



Installing and Configuring Cisco HSI Software

Introduction

This chapter contains instructions for installing and configuring the Cisco H.323 Signaling Interface (HSI). This chapter contains the following sections:

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Hardware and Software Requirements

The hardware requirements for the Cisco HSI are documented in the *Cisco Media Gateway Controller Hardware Installation Guide*. See the section “Cisco MGC Host Platforms” in Chapter 1.

The software requirements for the Cisco HSI are documented in the *Cisco Media Gateway Controller Software Release 9 Installation and Configuration Guide*.

Installing the Operating System

The appropriate operating system must be installed before you install the Cisco HSI. Instructions for installing the operating system on the appropriate platform are in the *Cisco Media Gateway Controller Software Release 9 Installation and Configuration Guide*, located at the following URL:

<http://www.cisco.com/univercd/cc/td/doc/product/access/sc/re19/swinstl/index.htm>

After completing the operating system installation, return to this document for Cisco HSI installation procedures.

Installing the Cisco HSI

This section provides step-by-step instructions for installing the Cisco HSI.

Before You Start

Complete the preinstallation tasks listed in [Table 2-1](#) before installing the Cisco HSI. Use the checklist to ensure that each task is completed. Detailed instructions for completing some tasks follow the checklist.

Table 2-1 Preinstallation Tasks Checklist

Check	Preinstallation Task
	Ensure that the required operating system is installed on the appropriate hardware platform.
	Configure group and user names, as described in the “Configuring Groups and Users” section on page 2-2.
	Gather the information listed in Table 2-2 and note it in the table for reference during the installation.
	Have your company internal support information and Cisco support contact information readily available so you can get help with the installation if needed. If you have questions or need assistance, see the “Obtaining Technical Assistance” section on page xviii.

Configuring Groups and Users

You must configure groups and users for the Cisco HSI on each host server. A user must be a member of the “mgcgrp” group to use certain Cisco HSI functions, such as Man-Machine Language (MML).

To configure groups and users, complete the following steps:

-
- Step 1** Log in as root.
- Step 2** At the # prompt, enter the following commands:
- ```
mkdir -p /export/home/users/mgcur
mkdir /export/BUILDS
mkdir /export/PATCHES
cd /export/home/users
groupadd -g 20000 mgcgrp
useradd -u 20001 -g 20000 -d /export/home/users/mgcur -s /bin/csh mgcur
chown mgcur:mgcgrp mgcur
passwd mgcur <type password twice>
```
- (Enter and confirm password)
- Step 3** Log out, then log in as **user mgcur**, using the password you applied in Step 2.
- Step 4** Verify that you are in directory `/export/home/users/mgcur` by entering the following command:
- ```
# pwd
```

- Step 5** Enter the following command:
vi .cshrc
- Step 6** Enter the vi insert mode by entering the following command:
i (enter insert mode)
- Step 7** Enter the following text on the first line:
source /opt/GoldWing/currentPM/local/setup.gw.csh
- Step 8** Save the file and quit vi by entering the following commands:
[Esc] (exit insert mode)
:wq (write file and quit)
- Step 9** Enter the following command:
chmod 777 .cshrc

Cisco HSI Installation Information

Gather the information listed in [Table 2-2](#) before you begin the Cisco HSI installation. Use the Notes column in this table to record the information. Several steps in the installation procedure require you to provide this information. Refer to this table as you proceed through the Cisco HSI installation steps.

Table 2-2 Cisco HSI Installation Information

Required Information	Notes
Base directory path	Note We strongly recommend that you accept the default base directory path.
Cisco HSI user name	Default: mgcusr
Cisco HSI group name	Default: mgcgrp
Gatekeeper IP address	
Gatekeeper port	Default: 1719
Gateway prefix	
Terminal alias	
Gatekeeper ID	Note This ID must match the entry configured in the gatekeeper.
E-ISUP host port	Note Typically 8003, but this entry must match the peer port setting of the IPLNK object in the PGW 2200 configuration.
VSC1 ¹ name (either the DNS ² host name, if DNS is configured, or the IP address of the Cisco PGW 2200 ³)	
VSC1 port	Note Typically 8003, but this entry must match the peer port setting of the IPLNK object in the PGW 2200 configuration.
Installation node ID	

Table 2-2 Cisco HSI Installation Information (continued)

Required Information	Notes
Hardware platform	
Installation location	

1. VSC = virtual switch controller
2. DNS = domain name system
3. PGW = PSTN Gateway

The Cisco HSI application is distributed as a tar file (with filename GoldWing-xxxx.tar in which xxxx is the version ID, for example, GoldWing-4.1.tar) or as a CD-ROM.

The default installation directory is /opt/GoldWing. We recommend that you install the software at the default location. More than one version of the software can exist within subdirectories, for example /opt/GoldWing/4.1

Links point to the currently active version of the Cisco HSI application, as follows:

- currentPM points to the current version to use for all software except the call processing application.
- currentGW points to the version that may not be the latest version of the call processing application. (GWmain)

Table 2-3 shows the subdirectories of the /opt/GoldWing/currentPM directory.

Table 2-3 CurrentPM Subdirectories

Subdirectory	Contents
./bin	All compiled executables.
./local	All scripts.
./etc	Base configuration files.
./lib	Shared libraries required by executables.
./toolkit	Toolkit files.
./var	Volatile directory that contains file locks and so on.
./var/log	Default log directory.
./var/prov	Provision system writes provisioning config files here.
./var/trace	Trace logs are written here.

Exported provisioning files are stored in /opt/GoldWing/export.

Installing Cisco HSI

This section provides step-by-step instructions for installing a single Cisco HSI for use with a simplex PGW 2200 configuration (a configuration with one Cisco PGW 2200 host). To install a dual Cisco HSI for use with a redundant PGW 2200 configuration (a configuration with two Cisco PGW 2200 hosts), complete the steps in this section and then proceed to the [“Installing Multiple Cisco HSIs in a Redundant PGW 2200 Configuration”](#) section on page 2-10.

**Note**

In the following installation procedure, the package name is OTTgw000 and the version of the software is 4.1; the /export/BUILDS directory is used to install the system software.

To install the Cisco HSI, complete the following steps:

- Step 1** Verify that the operating system is installed. See the [“Installing the Operating System”](#) section on page 2-1 for more information.
- Step 2** Login as root.
- Step 3** Issue the command: **cd /export**
- Step 4** The initial step for downloading the HSI software depends upon the media from which you obtain the software:
- If you download the software from a server, it will be in a tar file. Issue the following command:

```
# tar xvf GoldWing-4.1.tar
```

This command displays the following text:

```
x ./4.1/APPLICATIONS, 0 bytes, 0 tape blocks
x ./4.1/APPLICATIONS/OTTgw000.pkg, 38954496 bytes, 76083 tape blocks
x ./4.1/install.sh, 5223 bytes, 11 tape blocks
x ./4.1/uninstall.sh, 3053 bytes, 6 tape blocks
```

**Note**

The byte and block counts for your installation may be different from those provided in the preceding example.

- If you download the software from a CD-ROM, insert the Cisco HSI 4.1 CD-ROM into the drive and issue the following commands:

```
# mkdir BUILDS/4.1
# cp -r /cdrom/hsi_4.1* /* /export/BUILDS/4.1
```

Step 5 At the # prompt, enter the following commands:

```
# cd /export/BUILDS/4.1
# ./install.sh
```

The following text displays:

```
Processing package instance <OTTgw000> from </export/BUILDS/4.1/APPLICATIONS/OTTgw000.pkg>
GoldWing H323 Adjunct Processor V0.1.6
(sparc) 4.1
Copyright (c) 2001 Cisco Systems, Ltd.
All Rights Reserved
This product is protected by copyright and distributed under
licenses restricting copying, distribution and decompilation.
Enter GoldWing base directory path (default /opt/GoldWing) [?,q]
```

Step 6 Press **Enter** to select the default HSI base directory path.



Caution We strongly recommend that you select the default base directory path. Operational issues might arise if other directories are used.

The following text displays:

```
Enter base directory path (default /opt/GoldWing/4.1) [?,q]
```

Step 7 Press **Enter** to select the default base directory path. The following text displays:

```
Enter GoldWing user name
```

Step 8 Type the Cisco HSI user name **mgcusr** and press **Enter** (the default user name is cisco). The following text displays:

```
Enter GoldWing group name
```

Step 9 Type the Cisco HSI group name **mgcgrp** and press **Enter** (the default user group name is sysadmin). The following text displays:

```
Enter GateKeeper IP Address
```

Step 10 Type the gatekeeper IP address (see [Table 2-2](#)) and press **Enter**. The following text displays:

```
Enter GateKeeper Port
```

Step 11 Type the gatekeeper port (see [Table 2-2](#)) and press **Enter** (the default port is 1719). The following text displays:

```
Enter GateWay Prefix
```

Step 12 Type the gateway prefix (see [Table 2-2](#)) and press **Enter**.



Note The gateway prefix is the prefix that, when dialed from the H.323 network, causes the Cisco HSI to route the call over E-ISUP to the PGW 2200.

The following text displays:

```
Enter Terminal Alias
```

Step 13 Type the terminal alias (see [Table 2-2](#)) and press **Enter**. The following text displays:

```
Enter GateKeeper Id
```

Step 14 Type the gatekeeper ID (see [Table 2-2](#)) and press **Enter**.



Note The gatekeeper ID must match the entry configured in the gatekeeper.

The following text displays:

```
Enter E-ISUP Host Port
```

Step 15 Type the E-ISUP host port (see [Table 2-2](#)) and press **Enter**.



Note The E-ISUP host port is typically 8003, but it must match the peer port setting of the IPLNK object in the PGW 2200 configuration.

The following text displays:

```
Enter VSC1 Name
```

Step 16 Type the VSC1 name and press **Enter**.



Note The VSCI name is either the DNS host name (if DNS is configured) or the IP address of the PGW 2200.

The following text displays:

```
Enter VSC1 Port
```

Step 17 Type the VSC1 port number (see [Table 2-2](#)) and press **Enter**.



Note The VSCI port is typically 8003, but it must match the port setting of the IPLNK object in the PGW 2200 configuration.

The following text displays:

```
Enter Installation NodeId
```

Step 18 Type the installation node ID (see [Table 2-2](#)) and press **Enter**.



Note The installation node ID is a text field typically used by network designers for identification purposes. Entering a value in this field does not affect functionality.

The following text displays:

```
Enter Hardware Platform
```

Step 19 Type the hardware platform name (see [Table 2-2](#)) and press **Enter** (typically, accept the default platform name). The following text displays:

```
Enter Installation Location
```

Step 20 Type the installation location (see [Table 2-2](#)) and press **Enter**.



Note The installation location field is a text field typically used by network designers for identification purposes. Entering a value in this field does not affect functionality.

The following is an example of the screen that displays:

```
## Executing checkinstall script.
Modified Environment is:
-----
BASEDIR=/opt/GoldWing/4.1
GWHOME=/opt/GoldWing
GWUSR=mgcusr
GWGRP=mgcgrp
GWCONF_IP="10.70.54.53"
GWCONF_PORT="1719"
GWCONF_PREFIX="0208"
GWCONF_ALIAS="cisco@OuterLondonDomain.com"
GWCONF_GKID="OuterLondon"
GWCONF_HOST_PORT=8003
GWCONF_VSC1_NAME=goliath
GWCONF_VSC1_PORT=8003
GWCONF_NODEID="H323-GW1"
GWCONF_HARDWARE="Sun Netra T1"
GWCONF_LOCATION="H323 - GW1"
-----

The selected base directory </opt/GoldWing/4.1> must exist before installation is
attempted.
Do you want this directory created now [y,n,?,q]
```

Step 21 Type **y** to create the version directory. The following text displays:

```
Using </opt/GoldWing/4.1> as the package base directory.
## Processing package information.
## Processing system information.
## Verifying disk space requirements.
## Checking for conflicts with packages already installed.
## Checking for setuid/setgid programs.
This package contains scripts which will be executed with super-user
permission during the process of installing this package.
Do you want to continue with the installation of <OTTgw000> [y,n,?]
```

Step 22 Review the output before you continue the installation. Type **y** to continue. The files are installed. The following text displays:

```
Installing GoldWing H323 Adjunct Processor V0.1.6 as <OTTgw000>
## Installing part 1 of 1.
/etc/init.d/CiscoGW
/opt/GoldWing/4.1/bin/GWmain
/opt/GoldWing/4.1/bin/PMmain
/opt/GoldWing/4.1/bin/mml
/opt/GoldWing/4.1/bin/msg.conf
/opt/GoldWing/4.1/bin/parse
/opt/GoldWing/4.1/etc/GWmain.base.conf
/opt/GoldWing/4.1/etc/GWmain.default.conf
/opt/GoldWing/4.1/etc/GWmain.static.conf
/opt/GoldWing/4.1/etc/H323SkeletonFileSimple.dat
/opt/GoldWing/4.1/etc/parse.exclude.list
/opt/GoldWing/4.1/etc/parse.list
/opt/GoldWing/4.1/lib/libgwMib_shlib.so
/opt/GoldWing/4.1/var/prov/active_config <symbolic link>
[ verifying class <none> ]
```



```
[ verifying class <script> ]
## Executing postinstall script.
Installed package instance is: OTTgw000
Installation of <OTTgw000> was successful.
Installed package instance environment variables are:
-----
PKGINST=OTTgw000
VERSION=4.1
BASEDIR=/opt/GoldWing/4.1
GWHOME=/opt/GoldWing
MGCUSR=mgcusr
MGCGRP=mgcgrp
-----
Setting link /opt/GoldWing/currentPM.
Setting link /opt/GoldWing/currentGW.
```

Installation of the Cisco HSI is now complete. The directory `/opt/GoldWing` now displays as follows:

```
drwxr-xr-x  7 cisco  sysadmin   512 Jan  9 18:31 4.1
lrwxrwxrwx  1 cisco  sysadmin    19 Jan  9 18:31 currentGW -> /opt/GoldWing/4.1
lrwxrwxrwx  1 cisco  sysadmin    19 Jan  9 18:31 currentPM -> /opt/GoldWing/4.1
-rwxrwxr-x  1 root   other      3053 Jan  9 18:31 uninstall.sh
```

**Note**

The links `currentPM` and `currentGW` point to the currently active version of the Cisco HSI. The `uninstall` script has been copied here for convenience, but it can be run only by root user.

To check the Cisco HSI installation, enter **pkgchk OTTgw000**.

**Note**

The **pkgchk** command reports File size / Checksum information. This information may suggest errors because the post-installation scripts modify some of the files with user configuration information for which the user was prompted during the installation procedure. These messages are expected and do not indicate a problem with the installation.

**Note**

The package name is `OTTgw000`. If more than one instance of the package is installed, the package name has a suffix (for example, `OTTgw000.2`, `OTTgw000.3`, and so on).

Outside of the `/opt/GoldWing` directory, the start/stop script `CiscoGW` is copied to the `/etc/init.d` directory.

When the installation is complete, a file named `PKINST` is written to the base directory on the installed software.

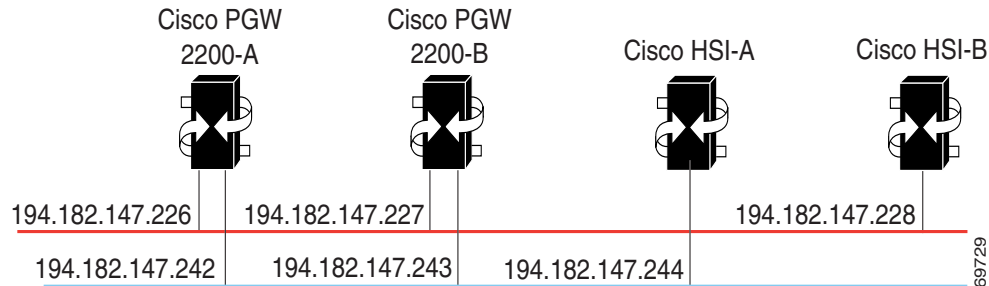
**Caution**

Do not modify the `PKINST` file. It contains information derived from the installation, and the `uninstall` script uses the `PKINST` file in the version directory to determine which package name to remove if more than one instance of the package is installed.

Installing Multiple Cisco HSIs in a Redundant PGW 2200 Configuration

This section describes how to install and configure two Cisco HSI for use with a redundant Cisco PGW 2200 configuration (See [Figure 2-1](#)).

Figure 2-1 Dual Cisco HSI with a Redundant PGW 2200 Configuration



Caution

To ensure the successful installation of two Cisco HSIs, after [Step 22](#) of the “[Installing Cisco HSI](#)” section on [page 2-5](#), provision the software for the active host first before proceeding to [Step 1](#) below. See “[Configuring the Cisco HSI](#)” section on [page 2-12](#) for configuration information.

Only one active provisioning session is permitted, and provisioning is permitted only on the active Cisco HSI.

Exit the provisioning session on the active host and continue to [Step 1](#) below. If software is not provisioned after it is installed on the active host, the stand-by host is not synchronized with the active host. As a result, a forced switchover might fail.

To install two Cisco HSIs for a redundant PGW 2200 configuration (a configuration with two Cisco PGW 2200 hosts), complete the following steps:

- Step 1** Continuing from [Step 22](#) of the “[Installing Cisco HSI](#)” section on [page 2-5](#), exit server 1.
- Step 2** Log in to server 2 as root and go to the # prompt.
- Step 3** Insert the Cisco HSI CD-ROM in the CD-ROM drive.
- Step 4** Follow the installation instructions found in [Step 3](#) through [Step 22](#) of the “[Installing Cisco HSI](#)” section on [page 2-5](#).

Installation of the dual Cisco HSI for a redundant PGW 2200 configuration is now complete. (See the example configuration script in the following section.)

Dual HSI Example Configuration Script

The following example script configures the network topology depicted in [Figure 2-1](#).

Example

```
HSI-A (Blue network)
prov-add:name="SYS_CONFIG_STATIC",HOST_PORT_NUMBER1="9001"
prov-add:name="SYS_CONFIG_STATIC",HOST_PORT_NUMBER2="0"
prov-add:name="SYS_CONFIG_STATIC",VSCA_IPADDR1="194.182.147.242"
prov-add:name="SYS_CONFIG_STATIC",VSCA_IPADDR2="194.182.147.242"
prov-add:name="SYS_CONFIG_STATIC",VSCA_PORT_NUMBER1="8003"
prov-add:name="SYS_CONFIG_STATIC",VSCA_PORT_NUMBER2="8003"
prov-add:name="SYS_CONFIG_STATIC",VSCB_IPADDR1="194.182.147.243"
prov-add:name="SYS_CONFIG_STATIC",VSCB_IPADDR2="194.182.147.243"
prov-add:name="SYS_CONFIG_STATIC",VSCB_PORT_NUMBER1="8003"
prov-add:name="SYS_CONFIG_STATIC",VSCB_PORT_NUMBER2="8003"

HSI-B (Red network)
prov-add:name="SYS_CONFIG_STATIC",HOST_PORT_NUMBER1="9002"
prov-add:name="SYS_CONFIG_STATIC",HOST_PORT_NUMBER2="0"
prov-add:name="SYS_CONFIG_STATIC",VSCA_IPADDR1="194.182.147.226"
prov-add:name="SYS_CONFIG_STATIC",VSCA_IPADDR2="194.182.147.226"
prov-add:name="SYS_CONFIG_STATIC",VSCA_PORT_NUMBER1="8004"
prov-add:name="SYS_CONFIG_STATIC",VSCA_PORT_NUMBER2="8004"
prov-add:name="SYS_CONFIG_STATIC",VSCB_IPADDR1="194.182.147.227"
prov-add:name="SYS_CONFIG_STATIC",VSCB_IPADDR2="194.182.147.227"
prov-add:name="SYS_CONFIG_STATIC",VSCB_PORT_NUMBER1="8004"
prov-add:name="SYS_CONFIG_STATIC",VSCB_PORT_NUMBER2="8004"
```

Starting the Cisco HSI

To start the Cisco HSI, execute the start script as the root user and enter the following command:

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



Note

The application runs as root user because this is a requirement of a Simple Network Management Protocol (SNMP) subagent application. If you do not run this script as the root user, the SNMP subagent fails to connect to the master agent.

Stopping the Cisco HSI

To stop the Cisco HSI, log in as root user and enter the following command:

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



Note

The command to stop the Cisco HSI returns information such as the following:

```
/etc/init.d/CiscoGW stop
Signalling PMmain to shut down
Signalling GWmain[739] to shut down
Process 'PMmain' not found
Process 'GWmain' not found
...shutdown complete
```

The “not found” messages do not indicate a problem. The shutdown script first attempts to shutdown the HSI processes gracefully (kill -39). The script then checks to determine whether the processes still exist. If HSI processes remain active, the script uses the kill -9 command. The “shutdown complete” announcement indicates that the shutdown script succeeded in stopping the HSI.

Configuring the Cisco HSI

To configure the Cisco HSI, you must first access the user interface. Use the **mml** command (see [Appendix A, “MML User Interface and Command Reference”](#) for more information). If the setup.gw file has been sourced, it is in the user path. Use the provisioning commands to configure the Cisco HSI as required (see [Chapter 3, “Provisioning the Cisco HSI”](#) and [Appendix A, “MML User Interface and Command Reference”](#) for more information).

Upgrading the Cisco HSI

Before removing an old version of the Cisco HSI, install the new version of the software. You can export a provisioning session to a flat file in a format that can be used as input to another provisioning session (see [prov-exp](#) in [Appendix A, “MML User Interface and Command Reference,”](#) for more information).



Note

To upgrade to Cisco HSI 4.1, if you have not partitioned disks according to the information provided in the partitioning tables presented in the *Cisco Media Gateway Controller Software Release 9 Installation and Configuration Guide*, you must repartition the disks and reinstall the operating system.

When you upgrade the Cisco HSI version, the following conditions apply:

- The Cisco HSI must first be stopped before installation is allowed to proceed.
- The installation of the new software does not overwrite the existing installed version.
- The installation of a new version results in a new version directory being created in the /opt/GoldWing parent directory. The links currentPM and currentGW are updated to point to this new version.

- The system should be restarted to enable the re-initialization of the SNMP processes. The craftsperson needs to change the user to root and issue the following UNIX command:

```
shutdown -i 6 -g 0 -y
```



Note To revert to a previous version of the software, manually modify the currentPM and currentGW links in the/opt/GoldWing parent directory to point to the previous version.

The uninstall.sh script uses the PKINST file in the version directory to determine which package name to remove.



Caution

When upgrading the Cisco HSI, you must install the security package CSC0h013 before you remove (uninstall) the preceding version of the HSI software. If you do not, the CSC0h013 security package will not operate. This step is not required if you are performing a fresh installation of the Cisco HSI.

Removing the Cisco HSI

To remove the Cisco HSI, complete the following steps:

Step 1 Log in as root.

Step 2 Enter the following command to stop the Cisco HSI:

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

Step 3 Enter the following commands:

```
# cd /opt/GoldWing
```

```
# ls -l
```

The following is an example of the screen that displays:

```
drwxr-xr-x  7 cisco  sysadmin    512 Jan  9 18:31 4.1
lrwxrwxrwx  1 cisco  sysadmin      19 Jan  9 18:31 currentGW -> /opt/GoldWing/4.1
lrwxrwxrwx  1 cisco  sysadmin      19 Jan  9 18:31 currentPM -> /opt/GoldWing/4.1
-rwxrwxr-x  1 root   other          3053 Jan  9 18:31 uninstall.sh
```

Step 4 Enter the **uninstall** command and specify the version of the software that you want to uninstall, for example:

```
# ./uninstall.sh 4.1
```

The following text displays:

```
Warning: This script will remove the package OTTgw000
Do you wish to proceed? [n] [y,n,?,q]
```

Step 5 Type **y** and press **Enter**. The following text displays:

```
Deleting generated files in /opt/GoldWing/4.1
The following package is currently installed:
OTTgw000      GoldWing H323 Adjunct Processor V0.1.6
(sparc) 4.1
Do you want to remove this package?
```

Step 6 Type **y** and press **Enter**. The following text displays:

```
## Removing installed package instance <OTTgw000>
This package contains scripts which will be executed with super-user
permission during the process of removing this package.
Do you want to continue with the removal of this package [y,n,?,q]
```

Step 7 Type **y** and press **Enter**. The following text displays:

```
## Verifying package dependencies.
## Processing package information.
## Executing preremove script.
## Removing pathnames in class <script>
/opt/GoldWing/4.1/local/setup.gw
/opt/GoldWing/4.1/local/pmStart.sh
/opt/GoldWing/4.1/local/gwhalt
/opt/GoldWing/4.1/local/CiscoGW
## Removing pathnames in class <none>
/opt/GoldWing/4.1/local
/opt/GoldWing/4.1/lib/libgwMib_shlib.so
/opt/GoldWing/4.1/lib
/opt/GoldWing/4.1/etc/parse.list
/opt/GoldWing/4.1/etc/parse.exclude.list
/opt/GoldWing/4.1/etc/H323SkeletonFileSimple.dat
/opt/GoldWing/4.1/etc/GWmain.static.conf
/opt/GoldWing/4.1/etc/GWmain.request.conf
/opt/GoldWing/4.1/etc/GWmain.default.conf
/opt/GoldWing/4.1/etc/GWmain.conf
/opt/GoldWing/4.1/etc/GWmain.base.conf
/opt/GoldWing/4.1/etc
/opt/GoldWing/4.1/bin/parse
/opt/GoldWing/4.1/bin/msg.conf
/opt/GoldWing/4.1/bin/mml
/opt/GoldWing/4.1/bin/PMmain
/opt/GoldWing/4.1/bin/GWmain
/opt/GoldWing/4.1/bin
/opt/GoldWing/4.1/PKGINST
/etc/init.d/CiscoGW
/etc/init.d <shared pathname not removed>
/etc <shared pathname not removed>
## Executing postremove script.
## Updating system information.

Removal of <OTTgw000> was successful.
```
