



Release Notes for Cisco H.323 Signaling Interface Release 4.2 and Related Patches

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The Cisco H.323 Signaling Interface (HSI) interoperates with the Cisco PSTN Gateway 2200 (PGW 2200) to enable calls between the Public Switched Telephone Network (PSTN) and the H.323 network. The HSI provides:

- Translation of signaling protocols for establishing, controlling, and releasing calls
- Administration of network parameters and protocol capabilities
- System and call-related statistics
- Fault reporting
- Overload management
- Event logging
- Simple Network Management Protocol (SNMP) interface

The Cisco HSI 4.2 release supports H.323 Version 4.



Note

The Cisco HSI does not interoperate with the Cisco Security Agent product.

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Americas Headquarters:

Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

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Platform Support

Hardware

The Cisco HSI is developed to run on a Sun Netra T1 100/105, a Sun Netra 120, a Sun Netra 240, a Sun Fire V120, or a Sun Fire V210 platform.

Software

The Cisco HSI runs on the Solaris 8 operating system.

New Features

Cisco HSI Release 4.2 Patch 1 introduces support for the following features:

- Backup and Restore Procedures—Refer to Chapter 6: Cisco HSI Backup and Restore Procedures in the *Cisco H.323 Signaling Interface User Guide* for HSI release 4.2.
- HSI Notify Support—Refer to Chapter 3: Provisioning the Cisco HSI in the *Cisco H.323 Signaling Interface User Guide* for HSI release 4.2.

- Adjustable Packetization—Refer to Chapter 3: Provisioning the Cisco HSI in the *Cisco H.323 Signaling Interface User Guide* for HSI release 4.2.
- Carrier Code Mapping—Refer to Chapter 3: Provisioning the Cisco HSI in the *Cisco H.323 Signaling Interface User Guide* for HSI release 4.2.

Related Documentation

Before Installation

Before you install the Cisco HSI software, consult the Cisco H.323 Signaling Interface User Guide at: http://www.cisco.com/univercd/cc/td/doc/product/access/sc/re19/hsi_42/42ug

After Installation

After you install the Cisco HSI software, consult the following related documentation for information on configuring and provisioning your system:

- Cisco H.323 Signaling Interface User Guide
http://www.cisco.com/univercd/cc/td/doc/product/access/sc/re19/hsi_42/index.htm
- The Provisioning Guide for your solution

General Purpose Documents

- The Gateway Installation Guide for your solution
- *Cisco Media Gateway Controller Software Release 9 Installation and Configuration Guide*
<http://www.cisco.com/univercd/cc/td/doc/product/access/sc/re19/swinstll/index.htm>
- *Cisco Media Gateway Controller Software Release 9 Operations, Maintenance, and Troubleshooting Guide*
<http://www.cisco.com/univercd/cc/td/doc/product/access/sc/re19/omts/index.htm>
- *Cisco Media Gateway Controller Software Release 9 Provisioning Guide*
<http://www.cisco.com/univercd/cc/td/doc/product/access/sc/re19/prvgde/index.htm>

Installation Requirements

Installation Checklist

Before you attempt to install the HSI application software, you must obtain the following information:

- Cisco H.323 Signaling Interface base directory path
- Base directory path

- Cisco H.323 User name and group name
- Gatekeeper IP address and port number
- Gateway prefix
- Terminal alias
- Gatekeeper ID
- EISUP host port number
- VSC1 name and port number
- Installation node ID
- Hardware platform description
- Installation location
- Your company's internal support and Cisco support contact information

Installing the Cisco HSI

For installation instructions refer to the *Cisco H.323 Signaling Interface User Guide*. See Chapter 2: Installing and Configuring Cisco HSI Software.

Installing HSI Software Patches

When you install an HSI software patch, the included updated binary, provisioning, library, and script files will be updated in the following directories depending on the type of file being delivered:

- /opt/GoldWing/currentPM/bin binaries
- /opt/GoldWing/currentPM/etc data files

Before installing a patch, you must shut down the Cisco HSI application, as the affected programs are part of the running system. To ensure that the HSI application has been shutdown, execute the following command:

```
# /etc/init.d/CiscoGW stop
```

Manual Patch Installation

Complete the following procedure to install a software patch:

-
- Step 1** Change user to root.
- Step 2** Use the following command to create a patch directory (if one does not exist) on the HSI machine:
- ```
mkdir /export/PATCHES
```
- Step 3** Transfer the hsi-4\_2\_p<n>.tar.Z file into the new directory.



**Note** <n> represents the patch number that you are installing.

---

**Step 4** To create a 4.2\_P<n> directory, execute the following commands:

```
uncompress hsi-4_2_p<n>.tar.Z
tar xvf hsi-4_2_p<n>.tar.Z
```

**Step 5** Ensure the HSI application is shutdown and all previous patches are uninstalled.

**Step 6** Use the following commands to change to the 4.2\_P<n> patch directory and install the patch:

```
cd ./4.2_P<n>
./install_patch.sh
```

**Step 7** Use the following command to restart the HSI application:

```
/etc/init.d/CiscoGW start
```

---

## Patch Removal

Complete the following procedure to remove a software patch:

---

**Step 1** Change user to root.

**Step 2** Issue the following command to shutdown the HSI application:

```
/etc/init.d/CiscoGW stop
```

**Step 3** Use the following commands to change directories and uninstall the patch:

```
cd /export/PATCHES/4.2_P<n>
./uninstall_patch.sh
```



**Note** <n> represents the patch number that you are removing.

---

**Step 4** Issue the following command to restart the HSI application:

```
/etc/init.d/CiscoGW start
```

---

## HSI 4.2 Patch 17 Information

This section includes information on:

- Caveats Resolved by Cisco HSI 4.2 Patch 17

### Caveats Resolved by Cisco HSI 4.2 Patch 17

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 17:

| Identifier | Version | Severity | Description                                                         |
|------------|---------|----------|---------------------------------------------------------------------|
| CSCsj24795 | 4.1     | 3        | In certain circumstances, the process for releasing a call stalled. |

**Symptoms:** Occasionally, the HSI did not clear a call when the HSI received a release from EISUP on one side and a release from the HSI side simultaneously.

**Resolution:** The HSI software is modified to eliminate this problem.

| Identifier | Version | Severity | Description                                         |
|------------|---------|----------|-----------------------------------------------------|
| CSCsx08727 | 4.2     | 3        | The HSI did not clear call resources when expected. |

**Symptoms:** Occasionally, the HSI did not clear all call resources when the HSI received an H.225 setup message and an H.225 releaseComplete message at the same time.

**Resolution:** The HSI software is modified to eliminate this problem.

| Identifier | Version | Severity | Description                                                                      |
|------------|---------|----------|----------------------------------------------------------------------------------|
| CSCsr57839 | 4.2     | 3        | Under very rare circumstances, an RUDP thread exhausted CPU resources on an HSI. |

**Symptoms:** In response to an unusual circumstance, a RUDP thread function was suspended and failed to complete.

**Resolution:** The HSI software is modified to eliminate this problem.

| Identifier | Version | Severity | Description                                                                                |
|------------|---------|----------|--------------------------------------------------------------------------------------------|
| CSCsx19824 | 4.2     | 6        | A call failed when an HSI received an EmptyCapabilitySet before channels were established. |

**Symptoms:** In normal operation, the HSI receives the EmptyCapabilitySet after two logical channels have been created.

**Resolution:** The HSI is modified to process this call scenario properly.

| Identifier | Version | Severity | Description                                                                                      |
|------------|---------|----------|--------------------------------------------------------------------------------------------------|
| CSCsx09305 | 4.2     | 3        | Under very rare circumstances, an EISUP link went out of service (OOS) when the HSI was started. |

**Symptoms:** A running EISUP link went OOS in response to an extremely rare condition.

**Resolution:** The HSI software is modified to eliminate this problem.

## HSI 4.2 Patch 16 Information

This section includes information on:

- Caveats Resolved by Cisco HSI 4.2 Patch 16

### Caveats Resolved by Cisco HSI 4.2 Patch 16

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 16:

| Identifier | Version | Severity | Description                                              |
|------------|---------|----------|----------------------------------------------------------|
| CSCsi46428 | 4.2     | 3        | Disable one CPU if HSI 4.2 is upgraded to N240 platform. |

**Symptoms:** The HSI 4.2 does not operate on two CPUs on an N249 platform.

**Resolution:** HSI 4.2 supports only 1 CPU. The HSI disables one CPU on a N240 platform when the operating system reboots and HSI reboots.

| Identifier | Version | Severity | Description                                                            |
|------------|---------|----------|------------------------------------------------------------------------|
| CSCsd84533 | 4.2     | 3        | The HSI sent the old RTP address/port in the connect message after ECS |

**Symptoms:** The HSI sent an incorrect RPT address/port in a connect message after ECS.

**Resolution:** Now HSI uses the correct RTP address/port after ECS.

| Identifier | Version | Severity | Description                                    |
|------------|---------|----------|------------------------------------------------|
| CSCsm43414 | 4.2     | 2        | File handle is not clear when log level=debug. |

**Symptoms:** When HSI platform.log was rotated, the old file handle was not cleared.

**Resolution:** The HSI is modified to process the file handle correctly.

| Identifier | Version | Severity | Description                                                                                                |
|------------|---------|----------|------------------------------------------------------------------------------------------------------------|
| CSCsm59911 | 4.3     | 3        | HSI did not establish an H.245 control channel for an h323-to-h323 connection for an CFNA to PRIQSIG call. |

**Symptoms:** HSI did not pass H.245 address to or from the Cisco PGW 2200 when in hairpin mode and the message was CPG/EISUP or PROGRESS/H225.

**Resolution:** The HSI is modified to process such a connection correctly.

| Identifier | Version | Severity | Description                                     |
|------------|---------|----------|-------------------------------------------------|
| CSCsm73487 | 4.2     | 3        | An HSI ignored the re-negotiation MSD procedure |

**Symptoms:** When HSI rejected the MSD status and the peer H.323 element restarted the MSD procedure, the HSI ignored the re-negotiation MSD procedure.

**Resolution:** The HSI is modified to process a restarted MSD procedure properly.

| Identifier | Version | Severity | Description                                                                    |
|------------|---------|----------|--------------------------------------------------------------------------------|
| CSCsm99667 | 4.2     | 3        | An HSI refreshed only the first value in response to an SNMP bulk get request. |

**Symptoms:** An HSI did not respond correctly to an SNMP get request.

**Resolution:** The HSI is modified to process an SNMP get request properly.

| Identifier | Version | Severity | Description                                                     |
|------------|---------|----------|-----------------------------------------------------------------|
| CSCso06755 | 4.2     | 3        | The HSI sent two numbers in RAS when IAM and SAM were too fast. |

**Symptoms:** For a call that arrived with overlap, the HSI sent a RAS with two numbers as destinationInfo. The RAS was then rejected by the GK.

**Resolution:** The HSI is modified to process the RAS correctly.

| Identifier | Version | Severity | Description                                                                                                  |
|------------|---------|----------|--------------------------------------------------------------------------------------------------------------|
| CSCsq18800 | 4.2     | 3        | An HSI could not properly process a setup request that included an extremely large nonStandardControl field. |

**Symptoms:** An HSI could not properly process setup request with an extremely large nonStandardControl field.

**Resolution:** The HSI is modified to process the setup request correctly.

| Identifier | Version | Severity | Description                                                         |
|------------|---------|----------|---------------------------------------------------------------------|
| CSCsq47384 | 4.2     | 2        | An EISUP thread could exhaust CPU resources rarely after EISUP OOS. |

**Symptoms:** When an EISUP link goes out of service, an EISUP thread could become unrecoverable.

**Resolution:** The HSI is modified to respond properly when an EISUP link goes out of service.

| Identifier | Version | Severity | Description                                                               |
|------------|---------|----------|---------------------------------------------------------------------------|
| CSCsq55198 | 4.2     | 3        | An HSI gapped incoming H.323 calls and did not release resources cleanly. |

**Symptoms:** When an HSI was in overload status, the HSI gapped calls. Also, the HSI did not release H.323 resources cleanly.

**Resolution:** The HSI is modified to process such H.323 calls properly.

| Identifier | Version | Severity | Description                                                                  |
|------------|---------|----------|------------------------------------------------------------------------------|
| CSCsa62963 | 4.2     | 3        | An HSI experienced a core dump on __OfTH323CallInstanceImpPprotocolHandlesv. |

**Symptoms:** Due to an unknown reason, an HSI core dumped every week during low call volume, on \_\_OfTH323CallInstanceImpPprotocolHandlesv.

**Resolution:** The HSI is modified to prevent this core failure.

## HSI 4.2 Patch 15 Information

This section includes information on:

- New Features in HSI 4.2 Patch 15
- Caveats Resolved by Cisco HSI 4.2 Patch 15

### New Features in HSI 4.2 Patch 15

Cisco HSI 4.2 Patch 15 introduces two new constant data elements:

- CC\_HC\_PortedNumber (See the resolution of CSCsl67650 in the [“Caveats Resolved by Cisco HSI 4.2 Patch 15”](#) section on page 10)
- ConnectedCallsMaxDuration (See the resolution of CSCsl11969 in the [“Caveats Resolved by Cisco HSI 4.2 Patch 15”](#) section on page 10)

## Caveats Resolved by Cisco HSI 4.2 Patch 15

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 15:

| Identifier | Version | Severity | Description                                                               |
|------------|---------|----------|---------------------------------------------------------------------------|
| CSCs167650 | 4.2     | 3        | H.323 cause code 14 (PortedNumber) must be mapped to an EISUP cause code. |

**Symptoms:** In the H.323 to EISUP direction, the HSI must support cause code 14 (PortedNumber).

**Resolution:** Now, by issuing appropriate MML commands, you can provision the constant data element CC\_HC\_PortedNumber to map to a supported EISUP cause code. Because CC\_HC\_PortedNumber is a constant element, after you provision the element, you must restart the HSI.

The following provisioning example shows how you might provision CC\_HC\_PortedNumber:

```
gw mml> prov-sta::srcver=active,dstver=HCPortedNum
gw mml> prov-add::name=CCPackage,CC_HC_PortedNumber=CC_EC_PortedNumber
gw mml> prov-cpy
gw mml> restart-softw
```

| Identifier | Version | Severity | Description                                                                                   |
|------------|---------|----------|-----------------------------------------------------------------------------------------------|
| CSCs11969  | 4.2     | 3        | The HSI did not clear call records of calls that remained connected for an extended duration. |

**Symptoms:** In response to certain network failures, if a call was in the connected state, and if both the Cisco PGW 2200 and the other H.323 endpoint did not send a call release message to the HSI, the HSI would never release the call.

**Resolution:** A new constant data element, ConnectedCallsMaxDuration, is added to the Cisco HSI. You can start an MML session and set a value for ConnectedCallsMaxDuration that establishes the maximum duration for a connected call. Thereafter, when a call exceeds the value set for ConnectedCallsMaxDuration, the HSI clears the call.

The value set for ConnectedCallsMaxDuration is in hours. The default value is 0 (zero). If the HSI retains the default value, a call could remain in the connected state indefinitely.

Because CC\_HC\_PortedNumber is a constant element, after you provision the element, you must restart the HSI.

The following provisioning example shows how you might provision ConnectedCallsMaxDuration:

```
gw mml> prov-sta::srcver=active,dstver=connectedDuration
gw mml> prov-add::name=CCPackage, ConnectedCallsMaxDuration=100
gw mml> prov-cpy
gw mml> restart-softw
```

| Identifier | Version | Severity | Description                                                |
|------------|---------|----------|------------------------------------------------------------|
| CSCs141086 | 4.2     | 3        | The HSI crashed with core _ZNK14 CCStateMachine8getStateEi |

**Symptoms:** The HSI crashed and revealed core \_ZNK14 CCStateMachine8getStateE.

**Resolution:** The HSI is modified to eliminate the core condition.

| Identifier | Version | Severity | Description                                                                                 |
|------------|---------|----------|---------------------------------------------------------------------------------------------|
| CSCsl25593 | 4.2     | 3        | The HSI cause location mapping was incorrect when the location was equal to 0 (location=0). |

**Symptoms:** The HSI cause location mapping from H.323 to EISUP was incorrect when the location value was set to 0 (location=0) in H.225 messages.

**Resolution:** The HSI is modified to prevent incorrect cause mapping.

| Identifier | Version | Severity | Description                                                          |
|------------|---------|----------|----------------------------------------------------------------------|
| CSCsm07750 | 4.2     | 2        | The HSI experienced a core dump while in a high call load condition. |

**Symptoms:** The HSI core dumped while processing very high call volume.

**Resolution:** The HSI is modified to prevent the core dump while processing high call volume.

| Identifier | Version | Severity | Description                             |
|------------|---------|----------|-----------------------------------------|
| CSCsk84567 | 4.2     | 3        | The HSI might fail under heavy traffic. |

**Symptoms:** The HSI might fail while attempting to process extremely heavy traffic.

**Resolution:** The HSI is modified to avert a failure due to heavy traffic.

| Identifier | Version | Severity | Description                                                                                               |
|------------|---------|----------|-----------------------------------------------------------------------------------------------------------|
| CSCsj65790 | 4.2     | 2        | During a performance test, the HSI experienced a core dump condition when processing 80 calls per second. |

**Symptoms:** During testing, the HSI core dumped while processing 80 calls per second.

**Resolution:** The HSI is modified to continue operating under heavy call volume.

## HSI 4.2 Patch 14 Information

This section includes information on:

- New Feature in HSI 4.2 Patch 14
- Caveats Resolved by Cisco HSI 4.2 Patch 14

## New Feature in HSI 4.2 Patch 14

Cisco HSI 4.2 Patch 14 introduces a new property:

- Support new Sys\_Config\_Dynamic Parameter—UsePayloadTypeMapping

## Support for New Sys\_Config\_Dynamic Parameter—UsePayloadTypeMapping

Cisco HSI 4.3 Patch 3 introduces support for the new Sys\_Config\_Dynamic parameter, UsePayloadTypeMapping. UsePayloadTypeMapping is a string parameter, which, if set to a non-empty value, the HSI negotiates the SDP payload type to be identical to the value received from the Cisco PGW 2200. By default, this parameter is disabled (set to an empty value). In the default case, the HSI uses the payload type that is hardcoded (static) in the HSI.

Cisco recommends enabling this parameter.

To enable payload mapping issue the following MML command:

```
prov-add:name=sys_config_dynamic, UsePayloadTypeMapping="true"
```

To disable payload mapping issue the following MML command:

```
prov-ed: name=sys_config_dynamic, UsePayloadTypeMapping=""
```

## Caveats Resolved by Cisco HSI 4.2 Patch 14

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 14:

| Identifier | Version | Severity | Description                                                            |
|------------|---------|----------|------------------------------------------------------------------------|
| CSCsh64349 | 4.1     | 3        | The HSI must map a Progress:CauseIndicator to ACM/CPG's CauseIndicator |

**Symptoms:** The HSI must be able to map the ISUP ACM:CauseIndicator parameter to an H323:Progress:CauseIndicator, and vice versa, for the EISUP to H.323 direction and for the H.323 to EISUP direction.

**Resolution:** The HSI now maps an H.323 Progress CauseIE to EISUP ACM/CPG's CauseIndicator.

| Identifier | Version | Severity | Description                                                                |
|------------|---------|----------|----------------------------------------------------------------------------|
| CSCsk30552 | 4.2     | 3        | The HSI did not correctly manager CCM 5.1 ECS in a call transfer to DPNSS. |

**Symptoms:** The HSI did not correctly manage an ECS sent from Cisco CallManager 5.1.

**Resolution:** The HSI is modified to eliminate this problem.

| Identifier | Version | Severity | Description                                                       |
|------------|---------|----------|-------------------------------------------------------------------|
| CSCsj61522 | 4.2     | 3        | HSI needs the ability to change the Payload Type for Clear CODEC. |

**Symptoms:** By default, the HSI uses the hard-coded payload type for some dynamic codecs.

**Resolution:** With the introduction of the dynamic system parameter, UsePayloadTypeMapping, the HSI can use a dynamic payload type for Clear Codec. To enable the new parameter issue the MML command:

```
prov-add:name=sys_config_dynamic,UsePayloadTypeMapping="true"
```

| Identifier | Version | Severity | Description                       |
|------------|---------|----------|-----------------------------------|
| CSCsj25244 | 4.3     | 3        | Megaco to H.323 call hold failed. |

**Symptoms:** A call hold failed because of an odd numbered RTP port in the SDP generated by the HSI during the call hold phase.

**Resolution:** The HSI is modified to eliminate this problem.

| Identifier | Version          | Severity | Description                   |
|------------|------------------|----------|-------------------------------|
| CSCsj05326 | 4.1, 4.2,<br>4.3 | 3        | Simplify the HSI log setting. |

**Symptoms:** A simpler method for obtaining logged information was requested.

**Resolution:** A new script enables one to obtain HSI log information more efficiently.

In the shell command window, enter the command **hsi\_log\_start** to start tracing and **hsi\_log\_stop <filename>** to stop tracing. The file *filename* contains all the information required to help determine problems with HSI processing.

## HSI 4.2 Patch 13 Information

This section includes information on:

- Caveats Resolved by Cisco HSI 4.2 Patch 13

### Caveats Resolved by Cisco HSI 4.2 Patch 13

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 13:

| Identifier | Version | Severity | Description                                                                  |
|------------|---------|----------|------------------------------------------------------------------------------|
| CSCsi80243 | 4.2     | 2        | The HSI MML command <b>rtrv-ne-health</b> needs to free calls automatically. |

**Symptoms:** Suspended calls were freed only by manually issuing the MML command **rtrv-ne-health**.

**Resolution:** Now, periodically, the HSI automatically clears suspended calls.

| Identifier | Version | Severity | Description                                                                             |
|------------|---------|----------|-----------------------------------------------------------------------------------------|
| CSCsg78249 | 4.2     | 3        | The HSI did not forward the Connected Line Restricted indicator from Cisco CallManager. |

**Symptoms:** The Cisco HSI did not map the Connected Line Indicator received from Cisco CallManager.

**Resolution:** HSI now correctly maps the Connected Line Restricted indicator from the H323 message to an EISUP message.

| Identifier | Version | Severity | Description                                |
|------------|---------|----------|--------------------------------------------|
| CSCsj41408 | 4.2     | 3        | Support call hold with resume with no SDP. |

**Symptoms:** Call hold with resume with no SDP is supported by HSI 4.3. It is now supported in HSI 4.2 also. HSI 4.2, requires the new SDP to continue call resume.

**Resolution:** This functionality is implemented in 4.2 to help customers during migration.

| Identifier | Version | Severity | Description                                                                                             |
|------------|---------|----------|---------------------------------------------------------------------------------------------------------|
| CSCsi68674 | 4.2     | 3        | The H.245 address was not suppressed in an Alerting message if SDP was delayed from the Cisco PGW 2200. |

**Symptoms:** The H.245 address must be suppressed in the Alerting message when SDP coming from the Cisco PGW 2200 is delayed.

**Resolution:** The HSI is modified to eliminate this problem.

| Identifier | Version | Severity | Description                                                |
|------------|---------|----------|------------------------------------------------------------|
| CSCsi91495 | 4.2     | 3        | The HSI included an H.245 address in the progress message. |

**Symptoms:** H.245 address was not suppressed in the progress message if an SDP coming from the Cisco PGW 2200 was delayed.

**Resolution:** The HSI is modified to eliminate this problem.

| Identifier | Version | Severity | Description                                            |
|------------|---------|----------|--------------------------------------------------------|
| CSCsh75638 | 4.2     | 3        | Help information was incorrect for MML alarm commands. |

**Symptoms:** The help information associated with the MML commands **ack-alm** and **clr-alm** was incorrect.

**Resolution:** The help information is corrected.

| Identifier | Version | Severity | Description                                                              |
|------------|---------|----------|--------------------------------------------------------------------------|
| CSCsi83681 | 4.2     | 2        | HSI 4.1 core dumped on SNMP for SntpTrapHandlerImplJraiseTrapiTBRC6Mbasi |

**Symptoms:** The HSI experienced a core dump when processing an SNMP operation for the object SntpTrapHandlerImplJraiseTrapiTBRC6Mbasi.

**Resolution:** The HSI is modified to eliminate this problem.

| Identifier | Version | Severity | Description                             |
|------------|---------|----------|-----------------------------------------|
| CSCsi68645 | 4.2     | 3        | An HSI dropped 10% to 15% of its calls. |

**Symptoms:** The problem occurred in the operating system when Ioc1l incorrectly reported that there was no data to read. The problem occurred during a period of extraordinarily high call volume.

**Resolution:** This problem of dropped calls has been eliminated.

| Identifier | Version | Severity | Description                                                                                                                         |
|------------|---------|----------|-------------------------------------------------------------------------------------------------------------------------------------|
| CSCsj56171 | 4.2     | 2        | H.245 negotiation failed when Cisco CallManager attempted a SIP call through the HSI and PGW, which was hairpinned back to the CCM. |

**Symptoms:** This problem occurred when the HSI was in H.323 “hairpin” mode and received a FACILITY message that contained reason “startH245”.

**Resolution:** The HSI is modified to eliminate this problem.

## HSI 4.2 Patch 12 Information

This section includes information on:

- Caveats Resolved by Cisco HSI 4.2 Patch 12

## Caveats Resolved by Cisco HSI 4.2 Patch 12

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 12:

| Identifier | Version | Severity | Description                                                          |
|------------|---------|----------|----------------------------------------------------------------------|
| CSCeb60409 | 4.1     | 3        | The MML command <b>prov-dlt</b> did not working for some properties. |

**Symptoms:** The MML command **prov-dlt** did not working for some properties. The HSI displayed the following error message:

```
"DENY Not allowed to (because CONST) or did not find SYS_CONFIG_STATIC:name to delete."
```

**Resolution:** The MML command **prov-dlt** now operates correctly for all properties.

| Identifier | Version | Severity | Description                                                                     |
|------------|---------|----------|---------------------------------------------------------------------------------|
| CSCsh87586 | 4.2     | 3        | The HSI crashed in response to receiving invalid packets for a particular call. |

**Symptoms:** The HSI core dumped when the H.323 stack received some invalid packets for the existing call.

**Resolution:** The HSI now responds appropriately if it receives invalid packets.

| Identifier | Version | Severity | Description                          |
|------------|---------|----------|--------------------------------------|
| CSCsg85269 | 4.2     | 3        | An MML session to the HSI was denied |

**Symptoms:** A Telnet connection was made to the HSI and then an MML session was started. Due to connectivity problems, the Telnet session was dropped. If the user repeated this sequence of operations several times, the user was not allowed to open a new MML sessions and the system displayed the following message:

"Max allowed mml sessions exceeded [12]".

**Resolution:** The HSI can now support repeated attempts to open an MML session.

| Identifier | Version | Severity | Description                            |
|------------|---------|----------|----------------------------------------|
| CSCsh74179 | 4.2     | 3        | An HSI core dumped during an ACT test. |

**Symptoms:** During an asymmetric codec treatment (ACT) test, the HSI generated a core dump file for the GWmain process.

**Resolution:** The HSI now performs an ACT test properly.

| Identifier | Version | Severity | Description                                                                           |
|------------|---------|----------|---------------------------------------------------------------------------------------|
| CSCsi18017 | 4.2     | 3        | The HSI did not forward the Connected Line Restricted indicator to Cisco CallManager. |

**Symptoms:** For a call from a CCM IP phone to a PSTN phone, via a PGW (CCM -> HSI -> PGW -> PSTN(INET)), the INET sent an ANM message with the presentation indicator Restricted. The PGW forwarded the ANM (and an EISUP NOTIFY) to the HSI, and the HSI sent an H225 Connect message (and a NOTIFY) to the CCM. The Presentation Indicator in these messages was incorrectly set to Allowed.

**Resolution:** The HSI now sets the Presentation Indicator correctly.

| Identifier | Version | Severity | Description                                                                         |
|------------|---------|----------|-------------------------------------------------------------------------------------|
| CSCsg87786 | 4.2     | 3        | The IE Calling Party Number was removed by the HSI if no CLI digits were contained. |

**Symptoms:** The HSI did not generate a CallingPartyNumber IE in the outgoing EISUP IAM message if a Q931/H225 SETUP message contained empty calling party number (digits).

**Resolution:** The HSI now retains the CLI information in the outgoing IAM message. The latest version of the Cisco PGW 2200 software can recognize this special IAM and map it to the SIP INVITE message.

| Identifier | Version | Severity | Description                                                          |
|------------|---------|----------|----------------------------------------------------------------------|
| CSCsh51515 | 4.2     | 3        | The HSI did not start the TCS procedure for a hairpinned (T.38) call |

**Symptoms:** The HSI does not do TCS unless it is required to, which caused a problem when FAX was needed.

**Resolution:** Now users can configure the following 2 parameters to make HSI start the TCS/MSD procedure.

```
prov-add:name=sys_config_dynamic, InitiateTCSAfterFSCall=true
prov-add:name=sys_config_dynamic, TransmitTCSAfterFSCall=true
```

| Identifier | Version | Severity | Description                                                                                     |
|------------|---------|----------|-------------------------------------------------------------------------------------------------|
| CSCsh34890 | 4.2     | 3        | The HSI must start TCS/MSD first for a Quintum gateway. the solution is the same as CSCsh51515. |

**Symptoms:** Although the OLC for T38 is requested first by a Quintum gateway, the RequestMode(T.38) is initiated by HSI/PGW.

**Resolution:** The solution is the same as CSCsh51515. The HSI starts TCS/MSD first.

| Identifier | Version | Severity | Description                                                         |
|------------|---------|----------|---------------------------------------------------------------------|
| CSCsi46428 | 4.1     | 2        | Disable one CPU if HSI 4.2 is upgraded to a Sun Netra 240 platform. |

**Symptoms:** If a customer purchases the Cisco HSI 4.2 installed on a Sun Netra 240 platform (which has 2 CPUs), one CPU must be disabled.

**Resolution:** Disable one CPU because HI 4.2 only supports one CPU.

| Identifier | Version | Severity | Description                                                                 |
|------------|---------|----------|-----------------------------------------------------------------------------|
| CSCsh70912 | 4.1     | 3        | The HSI incorrectly mapped some USI layer 1 messages to BC layer1 messages. |

**Symptoms:** The HSI incorrectly mapped some USI layer 1 messages to BC layer1 messages.

**Resolution:** HSI now correctly maps layer 1 information from EISUP messages to H323 messages.

## HSI 4.2 Patch 11 Information

This section includes information on:

- Caveats Resolved by Cisco HSI 4.2 Patch 11

### Caveats Resolved by Cisco HSI 4.2 Patch 11

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 11:

| Identifier | Version | Severity | Description                                           |
|------------|---------|----------|-------------------------------------------------------|
| CSCsh02337 | 4.2     | 2        | EISUP links may occasionally go out of service (OOS). |

**Symptoms:** Under a very rare condition (when an EISUP link receives incorrect packets), the EISUP link might go OOS briefly.

**Resolution:** This problem is fixed.

| Identifier | Version | Severity | Description                                   |
|------------|---------|----------|-----------------------------------------------|
| CSCsh16949 | 4.2     | 3        | HSI clears call in asymmetric codec condition |

**Symptoms:** Under asymmetric codec selection conditions, the HSI cleared the call unnecessarily.

**Resolution:** This has now been resolved.

| Identifier | Version | Severity | Description                                      |
|------------|---------|----------|--------------------------------------------------|
| CSCsh16955 | 4.2     | 3        | Asymmetric codec handling results in memory leak |

**Symptoms:** There was a small memory leak for asymmetric codec calls when HSI was negotiated as slave in the MSD procedure.

**Resolution:** The leak is now fixed.

| Identifier | Version | Severity | Description                                                 |
|------------|---------|----------|-------------------------------------------------------------|
| CSCsg41439 | 4.2     | 3        | Calls not properly released from HSI cause them to be hung. |

**Symptoms:** Under some extreme conditions, HSI hangs several calls per day after the PGW and gatekeeper show them as released. The response to the **rtrv-ne-health** command shows “Current in progress calls” increasing by several calls per day over the active calls on the network.

**Resolution:** This problem is fixed.

| Identifier | Version | Severity | Description                                                        |
|------------|---------|----------|--------------------------------------------------------------------|
| CSCsg40768 | 4.2     | 3        | Need mechanism to change log timestamps to reflect HSI system time |

**Symptoms:** A mechanism is required to change log timestamps to reflect HSI system time. On the Cisco HSI, events are logged in files in the directory `/opt/GoldWing/4.2/var/log` and timestamped according to GMT time, not system time.

**Resolution:** Now, optionally, you can configure the HSI to use system time. For backward-compatibility, by default, this feature is disabled. To configure the HSI to use system time, set the parameter `UseSysTimeEnabled` to any text value (for example, “true”), as shown in the following example:

```
prov-add:name=sys_config_static, UseSysTimeEnabled=true
```

| Identifier | Version | Severity | Description                                                                                       |
|------------|---------|----------|---------------------------------------------------------------------------------------------------|
| CSCsh48356 | 4.1 P7  | 3        | Issuing the MML command <b>rtrv-ne-health</b> during call processing caused the HSI to core dump. |

**Symptoms:** Issuing the MML command **rtrv-ne-health** caused some synchronous problems.

**Resolution:** This problem is fixed.

| Identifier | Version | Severity | Description                                             |
|------------|---------|----------|---------------------------------------------------------|
| CSCsb16339 | 4.1     | 3        | HSI forwards incorrect source IP address for screening. |

**Symptoms:** The IP address passed to the PGW as the source address is the `sourceCallSignalAddress` from within the setup message. However, the address should be the address from which the incoming H225 setup message was sent (that is, in the IP header).

**Resolution:** Now, optionally, you can configure the HSI to use the appropriate incoming IP address from the IP header. To configure the HSI to use the appropriate incoming IP address, set the parameter `UseRealSourceIP` to any text value (for example, “true”) as shown in the following command:

```
prov-add:name=sys_config_dynamic, UseRealSourceIP=true
```

For backward-compatibility, by default, this feature is disabled. To disable the feature, delete the parameter `UseRealSourceIP`, or set it to blank (“”).

```
prov-ed:name=sys_config_dynamic, UseRealSourceIP=""
```

| Identifier | Version | Severity | Description                                            |
|------------|---------|----------|--------------------------------------------------------|
| CSCsh51478 | 4.2     | 6        | H225PavoSupported overrides Q931RedirSupported setting |

**Symptoms:** Previously, the HSI did not support CCM PAVO (redirecting number) and Q931 redirecting number simultaneously.

**Resolution:** Now you can set the parameters H225PavoSupported and Q931RedirSupported to “true” to enable them.

## HSI 4.2 Patch 10 Information

This section includes information on:

- New feature introduced in Patch 10
- Caveats Resolved by Cisco HSI 4.2 Patch 10

## New Feature Introduced in HSI 4.2 Patch 10

This section describes the new feature, ISDN Subaddress Support, which is introduced in HSI 4.2 Patch 10.

### ISDN Subaddress Support

Prior to Cisco HSI 4.2 Patch 10, the HSI did not map Q.931 ISDN calling-party and called-party subaddress information from H.323 to EISUP. ISDN Subaddress support enables the Cisco HSI to use the Q.931 ISDN calling-party or called-party subaddress field.



#### Note

This feature is associated with caveat identified as CSCsd76148.

When the Cisco HSI receives from the H.323 network a SETUP message that includes the calling or called-party subaddress information element, the HSI can transfer the information transparently in the Access Transport parameter of the E-ISUP IAM message to the Cisco PGW.

The Calling-party subaddress information element identifies a subaddress associated with the origin of a call. (For the definition of subaddress, see Recommendation ITU-T I.330.)

The Called-party subaddress information element identifies the subaddress of the called party of the call. The network does not interpret this information. (For the definition of subaddress, see Recommendation ITU-T I.330.)

### ISDN Subaddress Support with SS7, PRI, QSIG Messaging

The Q.931called-party or calling-party subaddress fields are contained in SS7 messages within the Access Transport container.

If the incoming protocol is PRI/QSIG, the Cisco PGW2200 stores the subaddress fields internally for population of the Access Transport container.

For H.323 originated or terminated calls, the PGW 2200 transmits or receives this data over EISUP using an EISUP Access Transport parameter contained within the EISUP IAM message. The HSI encodes or decodes H.323 SETUP messages, which contain the called-party or calling-party subaddress parameters (carried in Q.931 format).

### Enabling ISDN Subaddress Support on the HSI

For enabling ISDN Subaddress support, the Cisco HSI Release 4.2 Patch 10 includes the Dynamic Configuration parameters CgSubAddr and CdSubAddr. If these parameters are set to any text value (for example, “enabled” or “true”), the feature is enabled. If the parameters are not present or set to blank (“”), the feature is disabled.

By default this feature is disabled (to maintain backward compatibility).

#### Examples

To enable the feature (in either direction or both directions), configure the following parameters to any text value (for example, “enabled”)

To enable PSTN to H.323 calls, enter the following MML command:

```
prov-add:name=sys_config_dynamic, SubAddrOut=enabled
```

To enable H.323 to PSTN calls, enter the following MML command:

```
prov-add:name=sys_config_dynamic, SubAddrIn=enabled
```

To disable the feature, delete the configuration of the parameters or set them to blank (for example, “”):

```
prov-ed:name=sys_config_dynamic, SubAddrOut=""
prov-ed:name=sys_config_dynamic, SubAddrIn=""
```

## Caveats Resolved by Cisco HSI 4.2 Patch 10

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 10:

| Identifier | Version | Severity | Description                           |
|------------|---------|----------|---------------------------------------|
| CSCsg68889 | 4.2     | 3        | HSI 4.2 P9 core in CCCall::canProcess |

**Symptoms:** HSI maintained that there was a call instance (after the timer expired) when the call instance already had cleared.

**Resolution:** The HSI is modified to correctly handle internal timers, so that they are correctly cancelled. This eliminates the possibility that the timer will invoke an event into the internal call instance after the call has already cleared.

| Identifier | Version | Severity | Description                                                                |
|------------|---------|----------|----------------------------------------------------------------------------|
| CSCsa75479 | 4.2     | 3        | HSI core while processing the command <b>rtrv-config:sys_config_static</b> |

**Symptoms:** The HSI became unstable while processing the command **rtrv-config** for a configuration that included an extensive number of entries.

**Resolution:** The HSI can now manage larger configurations.

| Identifier | Version | Severity | Description                                            |
|------------|---------|----------|--------------------------------------------------------|
| CSCsg94775 | 4.2     | 3        | Progress indicator 8 in H.323 Alerting message support |

**Symptoms:** Previously, the HSI only sent a progress indicator in the H.323 alerting message if one had arrived from the PSTN network. Now the HSI can be configured (optionally) to send a progress indicator value 8 in H.323 alerting messages, if the PSTN network has not sent a progress indicator value.

**Resolution:** To enable the feature, configure the following parameter needs to any text value (for example, "enabled"):

```
prov-add:name=sys_config_dynamic, InjectPI8InAlerting=enabled
```

To disable the feature, delete the parameter or set it to blank (""):

```
prov-ed:name=sys_config_dynamic, InjectPI8InAlerting=""
```

| Identifier | Version | Severity | Description                                              |
|------------|---------|----------|----------------------------------------------------------|
| CSCse87849 | 4.2     | 3        | Do not send h245Address early if SDP from PGW is delayed |

**Symptoms:** In certain cases, the HSI may attempt to transmit an h245Address earlier than the arrival of SDP (codec information) from the PGW.



**Note**

This issue was resolved in an earlier patch; however, now it has been placed under configuration control.

**Resolution:** To prevent this, configure the following parameter:

```
prov-add:name=sys_config_dynamic, HandleDelayedSDPAfterCallProc=enabled
```

To send the h245Address even if no SDP has arrived, delete the configuration or set the parameter to blank (""):

```
prov-ed:name=sys_config_dynamic, HandleDelayedSDPAfterCallProc=""
```

## HSI 4.2 Patch 9 Information

This section includes information on:

- Caveats Resolved by Cisco HSI 4.2 Patch 9

### Caveats Resolved by Cisco HSI 4.2 Patch 9

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 9:

| Identifier | Version | Severity | Description                                         |
|------------|---------|----------|-----------------------------------------------------|
| CSCsf25536 | 4.2     | 3        | Enable Fast start on unmatched packetization values |

**Symptoms:** Now, optionally, the HSI can be configured to perform fast start upon codec type match without codec packetization periods matching. Prior to this feature, the HSI defaulted to slow start if the packetization periods did not match.

**Resolution:** Now, for example, the HSI can be configured to a 20msec packetization period, and the remote H.323 gateway can be configured for 10msec, and the call can complete as a fast start call.

Note that unless the MGCP gateway and the remote H.323 gateways are capable of operating at these un-negotiated packetization periods, there is a risk that there may be no speech path present. As a result, Cisco does not recommend enabling this feature for anything other than a temporary workaround for third-party H.323 gateways until those gateways can be configured to match the HSI's configured packetization period values.

By default, this feature is disabled for backward-compatibility.

To enable the feature, configure the following parameter to any text value (for example, "enabled"):

```
prov-add:name=sys_config_dynamic, FSIgnoreFraming=enabled
```

To disable the feature, delete the parameter or set it to blank (""):

```
prov-ed:name=sys_config_dynamic, FSIgnoreFraming=""
```

| Identifier | Version | Severity | Description                                 |
|------------|---------|----------|---------------------------------------------|
| CSCsg03894 | 4.2     | 3        | Overlap call sendingComplete IE was ignored |

**Symptoms:** The HSI was not interpreting the H225 info message with the Sending Complete IE correctly.

**Resolution:** The HSI now correctly passes the sendingComplete information from H.323 to the PSTN.

| Identifier | Version | Severity | Description                                                          |
|------------|---------|----------|----------------------------------------------------------------------|
| CSCsg21415 | 4.2     | 3        | For H.323->PSTN calls, BearerCap requires mapping to UserServiceInfo |

**Symptoms:** For certain networks, the HSI must map the bearerCap IE into the ISUP user service information parameter as well as the TMR parameter.

**Resolution:** Now this capability can be enabled optionally. To enable the feature, configure the following parameter to any text value (for example, “enabled”):

```
prov-add:name=sys_config_dynamic, MapBearerCapToUsi=enabled
```

To disable the feature, delete the parameter or set it to blank (“”):

```
prov-ed:name=sys_config_dynamic, MapBearerCapToUsi=""
```

| Identifier | Version | Severity | Description                    |
|------------|---------|----------|--------------------------------|
| CSCsd84533 | 4.2     | 3        | Suppress faststart during ECS. |

**Symptoms:** When the HSI performs a H.245 empty capabilities procedure, it must suppress fast-start information in messages.

**Resolution:** The HSI now suppresses fast start in callProceeding and connect messages when it is performing an H.245 empty capabilities procedure.

| Identifier | Version | Severity | Description                     |
|------------|---------|----------|---------------------------------|
| CSCsg41439 | 4.2     | 3        | Calls in setup count inaccurate |

**Symptoms:** Under certain circumstances, it was possible for the HSI to operate as if cleared calls were still in setup. This caused an inaccurate count in response to the MML **rtrv-ne-health** command.

**Resolution:** The HSI now counts calls accurately.

| Identifier | Version | Severity | Description                        |
|------------|---------|----------|------------------------------------|
| CSCsg62531 | 4.2     | 2        | HSI 4.2 Patch 8 introduced a core. |

**Symptoms:** HSI 4.2 Patch 8 introduced a build problem.

**Resolution:** The problem introduced in HSI 4.2 Patch 8 has been eliminated.

## HSI 4.2 Patch 8 Information

This section includes information on:

- Caveats Resolved by Cisco HSI 4.2 Patch 8

### Caveats Resolved by Cisco HSI 4.2 Patch 8

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 8:

| Identifier | Version | Severity | Description                                                     |
|------------|---------|----------|-----------------------------------------------------------------|
| CSCsg07226 | 4.2     | 3        | Abnormal behavior in H245 negotiation—H245 address was deleted. |

**Symptoms:** H.245 negotiation occurred abnormally. The H.245 address was deleted.

**Resolution:** The HSI software was modified to ensure that H.245 negotiation operates properly.

## HSI 4.2 Patch 7 Information

This section includes information on:

- Caveats Resolved by Cisco HSI 4.2 Patch 7

### Caveats Resolved by Cisco HSI 4.2 Patch 7

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 7:

| Identifier | Version | Severity | Description                                                                     |
|------------|---------|----------|---------------------------------------------------------------------------------|
| CSCse87849 | 4.2     | 3        | HSI CallProc should not contain an h245 address if SDP is delayed from the PGW. |

**Symptoms:** G726r32 calls disconnected after one ring and G726r32 was not exchanged correctly in the terminal capability exchange.

**Condition:** This problem occurred during the interoperation of the following elements:

PGW/HSI <—> 2611 H323 CPE

**Workaround:** Set SdpXmitToH323Trigger to 0 (zero) on the PGW trunk group properties.

| Identifier | Version | Severity | Description                           |
|------------|---------|----------|---------------------------------------|
| CSCse53159 | 4.1     | 3        | HSI calls were blocked in Setup phase |

**Symptoms:** Calls were blocked in setup state on HSI.

**Condition:** High call rates can cause this problem to occur

**Workaround:** Perform a controlled restart of the HSI software at certain periods.



**Caution**

If the HSI is not restarted, the Active calls counter could reach the upper limit and the system can enter the MCL congestion state.

## HSI 4.2 Patch 6 Information

This section includes information on:

- Caveats Resolved by Cisco HSI 4.2 Patch 6

### Caveats Resolved by Cisco HSI 4.2 Patch 6

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 6:

| Identifier | Version | Severity | Description                                                                                       |
|------------|---------|----------|---------------------------------------------------------------------------------------------------|
| CSCse17090 | 4.2     | 3        | An incorrect cause value for PSTN to H323 calls was diverted to mobile, which rejected the calls. |

**Symptoms:** PSTN to H.323 calls were improperly rejected due to the generation of an incorrect cause value.

**Resolution:** To enable the HSI to wait for the correct release cause value from Cisco CallManager, the parameter `OutgoingCallUnansweredRelWait` must to be configured to any text value, for example, “enabled,” as shown in the following MML command example:

```
prov-add:name=sys_config_static, OutgoingCallUnansweredRelWait="enabled"
prov-cpy
restart-softw
```

To disable, the entry needs to be deleted or set to blank (“”) and the HSI restarted.

| Identifier | Version | Severity | Description                                          |
|------------|---------|----------|------------------------------------------------------|
| CSCse14353 | 4.2     | 3        | HSI should allow for Setup Display IE to be dropped. |

**Symptoms:** If the incoming EISUP IAM contained a Display Parameter and CLIR, the resulting switch had problems hiding the originator number.

**Resolution:** The HSI can now be optionally configured to disable the incoming IAM Display parameter from being sent in the H323 Setup message. To disable the transiting of the display parameter, configure the `IamToSetupDisplayDisabled` parameter to any text value, for example, "true," as shown in the following MML command example:

```
prov-add:name=sys_config_dynamic, IamToSetupDisplayDisabled="true"
```

To re-enable, the entry needs to be deleted or set to blank ("").

| Identifier | Version | Severity | Description                                                                                                             |
|------------|---------|----------|-------------------------------------------------------------------------------------------------------------------------|
| CSCsd04453 | 4.2     | 3        | HSI does not handle redirecting number if it is modified in PGW on Cisco CallManager to PGW to Cisco CallManager calls. |

**Symptoms:** The CCM sends a redirected call to the HSI, through the PGW, back down through the HSI again to the CCM. The Redirecting Number is transferred successfully when the PGW does not modify it.

If the PGW modifies the Redirecting Number, the IAM from the PGW to the HSI correctly shows the modified Redirecting Number but the HSI substitutes the original un-modified Redirecting Number into the Setup to the terminating CCM.

**Resolution:** The HSI software is modified to display the correct number.

| Identifier | Version  | Severity | Description                                 |
|------------|----------|----------|---------------------------------------------|
| CSCsb67321 | 4.1, 4.1 | 3        | HSI need to work with undotted Gxxx codecs. |

**Symptoms:** Because to the IANA assigned types do not use dot notation (<http://www.iana.org/assignments/rtp-parameters>), 729b/8000 calls failed.

**Resolution:** The HSI now correctly handles G729a, G729b and G726 codecs.

| Identifier | Version | Severity | Description                                                               |
|------------|---------|----------|---------------------------------------------------------------------------|
| CSCsc15518 | 4.2     | 3        | The HSI Display name is incorrectly replaced by the calling-party number. |

**Symptoms:** For a QSIG->PGW->EISUP->HSI->Cisco CallManager call, the HSI replaced the display name in the incoming EISUP IAM message to CallingID, which caused the wrong display name to appear on the CCM phone.

**Resolution:** The HSI software is modified so that the correct name is displayed on the CCM phone.

| Identifier | Version | Severity | Description                                                                                              |
|------------|---------|----------|----------------------------------------------------------------------------------------------------------|
| CSCsd33403 | 4.2     | 3        | The HSI restarted when the maximum-number-of-calls limit was exceeded. Existing calls were disconnected. |

**Symptoms:** The HSI had been limited to an incorrect number of calls.

**Resolution:** The HSI call limit is now established correctly.

| Identifier | Version | Severity | Description                                     |
|------------|---------|----------|-------------------------------------------------|
| CSCsd68014 | 4.2     | 3        | HSI Bearer Cap changed from 0x8890 to 0x8890A0. |

**Symptoms:** For a call that required a setting of “64k unrestricted”, the HSI added a spurious A0 at the end of the Bearer Capability information element.

**Resolution:** For 64k restricted/unrestricted digital information calls, the HSI now can be configured (optionally) to prevent octet 5 in the bearer capability for PSTN→H323 calls. To disable octet 5, issue the following MML commands:

```
prov-add:name=sys_config_static, SuppressBCapOctet5For64k="enabled"
prov-cpy
restart-softw
```

To re-enable octet 5, delete the entry that configures the SuppressBCapOctet5or64k parameter, or set the parameter to blank (“”) and then restart the HSI.

| Identifier | Version | Severity | Description                                                 |
|------------|---------|----------|-------------------------------------------------------------|
| CSCsd76587 | 4.2     | 3        | HSI removes the first two digits of the redirecting number. |

**Symptoms:** The HSI incorrectly skipped the first two digits of the redirecting number if no octet 3a or 3b existed in the redirecting number field.

**Resolution:** The HSI software is modified to process the redirecting number field correctly.

| Identifier | Version | Severity | Description                                                                   |
|------------|---------|----------|-------------------------------------------------------------------------------|
| CSCse22372 | 4.2     | 3        | When the HSI received an ECS invocation from the PGW, it returned ECS reject. |

**Symptoms:** The HSI responded with a rejection message when it received an ECS invocation from the PGW.

**Resolution:** The HSI software is modified to correctly process an ECS invocation from the PGW.

## HSI 4.2 Patch 5 Information

This section includes information on:

- Caveats Resolved by Cisco HSI 4.2 Patch 5

### Caveats Resolved by Cisco HSI 4.2 Patch 5

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 5:

| Identifier | Version | Severity | Description                                           |
|------------|---------|----------|-------------------------------------------------------|
| CSCsb78348 | 4.2     | 2        | HSI 4.2 generated a core file while processing calls. |

**Symptoms:** The HSI 4.2 software generated a core file with malloc\_unlocked, while processing calls.

**Resolution:** The HSI internal timer has been modified to prevent this problem.

| Identifier | Version | Severity | Description                                               |
|------------|---------|----------|-----------------------------------------------------------|
| CSCsc89081 | 4.2     | 3        | H.245 channel clearing occasionally led to call failures. |

**Symptoms:** While handling traffic, occasionally an H.245 logical channel would clear. When this occurred, the HSI attempted to open a new channel, which created a circular loop.

**Resolution:** The HSI is modified so that, in response to this particular channel release condition, the HSI does not reopen a channel incorrectly, which allows the call to clear gracefully.

## HSI 4.2 Patch 4 Information

This section includes information on:

- New Feature
- Caveats Resolved by Cisco HSI 4.2 Patch 4

### New Feature

Support for G.726 and G.Clear is present in Cisco HSI 4.2 Patch 4.

See Chapter 3: Provisioning the Cisco HSI, in the *Cisco H.323 Signaling Interface User Guide, Release 4.2* for information about configuring G.726 and G.Clear.

### Caveats Resolved by Cisco HSI 4.2 Patch 4

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 4:

| Identifier | Version | Severity | Description                                                      |
|------------|---------|----------|------------------------------------------------------------------|
| CSCsb84898 | 4.2     | 3        | Request to integrate support for G.726 and G.Clear into HSI 4.2. |

**Symptoms:** Add support for G.726 and G.Clear to HSI 4.2.

**Resolution:** HSI 4.2 Patch 4 supports G.726 and G.Clear.

| Identifier | Version  | Severity | Description                                                                    |
|------------|----------|----------|--------------------------------------------------------------------------------|
| CSCsc21256 | 4.2, 4.1 | 3        | HSI occasionally gets confused about which PGW is active and which is standby. |

**Symptoms:** During link failure the HSI occasionally associated with the non-active PGW.

**Resolution:** The HSI is modified so that it properly distinguishes between the active and standby PGWs.

| Identifier | Version  | Severity | Description                                                    |
|------------|----------|----------|----------------------------------------------------------------|
| CSCsc21279 | 4.2, 4.1 | 3        | HSI Pavo feature causes memory corruption with some endpoints. |

**Symptoms:** Memory corruption occurred if certain endpoints made non-Pavo calls when H225PavoSupported was configured on the HSI.

**Resolution:** The HSI now correctly handles these calls.

## HSI 4.2 Patch 3 Information

This section include information on:

- Caveats resolved by Cisco HSI 4.2 Patch 3

### Caveats Resolved by Cisco HSI 4.2 Patch 3

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 3:

| Identifier | Version | Severity | Description                                                          |
|------------|---------|----------|----------------------------------------------------------------------|
| CSCsb79583 | 4.2     | 2        | HSI rejected a call when a session ID 0 was received for a fax call. |

**Symptoms:** The Cisco HSI rejected a call when it received a session ID of 0 (zero) for a fax call.

**Resolution:** The HSI is modified to manage this scenario correctly.

## HSI 4.2 Patch 2 Information

This section include information on:

- Caveats resolved by Cisco HSI 4.2 Patch 2

### Caveats Resolved by Cisco HSI 4.2 Patch 2

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2 Patch 2:

| Identifier | Version | Severity | Description                            |
|------------|---------|----------|----------------------------------------|
| CSCsb47265 | 4.2     | 3        | Cause location is not mapped properly. |

**Symptoms:** A location cause code was not being passed through transparently.

**Resolution:** The HSI software has been modified so that for H323->PSTN releaseComplete messages, the cause location is correctly mapped into the EISUP cause location value.

| Identifier | Version | Severity | Description                                                   |
|------------|---------|----------|---------------------------------------------------------------|
| CSCsa84206 | 4.2     | 3        | HSI does not wait for CLCack before it proceeds with T38 fax. |

**Symptoms:** When a T38 fax call is made from CallManager via the HSI to the PGW, the fax call is not always successfully set up as T.38.

**Resolution:** The HSI software has been modified so that it correctly establishes a fax call as T.38.

| Identifier | Version | Severity | Description           |
|------------|---------|----------|-----------------------|
| CSCsa66293 | 4.1     | 6        | Handle codec mismatch |

**Symptoms:** If an incorrect packetization period was negotiated, the Cisco HSI waited for the Cisco PGW 2200 to clear the call (after 10 seconds).

**Resolution:** The HSI software has been enhanced to enable the clearing an instance of incorrect packetization immediately.

The following provisioning is required to enable this functionality:

```
prov-add:name=sys_config_dynamic, RelCallOnFailedChanNegotiation="enabled"
```

To disable this functionality, delete the entry or set the value to "".

| Identifier | Version  | Severity | Description                                    |
|------------|----------|----------|------------------------------------------------|
| CSCuk55640 | 4.1, 4.2 | 3        | ACF destinationInfo needs to be mapped to cdpn |

**Symptoms:** The HSI did not allow the gatekeeper to modify the called party number (for H323-originated calls).

**Resolution:** The HSI software has been modified to enable it to read the contents of the ACF destinationInfo field and use this as the called party number.

The following provisioning is required to enable this functionality:

```
prov-add:name=sys_config_static,UseIncomingGkDestInfo="enabled"
```

You must restart the HSI to enable this functionality. To disable this functionality, delete the entry or set the value to "", and restart the HSI.

| Identifier | Version  | Severity | Description                              |
|------------|----------|----------|------------------------------------------|
| CSCuk54922 | 4.2, 4.2 | 3        | H.225 (Q.931) Redirecting Number support |

**Symptoms:** The HSI lacked sufficient support for Redirecting Number.

**Resolution:** The HSI software has been modified to support Redirecting Number mapping.

The following provisioning is required to enable this functionality:

```
prov-add:name=sys_config_static,Q931RedirSupported="enabled"
```

You must restart the HSI to enable this functionality.

To disable this functionality, delete the entry or set the value to "". and restart the HSI.

| Identifier | Version     | Severity | Description                                            |
|------------|-------------|----------|--------------------------------------------------------|
| CSCsa63575 | 4.1 P7, 4.2 | 3        | Two OpenLogicalChannel messages were sent incorrectly. |

**Symptoms:** This problem was observed when both of the following actions occurred:

1. An H.323 client/gateway sent to the Cisco HSI a terminalCapability set message that contained more than one of the codecs that matched codecs configured for the HSI.
2. The H323 client/gateway sent an OLCAck before sending an OLC.

**Resolution:** The Cisco HSI has been modified to ensure that only one OLC message is sent.

# HSI 4.2 Patch 1 Information

This section include information on:

- Caveats resolved by Cisco HSI 4.2 Patch 1

## Caveats Resolved by Cisco HSI 4.2 Patch 1

The following anomalies identified in the operation of the Cisco HSI are resolved by HSI 4.2.

| Identifier | Version | Severity | Description                           |
|------------|---------|----------|---------------------------------------|
| CSCee86430 | 4.1     | 3        | HSI Packetization Period Enhancement. |

**Symptoms:** Enhancement request.

**Resolution:** The requested enhancement has been added to the Cisco HSI.

Refer to the section “Adjustable Packetization” in Chapter 3: Provisioning the Cisco HSI in the *Cisco H.323 Signaling Interface User Guide* for HSI release 4.2.

| Identifier | Version | Severity | Description                                             |
|------------|---------|----------|---------------------------------------------------------|
| CSCuk52948 | 4.1     | 2        | Stack resource leak in call hold/call resume call-flow. |

**Symptoms:** The call hold/call resume call-flow causes a small stack resource leak.

**Resolution:** The HSI has been modified to prevent a stack resource leak.

| Identifier | Version | Severity | Description                                                   |
|------------|---------|----------|---------------------------------------------------------------|
| CSCef66652 | 4.1     | 3        | HSI inserts terminal alias if Cgn is with held in call setup. |

**Symptoms:** If the calling party number is withheld in a EISUP IAM message sent to the HSI, it then incorrectly inserts its own Terminal alias before forwarding. This HSI terminal alias is then displayed on the remote H323 client.

**Resolution:** The HSI has been modified so that it does not insert an incorrect terminal alias in messages forwarded to a remote client.

| Identifier | Version | Severity | Description                                           |
|------------|---------|----------|-------------------------------------------------------|
| CSCuk51925 | 4.1 P2  | 3        | HSI does not handle Notification with SDP and ConnNum |

**Symptoms:** HSI does not handle a notification message containing SDP and connected number correctly, if it is in state H323StFSCconnecting. It should not call handleNotify. It should handle the SDP, and drop the connected number.

**Resolution:** The HSI has been modified so that, in response to the circumstances described, it does not call handleNotify.

| Identifier | Version | Severity | Description                              |
|------------|---------|----------|------------------------------------------|
| CSCuk53362 | 4.1     | 3        | Enable WATCHDOG stack logging on the HSI |

**Symptoms:** The HSI currently does not have the WATCHDOG stack logging available when the radlog::start command is issued. This log is important in determining the available stack resources.

**Resolution:** WATCHDOG stack logging is now available when the radlog::start command is issued.

| Identifier | Version | Severity | Description                                              |
|------------|---------|----------|----------------------------------------------------------|
| CSCsa62963 | 4.1     | 3        | Resource leak in fast overlap and fast release scenarios |

**Symptoms:** Due to an unknown reason, the HSI core dumped during low call volume, on code that is always exercised.

**Resolution:** The HSI has been modified to prevent resource leaks in the fast overlap and fast release conditions.

## 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](http://www.cisco.com/public/countries_languages.shtml)

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You can find instructions for ordering documentation at this URL:

[http://www.cisco.com/univercd/cc/td/doc/es\\_inpk/pdi.htm](http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm)

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<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.

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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:

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- 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:

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- *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:

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- *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:

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- *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>

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This document is to be used in conjunction with the documents listed in the “Related Documentation” section.

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