session.

3.2.8 tmnxMobGwBngSessTermBySystem

Table 15: tmnxMobGwBngSessTermBySystem properties

Property name	Value
Application name	MOBILE_CUPS_BNG
Event ID	2001
Event name	tmnxMobGwBngSessTermBySystem
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.105
Default severity	warning
Source stream	main
Message format string	CUPS BNG session terminated by the system: Reason <i>\$tmnxMobGwNtfyCupsBngSessTermReas\$</i> , extra info ' <i>\$tmnxMobGwNtfyCupsBngSessTermInfo\$</i> ', Gw <i>\$tmnxMobGwNtfyGatewayId\$</i> , VRtr <i>\$tmnxMobGwNtfyVrtrId\$</i> , UP-ip <i>\$tmnxMobGwNtfyUpPeerAddress\$</i> , L2-access-id <i>\$tmnxMobGwNtfyCupsBngSessKeyL2Acc\$</i> , s-vlan <i>\$tmnxMobGwNtfyCupsBngSessKeySVlan\$</i> , c-vlan <i>\$tmnxMobGwNtfyCupsBngSessKeyCVlan\$</i> , mac <i>\$tmnxMobGwNtfyCupsBngSessKeyMac\$</i> , circuit-id '0x <i>\$tmnxMobGwNtfyCupsBngSessKeyCirId\$</i> ', remote-id '0x <i>\$tmnxMobGwNtfyCupsBngSessKeyRemId\$</i> ', up-group ' <i>\$tmnxMobGwNtfyCupsBngUpGroup\$</i> '
Cause	The system found a reason, as indicated by tmnxMobGwNtfyCupsBngSessTermReas for terminating a session.
Effect	The established session is terminated or the session in setup is cancelled.
Recovery	None.

3.2.9 tmnxMobGwBngSubscriberCreate

Table 16: tmnxMobGwBngSubscriberCreate properties

Property name	Value
Application name	MOBILE_CUPS_BNG
Event ID	2003
Event name	tmnxMobGwBngSubscriberCreate
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.111
Default severity	warning
Source stream	main
Message format string	CUPS BNG new subscriber created: Sub-Id '\$tmnxMobGwNtfyCupsBngSubId\$', externally assigned alias (if any) '\$tmnxMobGwNtfyCupsBngSubExtAlias\$', UP IP '\$tmnxMobGwNtfyAddr\$'
Cause	A session setup, for which there wasn't any subscriber state yet, is successful.
Effect	The subscriber state is created.
Recovery	Not applicable.

3.2.10 tmnxMobGwBngSubscriberDelete

Table 17: tmnxMobGwBngSubscriberDelete properties

Property name	Value
Application name	MOBILE_CUPS_BNG
Event ID	2004
Event name	tmnxMobGwBngSubscriberDelete
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.112
Default severity	warning
Source stream	main
Message format string	CUPS BNG subscriber deleted: Sub-Id '\$tmnxMobGwNtfyCupsBngSubId\$', externally assigned alias (if any) '\$tmnxMobGwNtfyCupsBngSubExtAlias\$', UP IP '\$tmnxMobGwNtfyAddr\$'

Property name	Value
Cause	A session termination of the last session belonging to an active subscriber.
Effect	The subscriber state is deleted.
Recovery	Not applicable.

3.3 MOBILE_GATEWAY

3.3.1 tmnxMcRedundancyTrafficReceived

Table 18: *tmnxMcRedundancyTrafficReceived* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2084
Event name	tmnxMcRedundancyTrafficReceived
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.82
Default severity	major
Source stream	main
Message format string	Gw-\$tmnxMobGwNtfyGatewayId\$, Ref point-\$tmnxMobGwNtfyRefPointType\$, RefPointName- \$tmnxMobGwNtfyRefPointName\$, InterfaceType-\$tmnxMobGwNtfyIfType\$.
Cause	Traffic is detected at the ICR node due to a network issue.
Effect	When traffic comes to the ICR node, it is dropped if traffic redirection, which means shunting, is not used. If shunting is used, then the traffic is forwarded accordingly.
Recovery	Check the cause of routing change in the network and fix it if possible. If the traffic can not be directed back, but the whole routing works towards the node, perform an ICR switchover.

3.3.2 tmnxMobDbRedRoleActive

Table 19: tmnxMobDbRedRoleActive properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2151
Event name	tmnxMobDbRedRoleActive
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.153
Default severity	warning
Source stream	main
Message format string	Database \$tmnxMobDbId\$ with IP address \$tmnxMobDbIpAddr\$ is now active
Cause	The redundancy role of a database has changed from 'standby' to 'active'.
Effect	The database is actively being used.
Recovery	Not applicable.

3.3.3 tmnxMobDbStatusChanged

Table 20: tmnxMobDbStatusChanged properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2152
Event name	tmnxMobDbStatusChanged
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.154
Default severity	minor
Source stream	main
Message format string	Database \$tmnxMobDbId\$ with IP address \$tmnxMobDbIpAddr\$ is now \$tmnxMobDbStatus\$
Cause	The state of a database has changed.

Property name	Value
Effect	When the new state is 'up', the connection with the database is available. When the new state is 'down', the connection with the database is not available.
Recovery	If the new state is 'down' and there is no subsequent 'tmnxMobDbRed RoleActive' notification, an ICR switchover is recommended.

3.3.4 tmnxMobGwApnMaxAttachLmtAlrm

Table 21: tmnxMobGwApnMaxAttachLmtAlrm properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2124
Event name	tmnxMobGwApnMaxAttachLmtAlrm
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.124
Default severity	major
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , APN Name- <i>\$tmnxMobGwNtfyApn Name\$</i> , attach request rate reached maximum limit.
Cause	The GTP-based attach rate exceeds the configurable max-session-attach limit for tmnxMobGwNtfyApnName is reached
Effect	If there is a new GTP-based attach and attach rate has been exceeded, the new attach will be rejected.
Recovery	The alarm is cleared when the rate goes back below the limit.

3.3.5 tmnxMobGwApnMaxAttachLmtAlrmClr

Table 22: tmnxMobGwApnMaxAttachLmtAlrmClr properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2125
Event name	tmnxMobGwApnMaxAttachLmtAlrmClr

Property name	Value
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.125
Default severity	major
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , APN Name- <i>\$tmnxMobGwNtfyApnName\$</i> , attach request rate goes below maximum limit.
Cause	The GTP-based attach rate drops below the configurable limit max-session-attach limit for this tmnxMobGwNtfyApnName.
Effect	The GTP-based attach rate drops below the configurable limit.
Recovery	No further action required.

3.3.6 tmnxMobGwAssociationPeerState

Table 23: *tmnxMobGwAssociationPeerState* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2075
Event name	tmnxMobGwAssociationPeerState
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.73
Default severity	minor
Source stream	main
Message format string	Association state changed to <i>\$tmnxMobGwNtfyPeerAssociatnState\$</i> for <i>\$tmnxMobGwNtfySigPlaneType\$</i> Peer <i>\$tmnxMobGwNtfyPeerNodeId\$</i> on GW <i>\$tmnxMobGwNtfyGatewayId\$</i> Reference Point <i>\$tmnxMobGwNtfyRefPointType\$</i> <i>\$tmnxMobGwNtfyRefPointName\$</i> (IP Address: <i>\$tmnxMobGwNtfyRfPtPeerAddr\$</i>). Recovery Time: <i>\$tmnxMobGwNtfyRecoveryTimestamp\$</i> cp func <i>\$tmnxMobGwNtfyPeerCPFuncFeatures\$</i> up func <i>\$tmnxMobGwNtfyPeerUPFuncFeatures\$</i> bbf up func <i>\$tmnxMobGwNtfyPeerBbfUPFuncFeats\$</i>
Cause	The Association state changes when the association is either setup or released. The association can be setup/released by association related Node level messages triggered by either the gateway or the peer. Association Messages are initiated by the gateway if the peer is configured in the association Peer list.

Property name	Value
Effect	Path management for PFCP peers and UPF selection can occur after the association is established. Path management or UPF selection will not happen in case of association down.
Recovery	If the association state is down and the release was initiated by the Gateway, the Gateway must come up for the association to be reestablished. If the release was initiated by the peer, the peer will trigger the setup when it comes up again.

3.3.7 tmnxMobGwAssocNodeIdFail

Table 24: tmnxMobGwAssocNodeIdFail properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2121
Event name	tmnxMobGwAssocNodeIdFail
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.121
Default severity	major
Source stream	main
Message format string	Gw - \$tmnxMobGwNtfyGatewayId\$, epc-node not configured for \$tmnxMobGwPdnNtfySxAssociation\$
Cause	PFCP Association Setup failure to establish due to Node ID missing.
Effect	PFCP Association Setup procedure will continue to fail to peer node while Node ID is missing.
Recovery	Configure a valid string for epc-node under the context configure mobile-gateway pdn.

3.3.8 tmnxMobGwAssocNodeIdFailClr

Table 25: tmnxMobGwAssocNodeIdFailClr properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2123

Property name	Value
Event name	tmnxMobGwAssocNodeIdFailClr
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.123
Default severity	major
Source stream	main
Message format string	Gw - <i>\$tmnxMobGwNtfyGatewayId\$</i> , configured epc-node re-established for <i>\$tmnxMobGwPdnNtfySxAssociation\$</i>
Cause	PFCP Association Setup re-established after node id is present.
Effect	There is no effect for this notification.
Recovery	No further action is required.

3.3.9 tmnxMobGwAssocNodeIdMismatch

Table 26: *tmnxMobGwAssocNodeIdMismatch* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2143
Event name	tmnxMobGwAssocNodeIdMismatch
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.143
Default severity	major
Source stream	main
Message format string	Gw - <i>\$tmnxMobGwNtfyGatewayId\$</i> , node ID mismatched for <i>\$tmnxMobGwPdnNtfySxAssociation\$</i> PFCP association setup
Cause	PFCP Association Setup failure to establish due to mismatch of the provided node ID value from all of the PFCP association peer list configuration.
Effect	PFCP Association Setup procedure will continue to fail the peer node while node ID provided continues to mismatch to any entry in the association list.
Recovery	Provide a valid node ID configuration entry for the peer list configuration based on the node ID in the PFCP association.

3.3.10 tmnxMobGwAssocNodeIdMismatchClr

Table 27: *tmnxMobGwAssocNodeIdMismatchClr* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2144
Event name	tmnxMobGwAssocNodeIdMismatchClr
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.144
Default severity	cleared
Source stream	main
Message format string	Gw - <i>\$tmnxMobGwNtfyGatewayId\$</i> , node ID match found for <i>\$tmnxMobGwPdnNtfySxAssociation\$</i> PFCP association
Cause	PFCP Association Setup is re-established after the node id provided matches with a valid peer list configuration.
Effect	PFCP Association Setup is established.
Recovery	No further action is required.

3.3.11 tmnxMobGwAssocPfcPndIdIpTypeErClr

Table 28: *tmnxMobGwAssocPfcPndIdIpTypeErClr* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2146
Event name	tmnxMobGwAssocPfcPndIdIpTypeErClr
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.146
Default severity	cleared
Source stream	main
Message format string	Gw - <i>\$tmnxMobGwNtfyGatewayId\$</i> , PFCP node ID IP type match occurred after a prior mismatch for <i>\$tmnxMobGwPdnNtfySxAssociation\$</i> PFCP association

Property name	Value
Cause	PFCP Association Setup is re-established after the node ID IP-type value provided matches with a valid Sx reference point peer interface address configuration.
Effect	PFCP Association Setup is established.
Recovery	No further action is required.

3.3.12 tmnxMobGwAssocPfcNodeIdIpTypeErr

Table 29: *tmnxMobGwAssocPfcNodeIdIpTypeErr* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2145
Event name	tmnxMobGwAssocPfcNodeIdIpTypeErr
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.145
Default severity	major
Source stream	main
Message format string	Gw - \$tmnxMobGwNtfyGatewayId\$, pfc node ID IP type mismatched for \$tmnxMobGwPdnNtfySxAssociation\$ PFCP association
Cause	PFCP Association Setup failure to establish due to mismatch of the provided node ID IP-type value with all the configured Sx reference point entry interface address types.
Effect	PFCP Association Setup procedure will continue to fail while the PFCP node ID IP-type provided continues to mismatch to any address in all the Sx reference point interface configuration.
Recovery	To provide a valid node ID IP-type configuration in the TIMETRA-MOBILE-PDN-MIB::tmnxMobPdnPfcNodeIdIpType or create an equivalent IP-type address interface configuration of the Sx reference point configuration.

3.3.13 tmnxMobGwBngChfFailAlmClr

Table 30: tmnxMobGwBngChfFailAlmClr properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2156
Event name	tmnxMobGwBngChfFailAlmClr
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.158
Default severity	major
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , the CHF failure handling threshold alarm is cleared because upper limit of <i>\$tmnxMobGwNtfyFhAlarmLowerThr\$%</i> is reached for APN <i>\$tmnxMobGwNtfyApnName\$</i> on VM- <i>\$tmnxMobGwNtfyVmId\$</i>
Cause	The lower threshold limit of the CHF failure handling threshold has been reached.
Effect	Enough sessions (determined by the threshold) have recovered from failure handling and are being fully charged again.
Recovery	Not applicable.

3.3.14 tmnxMobGwBngChfFailAlmSet

Table 31: tmnxMobGwBngChfFailAlmSet properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2155
Event name	tmnxMobGwBngChfFailAlmSet
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.157
Default severity	major
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , the CHF failure handling threshold alarm is set because upper limit of <i>\$tmnxMobGwNtfyFhAlarmUpperThr\$%</i> is reached for APN <i>\$tmnxMobGwNtfyApnName\$</i> on VM- <i>\$tmnxMobGwNtfyVmId\$</i>

Property name	Value
	$\$%$ is reached for APN $\$tmnxMobGwNtfyApnName\$$ on VM- $\$tmnxMobGwNtfyVmld\$$
Cause	The upper threshold limit of the CHF failure handling threshold has been reached.
Effect	A significant number of sessions (determined by the threshold) have entered failure handling and are not being charged as intended.
Recovery	Restore the CHF servers to provide full connectivity and functionality.

3.3.15 tmnxMobGwBngPcfFailAlmClr

Table 32: *tmnxMobGwBngPcfFailAlmClr* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2158
Event name	tmnxMobGwBngPcfFailAlmClr
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.160
Default severity	major
Source stream	main
Message format string	Gw- $\$tmnxMobGwNtfyGatewayld\$$, the PCF failure handling threshold alarm is cleared because upper limit of $\$tmnxMobGwNtfyFhAlarmLowerThr\$%$ is reached for APN $\$tmnxMobGwNtfyApnName\$$ on VM- $\$tmnxMobGwNtfyVmld\$$
Cause	The lower threshold limit of the PCF failure handling threshold has been reached.
Effect	Enough sessions (determined by the threshold) have recovered from failure handling and are being fully charged again.
Recovery	Not applicable.

3.3.16 tmnxMobGwBngPcfFailAlmSet

Table 33: tmnxMobGwBngPcfFailAlmSet properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2157
Event name	tmnxMobGwBngPcfFailAlmSet
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.159
Default severity	major
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , the PCF failure handling threshold alarm is set because upper limit of <i>\$tmnxMobGwNtfyFhAlarmUpperThr\$</i> is reached for APN <i>\$tmnxMobGwNtfyApnName\$</i> on VM- <i>\$tmnxMobGwNtfyVmId\$</i>
Cause	The upper threshold limit of the PCF failure handling threshold has been reached.
Effect	A significant number of sessions (determined by the threshold) have entered failure handling and are not being charged as intended.
Recovery	Restore the PCF servers to provide full connectivity and functionality.

3.3.17 tmnxMobGwBngUdmSdmFailAlmClr

Table 34: tmnxMobGwBngUdmSdmFailAlmClr properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2160
Event name	tmnxMobGwBngUdmSdmFailAlmClr
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.162
Default severity	major
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , the UDM SDM failure handling threshold alarm is cleared because upper limit of <i>\$tmnxMobGwNtfy</i>

Property name	Value
	<i>FhAlarmLowerThr</i> %% is reached for APN <i>\$tmnxMobGwNtfyApnName\$</i> on VM- <i>\$tmnxMobGwNtfyVmId\$</i>
Cause	The lower threshold limit of the UDM failure handling threshold has been reached.
Effect	Enough sessions (determined by the threshold) have recovered from failure handling and are being fully charged again.
Recovery	Not applicable.

3.3.18 tmnxMobGwBngUdmSdmFailAlmSet

Table 35: *tmnxMobGwBngUdmSdmFailAlmSet* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2159
Event name	tmnxMobGwBngUdmSdmFailAlmSet
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.161
Default severity	major
Source stream	main
Message format string	<i>Gw-\$tmnxMobGwNtfyGatewayId\$</i> , the UDM SDM failure handling threshold alarm is set because upper limit of <i>\$tmnxMobGwNtfyFhAlarmUpperThr</i> %% is reached for APN <i>\$tmnxMobGwNtfyApnName\$</i> on VM- <i>\$tmnxMobGwNtfyVmId\$</i>
Cause	The upper threshold limit of the UDM failure handling threshold has been reached.
Effect	A significant number of sessions (determined by the threshold) have entered failure handling and are not being charged as intended.
Recovery	Restore the UDM servers to provide full connectivity and functionality.

3.3.19 tmnxMobGwBngUdmUecmFailAlmClr

Table 36: tmnxMobGwBngUdmUecmFailAlmClr properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2162
Event name	tmnxMobGwBngUdmUecmFailAlmClr
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.164
Default severity	major
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , the UDM UECM failure handling threshold alarm is cleared because upper limit of <i>\$tmnxMobGwNtfyFhAlarmLowerThr\$%</i> is reached for APN <i>\$tmnxMobGwNtfyApnName\$</i> on VM- <i>\$tmnxMobGwNtfyVmId\$</i>
Cause	The lower threshold limit of the UDM UECM failure handling threshold has been reached.
Effect	Enough sessions (determined by the threshold) have recovered from failure handling and are being fully charged again.
Recovery	Not applicable.

3.3.20 tmnxMobGwBngUdmUecmFailAlmSet

Table 37: tmnxMobGwBngUdmUecmFailAlmSet properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2161
Event name	tmnxMobGwBngUdmUecmFailAlmSet
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.163
Default severity	major
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , the UDM UECM failure handling threshold alarm is set because upper limit of <i>\$tmnxMobGwNtfyFhAlarm</i>

Property name	Value
	<i>UpperThr</i> %% is reached for APN <i>\$tmnxMobGwNtfyApnName\$</i> on VM- <i>\$tmnxMobGwNtfyVmId\$</i>
Cause	The upper threshold limit of the UDM UECM failure handling threshold has been reached.
Effect	A significant number of sessions (determined by the threshold) have entered failure handling and are not being charged as intended.
Recovery	Restore the UDM servers to provide full connectivity and functionality.

3.3.21 tmnxMobGwCfCapacityAlarmMinor

Table 38: *tmnxMobGwCfCapacityAlarmMinor* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2011
Event name	tmnxMobGwCfCapacityAlarmMinor
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.7
Default severity	minor
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , Flash ID- <i>\$tmnxMobGwNtfyFlashId\$</i> , Flash Limit- <i>\$tmnxMobGwNtfyCfLimit\$</i> , GTP Prime Server Group- <i>\$tmnxMobGwNtfyGtpPriGrpName\$</i> .
Cause	The compact flash capacity reaches the 85% limit.
Effect	N/A
Recovery	N/A

3.3.22 tmnxMobGwCfCapacityAlmMjrClear

Table 39: *tmnxMobGwCfCapacityAlmMjrClear* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2014

Property name	Value
Event name	tmnxMobGwCfCapacityAlmMjrClear
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.10
Default severity	major
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , Flash ID- <i>\$tmnxMobGwNtfyFlashId\$</i> , Flash Limit- <i>\$tmnxMobGwNtfyCfLimit\$</i> , GTP Prime Server Group- <i>\$tmnxMobGwNtfyGtpPriGrpName\$</i> .
Cause	The compact flash capacity drops below the 90% limit.
Effect	N/A
Recovery	N/A

3.3.23 tmnxMobGwCfCapacityAlmMnrClear

Table 40: tmnxMobGwCfCapacityAlmMnrClear properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2012
Event name	tmnxMobGwCfCapacityAlmMnrClear
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.8
Default severity	minor
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , Flash ID- <i>\$tmnxMobGwNtfyFlashId\$</i> , Flash Limit- <i>\$tmnxMobGwNtfyCfLimit\$</i> , GTP Prime Server Group- <i>\$tmnxMobGwNtfyGtpPriGrpName\$</i> .
Cause	The compact flash capacity drops below the 80% limit.
Effect	N/A
Recovery	N/A

3.3.24 tmnxMobGwCntrlFabricPartialFail

Table 41: *tmnxMobGwCntrlFabricPartialFail* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2100
Event name	tmnxMobGwCntrlFabricPartialFail
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.98
Default severity	minor
Source stream	main
Message format string	Detected <i>\$tmnxMobGwNtfyFailureDirection\$</i> failure for slot <i>\$tmnxMobGwNtfySlot\$</i> on control fabric <i>\$tmnxMobGwNtfyFabricId\$</i>
Cause	A tmnxMobGwCntrlFabricPartialFail is generated when a card loses connectivity to other cards in a particular direction over a particular control fabric. The card ID is indicated in tmnxMobGwNtfySlot, the failed fabric ID is indicated in tmnxMobGwNtfyFabricId and the direction of the failure (transmit/receive) is indicated in tmnxMobGwNtfyFailureDirection.
Effect	The system uses a different control fabric that is operational to communicate with the affected card.
Recovery	Manual intervention may be required to restore the connectivity.

3.3.25 tmnxMobGwControlFabricFailure

Table 42: *tmnxMobGwControlFabricFailure* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2101
Event name	tmnxMobGwControlFabricFailure
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.99
Default severity	minor
Source stream	main

Property name	Value
Message format string	Detected <i>\$tmnxMobGwNtfyFailureDirection\$</i> failure for slot <i>\$tmnxMobGwNtfySlot\$</i> on all control fabrics
Cause	A loss of connectivity to other cards in a particular direction over all available control fabrics.
Effect	The card cannot function properly as part of the system.
Recovery	Attempt to restore connectivity by rebooting the affected card.

3.3.26 tmnxMobGwDdnThrottlingStart

Table 43: *tmnxMobGwDdnThrottlingStart* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2033
Event name	tmnxMobGwDdnThrottlingStart
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.29
Default severity	warning
Source stream	main
Message format string	Acct Application: Throttling DDN: Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , Ref point- <i>\$tmnxMobGwNtfyRefPointType\$</i> , Ref protocol- <i>\$tmnxMobGwNtfyRefPointProtocol\$</i> , RefPointName- <i>\$tmnxMobGwNtfyRefPointName\$</i> , address type- <i>\$tmnxMobGwNtfyRfPtPeerAddrType\$</i> , peer address- <i>\$tmnxMobGwNtfyRfPtPeerAddr\$</i> , port- <i>\$tmnxMobGwNtfyRfPtPeerPort\$</i> , duration- <i>\$tmnxMobGwNtfyDdnThrotDuration\$</i> , factor- <i>\$tmnxMobGwNtfyDdnThrotFactor\$</i>
Cause	The SGW starts throttling the DDN when it receives a throttling instruction carried in the "downlink (DL) low priority traffic Throttling" IE from a peer node.
Effect	The SGW starts throttling the DDN based on a priority threshold value. The traffic with a priority value higher than or equal to the threshold value is considered as a bearer for non-priority traffic.
Recovery	When the throttling time is over, the SGW stops throttling the DDN.

3.3.27 tmnxMobGwDdnThrottlingStop

Table 44: tmnxMobGwDdnThrottlingStop properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2034
Event name	tmnxMobGwDdnThrottlingStop
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.30
Default severity	warning
Source stream	main
Message format string	Acct Application: Throttling DDN: Gw- \$tmnxMobGwNtfyGatewayId\$, Ref point-\$tmnxMobGwNtfyRefPointType\$, Ref protocol-\$tmnxMobGwNtfyRefPointProtocol\$, RefPointName- \$tmnxMobGwNtfyRefPointName\$, address type-\$tmnxMobGwNtfyRfPtPeerAddrType\$, peer address-\$tmnxMobGwNtfyRfPtPeerAddr\$, port- \$tmnxMobGwNtfyRfPtPeerPort\$, duration-\$tmnxMobGwNtfyDdnThrotDuration\$, factor-\$tmnxMobGwNtfyDdnThrotFactor\$
Cause	The SGW stops throttling the DDN when the throttling time is over.
Effect	The SGW stops throttling the DDN based on a priority threshold value. All DDNs are sent to the peer node.
Recovery	When another throttling instruction is received from a peer node, the SGW starts throttling the DDN.

3.3.28 tmnxMobGwDnsSnpFqdnIpLimitAlarm

Table 45: tmnxMobGwDnsSnpFqdnIpLimitAlarm properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2102
Event name	tmnxMobGwDnsSnpFqdnIpLimitAlarm
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.100
Default severity	minor
Source stream	main

Property name	Value
Message format string	Gw:\$tmnxMobGwNtfyGatewayId\$ Number of server addresses learned by DNS Snooping reached \$tmnxMobGwDnsSnpFqdnThres\$ % of maximum \$tmnxMobGwDnsSnpFqdnIpMax\$
Cause	The number of stored DNS resolved IP addresses approaches a threshold limit of the maximum number of cacheable addresses. The threshold in percentage is indicated by tmnxMobGwDnsSnpFqdnThres and the maximum size of stored IP addresses is indicated by the tmnx MobGwDnsSnpFqdnIpMax value.
Effect	The PGW may reach the maximum limit and may not be able to store new IP addresses.
Recovery	The operator assistance is needed to clear the resolved filters for the specified FQDN list.

3.3.29 tmnxMobGwLciOverload

Table 46: tmnxMobGwLciOverload properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2080
Event name	tmnxMobGwLciOverload
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.78
Default severity	minor
Source stream	main
Message format string	Mobile Gateway in GTP-C LCI 100%
Cause	The resources for the mobile gateway group have reached their limit.
Effect	The mobile gateway group resources are at critical levels. The system will attempt to lower resource usage on this mobile gateway group.
Recovery	None

3.3.30 tmnxMobGwLciOverloadClear

Table 47: tmnxMobGwLciOverloadClear properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2081
Event name	tmnxMobGwLciOverloadClear
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.79
Default severity	minor
Source stream	main
Message format string	Mobile Gateway GTP-C no longer at LCI 100%
Cause	The resources for the mobile gateway group are back to the normal operating levels.
Effect	The mobile gateway group is back to the normal operating levels.
Recovery	None, the system is back to the normal operating levels.

3.3.31 tmnxMobGwMcRedPurgeRebootStandby

Table 48: tmnxMobGwMcRedPurgeRebootStandby properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2063
Event name	tmnxMobGwMcRedPurgeRebootStandby
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.61
Default severity	minor
Source stream	main
Message format string	MC_RED purge: Active card- \$tmnxMobGwNtfyActiveCardSlotNum\$ initialized reboot on standby card-\$tmnxMobGwNtfyStandbyCardSlotNum\$

Property name	Value
Cause	In the case of a multi-chassis redundancy purge, if the RED state is not 'hot', the active card initializes a reboot on the standby card after the purge finishes on the active card.
Effect	The standby card reboots.
Recovery	No further action is required.

3.3.32 tmnxMobGwNnrfBlocklistAlarm

Table 49: *tmnxMobGwNnrfBlocklistAlarm* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2126
Event name	tmnxMobGwNnrfBlocklistAlarm
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.126
Default severity	warning
Source stream	main
Message format string	NRF peer for service <i>\$tmnxMobGwNnrfServiceType\$</i> on GW- <i>\$tmnxMobGwNnrfGatewayId\$</i> is block-listed
Cause	All the NRF peers for service nnrf-nfm or nnrf-disc are block-listed after failure responses or response timeouts.
Effect	The block list duration is not applied. All NRF peers are sending failure responses or the responses time out. The Gateway continuously retries service requests to all peers.
Recovery	The alarm is cleared when the first NRF peer from the block list is successfully contacted (a success HTTP status is received).

3.3.33 tmnxMobGwNnrfBlocklistAlarmClear

Table 50: *tmnxMobGwNnrfBlocklistAlarmClear* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2127

Property name	Value
Event name	tmnxMobGwNrfBlocklistAlarmClear
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.127
Default severity	warning
Source stream	main
Message format string	NRF peer for service <i>\$tmnxMobGwNtfyNrfServiceType\$</i> on GW- <i>\$tmnxMobGwNtfyGatewayId\$</i> is no longer block-listed
Cause	All the NRF peers for service nrf-nfm or nrf-disc are no longer block-listed.
Effect	The block list duration is applied.
Recovery	No further action required.

3.3.34 tmnxMobGwNrfHeartbeatAlarm

Table 51: *tmnxMobGwNrfHeartbeatAlarm* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2094
Event name	tmnxMobGwNrfHeartbeatAlarm
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.90
Default severity	major
Source stream	main
Message format string	NRF heartbeat failed for peer <i>\$tmnxMobGwNtfyRfPtPeerAddr\$</i> on GW <i>\$tmnxMobGwNtfyGatewayId\$</i> with error: <i>\$tmnxMobGwNtfyNrfHbAlarmReason\$</i>
Cause	Loss of connectivity to the NRF, NRF failure.
Effect	The NRF does not consider MAG-c SMF or UPF to be registered and eligible for discovery anymore. The NRF may also consider the MAG-c SMF or UPF to be out of service and notify the subscribed peer NF instances.
Recovery	Recovery is TBD according to failure handling of failed HB responses and failover to next NRF is concluded.

3.3.35 tmnxMobGwNrfHeartbeatAlarmClear

Table 52: *tmnxMobGwNrfHeartbeatAlarmClear* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2095
Event name	tmnxMobGwNrfHeartbeatAlarmClear
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.91
Default severity	major
Source stream	main
Message format string	NRF heartbeat succeeded for peer <i>\$tmnxMobGwNrfPeerAddr\$</i> on GW <i>\$tmnxMobGwNrfGatewayId\$</i> with error: <i>\$tmnxMobGwNrfHbAlarmReason\$</i>
Cause	Successful Heartbeat message request/response sequence with NRF.
Effect	The NRF considers MAG-c SMF or UPF to be registered and eligible for discovery.
Recovery	No further action is required.

3.3.36 tmnxMobGwOciOverload

Table 53: *tmnxMobGwOciOverload* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2082
Event name	tmnxMobGwOciOverload
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.80
Default severity	major
Source stream	main
Message format string	Mobile Gateway in GTP-C OCI overload
Cause	The resources for the mobile gateway group have been almost exhausted due to high load.

Property name	Value
Effect	The mobile gateway group resources are at critical levels. The system will attempt to lower resource usage on this mobile gateway group.
Recovery	None.

3.3.37 tmnxMobGwOciOverloadClear

Table 54: tmnxMobGwOciOverloadClear properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2083
Event name	tmnxMobGwOciOverloadClear
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.81
Default severity	major
Source stream	main
Message format string	Mobile Gateway no longer in GTP-C overload
Cause	The resources for the mobile gateway group are back to the normal operating levels.
Effect	The mobile gateway group is back to the normal operating levels.
Recovery	None, the system is back to the normal operating levels.

3.3.38 tmnxMobGwOciOvldThrtStart

Table 55: tmnxMobGwOciOvldThrtStart properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2103
Event name	tmnxMobGwOciOvldThrtStart
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.101
Default severity	major
Source stream	main

Property name	Value
Message format string	The mobile gateway has started throttling incoming call flows due to local overload.
Cause	The resources for the mobile gateway group have been almost exhausted due to high load.
Effect	The mobile gateway group resources are at critical level. The system attempts to lower the resource usage on this mobile gateway group.
Recovery	The mobile-gateway stops throttling incoming call flows when it is out of local overload.

3.3.39 tmnxMobGwOciOvldThrtStop

Table 56: *tmnxMobGwOciOvldThrtStop* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2104
Event name	tmnxMobGwOciOvldThrtStop
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.102
Default severity	major
Source stream	main
Message format string	The mobile gateway has stopped throttling incoming call flows due to local overload.
Cause	Either incoming call flows are not received for the last 30 seconds, or the resources for the mobile gateway group are back to normal operating levels in the last 30 seconds.
Effect	The mobile gateway is no longer throttling incoming call flows due local overload.
Recovery	Not applicable.

3.3.40 tmnxMobGwPathMgmtPeerState

Table 57: tmnxMobGwPathMgmtPeerState properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2001
Event name	tmnxMobGwPathMgmtPeerState
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.1
Default severity	major
Source stream	main
Message format string	Path Management: Peer State: \$tmnxMobGwNtfyPathMgmtPeerState\$: Gw-\$tmnxMobGwNtfyGatewayId\$, Ref point-\$tmnxMobGwNtfyRefPointType\$, protocol- \$tmnxMobGwNtfyRefPointProtocol\$, RefPoint Name-\$tmnxMobGwNtfyRefPointName\$,peer-\$tmnxMobGwNtfyRfPtPeerAddr\$, port- \$tmnxMobGwNtfyRfPtPeerPort\$, Local address - \$tmnxMobGwNtfyPathLocAddress\$, Previous Restart Counter- \$tmnxMobGwNtfyPrevRestartCounter\$, Current Restart Counter-\$tmnxMobGwNtfyCurrRestartCounter\$, Peer Restart Reason- \$tmnxMobGwNtfyPeerRestartReason\$, Pkt Seq Number-\$tmnxMobGwNtfyPeerRestPktSeqNum\$, Peer Type-\$tmnxMobGwNtfySigPeerType\$, Plane Type-\$tmnxMobGwNtfySigPlaneType\$.
Cause	A change in the reference point peer state during path management. The supported trap event values are the following: Added - raised when a new peer is identified due to incoming messages Up - raised when a peer moves to UP state, for a SGW peer, this state change happens when a CS Req is received. for PGW peers, this state change happens when a CS Resp from the PGW peer is received (this is to make sure that Path UP trap is generated only for a real PGW peer in case of GTP-C redirection) Down - raised when a peer moves to the FAULT state while detecting a path management failure. Idle - raised when a peer moves to the IDLE state after session cleanup is done due to path management Failure/ Detach/Admin delete Restart - raised when a peer restart is detected, it is associated with Peer RESTART state Deleted - raised when a peer entry is deleted due to a peer aging out, a peer ages out when it is Idle for more than the Age Out Interval.
Effect	N/A
Recovery	N/A

3.3.41 tmnxMobGwPcmdOperStateChange

Table 58: tmnxMobGwPcmdOperStateChange properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2045
Event name	tmnxMobGwPcmdOperStateChange
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.43
Default severity	minor
Source stream	main
Message format string	PCMD: Oper State: \$tmnxMobGwNtfyPcmdOperState\$: Gw- \$tmnxMobGwNtfyGatewayId\$, PCMD profile-\$tmnxMobGwNtfyPcmdProfile\$
Cause	The PCMD operational state changes when the destination address reachability changes.
Effect	When the PCMD state is down, the generated PCMD packets are not sent to the destination address. When the PCMD state is up, the PCMD packets are sent to the destination address.
Recovery	If the PCMD state is down, then generated PCMD packets are dropped.

3.3.42 tmnxMobGwPfcPRestoreInProg

Table 59: tmnxMobGwPfcPRestoreInProg properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2122
Event name	tmnxMobGwPfcPRestoreInProg
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.122
Default severity	major
Source stream	main
Message format string	Gw-\$tmnxMobGwNtfyGatewayId\$ VRtr- \$tmnxMobGwNtfyVrtrId\$ Ref PointType-\$tmnxMobGwNtfyRefPointType\$ RefPointName-\$tmnxMobGwNtfyRefPointName\$ PFCP restoration in progress for RemotePeer

Property name	Value
	Address- <i>\$tmnxMobGwNtfyRfPtPeerAddr\$</i> LocalPeerAddress- <i>\$tmnxMobGwNtfyPeerLocAddress\$</i> RestoreTimer- <i>\$tmnxMobGwNtfyRestoreTimer\$</i> NodeId- <i>\$tmnxMobGwNtfyPeerNodeId\$</i>
Cause	A PFCP keepalive failure between UP and CP has been detected.
Effect	The restoration timer has started.
Recovery	Restore the path between UP and CP to allow keepalives to succeed again. If keepalives recover before the restoration timer times out, the CP and UP will perform an audit and recover from the failure automatically.

3.3.43 tmnxMobGwPfcPViaUpFuncFailureClr

Table 60: *tmnxMobGwPfcPViaUpFuncFailureClr* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2129
Event name	tmnxMobGwPfcPViaUpFuncFailureClr
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.129
Default severity	cleared
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , <i>\$tmnxMobGwNtfyGrpName\$</i> detected a PFCP-u tunnel connectivity re-established between the CP function and UP function.
Cause	PFCP-u tunnel used for via-up-function (radius-group or dhcp-server-group) traffic between CP and UP function is failing re-established.
Effect	Any traffic routed over the PFCP-u tunnel will no longer fail.
Recovery	No further action required.

3.3.44 tmnxMobGwRadGrpFailAlarm

Table 61: tmnxMobGwRadGrpFailAlarm properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2024
Event name	tmnxMobGwRadGrpFailAlarm
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.20
Default severity	major
Source stream	main
Message format string	Gw-\$tmnxMobGwNtfyGatewayId\$, Radius Server Group- \$tmnxMobGwNtfyRadGrpName\$, Group State-\$tmnxMobGwNtfyRadGrpState\$.
Cause	All the RADIUS servers for the group are in a down operating state.
Effect	When the group of RADIUS servers fails, RADIUS messages may not be sent to the group.
Recovery	The RADIUS server group will recover from this failure mode when one of its servers returns to the up operating state.

3.3.45 tmnxMobGwRadGrpFailAlarmClrd

Table 62: tmnxMobGwRadGrpFailAlarmClrd properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2025
Event name	tmnxMobGwRadGrpFailAlarmClrd
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.21
Default severity	minor
Source stream	main
Message format string	Gw-\$tmnxMobGwNtfyGatewayId\$, Radius Server Group- \$tmnxMobGwNtfyRadGrpName\$, Group State-\$tmnxMobGwNtfyRadGrpState\$.

Property name	Value
Cause	The RADIUS server group is recovered from the previous failure mode and at least one of its servers has transitioned to the up operating state.
Effect	The operation for the RADIUS group is back to normal.
Recovery	No further action is required.

3.3.46 tmnxMobGwRadPeerFailAlarm

Table 63: tmnxMobGwRadPeerFailAlarm properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2022
Event name	tmnxMobGwRadPeerFailAlarm
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.18
Default severity	minor
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , Radius Server Group- <i>\$tmnxMobGwNtfyRadGrpName\$</i> , Address- <i>\$tmnxMobGwNtfyRadPeerAddr\$</i> , Authentication port- <i>\$tmnxMobGwNtfyRadPeerAuthPort\$</i> , Accounting port- <i>\$tmnxMobGwNtfyRadPeerAcctPort\$</i> , Peer State- <i>\$tmnxMobGwNtfyRadPeerState\$</i> .
Cause	The operating state for RADIUS server is changed to the down state.
Effect	RADIUS messages may not be sent to the RADIUS server.
Recovery	RADIUS messages can continue to be sent to a RADIUS server after the RADIUS server's operating state changes back to up or the dead timer expires.

3.3.47 tmnxMobGwRadPeerFailAlarmClrd

Table 64: tmnxMobGwRadPeerFailAlarmClrd properties

Property name	Value
Application name	MOBILE_GATEWAY

Property name	Value
Event ID	2023
Event name	tmnxMobGwRadPeerFailAlarmClrd
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.19
Default severity	minor
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , Radius Server Group- <i>\$tmnxMobGwNtfyRadGrpName\$</i> , Address- <i>\$tmnxMobGwNtfyRadPeerAddr\$</i> , Authentication port- <i>\$tmnxMobGwNtfyRadPeerAuthPort\$</i> , Accounting port- <i>\$tmnxMobGwNtfyRadPeerAcctPort\$</i> , Peer State- <i>\$tmnxMobGwNtfyRadPeerState\$</i> .
Cause	The RADIUS server recovered from the previous failure mode and one of its servers has transitioned to the up operating state.
Effect	The operation for the RADIUS server is back to normal.
Recovery	No further action is required.

3.3.48 tmnxMobGwSbiPeerState

Table 65: *tmnxMobGwSbiPeerState* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2130
Event name	tmnxMobGwSbiPeerState
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.130
Default severity	warning
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , Group ID- <i>\$tmnxMobGwNtfySbiGroupId\$</i> , NF service name- <i>\$tmnxMobGwNtfySbiNfServiceName\$</i> , Service Instance- <i>\$tmnxMobGwNtfySbiNfServiceIns\$</i> , peer UUID- <i>\$tmnxMobGwNtfySbiPeerUuid\$</i> , peer ip address- <i>\$tmnxMobGwNtfySbiPeerIpAddress\$</i> , peer port- <i>\$tmnxMobGwNtfySbiPeerPort\$</i> , connection state- <i>\$tmnxMobGwNtfySbiConnectionState\$</i> , NF service state- <i>\$tmnxMobGwNtfySbiNfServiceState\$</i> .

Property name	Value
Cause	A change in the NF peer connection status or peer is deleted from peer list.
Effect	N/A.
Recovery	N/A.

3.3.49 tmnxMobGwSmfDnnOvld

Table 66: *tmnxMobGwSmfDnnOvld* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2116
Event name	tmnxMobGwSmfDnnOvld
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.115
Default severity	minor
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , APN Name- <i>\$tmnxMobGwNtfyApn Name\$</i> SMF entered into DNN overloaded state.
Cause	SMF reaches DNN level overload state.
Effect	The system throttles new sessions and signals a backoff timer as configured with 'pdn apn dnn-overload-control n1-back-off-timer'.
Recovery	Not applicable.

3.3.50 tmnxMobGwSmfDnnOvldClear

Table 67: *tmnxMobGwSmfDnnOvldClear* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2117
Event name	tmnxMobGwSmfDnnOvldClear
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.116

Property name	Value
Default severity	minor
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , APN Name- <i>\$tmnxMobGwNtfyApnName\$</i> SMF no longer in DNN overload.
Cause	SMF no longer in DNN level overload.
Effect	The system stops throttling new sessions.
Recovery	Not applicable.

3.3.51 tmnxMobGwSmfNodeOvld

Table 68: *tmnxMobGwSmfNodeOvld* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2114
Event name	tmnxMobGwSmfNodeOvld
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.113
Default severity	minor
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , Group ID- <i>\$tmnxMobGwNtfySysGroupId\$</i> SMF entered into node level overloaded state.
Cause	SMF reaches node level overload.
Effect	The system throttles new sessions and signals a backoff timer as configured with 'pdn apn overload-back-off overload-back-off-timer'.
Recovery	Not applicable.

3.3.52 tmnxMobGwSmfNodeOvldClear

Table 69: *tmnxMobGwSmfNodeOvldClear* properties

Property name	Value
Application name	MOBILE_GATEWAY

Property name	Value
Event ID	2115
Event name	tmnxMobGwSmfNodeOvldClear
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.114
Default severity	minor
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , Group ID- <i>\$tmnxMobGwNtfySysGroupId\$</i> SMF no longer in node level overload.
Cause	SMF no longer in overload.
Effect	The system stops throttling new sessions.
Recovery	Not applicable.

3.3.53 tmnxMobPdnApnMaxPdnConnAlarm

Table 70: *tmnxMobPdnApnMaxPdnConnAlarm* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2035
Event name	tmnxMobPdnApnMaxPdnConnAlarm
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.33
Default severity	major
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , APN Name- <i>\$tmnxMobGwNtfyApnName\$</i> .
Cause	The maximum number of PDN connections for this APN on the gateway is reached.
Effect	New PDN connections are not accepted until the limit drops below the value of TIMETRA-MOBILE-PDN-MIB::tmnxMobPdnApnMaxPdnConnections.
Recovery	To accept new PDN connections, the system has to wait until the maximum PDN connections number drops below the threshold.

3.3.54 tmnxMobPdnApnMaxPdnConnAlarmClr

Table 71: tmnxMobPdnApnMaxPdnConnAlarmClr properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2036
Event name	tmnxMobPdnApnMaxPdnConnAlarmClr
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.34
Default severity	major
Source stream	main
Message format string	Gw-\$tmnxMobGwNtfyGatewayId\$, APN Name- \$tmnxMobGwNtfyApnName\$.
Cause	The existing number of PDN connections for this APN on the gateway drops below the value of TIMETRA-MOBILE-PDN-MIB::tmnxMobPdnApnMaxPdnConnections.
Effect	New PDN connections are accepted.
Recovery	No further action is required.

3.3.55 tmnxMobPdnBearerContextClear

Table 72: tmnxMobPdnBearerContextClear properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2153
Event name	tmnxMobPdnBearerContextClear
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.155
Default severity	warning
Source stream	main
Message format string	Clear bearer context in PDN \$tmnxMobGwNtfyGatewayId\$ \$tmnxMobGwNtfyLongText\$ \$tmnxMobGwNtfyStartEnd\$ (#\$tmnxMobGwNtfyNumber\$)

Property name	Value
Cause	The system starts or terminates processing a request to clear a PDN bearer context. The request can be done with the CLI command 'clear mobile-gateway pdn bearer-context' or by using one of the appropriate rows in the TIMETRA-CLEAR-MIB::tmnxClearTable, like the row named 'clearMobPdnBearerContext'.
Effect	In the time interval between the start and end notification, the system has cleared a number of PDN bearer contexts that match the specified parameters. The UE's associated with the bearer contexts lose their connection with the PDN.
Recovery	None.

3.3.56 tmnxMobPdnLaaPfxInsufficientMem

Table 73: tmnxMobPdnLaaPfxInsufficientMem properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2113
Event name	tmnxMobPdnLaaPfxInsufficientMem
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.113
Default severity	warning
Source stream	main
Message format string	Gw- <i>\$tmnxMobGwNtfyGatewayId\$</i> , network realm <i>\$tmnxMobGwNtfyNwRealmName\$</i> , pool <i>\$tmnxMobGwNtfyPoolName\$</i> , prefix <i>\$tmnxMobGwNtfyAddr\$/\$tmnxMobGwNtfyPfxLength\$</i> not operational due to insufficient memory
Cause	Insufficient memory for an IP address prefix and all of its micronets.
Effect	The IP address prefix is not activated, and its operational status goes down.
Recovery	Add memory to the system, or reduce the number of the prefix micronets.

3.3.57 tmnxMobPdnLaaPINoFreeMnets

Table 74: tmnxMobPdnLaaPINoFreeMnets properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2136
Event name	tmnxMobPdnLaaPINoFreeMnets
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.136
Default severity	minor
Source stream	main
Message format string	Gw-\$tmnxMobGwNtfyGatewayId\$, network realm \$tmnxMobGwNtfyNwRealmName\$, pool \$tmnxMobGwNtfyPoolName\$ IPv6 type \$tmnxMobGwNtfyIpv6AssignmentType\$: no more free \$tmnxMobGwNtfyLaaUnfragmentedMn\$ micronets \$tmnxMobGwNtfyTruthValue\$
Cause	The last available micronet of its kind in the pool is activated.
Effect	Setup of new end user sessions will start to fail.
Recovery	Add prefixes to the pool.

3.3.58 tmnxMobPdnLaaPINumFreeMnetsLow

Table 75: tmnxMobPdnLaaPINumFreeMnetsLow properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2110
Event name	tmnxMobPdnLaaPINumFreeMnetsLow
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.108
Default severity	warning
Source stream	main
Message format string	Gw-\$tmnxMobGwNtfyGatewayId\$, network realm \$tmnxMobGwNtfyNwRealmName\$, pool \$tmnxMobGwNtfyPoolName\$ IPv6 type \$tmnxMobGwNtfyIpv6AssignmentType\$: running low on \$tmnxMobGwNtfyLaaUnfragmentedMn\$ micronets \$tmnxMobGwNtfyTruthValue\$

Property name	Value
Cause	A micronet is activated while the number of free micronets in the pool is already low.
Effect	None.
Recovery	No recovery is immediately required. However, it is recommended to add prefixes in order to avoid complete depletion of the pool.

3.3.59 tmnxMobProfNodeSelTrgtSugstRebal

Table 76: *tmnxMobProfNodeSelTrgtSugstRebal* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2149
Event name	tmnxMobProfNodeSelTrgtSugstRebal
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.151
Default severity	warning
Source stream	main
Message format string	Evaluate target-profile <i>\$tmnxMobGwNtfyProfileName\$</i> and rebalance if necessary - new UP= <i>\$tmnxMobGwNtfyUpPeerAddress\$</i> , surviving number of UPs= <i>\$tmnxMobGwNtfyNumber\$</i>
Cause	The system has reconnected to a UPF after having been disconnected.
Effect	While the UPF connection was down session distribution among the UPFs in a target profile may have become unbalanced. This event indicates session load rebalancing may be necessary.
Recovery	Session load among the available UPFs in the target profile should be evaluated, and if necessary, rebalanced using a clear operation.

3.3.60 tmnxMobProfNodeSelTrgtSugstRevrt

Table 77: *tmnxMobProfNodeSelTrgtSugstRevrt* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2150

Property name	Value
Event name	tmnxMobProfNodeSelTrgtSugstRevert
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.152
Default severity	warning
Source stream	main
Message format string	Evaluate target-profile <i>\$tmnxMobGwNtfyProfileName\$</i> and revert if necessary
Cause	The number of available UPFs in a target profile entry has reached the necessary minimum threshold.
Effect	While the number of available UPF connections was below the minimum threshold new sessions will be directed to backup UPFs. This event indicates it may be appropriate to revert sessions to primary UPFs.
Recovery	Session load among primary and secondary UPFs of the target profile should be evaluated and if necessary, reverted using a clear operation.

3.3.61 tmnxOverlayFabricFailure

Table 78: *tmnxOverlayFabricFailure* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2072
Event name	tmnxOverlayFabricFailure
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.70
Default severity	minor
Source stream	main
Message format string	Detected <i>\$tmnxMobGwNtfyFailureDirection\$</i> failure for slot <i>\$tmnxMobGwNtfySlot\$</i> on all overlay fabrics
Cause	A loss of connectivity to other cards in a particular direction over all available overlay fabrics.
Effect	The card cannot function properly as part of the system.
Recovery	Attempt to restore connectivity by rebooting the affected card.

3.3.62 tmnxOverlayFabricPartialFailure

Table 79: *tmnxOverlayFabricPartialFailure* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2073
Event name	tmnxOverlayFabricPartialFailure
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.71
Default severity	minor
Source stream	main
Message format string	Detected <i>\$tmnxMobGwNtfyFailureDirection\$</i> failure for slot <i>\$tmnxMobGwNtfySlot\$</i> on overlay fabric <i>\$tmnxMobGwNtfyFabricId\$</i>
Cause	Loss of connectivity between the affected card and the other cards in a particular direction over a particular overlay fabric.
Effect	The system will use a different overlay fabric that is operational to communicate with the affected card, but the capacity will be reduced.
Recovery	Manual intervention may be required to restore the connectivity.

3.3.63 tmnxOverlayFabricStatus

Table 80: *tmnxOverlayFabricStatus* properties

Property name	Value
Application name	MOBILE_GATEWAY
Event ID	2060
Event name	tmnxOverlayFabricStatus
SNMP notification prefix and OID	TIMETRA-MOBILE-GATEWAY-MIB.tmnxMobGatewayNotifications.58
Default severity	major
Source stream	main
Message format string	Operational state of last overlay fabric port transitioned to <i>\$tmnxMobGwNtfyOverlayFabricState\$</i> state for VM <i>\$tmnxMobGwNtfyVmId\$</i>
Cause	A change in the operational state of the overlay fabric switch, either when the last operational overlay fabric port transitions to the down

Property name	Value
	state or when the first overlay fabric port transitions to an operationally up state.
Effect	If the value of tmnxMobGwNtfyOverlayFabricState is down, the VM fails (crashes) and ceases to process any new packets.
Recovery	If the value of tmnxMobGwNtfyOverlayFabricState is down, the VM fails to process new packets and reboots. The VM remains in the booting state until the value of tmnxMobGwNtfyOverlayFabricState changes to up.

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