



# Cisco VCO/4K SS7 ISUP, ANSI V5.2, Release Notes

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## December 2000

These release notes describe new features and caveats in ANSI SS7 ISUP system software release 5.2 for use with the Cisco VCO/4K switch and SS7 subsystem ANSI software. Use these release notes in conjunction with the *Cisco VCO/4K SS7 Subsystem Manual* for ANSI.

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# System Requirements

This section provides a list of system requirements for running the SS7 subsystem ANSI software. These requirements are categorized by hardware, firmware, and software. Contact Cisco Systems TAC (Technical Assistance Center) for any site-specific information.

## Hardware Requirements

In addition to the SS7 subsystem software, ANSI Version 5.2 requires the following hardware:

- One of the following systems:
  - VCO/80
  - VCO/20 with an SS7 VME shelf
  - VCO/4K with an SS7 VME shelf
- A SPARC CPU5V card
- 32 MB RAM (2K Mode) or 64 MB RAM (4K Mode) available on the system

## Firmware Requirements

There are no special firmware requirements for ANSI V5.2. However, the firmware in the VCO must have the appropriate revision level required by the system software. For information, refer to the *Cisco VCO/4K System Software Version 5.x Release Notes*.

## Software Requirements

ANSI Version 5.2 requires the following software:

- VCO/4K System Software V5.x or higher
- Solaris Release V2.6
- AccessManager V3.5.4\_22

New SS7 subsystems have Solaris V2.6 and AccessManager V3.5.4\_22 installed at the factory.

# New and Changed Information

## New Features in SS7 ISUP, ANSI V5.2

The following are enhancements in the Cisco SS7 subsystem software, ANSI V5.2.

### Three New CktInt.cfg Feature Flags

There are three new feature flags available in the CktInt.cfg file:

- **FEATURE\_FLAG15**—When the load sharing mode is set to BROADCAST, allows cktint to broadcast a \$C0 05 relinquish control command acknowledgement from the VCO to all connected hosts.
- **FEATURE\_FLAG16**—Generates \$D3/\$D9 reports for maintenance acknowledgment messages like Circuit Group Blocking Acknowledgement (CGBA) or Blocking Acknowledgement (BLA) from the network.
- **FEATURE\_FLAG17**—Informs the host that an outgoing call is being cleared for dual seizure conditions. An \$EA report with cause value 0x7E is sent to the host from cktint for a Release (REL) during dual seizure conditions.

See the “Cktint Configuration File: CktInt.cfg” section in the *Cisco VC0/4K SS7 Subsystem, ANSI V5.2, Manual* for details on configuring the CktInt.cfg file.

### Hardware State of Circuit Displayed

The “s” command in the **isup\_console** program has been changed to include the hardware state of a circuit, but the hardware status information is only relevant to ITU ISUP.

The **isup\_console** program is located in the `~/sys/CktIntAnEnv ($XNV)` directory. For detailed information on the **isup\_console**, see the “Managing Circuits and Circuit Groups (**isup\_console**)” section in the *Cisco VC0/4K SS7 Subsystem, ANSI V5.2, Manual*.

### New States and Originator Codes Added to Host Reports

New states have been added to the \$B0 01 report. Likewise, new originator codes have been added to the \$D3 and \$D9 reports. For detailed information on the new states and originator codes, see the “Circuit Interworking Commands and Reports” section(s) in the *Cisco VC0/4K SS7 Subsystem, ANSI V5.2, Manual*.

## New Return Code Added to SS7 \$49 Command

A new Network Status Byte has been added to the list of possible NSBs returned by the SS7 Network Message Generation (\$49) Command.

- NSBxD4—Circuit in transient state. When a circuit is in maintenance transient state, no messages are allowed on that circuit.

## Enhancements for Split Trunk Groups

This enhancement allows scenarios where a T1/E1 span is configured for more than one trunk group, with some part of a span in the first trunk group and the other part in a second trunk group. In the past, with such a configuration, whenever cktint generated a group maintenance message for the span, two messages were sent to the network, one for each group. But some networks responded with only one Ack message instead of two.

To solve this problem, cktint has been modified to generate one group message for the T1/E1 span, irrespective of the number of groups.

Similarly if the network sends a group maintenance message whose range is spread across two groups, cktint will process that group message and respond with appropriate acknowledgement.

In the past, if the host application sent a group maintenance message with range beyond a group, it was rejected with NSB\_INVALID\_RANGE (0xC7), but as of this enhancement, cktint will process that group message and respond with appropriate acknowledgement.

In order to enable this enhancement the user has to change the cktint configuration file 'ckt\_ss7\_to\_sds' by adding 'pcno' as an extra column. For more information, see Section 4.4.2.1 of the *Cisco VCO/4K SS7 Subsystem Manual* for ANSI.



### Note

The system will function normally without the extra PCNO column in the ckt\_ss7\_to\_sds file. This enhancement is optional.

## Standards Supported by SS7 ISUP, ANSI V5.2

This release supports the ANSI standards listed in Table 1.

**Table 1** ANSI Standards Supported by V5.2

SS7 Layer	Standard
MTP-2	ANSI T1.111.3, 1991
MTP-3	ANSI T1.111.4, 1991
ISUP	ANSI T1.113, 1992

# Installation Notes

## Default ISUP Office Information Changed

The default value of the CRGOFF bit in the ISUP office information has changed in ANSI Version 5.2. This may affect your current configuration files when you upgrade. Formerly, the bit default was 0 (OFF). Now, the bit default is 1 (ON). Please add the **MODIFY-ISUPOFFINFO** line to your ISUP configuration files if you need this value set to off.

## Redundancy Configuration Changes for Upgrades

In redundant systems running ANSI Version 5.2, you must make new modifications to your **AccessRd.cfg** file as follows:

- 
- Step 1** Log in as **root** to the SS7 subsystem side A, **<hostname>a**.
- Step 2** Enter the following command and press **Return**:
- ```
chmod 644 $EBSHOME/access/config/AccessRd.cfg
```
- Step 3** Use the vi editor to open the file **\$EBSHOME/access/config/AccessRd.cfg**.
- Check the following lines. The lines should read:  

```
MONITOR_OPTION    OFF  
CTS_CONFIGURATION  INVERTED  
HOST-A <SS7 subsystem side A hostname>  
(i.e., HOST-A tsup6ss7a)  
HOST-B <SS7 subsystem side B hostname>  
(i.e., HOST-B tsup6ss7b)
```
  - If the lines do not match, modify them accordingly.
  - Save the changes and close the file.
- Step 4** Log on as **root** to the SS7 subsystem side B, **<hostname>b**, and repeat Step 2 through Step 3.
- Step 5** Check to make sure the SS7 Integrated Software version matches that on side A. Enter the following commands and press **Return** after each:
- ```
%cd $XNV  
%version cktint
```
- Step 6** To bring the SS7 subsystem into operation, go to *Section 5* of the *Cisco VC0/4K SS7 Subsystem, ANSI V5.2, Manual* and start the SS7 stack and Circuit Interworking software.
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# Limitations and Restrictions

## Known Design Constraints

The following are design constraints which have been identified in SS7 subsystem ANSI software. Cisco Systems currently has no plans to address the following known design constraints.

### **CSCdr68667: Cktint Does Not Handle Dual Seizure Properly**

When cktint releases a call for dual seizure conditions, the REL sent to the host gives no indication that it was sent because of dual seizure.

#### **Workaround**

Enabling Feature Flag 17 in the CktInt.cfg file will cause an \$EA report with cause value 0x7E to be sent to the host from cktint for a Release (REL) during dual seizure conditions.

### **CSCsf63489 (U611070001): CktInt Loses Info. When No Host Connected**

CktInt does not maintain a socket connection dedicated to the VCO. If no host is connected, circuit state change information from the system is lost.

### **CSCsf73966 (U705050007): No Switchover When SS7 Is Stopped On Active Side**

The system does not switch over automatically when one of the following conditions occur:

- If the Active CktInt and EBS stacks are stopped
- If CktInt hangs or dies
- If any EBS stack process dies and the MONITOR\_OPTION is OFF (needs to be off to fix the problem where the Ethernet cable is detached and the system will flip flop sides).

#### **Workaround**

Set the All Host Link Failure Action, on the SDS System Host Configuration Screen, to Conditional Switchover. When the Conditional Switching option is selected, a major alarm is generated if all host links fail and a system switchover is initiated if the Standby controller is on-line (file sync. completed) and has active host links.

## CSCsf74160 (U707160004): Associated Ports Are Lost After Switchover

CktInt associates ports as specified in the SS7 \$49 Command and the association is maintained until call tear down. If the controlling port is a VCO port, and the associated port is an SS7 port, the two ports are associated until one or the other is released by the host. When one of the ports is released, CktInt automatically releases the other.

However, if the system switches over while the call is stable, CktInt, on what is now the Active side, has no knowledge of port association established prior to switchover. This is because the CktInt on side A does not communicate with CktInt on side B and vice versa. If the host attempts to release the call by its port association, the release will fail.

If the system switches over a second time, and the call is still stable, the CktInt module that established the port association is now on the Active side, and host can release the call by its port association.

### Workaround

Do not use the port association option in host applications.

## CSCsf85148 (U809300002): MTP\_PAUSE and MTP\_RESUME

When all the links are down, sometimes cktint does not receive MTP\_PAUSE messages from EBS. When this happens, the circuit state stays active.

To help prevent this situation, set your Level 2 timer T0 to 160 msec by completing the following steps:

- 
- Step 1** Log in as **root** to side A of the SS7 subsystem, **<hostname>a**.
  - Step 2** Enter the following command and press **Return**:  

```
mml 0
MODIFY-L2TIMER:TIMER=0,VALUE=160;
```
  - Step 3** Confirm proper settings by entering the following line and pressing **Return**:  

```
DISPLAY-L2TIMER:TIMER=0;
```
  - Step 4** Log in as **root** to side B of the SS7 subsystem, **<hostname>b**, and repeat Step 2 and Step 3.
- 

### Workaround

If the circuit state gets stuck on the active side, bring your SS7 subsystem down and back up again.

# Important Notes

This section describes the special considerations you should be aware of while using SS7 ISUP software, ANSI V5.2. This section provides explanations for the following areas:

- Commands and reports
- Debug flags
- EBS configuration
- Host considerations
- Redundancy
- System configuration

## Commands and Reports

### CktInt Requires \$DA And \$DB Reports

Do not suppress the \$DA and \$DB Reports in your SS7 application. These reports are required by CktInt for non-SS7 to SS7 calls and SS7 to non-SS7 calls because of the disconnect control byte. Cktint must see an on-hook.

## Debug Flags

Turning on the debug flags may negatively impact performance.



Note

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Make sure all debug flags are turned off for production systems.

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## EBS Configuration

### Routing Alarm Messages to the Console

To route alarm messages to the system console, complete the following steps:

- 
- Step 1** Start the MML utility by entering the following command and pressing **Return**:  
mml 0
  - Step 2** At the system prompt, enter the following command and press **Return**:  
MODIFY-ALARM-CONFIG:DISPLAY=ON;
  - Step 3** Exit the MML utility by entering the following command and pressing **Return**:  
EXIT:;
-



## Configuration for a Combined Linkset with Two A-Links

In order for link inhibit/uninhibit to work properly in a combined linkset with two A-links, you must set up alternate routes in the **mtp mml** file, as shown in lines 6 and 7 below.

```

MODIFY-SP:NAME=HOME,SPC=3-8-3,NI=NATIONAL,TYPE=SEP;
ADD-LSET:LSET=LSET1,DPC=1-1-1,ACTIVE=1,LOADED=1,TYPE=ALINK,BR=56000;
ADD-LSET:LSET=LSET2,DPC=1-1-2,ACTIVE=1,LOADED=1,TYPE=ALINK,BR=56000;
ADD-LINK:LINK= LINK-0,LSET=LSET1,SLC=0,PORT=1,TYPE=DTE,PRIORITY=0;
ADD-LINK:LINK=LINK-0,LSET=LSET2,SLC=0,PORT=2,TYPE=DTE,PRIORITY=0;
ADD-ROUTE:RTSET=LSET1STP,LSET=LSET2,PRIORITY=1;
ADD-ROUTE:RTSET=LSET2STP,LSET=LSET1,PRIORITY=1;
ADD-CMBLSET:CMBLSET=CLSET12,LSET1=LSET1,LSET2=LSET2;
ADD-RTSET:RTSET=RSET12,DPC=2-2-2,ROUTE1=CLSET12;
MODIFY-LSET:LSET=LSET1,ADMINSTATE=ACTIVE;
MODIFY-LSET:LSET=LSET2,ADMINSTATE=ACTIVE;
EXIT;;

```

## Host Considerations

### Multiple Hosts Affect Call Handling

Additional TCP connections affect VCO call handling capacity. Optimal performance can be achieved with four or fewer simultaneously active TCP connections.

## Redundancy

### Host Connected to Both Sides

A host must be connected to both the active and standby sides of the SS7 system for reliable redundancy operation.

### No Switchover When Ethernet Fails

If Ethernet fails, the system does not switch over.

### Workaround

Add a routine to your host application that can detect when the SS7 subsystem is unreachable and initiates a switchover.

## ASCII Terminals On Redundant Systems

If you turn the SS7 console off, or power to the terminal is lost, the SPARC5V CPU may abort and return to the boot prompt.

It is possible to connect a single ASCII terminal to both side A and side B via an electronic A/B selector switch. However, the selector must be capable of providing surgeless, spikeless change-overs. If the selector switch does not have this feature, the SPARC5V CPU may abort and return to the boot prompt when a change-over occurs.

## Calls During Switchover

Only stable (answered) calls are preserved by the system during a redundancy switchover.

## Loss of Network or SS7 Selector Switch Links

The loss of network links does not cause a switchover. Also, the loss of SS7 selector switch links does not cause a switchover. If you are going to perform maintenance on any of the links, you must first switch the system over to the standby side.

## SDS and VCO/80 Do Not Boot Without SPARC CPU Installed

An SDS or VCO/80 system configured for SS7 does not boot if one of the SPARC CPUs is removed from the Control Subrack. The NBC does not download, the NBC's LEDs stay illuminated, and the SDS/VCO system freezes.

## Time Between Consecutive Switchovers

Depending on the number of SS7 circuits in your configuration, the SS7 system needs 10 to 30 seconds between two consecutive switchovers to avoid a mismatch in redundancy states of the VCO, cktint, and EBS.

## System Configuration

### GRPID and TRNKGRPID Numbering Per DPC

For each distant end DPC, if your Circuit Group IDs (GRPID) are numbered consecutively (i.e. 1, 2, 3, 4...), Cisco Systems recommends you also number your Trunk Group IDs (TRNKGRPIDs) consecutively (i.e. 50, 51, 52, 53...).

## Choosing No Name Service

During system configuration, if you set the Name Service screen to “NONE” and press the **F2** key to continue, the sys-config program will generate an error message and gets into a loop.

### Workaround

When running the system sys-config, the system expects any name service to be defined. When you set the Name Service screen option to “NONE,” the system still tries to look for any service type and gets into a loop. To run with no name service, you need to create two empty files, as described below, and then rerun the sys-config program from the beginning.

- 
- Step 1** From the Name Server screen, mark the “NONE” field and press **F2** to continue.
- Step 2** An error message containing a path and file name will be generated. Write down the path and file name.
- Step 3** If using a UNIX/Solaris terminal, press **Stop** and then **a**. This will get the “OK” prompt.  
If using a WYSE terminal, press **Cntrl** and then **Pause/Break** or **F5**. Pressing **Alt** and then **Pause/Break** or **F5** may also work. This will get the “OK” prompt.
- Step 4** At the “OK” prompt, enter the following command and press **Return**:
- ```
boot -s
```
- This will bring up the system in single user mode. The following message appears:
- ```
press cntrl-D or enter root password
```
- Step 5** At the password prompt, enter the following root password and press **Return**:
- ```
abc123
```
- Step 6** Change the directory (**cd**) to **/etc** and create the files **nsswitch.conf** and **nsswitch.files**, or the file names you wrote down in Step 2 if they differ.
- Basically, you are creating any files that the system was complaining about in the original error message. To create the files with vi editor, enter the following command(s) and press **Return**:
- ```
vi /etc/nsswitch.conf
vi /etc/nsswitch.files
```
- Step 7** Press the **Esc** key. Then, type **:wq** and press **Return**.
- Step 8** Verify that the files now exist under directory **/etc**.
- Step 9** Change the directory (**cd**) to **/usr/sbin**.
- Step 10** Type **sys-unconfig** and press **Return** to un-configure the system and revert to a blank system.
- Step 11** Type **reboot** and press **Return** to bring the system back in configuration mode (sys-config).
- Step 12** Continue with the regular sys-config procedure. This time, when you set the Name Service option to “NONE,” the system will allow you to configure the rest of the fields without any problem.
-

# Caveats

This section contains open and resolved software caveats for this release of the SS7 ISUP, ANSI V5.2 software. Caveats describe unexpected behavior or defects in the SS7 subsystem software or related hardware.

Complete the following steps to access detailed information on resolved and open caveats:

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**Step 1** Open an Internet browser application.

**Step 2** Go to <http://www.cisco.com>

**Step 3** Click on the site menu's Login hypertext.

The Username and Password Required dialog box is displayed.

**Step 4** Enter your username and password.



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**Note** If you do not have a valid username and password contact your Cisco Systems representative or send e-mail to *cco-team*.

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**Step 5** Click the OK button.

A Cisco Systems Web page is displayed.

**Step 6** Click on the Technical Assistance Center hypertext, which is located beneath the Service & Support section.

**Step 7** Click on the Tools hypertext.

**Step 8** Click on the Software Bug Toolkit hypertext.

**Step 9** Click on Search for Bug by ID Number hypertext.

The Search for Bug by ID Number tool is displayed.

**Step 10** Use the Search for Bug by ID Number search tool to find detailed information on caveats for the VCO/4K-related product.

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## Open Caveats - SS7 ISUP, ANSI V 5.2

Cisco Systems, Inc. has identified and evaluated functional constraints in ANSI V5.2 system software. This section provides explanations and, where applicable, workarounds for possible unexpected behavior by V5.2 system software.

### CSCsf74269 (U708200008): Warmboot With Autostart Takes 20 Minutes

If autostart is configured and the system is warm booted, it will take at least 20 minutes for the SS7 software to start. This will ensure that the VCO is entirely operational before the SS7 software is started.

**Note**

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Do not change this timer value unless you are instructed to do so by Cisco Systems Technical Support.

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#### Workaround

You may disable the autostart feature. If disabled, the SS7 software must be manually started. To disable autostart, complete the following steps:

- 
- Step 1** Log in to the SS7 subsystem as **root**.
  - Step 2** Enter the following command and press **Return**:  

```
rm /etc/rc3.d/S85ss7
```
  - Step 3** Reboot the Sparc and autostart will be inactive.
-

## CSCsf84706 (U803110006): Synchronization Failure

If EBS and cktint are brought down and back up on the standby side, sometimes the “tli” process does not sync up with the tli process on the active side and the following messages are repeatedly displayed:

```
srv_connect:: An event requires attention
```

```
Enabling connect timer ....
```

This impacts the redundancy operation of the system.

### Workaround

Bring down the tli processes on both sides. Then, bring both tli processes back up.

To bring down the tli processes:

- 
- Step 1** Log in as **root** to the Standby side of the SS7 subsystem.
  - Step 2** Type **px** and press **Return** to verify which active processes are running.
  - Step 3** Find the tli process I.D. number.
  - Step 4** Enter the following command and press **Return**:
 

```
kill -9 <process I.D. #>
```
  - Step 5** Log in as **root** to the Active side of the SS7 subsystem, then repeat Step 1 through Step 4.
- 

To bring both tli processes back up:

- 
- Step 1** Log in as **root** to the Active side of the SS7 subsystem.
  - Step 2** Enter the following command and press **Return**:
 

```
tli &
```
  - Step 3** Log in as **root** to the Standby side of the SS7 subsystem, then repeat Step 1 through Step 2.
-

## Resolved Caveats - SS7 ISUP, ANSI V 5.2

Table 2 list the caveats issued against the SS7 subsystem software that have been resolved in system software version ANSI V5.2.

**Table 2** *Resolved Caveats for Release 5.2*

DDTs Issue	Description
CSCdm40386	Whenever cktint received a \$49 command with a resource group of more than 63 in extended mode, it rejected the command with an NSB of 0D. This issue has been fixed. Cktint now accepts all resource groups within the proper range in extended mode.
CSCdm42225	When incoming continuity check failed on a circuit, the following error message was printed on the log file: <pre>***ERROR 038: ss7_cont() Continuity Test Failed On CIC: x GRP: y SP: 0</pre> where <i>x</i> was the circuit ID and <i>y</i> was the trunk group number. However, the circuit ID was printed in decimal instead of hex. Now it's printed in hex.
CSCdm43357	The millisecond field in the time stamp printed on the cktint log file was not proper. This issue has been fixed
CSCdm43972	Whenever outgoing continuity was initiated in extended mode, \$69 commands sent to the host were not formatted properly. This issue has been fixed.
CSCdm44005	In a non-SS7-to-SS7 call with the disconnect control byte set to 00, when the non-SS7 port was released, the \$EA report for the automatic release of the SS7 port by cktint did not contain a cause indicator parameter. This issue has been fixed.
CSCdm91301	In Roundrobin mode with two hosts, if a host that handled the last call was disconnected, subsequent new calls were released. This problem was also seen in situations where there were more than two connected hosts and then, due to network failures, the number of connected hosts went down to one. These issues have been fixed.
CSCdp17708	When two SS7 voice circuits were associated via a \$49 command, cktint ignored the REL messages generated for both ports when the COT Success message was not propagated from the incoming circuit to the outgoing circuit. This caused the outgoing circuit to become stuck in released state. This issue has been fixed.
CSCdp17721	Outgoing COT success on a previous circuit from the host did not go to the network if association was made between incoming and outgoing ports in SS7-to-SS7 calls. The proper COT messages are now passed to the network.
CSCdp17838	When the SPAN1 were distributed among different trunk groups (TRG1 and TRG2) and a D9 OOS for SPAN1 was received from the VCO, cktint locally blocked all the circuits in TRG1, but not circuits in TRG2, and sent CGB to the network for only circuits in TRG1. Cktint set the hardware flag for all the ports of SPAN1 in TRG1 and TRG2. This issue has been fixed. Now if 2 trunk groups are configured for cktint, and a D9 OOS is sent from the VCO, circuits in both trunk groups are locally blocked. If a D9 IS is then sent from the VCO, circuits in both trunk groups are in active idle state.

**Table 2 Resolved Caveats for Release 5.2 (continued)**

DDTs Issue	Description
CSCdp72785	When there was a hole among CCTNUM values in the <code>ckt_ss7_to_sds</code> file for any trunk group, and if there was only one circuit after the hole, cktint generated GRS for the circuits before the hole and RSC for the circuit after the hole. When these GRA and RLC messages were received from the network as an acknowledgment, the EBS stack did not pass on the RLC to cktint, resulting in the circuit state of that circuit getting stuck in transient state. This issue has been fixed.
CSCdp99035	In a redundant system, a circuit was remotely blocked on the active side. When the system switched over, a \$D3 report was sent on the current active side for this circuit indicating that the circuit was available when it was actually remotely blocked. This issue has been fixed and the correct circuit state is now reported.
CSCdr08537	When an IAM is received from the network and the load sharing mode is set to BROADCAST, CktInt sends a \$C0 05 command to the VCO to relinquish control. Cktint did not report the acknowledgement of this command from the VCO to the host. Feature Flag 15 has been added to the <code>CktInt.cfg</code> file to allow the acknowledgement of the \$C0 05 command to be broadcast to all the connected hosts.
CSCdr26480	When a TFC message was received from a far-end STP, the EBS stack did not respond with a RCT message. This issue has been fixed.
CSCdr92780	When a suspend message is received from the network, the change byte (#19) in the \$EA report showed that the hook state changed to ON HOOK. The state should only change to ON HOOK if there is a RLC or REL. It should only change to off-hook on an IAM. This was fixed. Now if suspend or release messages are received from the network, the status of the \$EA report is correct.
CSCds16257	When more than one IAM is received from the network, on the same CIC, the EBS stack processes the first IAM and discards the preceding IAMs on that CIC. However, it does not generate RSC to the network to indicate that it has been reset. This was fixed. Now EBS will send the RSC after receiving two IAMs in the same CIC.
CSCds40856	This caveat occurred with the following sequence: 2 TFPs, one from each of a mated STP pair for an affected far end SP, followed by a single TFR from one STP for the same far end SP, followed by 2 TFAs from the STP pair. The result was the route to the far end SP staying in RESTR forever unless the stack was stopped and started. This issue has been fixed. Now the far end SP is no longer stuck at RESTR when a single TFR is received from a mated STP pair.
CSCds70198	The <code>_tcptxsrvclnt</code> process cored when there was a failure in trying to attach the CktMem shared memory due to system memory corruption. This issue was fixed. <code>T_tcptxsrvclnt</code> process no longer cores when there is a failure in trying to attach to CktMem shared memory due to system memory corruption.



**Table 2 Resolved Caveats for Release 5.2 (continued)**

<b>DDTs Issue</b>	<b>Description</b>
CSCsf84726 (U803110006)	<p>When a CCR was sent from the host, continuity check failed with the following messages:</p> <p style="padding-left: 40px;">SsIsTx()- FAILED PUTTING header: isup_error- EINVPRMTYP (0x12c) spmerr@pid(2514): [300] invalid primitive</p> <p>This issue has been fixed.</p>
CSCsf84803	<p>When a circuit was blocked either locally or remotely, or both, and if a RSC message was sent from either the host or isup_console, a \$D3 report was not sent to the host with status 13 and originator code 0x04 when an RLC message was received from the network. This issue has been fixed.</p>
CSCsf84906	<p>Whenever an IAM is received on a remotely blocked circuit, a \$D3 report was not sent to the host. This issue has been fixed.</p>
CSCsf84965 (U806260002)	<p>When the variant is set to BELL (BELLCORE), the circuit numbers in a trunk group start at 1 and end at 24 (1-18 hex). When a message was received from the network on the last circuit of a trunk group (hex 18 / decimal 24), the command was not being processed by cktint. This issue has been fixed. Cktint now recognizes all circuits in such a trunk group.</p>
CSCsf85138	<p>When an IAM with more than 15 parameters was sent from the host, cktint returned an ERROR 037: Interworking TX to PORTICO failed, error number 299 in the cktint log file. Echo back with the command successful returned to the host, the circuit state changed to O-Busy, initialized, but the IAM never was sent to the network. This issue has been fixed. Now cktint sends IAM with any number of parameters supported by the protocol.</p>
CSCsf85208	<p>When a template was used in a \$49 command and the duplicate parameters were included in the command, cktint sent an echo back saying that the command was processed successfully, but the the message never was sent to the network. The cktint log also showed the error message "ERROR 37: Interworking TX to PORTICO failed: 22". This issue was fixed. Now when an IAM message is sent from the host with greater than 15 template parameters, cktint processes the command properly.</p>
CSCsf85281	<p>When the standby side of cktint was stopped and started, the active side of the EBS stack stopped processing calls if the configuration had large circuits (typically, more than 1700). This issue has been fixed.</p>

# Checksums

Table 3 lists valid software checksums and file sizes for the ANSI V5.2 software.

**Table 3 Cktint Version: ANSI ISUP Version 5.2 FSR00**

Filename	Checksum /usr/bin/sum	Size ls -l
cktint.cpio.Z	49440 3979	2036997
install_cktint.sh	14016 12	5655



**Note**

To get the version of cktint, run the following command in **\$XNV**:  
`% version cktint`

Table 4 lists valid software checksums and file sizes for the AccessManager Version 3.5.4\_22 software running on Solaris V2.6.

**Table 4 EBS Version: 3.5.4\_22**

Filename	Checksum /usr/bin/sum	Size ls -l
ebs.cpio.Z	50099 13725	7027061
install_ebs.sh	53000 7	3185



**Note**

To get the version of EBS, run the following command in **\$EBSHOME/access**:  
`% more version.dat`

## Related Documentation

The following documents contain information that may be useful to SS7 subsystem software, ANSI V5.2 users.

- *Cisco VCO/4K SS7 Subsystem, ANSI V5.2, Manual*
- *Cisco VCO/4K System Software Version 5.x Release Notes*
- *Cisco VCO/4K Standard Programming Reference*
- *Cisco VCO/4K Extended Programming Reference*

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