



Release Notes for Cisco Billing and Measurements Server Software Release 3.20 and Related Patches

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Platform Support

Cisco BAMS Release 3.x runs on the Sun Solaris 8 operating system. For installation and platform information, refer to Chapter 1 of the *Cisco Billing and Measurements Server User's Guide*.



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Software Compatibility

Cisco BAMS Release 3.20 will interoperate with release 9.6(1) and earlier releases of the Cisco Media Gateway Controller software (which runs on the Cisco PGW 2200). To enable all of the features introduced by Cisco BAMS 3.20, the Cisco PGW 2200 must be running release 9.5(2) or later. There are no new features introduced in Cisco BAMS 3.20 that require release 9.6(1) of the Cisco MGC software.

Certain features introduced in the Cisco MGC software for the Cisco PGW 2200 in releases previous to release 9.5(2), can now be enabled in interoperation with Cisco BAMS Release 3.20. Specifically, the Cisco MGC software release 9.4(1) included the CIC Availability Measurement CDB feature, which introduced CDB 1071 to capture the accurate availability of a circuit (CIC) as it pertains to a trunk group or SigPath. This feature is now operable with Cisco BAMS 3.20. (See the following section, [New Features](#).)

New Features

The following features have been added to the Cisco Billing and Measurements Server software in Release 3.20.

- 1071 CDB—This new CDB includes two new CDEs, 4234 and 4235. These two CDEs depict the status of the Trunk Group or SigPath on the Cisco PGW 2200 for the number of circuits in the trunk group (sigpath in nailed mode) and the number of unavailable circuits for the trunk group (sigpath in nailed mode). The 1071 CDB is generated whenever a circuit state changes, a trunk group (sigpath) is added or updated, or when a manual MML audit command is issued on the PGW.

With these two new CDEs from the PGW, BAMS can update the trunk groups and the number of circuits in a trunk group dynamically without end-user intervention. The 1071 CDB enables BAMS to:

- Update the number of circuits for each update on the PGW 2200 using CDE 4234.
- Report the number of circuits out of service for a trunk group using CDE 4235.
- Nailed customers need not provision individual circuits for the CIC to trunk member mapping. New one-to-one mapping between sigpath and trunkgroups simplifies this process.



Note

This feature includes the availability of the **sta-aud-cic** MML command. This command starts the CIC state audit process, which generates a CDB Tag 1071 for every configured ISUP trunk group in Call Control mode or generates a CDB Tag 1071 for every configured ISUP SigPath in Signaling mode.

- PGW_DYNAMIC_UPDATE—The field PGW_DYNAMIC_UPDATE has been added, which enables BAMS to determine the software version running on the PGW 2200. This flag has two values, true or false. False indicates a release of the PGW prior to 9.4.1. True indicates PGW release 9.4.1 or later. The flag value is set to false by default during installation.

The PGW_DYNAMIC_UPDATE flag can be changed only by a new non-MML command while BAMS is inactive. When this flag changes from false to true, the software generates a warning that asks the user to confirm that the PGW is running release 9.4.1 or later. The flag change is accepted only if the user confirms the change. The current configuration is backed up for possible rollback changes.

When this flag changes from true to false, the software generates a warning that asks the user to confirm that the BAMS configuration will be rolled back to its status on the date when the flag was changed from false to true.



Note You must restart BAMS when this flag is changed.

The `pgw-dynamic-update` flag indicates to BAMS whether the new 4234 and 4235 CDEs are present in 1071 CDBs. BAMS changes the format for the trunk group table depending on the value of the flag.

Refer to the *Cisco Billing and Measurements Server User's Guide* for information about how BAMS formats the Trunk Group and Sigpath tables based on the value of the `PGW_DYNAMIC_UPDATE` flag.

- Default SKIPCDB table—BAMS 3.20 adds the 1070 CDB and 1020 CDB to the SKIPCDB table of the default configuration of BAMS.
- 1071 CDB measurement effects—If the `PGW_DYNAMIC_UPDATE` flag is set to false, BAMS ignores 1071 CDBs and suppresses the generation of certain measurements. If the `PGW_DYNAMIC_UPDATE` flag is set to true, BAMS removes the circuits column from the trunk group table. Refer to the *Cisco Billing and Measurements Server User's Guide* for more information.
- MGCP Dial and MGCP Scripting Handoff Measurement—For MGCP Dial and MGCP Script Handoff calls, the Egress trunk group (4015), Egress SigPath (4070) and Egress BearChan (4072) fields are not populated. Refer to the *Cisco Billing and Measurements Server User's Guide* for more information about this special call handling.
- EXTASCII output—BAMS 3.20 includes new CDEs in the EXTASCII output. The new CDEs include: 4034–4037, 4046–4047, 4068, 4072, 4083–4097, and 4211–4226. Refer to the *Cisco Billing and Measurements Server User's Guide* for more information.
- 1110 Binary output—BAMS 3.20 includes new CDEs in the 1110 Binary output. The new CDEs are listed in Table 10-3 and are identified by the Index numbers 55–96. Refer to the *Cisco Billing and Measurements Server User's Guide* for more information.
- NICS Output Calling-Party-Number Rules—For BAMS 3.20, the rules applied to the Calling Party Number (Field 19) in the NICS output has changed. The field name for field 19 is now the Outgoing Calling Party Number. The CDE tag number is now either 4084 or 4010. Refer to the *Cisco Billing and Measurements Server User's Guide* for more information.
- P01 output changes—BAMS 3.20 populates Egress trunk in the P01 output with the actual trunk group ID in switched mode. Refer to the *Cisco Billing and Measurements Server User's Guide*.
- Backup utility—BAMS 3.20 provides a utility to backup the current configuration files, all executable files, and intermediate files. Refer to the *Cisco Billing and Measurements Server User's Guide* for more information.
- Restore utility—BAMS 3.20 provides a utility to restore any previously backed up files. Refer to the *Cisco Billing and Measurements Server User's Guide* for more information.
- Modified CDE tags—The length of CDE tags 4046 and 4047 have been modified for BAMS release 3.20. Refer to the *Cisco Billing and Measurements Server User's Guide* for more information.

Related Documentation

Cisco Billing and Measurements Server User's Guide, Release 3.20

Installation Notes

Refer to the *Cisco Billing and Measurements Server User's Guide* for installation information.



Note

The filename for the BAMS 3.20 is **CSCOcaBAM.pkg**.

Upgrading to Cisco BAMS 3.20

Refer to Appendix B: “Upgrading to BAMS Release 3.20”, in the *Cisco Billing and Measurements Server User's Guide, Release 3.20* for complete upgrade information.

Cisco BAMS 3.20 Patch 7 Information

This section includes information about caveats resolved by Cisco BAMS 3.20 Patch 7.

Caveats Resolved by Cisco BAMS 3.20 Patch 7

The following anomaly was identified in the operation of the Cisco BAMS is resolved by BAMS 3.20 Patch 7:

CSCsq03104

Version	Severity	Description
3.20	3	BAMS experienced a core failure when attempting to process a large volume of QoS data in CDRs.

Conditions and Symptoms: The BAMS FMT process failed while processing QoS CDRs of great length.

Resolution: The BAMS software is modified to eliminate this problem.

Cisco BAMS 3.20 Patch 6 Information

This section includes information about caveats resolved by Cisco BAMS 3.20 Patch 6.

Caveats Resolved by Cisco BAMS 3.20 Patch 6

The following anomalies identified in the operation of the Cisco BAMS are resolved by BAMS 3.20 Patch 6:

CSCsd46669

Version	Severity	Description
3.20	3	Restoring BAMS 3.20 failed using bamsrestore utility

Conditions and Symptoms: When restoring BAMS 3.20 using **bamsrestore** utility, it failed. The detailed error message is as follows:

```
Restoring files from /tmp/cc.bk.../bamsrestore[62]: /usr/bin/cpio: arg list too long
The cpio command failed. Restore aborted, rc=1.
```

Resolution: The software is modified so that the pattern parameters for cpio are quoted.

CSCsd52475

Version	Severity	Description
3.20	3	BAMS cannot process CDRs that contain large length QoS data.

Conditions and Symptoms: When BAMS attempted to process CDR files that had very large length QoS data (CDE 4097/4098), the FMT process continually restarted and dumped a core file. BAMS could not process those files.

As a result, no billing output or measurements were created. This happened when the gateway was set to generate priority level 2 or all mgcp voice-quality-stats.

Resolution: The BAMS software is modified to add 4098 and 4099 to the skipcde table.

CSCsc79100

Version	Severity	Description
3.20	3	BAMS deletes CDR files on PGW.

Conditions and Symptoms: This anomaly occurred when the following three conditions were true.

1. BAMS was running in redundant mode.
2. BAMS used SFTP/SSH to poll files from PGW.
3. Both BAMS became active at the same time.

Resolution: The BAMS software is been modified to prevent BAMS from deleting files on the PGW.

CSCsc32305

Version	Severity	Description
3.20	3	BAMS NICS output was incorrect for long-duration call records.

Conditions and Symptoms: BAMS NICS output was incorrect for long-duration call records.

Resolution: The BAMS software is modified to generate BAMS NICS output correctly for long-duration call records.

Cisco BAMS 3.20 Patch 5 Information

This section includes information about caveats resolved by Cisco BAMS 3.20 Patch 5.

Caveats Resolved by Cisco BAMS 3.20 Patch 5

The following anomaly identified in the operation of the Cisco BAMS is resolved by BAMS 3.20 Patch 5:

CSCsa92926

Version	Severity	Description
3.20	2	BAMS could not handle CDE tags that were longer than the defined length.

Conditions and Symptoms: The maximum length was increased for tag fields 4223, 4224, and 4225 in Release 9.6 of the Cisco PGW 2200. Cisco BAMS could not process these tag fields at the greater length.

Resolution: The Cisco BAMS software is modified to process the tag fields 4223 4224, and 4225

Cisco BAMS 3.20 Patch 4 Information

This section includes information about caveats resolved by Cisco BAMS 3.20 Patch 4.

Caveats Resolved by Cisco BAMS 3.20 Patch 4

The following anomaly identified in the operation of the Cisco BAMS is resolved by BAMS 3.20 Patch 4:

CSCsb92219

Version	Severity	Description
3.20	2	BAMS 3.20 SFTP does not work between redundant systems.

Conditions and Symptoms: With SFTP setup between two redundant BAMS, the file transfers fail.

1. CDR files are not sent to redundant host.
2. Provisioning changes are not sent over either.

Resolution: The Cisco BAMS is modified to enable SFTP to operate properly between redundant BAMS systems.

Resolved Caveats

The following anomalies identified in the operation of the Cisco BAMS have been resolved in Cisco BAMS Release 3.20.

CSCdz66794

Version	Severity	Description
3.13	3	BAMS accepts the clr alarm command with no msgtext accepted; however, the alarm is not cleared.

Conditions and Symptoms: For ACC227 alarms, the alarm cannot be cleared unless the full msgtext or the msgtext up to the character @ is present; but, if the user issues a **clr alarm** such as is allowed for some alarms, without the msgtext, BAMS processes the command. However, if the user issues another **rtrv-alarms** command, the command has no effect and the ACC227 alarm remains active.

Resolution: The mml program has been modified to verify whether the **clr-alm** command is successful or not. A DENY status is displayed if the command fails.

CSCdu63923

Version	Severity	Description
2.68	3	SNMP TRAPS DRX009 and DTX008 should be major alarms/traps.

Conditions and Symptoms: SNMP traps DRX009 and DTX008 are reported when the connection to the redundant BAMS is down. These traps are reported as a minor alarms. They should be considered major alarms.

Resolution: The alarm severity levels have been modified in the DRX and DTX modules.

CSCdv22058

Version	Severity	Description
2.68	3	BAMS keep-alives are not always sent on the same interface as traffic.

Conditions and Symptoms: Keep-alives are not always sent on the same interface as FTP traffic. If the interface over which keep-alives are passing fails, BAMS sends traps indicating loss of connection even though traffic is working fine on the other interface. The keep-alives failover to the other interface and everything works as expected. This has no effect on real traffic but generates confusing alarms.

Resolution: After this bug report was reviewed, it was determined that the DTX alarms would not be masked as suggested in the bug report. The DTX module also will not open a socket on hme0 if a socket is successfully established on hme1 as was recommended in bug report. The method of sending and receiving keep-alives by the DTX and DRX modules will remain the same.

The alarm level for DTX006 (cannot establish connection on either interface) has been changed from INFO to MAJOR. The alarm level for DTX011 (cannot establish connection on hme0, trying hme1) remains a MINOR alarm.

CSCdy58974

Version	Severity	Description
3.12	2	On Upgrade, the system comes up in simplex mode

Conditions and Symptoms: Duplex BAMS are active/active after an upgrade to a new release.

Resolution: The BAMSpreremove and BAMSpostinstall scripts have been modified to retain the system sym_defs, collect_defs, and proglint information when the restore option is selected during installation.

CSCdy58807

Version	Severity	Description
3.12	2	Upon upgrade, the seqno is not retained.

Conditions and Symptoms: After an upgrade installation, the system polls but does not collect any files. Upgrade installation of BAMS with provisioning and data saved.

Resolution: The BAMSpreremove and BAMSpostinstall scripts have been modified to retain the sequence numbers for all 8 nodes when the restore option is selected during installation.

CSCdy74303

Version	Severity	Description
3.12	3	Maintenance pegs will be off if the PGW receives both a single block and group block for the same circuit.

Conditions and Symptoms: The BAMS measurements report TTL MAINT USE where there is none and the TTL AVLBL CIC is less than expected. This can occur if the PGW receives both a single and a group block of the same circuit. When the group unblock unblocks the circuit, BAMS still reports the block because of the single block message.

Resolution: Fixed in latest 3.20 release with PGW release 9.4 or later, with PGW-DYNAMIC-UPDATE flag set to true.

CSCdv15329

Version	Severity	Description
3.02	3	srcver=default baf is turned off, yet bafinfo is turned on

Conditions and Symptoms: The bafinfo parameter is turned on in case bafoutput is turned on.

Resolution: This has been corrected in the default NODEPARMS table.

CSCdv90967

Version	Severity	Description
3.07	3	The switchinfo sensortype takes more than 3 digits

Conditions and Symptoms: The switchinfo table has the following parameters: sensortype, sensorid, recoefftype, and recoeffcid. The mml program currently allows sensortype and recoefftype to be 4 characters, and sensorid and recoeffcid to be 8 characters. When these BAF fields are generated, sensortype and recoefftype are truncated to 3 characters, and sensorid and recoeffcid are truncated to 7 characters.

Resolution: The SWITCHINFO fields sensortype and recoefftype have been truncated to 3 digits. In accordance with the BAF GR-1100-CORE specs, the fields sensorid and recoeffcid have been truncated to 7 digits.

CSCdw11384

Version	Severity	Description
3.08	3	Provisioning stuck in session, but prov-stp says no session

Conditions and Symptoms: Occasionally a provisioning session might be started but not cleanly terminated. If that happens, a user attempting to start a provisioning session might get an error indicating that a session already exists.

Resolution: A sync error in the provisioning session status has been fixed in the MML program.

CSCdw11443

Version	Severity	Description
3.08	3	Measurement files appear at same time so no thres alms show

Conditions and Symptoms: A possible condition exists that could create multiple measurements files for different intervals at the same time. Because the measurements for multiple intervals are generated at one time, it is possible to not detect threshold alarms that were set and cleared instantaneously in the intervals generated.

Resolution: Fixed with the addition of time stamp in TCA alarms.

CSCdx64242

Version	Severity	Description
3.10	2	When TG is not configured, measurements for the TG are not reported.

Conditions and Symptoms: Trunk groups that have not been provisioned in the TRUNKGRP table do not generate measurements. Call data on unprovisioned trunk groups generates the following log message in the node syslog file:

```
FMT235 <number> record(s) failed <lookup type> lookup for file <raw file name>
```

This message indicates that a non-zero number of records failed either the SIGPATH or the TRUNKGRP lookup function. The lookup function populates the TRUNKGRP-related fields based on information from the SIGPATH and TRUNKGRP tables. To get more information on the lookup failure, look for messages of this type in the file /opt/CiscoBAMS/files/sxx/FMT_cdr.log:

```
Fail %s lookup of %s: %d
```

A message of this type indicates the trunk group value that was not defined in the TRUNKGRP table. In a nailed (signalling mode) configuration, this message might indicate the sigpath or bearer channel information that failed lookup in the SIGPATH table.

Resolution: The FMT module has been modified to not tag the trunk group fields as ERR_LOOKUP if they are not found in the TRUNKGRP table.

Since the trunkgroup fields will not have an error status, the ACC module will correctly generate measurements for the trunkgroups. The intended augmented fields from the TRUNKGRP tables will retain the ERR_LOOKUP status since these would not be populated.



Note

See the section, “Setting the PGW Dynamic Update Mode” in Chapter 2 of the *Cisco Billing and Measurements Server User’s Guide, Release 3.20*.

CSCdy10852

Version	Severity	Description
3.10	3	A dynamic configuration of cics does not show in measurements.

Conditions and Symptoms: Dynamic configuration of cics in a trunk group does not change the number of cics in the measurement files. The number of cics stays the same.

Resolution: The introduction of the CIC Availability Measurement CDB on the PGW 2200 in release 9.4(1) resolves the problem described in DDTS CSCdy10852.

The introduction of CDB Tag 1071 in the Media Gateway Controller software running on the Cisco PGW 2200, enables Cisco BAMS 3.20 to record changes in the number of circuits configured and unavailable for a trunk group (switched configuration) or SigPath (nailed up). This CDB only applies to the SS7 protocol.

The CIC Availability Measurement CDB feature is documented in the feature module entitled CIC Availability Measurement CDB, which appears on the Cisco website under the Media Gateway Controller software Release 9.

In the BAMS 3.20 user guide, use of the 1071 CDB is documented in the section, “Setting the Dynamic Update Mode” in Chapter 2. It is also addressed in Chapter 11: Obtaining Measurements and in Appendix B in the section “BAMS 3.20 Configuration Changes.”

CSCdz59725

Version	Severity	Description
3.13	3	TCA-TBL help display should pause to enable user to read all entries.

Conditions and Symptoms: If a user does not have a users guide to add tca-tbl entries or would like to cut and paste entries out of the prov-add:tca-tbl:? command, this is difficult as the entries allowed in this table have become so numerous, they exceed a single screen display.

Resolution: The mml program has been fixed to page through the help output for the provisioning tables, (that is, prov-rtrv:<TABLENAME>:?).

CSCdz66794

Version	Severity	Description
3.13	3	A clr alarm with no msgtext was accepted; but, the alarm was not cleared.

Conditions and Symptoms: For ACC227 alarms, the alarm cannot be cleared without the full msgtext or the msgtext up to the @; however, if the user issues a clr alarm such as is allowed for some alarms without the msgtext, it is accepted. However, if another rtrv-alarms is issued, the user will see that the command had no affect and the ACC227 alarm is still active.

Resolution: The mml program has been modified to verify whether the **clr-alm** command is successful or not. A DENY status is displayed if the command fails.

CSCdz66813

Version	Severity	Description
3.13	3	PEGS with cond=1 do not always get Pegged.

Conditions and Symptoms: After setting up the TCA-TBL, there was no activity. The user expected to see alarms for each meas interval for my TCA-TBL entries with cond=1. When the user started up the call rate, she expected the alarms to clear. Few alarms were set during the inactive period and, for those few, the alarms did not automatically clear when the condition was removed.

Resolution: A Note has been added at the end of the section, “Configured vs. Dynamic Trunk Group Output” on page 11-25 of the *Cisco Billing and Measurements Server User’s Guide*.

CSCed38155

Version	Severity	Description
3.13	2	Empty ASCII CDRs and invalid CALL_REFERENCE_ID messages appear in BAMS logs.

Conditions and Symptoms: A Cisco Billing and Measurements Server (BAMS) may lose Call Detail Record (CDR) information from a Cisco PGW 2200 Softswitch, and the following error message may be generated:

Invalid "CALL_REFERENCE_ID" in rtrv-syslog::cont.

This symptom is observed when the Network Time Protocol (NTP) changes from one year to the next year, for example from 2003 to 2004.

Resolution: Fixed leap-year time calculation, which caused BAMS to throw out billing records.

CSCea59329

Version	Severity	Description
3.10	3	Incorrect number of available cics in BAMS measurement.

Conditions and Symptoms: BAMS 3.10 had difficulty reporting the correct number of available cics.

Resolution: This problem was corrected in BAMS 3.20 operating with PGW release 9.4 or later, with the PGW-DYNAMIC-UPDATE flag set to true.

CSCeb27082

Version	Severity	Description
3.13	3	CDR C7 message shows the answer-no-charge field is not set.

Conditions and Symptoms: A customer requested the addition of an answer-no-charge field. For a call from PGW to the operator (100), the NUP C7 message showed the answer-no-charge field is not set in the answer message, which indicates that no charge should be applied to the call.

Resolution: CDE 4083 is added to both EXTASCII output and BIN1110 output.

CSCuk28043

Version	Severity	Description
2.68	3	BAMS needed any 3 digit NPANXX for the trunkgrp.

Conditions and Symptoms: A user had to create a dummy zone and dummy NPANXX for 3 digits, and had to assign it to the 928 trunkgroups created, in order to get rid of errors.

Resolution: BAMS 3.20 no longer requires NPANXX for trunkgroups if BAF is not enabled.

CSCea28444

Version	Severity	Description
3.10 (P8)	3	Incorrect measurement data generated from BAMS.

Conditions and Symptoms: A user reported that when using BAMS 3.10, they lacked 30 - 40% of total amount of traffic minutes on their dial solution.

Resolution: Problem was corrected in BAMS 3.10 Patch 10.

Open Caveats

This section describes anomalies identified in the operation of the Cisco Billing and Measurements Server software.

CSCdy54403

Version	Severity	Description
3.11	3	NICS output fields 71 and 72 are populated when fields 69 and 70 are not.

Conditions and Symptoms: The NICS output fields 69 (egress-carrier connection date) and 70 (egress-carrier connection time) are not populated (have a NULL value); however, NICS output fields 71(egress-carrier disconnect date) and 72 (egress-carrier disconnect time) are populated.

This condition may be observed in the rare case when there is an IAM and then an immediate release (that is, no ACM). It may appear strange when an egress-carrier disconnect date and time are recorded when no associated egress-carrier connection date and time appear.

Workaround: Although this rarely-observed behavior seem anomalous, the software operates as designed.

CSCdv86781

Version	Severity	Description
3.06	3	Exporting a non-active config on a system node generates a core dump.

Conditions and Symptoms: This problem occurs only when exporting a non-active configuration on a system node.

Workaround: None.

CSCdz26059

Version	Severity	Description
3.12	3	BAMS does not always provide valid reasons for the failure of an MML provisioning session.

Conditions and Symptoms: BAMS may not provide the true reason for a failure or it may not provide any reason. When a valid error occurs in a batch provisioning script, it may cause the subsequent provisioning of valid entries to fail for invalid reasons.

Workaround: When a failure reason is reported, isolate the parameters with failures and try to provision by themselves. In this manner, you can locate and correct the actual problem.

CSCeb75027

Version	Severity	Description
3.13	3	BAMS stops logging to syslog.

Conditions and Symptoms: The system appears to be inactive by looking in the syslog either via `/opt/CiscoBAMS/files/s0X syslog`, `MML>rtrv-syslog`, or `MML>rtrv-syslog::cont`.

However, the system functions at all levels except for logging to syslog.

Workaround: A stop and start of the BAMS application corrects this problem. This can be accomplished by a `stop_system` and `start_system` at the unix prompt or in `MML:SYS>stp-softw::confirm` and `MML:SYS>sta-softw`.

CSCdv61905

Version	Severity	Description
2.68	3	Problems with FTP to standby BAMS

Conditions and Symptoms: In a redundant BAMS configuration, if the file transfer of a file from the active to standby BAMS is interrupted, the transfer will not failover to the secondary interface. All subsequent transfers fail until the primary connection comes up.

Workaround: Repair the primary connection. All files are held on the active box until the primary interface is back up. The files are transferred when the connection is repaired.

CSCed19737

Version	Severity	Description
3.10	3	To use BAMS one is required to be identified as user bams.

Conditions and Symptoms: Some customers want to use personalized accounts that would enable them track who did what.

Workaround: None.

CSCeg40197

Version	Severity	Description
3.20	3	The utility bamsbackup fails when BAMS is running.

Conditions and Symptoms: The script **bamsbackup** fails when BAMS is running.

Workaround: Stop BAMS and then rerun the **bamsbackup** utility.

CSCeg50733

Version	Severity	Description
3.20	3	A user could not start a provisioning session even after issuing the command prov-stp::force .

Conditions and Symptoms: A user could not start a provisioning session even after issuing the command **prov-stp::force**.

Workaround: None.

CSCeg51509

Version	Severity	Description
3.20	3	Multiple carrier selects built for TCA-TBL caused the ACC function to stop.

Conditions and Symptoms: The TCA-TBL provisioning does not permit building multiple carriers.

Workaround: Provision only one carrier per trunk group.

CSCeg51663

Version	Severity	Description
3.20	3	ACC cores after changing dynamicaccumes, interval-minute, and h323.

Conditions and Symptoms: ACC cores when a few parameters are changed.

Example

```
set-pgw-mode=false,dynamicaccumes=1,interval-minute=10,enabled-h323=0
Change dynamicaccumes=2,interval-minutes=5,enabled-h323=1
```

The core dump begins after this action.

Workaround: Shut down BAMS, apply the changes, then restart BAMS.

CSCeg72831

Version	Severity	Description
3.20	3	An upgrade did not add 1070 to the skipcdb table-new default value.

Conditions and Symptoms: Upon migration from release 3.13 to 3.20 the addition of 1070 to the skipcdb table is not automatic.

Workaround: Add the 1070 CDB to the skipcdb table manually with a new provisioning session after the upgrade.

CSCea87893

Version	Severity	Description
3.13	3	An ASCII/EXTASCII output out-of-order CDR creates two 1110 records.

Conditions and Symptoms: When a release (1040 CDB) is processed before a Answer CDB this results in two 1110 records being created for the same call.

Workaround: None.

CSCea87771

Version	Severity	Description
3.13	3	Out-of-order BIN1110 records are missing key data.

Conditions and Symptoms: When BIN1110 output is turned on and the CDR CDBs are processed out of order with a 1040 (release) then 1010 answer, I expected the 1040 to be cached until the 1010 was received. However the following occurred instead.

The 1040 resulted in a BIN1110 table populated as follows: (missing all the key information found in the not yet processed/received 1010). Only release information is in the end of call record (1110).

Workaround: None.

Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

http://www.cisco.com/public/countries_languages.shtml

Ordering Documentation

You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/index.shtml>

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

Documentation Feedback

You can send comments about technical documentation to bug-doc@cisco.com.

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems
Attn: Customer Document Ordering
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, Cisco Technical Support provides 24-hour-a-day, award-winning technical assistance. The Cisco Technical Support Website on Cisco.com features extensive online support resources. In addition, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not hold a valid Cisco service contract, contact your reseller.

Cisco Technical Support Website

The Cisco Technical Support Website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, 365 days a year at this URL:

<http://www.cisco.com/techsupport>

Access to all tools on the Cisco Technical Support Website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool automatically provides recommended solutions. If your issue is not resolved using the recommended resources, your service request will be assigned to a Cisco TAC engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco TAC engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553 2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:

<http://www.cisco.com/go/marketplace/>

- The Cisco *Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the Cisco Product Catalog at this URL:

<http://cisco.com/univercd/cc/td/doc/pcat/>

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

<http://www.ciscopress.com>

- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:

<http://www.cisco.com/packet>

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:

<http://www.cisco.com/go/iqmagazine>

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

<http://www.cisco.com/ipj>

- World-class networking training is available from Cisco. You can view current offerings at this URL:

<http://www.cisco.com/en/US/learning/index.html>

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