CHAPTER 2

Audit Troubleshooting

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Introduction

This chapter provides the information needed to monitor and troubleshoot Audit events and alarms. This chapter is divided into the following sections:

- Audit Events and Alarms – Provides a brief overview of each Audit event and alarm.
- Monitoring Audit Events – Provides the information needed to monitor and correct Audit events.
- Troubleshooting Audit Alarms – Provides the information needed to troubleshoot and correct Audit alarms.

Audit Events and Alarms

This section provides a brief overview of the Audit events and alarms for the Cisco BTS 10200 Softswitch in numerical order. Table 2-1 lists all of the audit events and alarms by severity.

Note Click the Audit message number in Table 2-1 to display information about the event or alarm.

Table 2-1 Audit Events and Alarms by Severity

CRITICAL	MAJOR	MINOR	WARNING	INFO
AUDIT (5)	AUDIT (6)	AUDIT (7)	AUDIT (3)	AUDIT (1)
			AUDIT (4)	AUDIT (2)
			AUDIT (8)	

AUDIT (1)

For additional information, refer to the "Test Report - Audit (1)" section on page 2-6.

DESCRIPTION	Test Report
SEVERITY	Information (INFO)
THRESHOLD	100
THROTTLE	0
PRIMARY CAUSE	This event is used for testing the new "Audit" category.
PRIMARY ACTION	No action is necessary.

AUDIT (2)

For additional information, refer to the "Start or Stop of Signaling System 7 - Circuit Identification Code Audit - Audit (2)" section on page 2-6.

DESCRIPTION	Start or Stop of Signaling System 7-Circuit Identification Code Audit (Start or Stop of SS7-CIC Audit)
SEVERITY	INFO
THRESHOLD	100
THROTTLE	0
DATAWORDS	Type of Audit - STRING [64]
PRIMARY CAUSE	Signaling System 7 (SS7) circuit identification code (CIC) audit has started or stopped.
PRIMARY ACTION	No action required - normal operation.

AUDIT (3)

To monitor and correct the cause of the event, refer to the "Signaling System 7 Circuit Identification Code Audit Terminated Before Successful Completion - Audit (3)" section on page 2-6.

DESCRIPTION	Signaling System 7 Circuit Identification Code Audit Terminated Before Successful Completion (SS7 CIC Audit Terminated Before Successful Completion)
SEVERITY	WARNING
THRESHOLD	100
THROTTLE	0
DATAWORDS	Type of Audit - STRING [64]
PRIMARY CAUSE	A higher priority SS7 CIC audit interrupted and terminated a lower priority SS7 CIC audit.
PRIMARY ACTION	Do not schedule an SS7 remote termination audit to occur while a periodic SS7 local termination audit is executing.

AUDIT (4)

To monitor and correct the cause of the event, refer to the "Call Exceeds a Long-Duration Threshold - Audit (4)" section on page 2-7

DESCRIPTION	Call Exceeds a Long-Duration Threshold
SEVERITY	WARNING
THRESHOLD	100
THROTTLE	0
DATAWORDS	Trunk group number - TWO_BYTES Trunk member number - TWO_BYTES Current long-duration threshold - TWO_BYTES
PRIMARY CAUSE	Call exceeds current system long-duration threshold.
PRIMARY ACTION	If there is reason to believe the call is no longer valid, release the associated trunk facility.

AUDIT (5)

To troubleshoot and correct the cause of the alarm, refer to the "Critical Internal Audit Failure - Audit (5)" section on page 2-9.

DESCRIPTION	Critical Internal Audit Failure
SEVERITY	CRITICAL
THRESHOLD	100
THROTTLE	0
DATAWORDS	Failure Details - STRING [220] Probable Causes - STRING [80] Corrective Actions - STRING [80]
PRIMARY CAUSE	See data field.
PRIMARY ACTION	See data field.

AUDIT (6)

To troubleshoot and correct the cause of the alarm, refer to the "Major Internal Audit Failure - Audit (6)" section on page 2-9.

DESCRIPTION	Major Internal Audit Failure
SEVERITY	MAJOR
THRESHOLD	100
THROTTLE	0
DATAWORDS	Failure Details - STRING [220] Probable Causes - STRING [80] Corrective Actions - STRING [80]
PRIMARY CAUSE	See data field.
PRIMARY ACTION	See data field.

AUDIT (7)

To troubleshoot and correct the cause of the alarm, refer to the "Minor Internal Audit Failure - Audit (7)" section on page 2-9.

DESCRIPTION	Minor Internal Audit Failure
SEVERITY	MINOR
THRESHOLD	100
THROTTLE	0
DATAWORDS	Failure Details - STRING [220] Probable Causes - STRING [80] Corrective Actions - STRING [80]
PRIMARY CAUSE	See data field.
PRIMARY ACTION	See data field.

AUDIT (8)

To monitor and correct the cause of the event, refer to the "Warning From Internal Audit - Audit (8)" section on page 2-8.

DESCRIPTION	Warning From Internal Audit
SEVERITY	WARNING
THRESHOLD	100
THROTTLE	0
DATAWORDS	Failure Details - STRING [220] Probable Causes - STRING [80] Corrective Actions - STRING [80]
PRIMARY CAUSE	See data field.
PRIMARY ACTION	See data field.

Monitoring Audit Events

This section provides the information needed to monitor and correct Audit events. Table 2-2 lists all Audit events in numerical order and provides cross reference to each subsection in this section.

Table 2-2 Cisco BTS 10200 Softswitch Audit Events

Event Type	Event Name	Event Severity
AUDIT(1)	Test Report - Audit (1)	INFO
AUDIT(2)	Start or Stop of Signaling System 7 - Circuit Identification Code Audit - Audit (2)	INFO
AUDIT(3)	Signaling System 7 Circuit Identification Code Audit Terminated Before Successful Completion - Audit (3)	WARNING
AUDIT(4)	Call Exceeds a Long-Duration Threshold - Audit (4)	WARNING
AUDIT(5)	Critical Internal Audit Failure - Audit (5)	CRITICAL
AUDIT(6)	Major Internal Audit Failure - Audit (6)	MAJOR
AUDIT(7)	Minor Internal Audit Failure - Audit (7)	MINOR
AUDIT(8)	Warning From Internal Audit - Audit (8)	WARNING

Test Report - Audit (1)

The Test Report event is used for testing the audit event category. The event is informational and no further action is required.

Start or Stop of Signaling System 7 - Circuit Identification Code Audit - Audit (2)

The Start or Stop of Signaling System 7 - Circuit Identification Code Audit event occurs as part of normal Cisco BTS 10200 Softswitch operation. The event is informational and no further action is required.

Signaling System 7 Circuit Identification Code Audit Terminated Before Successful Completion - Audit (3)

The Signaling System 7 Circuit Identification Code Audit Terminated Before Successful Completion event serves as a warning that a higher priority SS7 CIC audit has interrupted and terminated a lower priority SS7 CIC audit. To control the occurrence of this event an SS7 remote termination audit should not be scheduled to occur while a periodic SS7 local termination audit is executing.

Call Exceeds a Long-Duration Threshold - Audit (4)

The Call Exceeds a Long-Duration Threshold event serves as a warning that a call has exceeded the current the Cisco BTS 10200 Softswitch system long-duration threshold. If there is reason to believe the call is no longer valid, the associated trunk facility should be released.

To check the current threshold setting for Long Duration calls, proceed as follows:

Step 1 As root user from the Call Agent (CA), execute the following command:

```
# grep LongDuration /opt/OptiCall/`ls /opt/OptiCall | grep CA`/bin/platform.cfg
```

Step 2 Review the command results.

Example results:

```
Args=-ems_pri_dn blg-asys07EMS.mssol.cisco.com -ems_sec_dn blg-asys07EMS.mssol.cisco.com
-port 15260
-QCheckInterval1 1000 -QCheckInterval2 4500 -RecordGenTime 00:00:00 -LongDurationAllowance
1440
-QCheckInterval3 60 -MyCaBillingDn blg-asys07CA.mssol.cisco.com
```

Note Following a platform start, the billing system will wait until the present time (current time on the call agent) is equal to RecordGenTime before auditing for Long Duration Calls. After the initial audit, the billing system will perform a Long Duration Call audit every LongDurationAllowance minutes. During an audit, the billing system will generate a Long Duration CDR for calls that have been active for LongDurationAllowance minutes.

Critical Internal Audit Failure - Audit (5)

The Critical Internal Audit Failure alarm (critical) indicates that a critical internal audit failure has occurred. To troubleshoot and correct the cause of the Critical Internal Audit Failure alarm, refer to the "Critical Internal Audit Failure - Audit (5)" section on page 2-9.

Major Internal Audit Failure - Audit (6)

The Major Internal Audit Failure alarm (major) indicates that a major internal audit failure has occurred. To troubleshoot and correct the cause of the Major Internal Audit Failure alarm, refer to the "Major Internal Audit Failure - Audit (6)" section on page 2-9.

Minor Internal Audit Failure - Audit (7)

The Minor Internal Audit Failure alarm (minor) indicates that a minor internal audit failure has occurred. To troubleshoot and correct the cause of the Minor Internal Audit Failure alarm, refer to the "Minor Internal Audit Failure - Audit (7)" section on page 2-9.

Warning From Internal Audit - Audit (8)

The Warning From Internal Audit event serves as a warning that a problem with an internal audit has occurred. To correct the internal audit problem refer to the failure details (220), probable cause (80), and corrective actions (80) listed in the data field. Additionally, refer to the previous critical, major, and minor internal audit failure sections.

Troubleshooting Audit Alarms

This section provides the information needed to troubleshoot and correct Audit alarms. Table 2-3 lists all Audit alarms in numerical order and provides cross reference to each subsection in this section.

Table 2-3 Cisco BTS 10200 Softswitch Audit Alarms

Alarm Type	Alarm Name	Alarm Severity
AUDIT(5)	Critical Internal Audit Failure - Audit (5)	CRITICAL
AUDIT(6)	Major Internal Audit Failure - Audit (6)	MAJOR
AUDIT(7)	Minor Internal Audit Failure - Audit (7)	MINOR

Critical Internal Audit Failure - Audit (5)

The Critical Internal Audit Failure alarm (critical) indicates that a critical internal audit failure has occurred. To find the probable causes of the alarm, review the data field “Failure Details” and “Probable Causes” datawords. For the corrective actions for the alarm, review the data field “Corrective Actions” dataword. Once the “Corrective Actions” dataword has been reviewed, proceed with the corrective actions listed.

Major Internal Audit Failure - Audit (6)

The Major Internal Audit Failure alarm (major) indicates that a major internal audit failure has occurred. To find the probable causes of the alarm, review the data field “Failure Details” and “Probable Causes” datawords. For the corrective actions for the alarm, review the data field “Corrective Actions” dataword. Once the “Corrective Actions” dataword has been reviewed, proceed with the corrective actions listed.

Minor Internal Audit Failure - Audit (7)

The Minor Internal Audit Failure alarm (minor) indicates that a minor internal audit failure has occurred. To find the probable causes of the alarm, review the data field “Failure Details” and “Probable Causes” datawords. For the corrective actions for the alarm, review the data field “Corrective Actions” dataword. Once the “Corrective Actions” dataword has been reviewed, proceed with the corrective actions listed.