

Avaya Hospitality Messaging Server 400 Fundamentals

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Chapter 1: New in this release

The following sections detail what is new in Avaya Hospitality Messaging Server 400 Fundamentals, NN42350-104 for HMS 400 Release 3.0.

Navigation:

- Features on page 7
- Other changes on page 19

Features

See the following sections for information about feature changes.

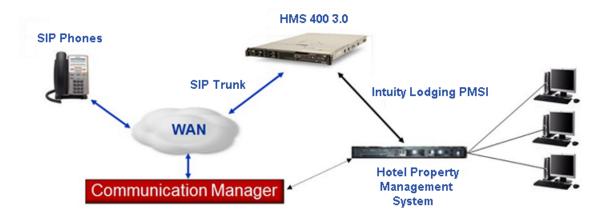
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Communication Manager support

HMS 400 Release 3.0 supports the integration of HMS 400 with the Communication Manager 6.x platform (without Session Manager).

HMS 400 Release 3.0 directly integrates with Communication Manager 6.x using an SIP trunk, and integrates with the hotel Property Management System using the Avaya Intuity Lodging PMS Interface (PMSI).



For more information, see Solution Integration Guide For Avaya Communication Manager 6.x/ Avaya Hospitality Messaging Server 400 Release 3.0, NN42350–302.

Intuity Lodging PMS support

HMS 400 Release 3.0 supports the Avaya Intuity Lodging PMS interface (Version 5, dated June 1999) with the exception of the following features:

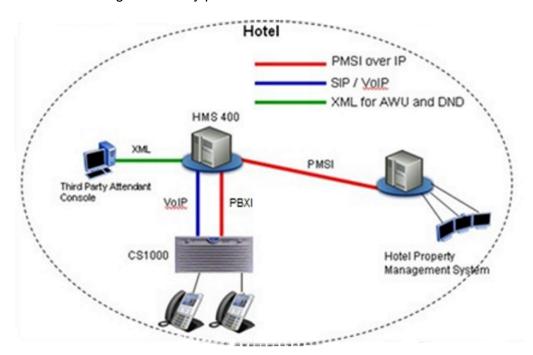
- Display suite
- Create/modify suite
- Delete suite

Communication Server 1000 SIP architecture support

The following SIP features are supported in HMS 400 Release 3.0:

- UDP, TCP
- RTP

- QoS monitoring for RTP, RTCP, Packet Loss
- HMS400 call queuing ACD
- Codecs supported G.711, G.729
- SIP standards SIP slow start, SIP fast start, SIP Register, SIP Peer-to-peer
- RFC3264 (OPTIONS packet)
- RFC2833 for DTMF detection. Note that SIP Info is not supported.
- MWL through SIP Notify packet



Upgrades and migrations

703t Upgrades

Customers on 703t servers must migrate to Release 3.0 on the HP ProLiant DL360 G7 server with SIP integration.

Supported upgrade and hardware migration paths

The following upgrade and hardware migration paths are supported:

From	То
• HMS 400 Release 1 on 703t	Release 3 on HP ProLiant DL360 G7 server
• HMS 400 Release 2 on 703t	Release 3 on HP ProLiant DL360 G7 server

From	То
• HMS 400 Release 2 on IBM x3350 server	Release 3 on HP ProLiant DL360 G7 server
• HMS 400 Release 2 on IBM x3350 server	Release 3 on IBM x3350 server

Operating system

HMS 400 Release 3.0 is installed on the 32–bit Windows 2008 R2 Enterprise Edition operating system (OS). The Windows 2008 OS ensures continued OS support from Microsoft and interoperability with Microsoft SQL and .NET technology. The Windows 2008 OS is included with the HMS 400 Release 3.0 software.

Upgrades from HMS 400 Release 2.0 to Release 3.0 will also run the same Windows Server 2008 configuration.

Voice Profile for Internet Messaging

HMS 400 supports the Voice Profile for Internet Messaging (VPIM) Internet standard version 2. VPIM permits messaging between Avaya CallPilot and HMS 400, between HMS 400 and Avaya CallPilot, and between HMS 400 systems. HMS 400 Release 3.0 provides a robust voice mail-networking solution to cover an entire resort complex and allow back-office staff members on CallPilot to compose and send messages to guests at the hotels.

3 Note:

VPIM networking is only supported with CallPilot and other HMS 400 3.0 systems.

For more information about VPIM, see *Avaya Hospitality Messaging Server 400 Installation and Commissioning, NN42350-301.*

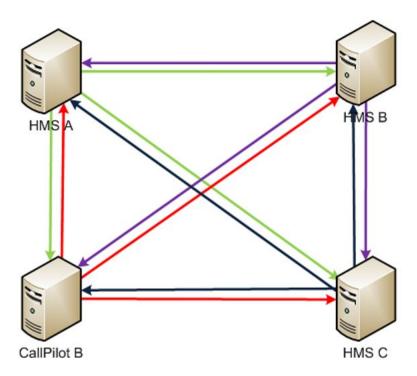
On-board SMTP server

Each HMS 400 Release 3.0 system has its own on-board Simple Mail Transfer Protocol (SMTP) server so that the customer e-mail infrastructure does not have to be used for the exchange of voice mail messages. The e-mail configuration parameters for the SMTP server are entered in the HMS 400 web UI.

Multi-site VPIM support

Up to 50 VPIM sites can be entered into the HMS 400 database so that a heterogeneous network of HMS 400 and CallPilot systems can exchange voice messages, enabling the following functionality:

- Admin staff members on an HMS 400 system can compose and send messages to users on multiple CallPilot or HMS 400 systems.
- Admin Staff members on a CallPilot system can compose and send voice mail messages to users on multiple HMS 400 and CallPilot systems.
- Admin staff users on either CallPilot or HMS 400 can compose and send voice messages to guests on HMS 400 systems.



The HMS 400 WebUI provides input fields for remote network locations and various other new parameters. Since customers can choose to use DHCP to assign dynamic IP addresses, host names are supported in the network configuration.

VPIM messages to guests

Staff can compose VPIM messages and forward them to individual guests or groups of guests staying in properties at a resort complex.

Messages can be sent to:

- staff and guest mailboxes on other HMS 400 Release 3.0 systems
- local distribution lists
- remote distribution lists

VPIM messages to networked system Distribution Lists

Messages originating on an HMS 400 or CallPilot can be addressed to distribution lists on HMS 400 systems networked by VPIM. For example, if guests associated with group code 5678 reside on two HMS 400 systems — HMS 400 system A and system B — a staff member on a CallPilot can address a VPIM message to distribution list 5678 on HMS 400 A and HMS 400 B.

Licensing

Licensing with CS 1000

Each HMS 400 system with Communication Server 1000 (CS 1000) has its feature set controlled by an encrypted keycode. This keycode enables only the features or capacities the customer has paid for. The keycode is validated against the USB dongle installed on the HMS 400 server.

Licensing with Communication Manager

The same licensing methodology is used for Communication Manager as is used for CS 1000.

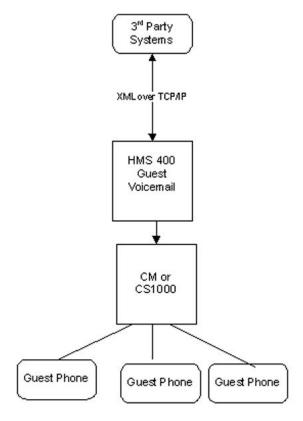
Third-party systems and operator messaging

In HMS 400 Release 3.0, third-party systems such as operator console systems are able to compose voice mail messages through HMS and then instruct HMS to send the message to guests. This is done through an expansion of the existing Operator Console XML interface of the HMS 400 system and making this interface available to third-party developers through the DevConnect program.

Networking

A maximum of 30 HMS 400 systems can be supported.

The customer must provide appropriate connectivity between the central third-party system and the HMS 400 systems at the hotel properties to be covered by this feature. At a minimum, the third-party server must be able to ping the HMS 400 systems, and the HMS 400 systems must be able to ping the third-party server.



Operator messaging to guests

Operators using third-party console systems can compose voice mail messages through HMS 400 and then instruct HMS 400 to send the messages to recipients at a property or across multiple properties.

To record the messages, the HMS 400 Staff TUI provides a new option allowing the operator to record the message on the HMS 400 so that it can be referred to by the third-party system. To align the message with the XML packet from the console system, a unique four-digit code is used for each message.

Security

This section describes the security enhancements in HMS 400 Release 3.0.

Staff forced password-change option

If this option is configured, then when Admin staff users first log into the voice mail system, they are prompted to change their password from the default password.

Guest mailbox required password

If this option is configured, guests are required to key in a password to access their mailboxes when calling from their room extensions. It is a global setting; if activated, all rooms are affected.

By default, this option is not activated.

Upload greetings and Auto Attendant prompts as .wav files

In HMS 400 Release 3.0, a WebUI page is provided to upload sound files in .WAV format in PCM 16bit/8kHz/mono so that customers can use professional, studio recorded prompts.

These sounds files can only be used for:

- Auto Attendant prompts
- Busy prompt
- No Answer prompt
- Welcome message
- Introductory message
- Auto Wakeup greeting

The HMS 400 converts the .WAV format file into the appropriate d40 format used by Dialogic HMP.

Auto Attendant enhancements

This section describes the Auto Attendant enhancements introduced in HMS 400 Release 3.0.

Dial-by-name from Auto Attendant

Callers to an Auto Attendant flow can now reach internal staff by spelling a staff member's name (last name first) from the telephone keypad.



This feature is currently available in admin staff call flows.

Leaving a message through Auto Attendant

This enhancement allows users in an Auto Attendant call flow to leave messages in guest and admin mailboxes without having to make a subsequent call to the intended recipient's extension. This feature is available through a new key press option in the layer design GUI.

Adding notes to Auto Attendant layers

This enhancement allows users to include text remarks/information/notes for each Auto-Attendant layer.

Windows Net Send for AWU alerts

AWU alerts through Windows Messaging Service are not available on Windows 2008. This means Net Send can no longer be used to alert designated PCs about AWU failures

Standardized TUI call flows

All call flows have consistent treatment of Invalid/Time Outs/Return to Previous Menu, eliminating inconsistencies and improving the staff usage experience

Alphanumeric group code support

HMS 400 supports a group booking code from the Property Management System to create distribution lists for group messages, Auto Wakeup, and welcome greetings. However, many PMS systems use group codes that can be up to 23 alphanumeric characters long impractical for mailbox users to dial.

HMS 400 Release 3.0 provides a translation table between the group booking codes received and a set of unique five-digit dialable numbers, accessed through a simple web GUI.

Code	Distribution List Number	Description
1234ABC122345667	55512	ABC Tours
1234ABC	55513	VIP Rooms
ASDF12344	55514	Level 10 Rooms

A new group check-in using alphanumeric codes will be assigned a five-digit code in the range 30,001 – 99,999. Group codes 10,000 – 30,000 are reserved for groups checked in from PMS using five-digit numeric codes. However, the codes in the range of 30,001-99,999 are also accepted if the code has not been assigned yet.

A new page is added to the Web UI that only displays the booking code translation table. This allows the super admin to configure Web UI users who can only access this table and not the rest of the WebUI.

■ Note:

Alphanumeric group code support is not available with CM Integration due to a limitation in the Intuity Lodging PMS Interface.

If a 5-digit code is received from the PMS, that code is automatically used as the distribution list number without need for the translation table.

Languages

The following languages are introduced in HMS 400 for Release 3.0 prompts:

- Cantonese
- Latin American Spanish (improved)
- Russian
- Canadian French
- Brazilian Portuguese

Web UI language localization support

The Hotel Operation and Admin User Mailbox Web UI pages are displayed in the language selected by the user at the main login page.

HMS 400 Release 3.0 supports end-user documentation, graphical and web user interfaces in the following languages:

Country	Written language (GUI and Web UI) End user documents	Spoken language (TUI)
APAC		
1. China	Simplified Chinese	Mandarin
2. Japan	Japanese	Japanese
3. Korea	Korean	Korean
4. India	English	English
5. South East Asia	Mandarin	Cantonese
EMEA		
6. France	French	French
7. Germany	German	German
8. Russia	Russian	Russian
9. UK	English	English
CALA		
10. Mexico	Latin American Spanish	Latin American Spanish (improved)

Country	Written language (GUI and Web UI) End user documents	Spoken language (TUI)
11. Central America	Latin American Spanish	Latin American Spanish (improved)
12. Brazil	Brazilian Portuguese	Brazilian Portuguese
Canada/US		
13. Canada	French/English	Canadian French
14. United States	English	North American English

Note:

HMS 400 3.0 does not support Unicode characters for staff or guest names. The system cannot process names using the Russian Cyrillic alphabet or Japanese, Korean or Chinese characters. Therefore, a "westernized" or phonetic spelling of the name using the Latin alphabet is used for Russian, Japanese, Korean and Chinese names.

Internet browser support

HMS 400 Release 3.0 supports the following Internet browsers:

- Internet Explorer 8
- Internet Explorer 9
- Firefox 4.0 and above

Reporting improvements

Automatic Wake Up call report improvements

The following improvements have been made to Automatic Wake Up (AWU) call reports:

- AWU print transaction options have been separated from event logging. This enables the administrator to still have full AWU event logging by the system without having to print them out.
- Guest Name information is included on the Failed Wake-Up call reports to improve staff follow-up of missed wake-up calls
- recurring wake-up calls can be distinguished from single wake-up calls in logs

Guest Directory report

Front desk staff can create a list of all checked-in guests to cross-check with the actual occupancy status as logged in the Hotel PMS interface

System Traffic report

HMS 400 can create a report (and graph) providing an hourly summary of traffic to the different services (for example: call answering, voice messaging, AWU) in CCS or Erlangs. This allows

customers, distributors and system engineers to evaluate which services are drawing the most traffic and to determine peak usage hours.

Sort reports by any column

Reports can be sorted by data using selected columns as the sorting key, therefore enabling customized reports.

Messaging enhancements

HMS 400 Release 3.0 introduces the following messaging enhancements.

Post-message recorded options

This feature provides the ability to review a message after it has been recorded, with options such as listen, rerecord, continue recording, and delete. This functionality is now available for the TUI Prompt Recording Menu options.

Review recorded prompts using the TUI

In addition to reviewing a recorded prompt immediately after recording it, this feature provides the option to review recorded prompts on subsequent calls as well.

This capability is presented as silent options in the TUI Prompt Recording Menu.

- To review a previously recorded Welcome prompt, press 6.
- To review a previously recorded AWU prompt, press 7.
- To review a previously recorded Introductory prompt, press 8.
- To review a previously recorded Auto Attendant prompt, press 9.

If there is a recording for the specific prompt selected, the system plays the recording and then returns to the TUI Prompt Recording Menu.

Announce Caller Line ID of external calls option

This option, when configured, plays the external Caller ID as part of the message envelope. If deactivated through a configuration change, the system plays "unknown number" instead.

Shortened Express Messaging greeting

This feature shortens the greeting for Express Messaging to 'Please record your message after the tone'.

Maintenance and serviceability

Log file extraction tool

HMS 400 Release 3.0 provides a log file extraction tool which extracts only events logged between a specified start and end date/time, or events designated by other search criterion such as Room Number, Guest Name, Extension Number, Modules, or Severity Levels. This capability reduces the effort and time needed to collect logs used for troubleshooting by obtaining only the relevant data. The tool, which is installed on the server, also compresses

the extracted logs into a single zip file. Remote administrators can connect to the system, run the tool, and copy the zip file to forward to support personnel.

Maximum channels for Auto Wakeup service

HMS 400 Release 3.0 provides a mechanism to restrict how many ports can be used for outgoing Auto Wakeup (AWU) calls. This mechanism prevents AWU from seizing all ports. therefore enabling incoming calls to still get through. Staff can configure the number of channels dedicated for outgoing calls or incoming calls. The rest of the channels are assigned to handle both outgoing and incoming calls.

Other changes

The HMS 400 Release 3.0 documentation suite introduces a new document: Solution Integration Guide For Avaya Communication Manager 6.x/Avaya Hospitality Messaging Server 400 Release 3.0, NN42350-302. This document describes how to plan, configure, and troubleshoot the integration of the Hospitality Messaging Server 400 Release (HMS 400) 3.0 with Communication Manager Release 6.x

Revision history

March 2012

Standard 02.01. This document is issued to support Hospitality Messaging Server 400 Release 3.0.

New in this release

Chapter 2: Introduction

This document describes the fundamental topics for Avaya HMS 400 Release 3.0.

- Documentation roadmap on page 23
- Regulatory information on page 31
- Overview on page 35
- System architecture on page 43
- Installation and commissioning fundamentals on page 51
- Administration fundamentals on page 65
- Maintenance fundamentals on page 75
- <u>Upgrades</u> on page 83
- <u>User interface</u> on page 85
- Terminology on page 93

Introduction

Chapter 3: Documentation roadmap

This chapter lists and describes the documentation available for Avaya HMS 400 Release 3.0.

Navigation:

- Avaya HMS 400 documentation packaging on page 23
- Text conventions on page 25
- Modular, task-based information on page 26
- Customer service on page 28

Avaya HMS 400 documentation packaging

Avaya technical documents are organized according to a set of job functions.

Product fundamentals

HMS 400 fundamentals documentation includes overview and reference information about the HMS 400 product and product documentation.

Table 1: HMS 400 fundamentals documents

Document title	Description
Avaya Hospitality Messaging Server 400 Fundamentals, NN42350-104	This document describes fundamental product information about HMS 400.
Avaya Hospitality Messaging Server 400 Front Desk Staff User Guide, NN42350-100	This document describes how to use the Staff Telephone User Interface (TUI), Web User Interface, (Web UI), PMS menu, Mailbox Services menu, and Prompt Recording menu.
Avaya Hospitality Messaging Server 400 Staff Messaging Quick Reference Guide, NN42350-102	This document provides information on how to use the staff voice messaging system and features, information on administering voice messaging functions using a personal web page (Web user interface), information on how to use the housekeeping staff operation feature for minibar charges and room status, and contains Quick Reference Cards for

Document title	Description
	Staff Mailbox Features and housekeeping Staff Operation features.
Avaya Hospitality Messaging Server 400 Guest Messaging Quick Reference Guide, NN42350-103	This document provides information on how to use the guest messaging features.

Installation and commissioning

Installation and commissioning documentation enables you to install and configure the HMS 400 hardware and software.

Table 2: HMS 400 installation and commissioning documents

Document title	Description
Avaya Hospitality Messaging Server 400 Installation and Commissioning, NN42350-301	This document describes how to install, commission, and verify the HMS 400 system.
Solution Integration Guide For Avaya Communication Server 1000 7.0/Avaya Hospitality Messaging Server 400 Release 3.0, NN42350–105	This document describes how to plan, configure, and troubleshoot the integration of the Hospitality Messaging Server 400 (HMS 400) Release 3.0 with a Communication Server 1000 (CS 1000) Release 7.0 system.
Solution Integration Guide For Avaya Communication Manager 6.x/Avaya Hospitality Messaging Server 400 Release 3.0, NN42350–302	This document describes how to plan, configure, and troubleshoot the integration of the Hospitality Messaging Server 400 Release (HMS 400) 3.0 with Communication Manager Release 6.x.

Upgrades

Upgrades documentation describes how to upgrade software from your HMS 400 current release to HMS 400 Release 3.0.

Table 3: HMS 400 upgrades and patches documents

Document title	Description
Avaya Hospitality Messaging Server 400 Upgrades, NN42350-400	This document describes how to upgrade an HMS 400 Release 1.0 or 2.0 system to an HMS 400 Release 3.0 system.

Administration

Administration documentation enables you to securely manage and maintain the system configuration, data, and users.

Table 4: HMS 400 administration and security documents

Document title	Description
Avaya Hospitality Messaging Server 400 Administration, NN42350-600	This document describes administration procedures and information for HMS 400.

Operations

Operations documentation provides information on how to perform necessary maintenance tasks.

Table 5: HMS 400 operations documents

Document title	Description
Avaya Hospitality Messaging Server 400 Maintenance, NN42350-101	This document describes maintenance information for the HMS 400 and how to use system tools to identify the cause of system problems.

Text conventions

This section describes the text conventions used throughout the HMS 400 documentation suite.

Table 6: Text conventions

Font	Convention
Courier	Indicates the text a user must input or keys the user must press.
Courier with gray background Courier with gray background	Indicates Java code or system outputs.
Courier bold	Indicates commands that you must enter at the command prompt.
Bold font	Indicates a window, a selection, or an action.

Font	Convention
Italic font	Indicates a document title.
blue font on page 26	Indicates a cross reference.

Modular, task-based information

This section describes the structure of information in Avaya documentation.

Task-based documentation organizes information in a structured, modular, task-centric format. Task-based documentation focuses on what you must do and the sequence in which you must perform a set of tasks or procedures.

The goal is to make Avaya documentation easy-to-find, easy-to-use, timely, and accurate. To understand the structure and terminology associated with task-based documentation, see the following sections.

Navigation:

- Work flows and task flows on page 26
- Structure of work flows, task flows, and procedures on page 27
- Purpose statements on page 27
- Prerequisites on page 27
- Work flow and task flow charts on page 27
- Procedure steps on page 27
- Variable definitions on page 27
- Job aids on page 28
- Examples on page 28

Work flows and task flows

Task-based documentation emphasizes procedural information. Flow charts provide the primary navigation to tasks and procedures whenever there is a required order and flow to the actions you must perform to complete a given job.

Flow charts (called work flows and task flows) illustrate which tasks or procedures and decisions are involved in an activity. The flow charts guide you through any type of activity, whether it is initial installation, configuration, upgrades, routine maintenance, or troubleshooting.

Each flow chart provides the prerequisites and links to the tasks or procedures that you must perform. Always follow the work flows and task flows so that you perform the required procedures in the correct order.

Structure of work flows, task flows, and procedures

For consistency, work flows, task flows, and procedures contain similar elements. Each element has a specific function.

Purpose statements

Purpose statements explain why or when you can perform a task or procedure, and its impact.

Prerequisites

Prerequisites list everything that you must do or know prior to starting a task (or set of tasks), or procedure; for example, risks, confirmation of system status, time estimates or limitations, and links to supporting information.

Work flow and task flow charts

A work flow is a high-level grouping of tasks. Each task is presented as a single action (or box) in a graphical work flow chart. A task flow is a logical grouping of procedures. Each procedure is represented as a single action (or box) in a graphical task flow chart. A work flow or task flow section in a document contains a flow chart that shows the order of tasks or procedures and major decision points. Navigational links show you where to find each task or procedure in the document.

Procedure steps

A procedure contains a set of numbered steps where each step is a single action.

Variable definitions

Variable definitions tables in procedures provide possible values, ranges, or definitions of each parameter used in the procedure steps.

Job aids

Job aids provide information that assists you in performing a procedure. A job aid can contain information that you must know in order to successfully complete the procedure.

Examples

Procedures can also contain examples that include sample values.

Customer service

Visit the Avaya Web site to access the complete range of services and support that Avaya provides. Go to http://www.avaya.com/support, or go to one of the pages listed in the following sections.

Navigation:

- Getting technical documentation on page 28
- Getting product training on page 28
- Getting help from a distributor or reseller on page 29
- Getting technical support from the Avaya Web site on page 29
- Enabling Log Me In remote access on page 29

Getting technical documentation

To download and print selected technical publications and release notes directly from the Internet, go to http://www.avaya.com/support.

Getting product training

Ongoing product training is available. For more information or to register, you can access the Web site at http://www.avaya.com/support. From this Web site, you can locate the Training and Certifications link on the left-hand navigation pane.

Getting help from a distributor or reseller

If you purchased a service contract for your Avaya product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller for assistance.

Getting technical support from the Avaya Web site

The easiest and most effective way to get technical support for Avaya products is from the Avaya Technical Support Web site at www.avaya.com/support.

Enabling Log Me In remote access

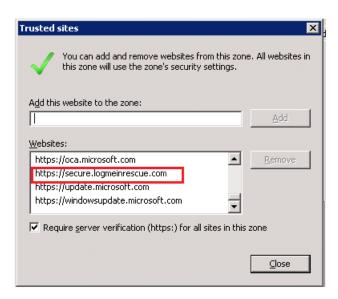
About this task

The Log Me In application (logmein) is used to access the HMS 400 system.

Access to logmein may be blocked by Internet Explorer indicating security levels are too high. Use this procedure to add logmein to your list of trusted sites.

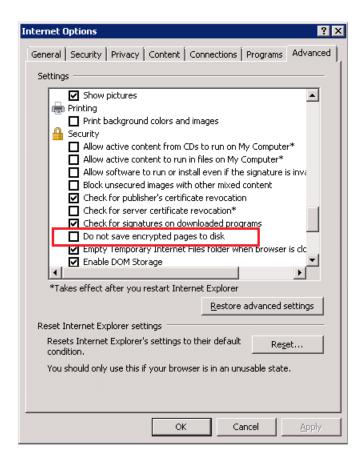
Procedure

- 1. Open Internet Explorer.
- 2. Click **Tools** > **Internet Options**.



3. Under the Security tab, click Trusted Sites

- 4. Click Sites.
- 5. In the Trusted Sites window, type https://secure.logmeinrescue.com in the **Add this** website to the zone field.
- 6. Click **Close** to close the Trusted Sites window.
- 7. In the Internet Options window, click the **Advanced** tab.
- 8. Scroll down to Security in the Settings list box and uncheck Do not save encrypted pages to disk.



9. Restart Internet Explorer.

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Chapter 4: Regulatory information

This section contains all regulatory information and warnings for Avaya HMS 400.

Navigation:

- Grounding on page 31
- Notice for international installations on page 31
- Electromagnetic compatibility on page 32
- Radio and TV interference (United States) on page 34

Grounding

Ensure that electrical ground connections of power utility, telephone lines, and internal metallic water pipe system, if present, connect together. This precaution is for the users' protection, and is particularly important in rural areas.



Risk of electrocution

Do not attempt to make electrical ground connections yourself. Contact your local electrical inspection authority or electrician to make electrical ground connections.

Caution:

Risk of equipment damage

The HMS 400 frame ground of each system cabinet or chassis must be tied to a reliable building ground reference.

Notice for international installations

If insufficient planning or technical information is available for your country of operation, contact your regional telecommunications distributor or authority for assistance.

European compliance information

The HMS 400 system meets the following European safety specifications:

- EN 60825
- EN 60950

Denan regulatory compliance (Japan only)

⚠ Warning:

Be careful of the following while installing the equipment:

- Use only the connecting cables, power cord, AC adaptors shipped with the equipment or specified by Avaya to be used with the equipment. If you use any other equipment, it may cause "failures, malfunctioning or fire."
- Power cords shipped with this equipment must not be used with any other equipment. In case the above guidelines are not followed, it may lead to death or severe injury.



本製品を安全にご使用頂くため、以下のことにご注意ください。

- 接続ケーブル、電源コード、AC アダプタなどの部品は、必ず製品に同梱されております。添付品または指定品をご使用ください。添付品・指定品以外の部品をご使用になると故障や動作不良、火災の原因となることがあります。
- 同梱されております付属の電源コードを他の機器には使用しないでください。上記注意事項を守らないと、死亡や大怪我など人身事故の原因となることがあります。

Figure 1: Denan regulatory compliance (Japan only)

Electromagnetic compatibility

The following table summarizes the electromagnetic compatibility (EMC) specifications for Class A devices.

Jurisdicti on	Standard	Title	
United States	FCC CFR 47 Part 15	FCC Rules for Radio Frequency Devices. Note 1	
Canada	ICES-003	Interference-Causing Equipment Standard: Digital Apparatus	
Europe	EN 55022/ CISPR 22	Information technology equipment — Radio disturbance characteristics — Limits and methods of measurement Not 2	
	EN 55024	Information technology equipment — Immunity characteristics — Limits and methods of measurement	
	EN 61000-3-2	Limits for harmonic current emissions (equipment input current <= 16 A per phase)	
	EN 61000-3-3	Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current <= 16 A	
Australia	CISPR 22/ AS/ NZS 3548	Limits and methods of measurement of radio disturbance characteristics of information technology equipment Note 2	
		Information technology equipment — Radio disturbance characteristics — Limits and methods of measurement	
	KN24	Information technology equipment — Immunity characteristics — Limits and methods of measurement	
Taiwan	CNS 13438	Limits and methods of measurement of radio disturbance characteristics of information technology equipment	
Japan	VCCI	Limits and methods of measurement of radio disturbance characteristics of information technology equipment	

☑ Note:

FCC CFR 47 Part 15.21 statement: "Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense."

☑ Note:

EN 55022/CISPR 22 statement: "WARNING This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures."

Radio and TV interference (United States)

The HMS 400 system complies with Part 15 of the FCC rules in the United States. Operation is subject to the following two conditions:

- The system must not cause harmful interference.
- The system must accept any interference received, including interference that can cause undesirable operation.

If the HMS 400 Release 3.0 system causes interference to radio or television reception, which can be determined by placing a telephone call while monitoring, the user is encouraged to try to correct the interference by the following measures:

- Reorient the receiving TV or radio antenna where this can be done safely.
- Move the TV or radio in relation to the telephone equipment.

If necessary, ask a qualified radio or television technician or supplier for additional information. You can also refer to the document *How to Identify and Resolve Radio-TV Interference*, prepared by the Federal Communications Commission. This document is available from: U.S. Government Printing Office, Washington DC, 20402

Chapter 5: Overview

This section documents a high-level overview of the Hospitality Messaging Server 400 (HMS 400) system features.

- Avaya HMS 400 overview on page 35
- Guest voice mail features on page 37
- Staff voice mail features on page 38
- Auto Wake-Up features on page 38
- Minibar management features on page 39
- Housekeeping/room status service features on page 39
- Staff Telephony User Interface features on page 40
- Other HMS 400 system features on page 40

Avaya HMS 400 overview

The Avaya Hospitality Messaging Server (HMS) 400 system is a server-based messaging solution for hotels. HMS 400 provides a comprehensive, simple-to-use solution for delivering messaging services for hotel quests and staff, as well as advanced communication features that provide hospitality businesses with better overall quest satisfaction and operational efficiency. Additionally, the HMS 400 integrates seamlessly with the Property Management System (PMS) and provides advanced administrative functions that keep operations running smoothly. It is a flexible messaging solution that can scale from the smallest property type to the largest mega resort and is available for global deployment.

The HMS 400 system includes both hardware and software components:

A new HMS 400 server currently comes with an HP ProLiant DL360 G7 server. Hardware includes the following:

- 1u rack mount
- redundant AC power supplies
- Intel® E5620 2.4 GHz 4-core processor
- CD/DVD drive
- rack-mount rails
- two 10/100/1000 Ethernet ports

- USB ports—HP ProLiant DL360 G7 has 3 USB ports + 1 internal USB port
- one USB dongle
- one serial port
- DRAM—HP ProLiant DL360 G7 includes 6 GB
- Disk drives— two SAS disks in RAID 1 configuration

☑ Note:

The Express - 4 Port PCI Express Serial Card is no longer supported. Serial connection to the Communication Server 1000 (CS 1000) is not supported by HMS 400 Release 3.0.

For more information about Avaya HMS 400 servers, see HMS 400 hardware on page 52.

The HMS 400 system integrates with your Property Management System (PMS) host, and your CS 1000 Release 7.5 or Communication Manager 6.0.1 or later. For more information about system components and integration, see System architecture on page 43.

Avaya determines the number of voice channels you require to correctly size your individual HMS 400 system using Enterprise Configurator or ASD.

The main features of the system include:

- Integrates with the hotel property management system to automatically create and remove guest mailboxes.
- Powerful guest messaging capabilities allow guests to retrieve messages quickly in the language of their choice.
- Staff messaging capabilities that enable smooth operations and staff efficiency.
- Simple-to-use telephone interface with which staff can retrieve messages guickly.
- Minibar management from the telephone interface (CS 1000 integration only). This feature allows staff to quickly and easily to update minibar consumption from the room.
- Auto wake-up. Guests can guickly set up their own wake-up calls.
- Room status (CS 1000 integration only) . Housekeeping can easily provide a status update of the room's current condition (clean, dirty, etc.).
- Global solution that currently supports the following languages:

Written language (GUI and Web UI) End user documents	Spoken language (TUI)
Simplified Chinese	Mandarin
Simplified Chinese	Cantonese
Japanese	Japanese
Korean	Korean
French	French

Written language (GUI and Web UI) End user documents	Spoken language (TUI)
German	German
Russian	Russian
English	UK English
English	US English
Latin American Spanish	Latin American Spanish (improved)
Brazilian Portuguese	Brazilian Portuguese
French	Canadian French

HMS 400 Release 3.0 includes a number of new features. For a list of new features, see Features on page 7.

Guest voice mail features

Guest voice mail features include:

- Guest personal greeting
- Guest configurable passcode
- Assign guest passcode through PMS
- Simple guest messaging with voice prompted help
- Automatic check-in comfort message
- Auto-login/auto-play
- Move guest between rooms/message preservation
- Guest IVR for auto wake-up setting (can be turned on or off)
- Guest group message delivery (staff activated)
- Guest language set by PMS
- Dual language voice prompting per guest mailbox
- Guest text message alert
- Restore all deleted guest messages (staff activated)
- Post-check out message retention
- Remote access to guest mailbox during stay
- Set single or recurring auto wake-up calls
- Fast forward and rewind within messages

Staff voice mail features

Staff voice mail features include:

- Easy-to-use interface
- Navigate between messages
- Fast forward and rewind within messages
- Forward messages to other users or distribution lists
- Compose and send messages to users or distribution lists
- · Reply to sender
- Configurable alternate DN
- Internal/external/temporary greetings
- Tag messages as urgent and/or private
- Configure Away Mode
- Message Receipt Notification
- Remote Message Notification
- Create personal distribution lists
- Different prompting for busy versus no answer
- System distribution lists
- Express messaging/express message retrieval
- Staff classes of service
- Access mailbox from any phone
- Phantom mailboxes for staff without phones

Auto Wake-Up features

Auto Wake-Up features include:

- Delivered in the language of guest's choice (AWU works with all supported languages)
- Snooze capability
- Can be set by guest through IVR, by the operator through a special service number (entry point), through the WebUI or through PMSI manual posting

- Recurring wake-up calls can be set
- Staff access to wake-up call reports
- Reports can be printed at regular intervals
- Operator is notified after maximum number of wake-up attempts go unanswered
- Wake-up calls can be printed to network printer
- Multiple wake-up calls over a 24-hour period can be set

Minibar management features

Minibar management features (CS 1000 integrated systems only) include:

- Housekeeping or other staff can update minibar consumption from the guest room using a telephone
- Staff will be prompted to enter item numbers and quantities consumed
- Automatically posts updated minibar charges to the PMS
- Supports GST/tax
- Available to housekeeping staff in any of the supported languages

Housekeeping/room status service features

Housekeeping/room status service features (CS 1000 integrated systems only) include:

- Assists hotel staff to update room status
- From the room, housekeeping can use the telephone to change the status of a room, including: cleaning requested, cleaning in progress, room cleaned, passed inspection, failed inspection, or cleaning skipped.
- Information automatically updated in the PMS or front office application
- Available to housekeeping staff in any of the supported languages

Staff Telephony User Interface features

The Staff Telephony User Interface (TUI) allows simple access to common hotel features through IVR, including:

- Check in/check out a room
- Move guest to another room
- Change guest language
- Reset mailbox password
- Enable/disable staff mailbox
- Set or cancel wake-up calls
- Retrieve post-check out messages
- Undelete messages
- Record Auto Attendant prompts
- Record welcome message
- Delete all messages (guest mailboxes only)
- Record Introductory message
- Record automatic wake-up greeting

Other HMS 400 system features

Other HMS 400 system features include:

- Disk-to-disk backup and restore
- External USB backup and restore
- Web browser administrative and user interfaces
- Guest admin backup terminal for downed PMS
- Auto attendant
- System reports
- Auto wake-up reports
- System alarms via SNMPv2

- Message waiting indication
- Broadcast messaging to all users (through multiple distribution lists)

Overview

Chapter 6: System architecture

This chapter describes Avaya HMS 400 network architecture, supported components, and port capacities.

Navigation:

- HMS 400 solution architecture on page 43
- Supported PBX host integration compatibility matrix on page 44
- Supported Property Management System host integration on page 45
- Hospitality Integration requirements for CS 1000 software on page 46
- Port capacity on page 46

HMS 400 solution architecture

The HMS 400 is a voice mail server that is able to interface directly with the CS 1000 and the Property Management System (PMS) as well as Communication Manager (CM) with the Intuity Lodging PMSI.

HMS 400 supports either serial cable or IP-based connections to the Property Management Systems (PMS) link of either the CS 1000 or CM Intuity Lodging.

The HMS 400 uses SIP virtual trunks to allow access to voice mail, Auto Attendants, and other HMS 400 features. The system also supports a third-party auto wake-up management system to connect to the HMS 400 through an IP link.

The following diagram shows a sample HMS 400 configuration with CS 1000.

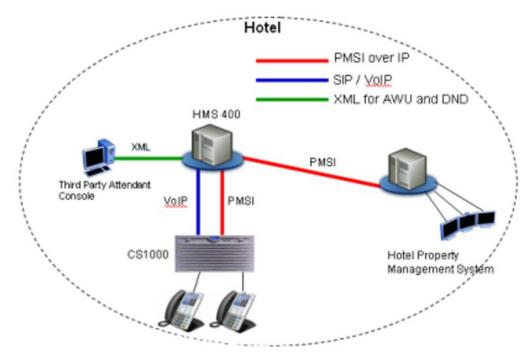


Figure 2: Sample HMS 400 configuration with CS 1000

The following diagram shows a sample HMS 400 configuration with Communication Manager (without Session Manager).

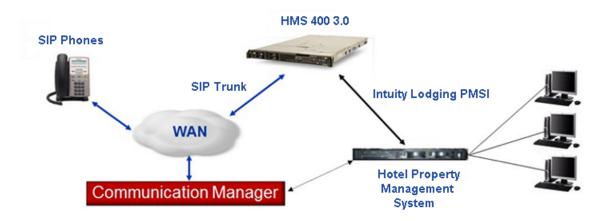


Figure 3: Sample HMS 400 configuration with Communication Manager (without Session Manager)

Supported PBX host integration compatibility matrix

This section identifies the supported PBX integration for the HMS 400 Release 3.0 systems.

The following table identifies supported PBX integration targets for the HMS 400. HMS 400 does not support SIP and H.323 trunks from carriers. Any PBX product not listed in the following table is not supported and there are no plans to support other PBX products.

Table 7: Supported PBX integration targets

Auxiliary Processors	Notes
PC Console Interface Unit	Only third-party vendors using the Operator Console specifications stated in <i>Avaya Hospitality Messaging Server 400 Administration, NN42350-600.</i>
M39xx	Only through connection to the Communication Server 1000 (CS 1000). Telephones are never directly connected to the HMS 400.
Avaya Integrated DECT	Only through connection to the CS 1000. Telephones are never directly connected to the HMS 400.
IP DECT	Only through connection to the CS 1000. Telephones are never directly connected to the HMS 400.
WLAN Handset 2210/2211/2212	Only through connection to the CS 1000. Telephones are never directly connected to the HMS 400.

Supported Property Management System host integration

Avaya supports the following customer-supplied Property Management System (PMS) integrations for the HMS 400. You can integrate any PMS system with HMS 400 as long as it supports the Nortel-heritage PMSI Release 4.0 (or later) specification.

- CLS
- EECO
- Fidelio (including Opera)
- HIS
- HRGAS
- HOS
- IFCA
- Innsoft
- LANMARK

- Maxial
- NEC CASH ASTRA
- PROLOG
- Real-Tech
- Springer-Miller
- Stratus

Hospitality Integration requirements for CS 1000 software

The Avaya Communication Server 1000 (CS 1000) must be release 7.5 or later. It requires either a SIP Trunk gateway dedicated to the HMS 400 or an NRS.

Table 8: Minimum requirements to support HMS 400 and CS 1000

CS 1000 HMS 400 requirements	CS 1000 software feature options
Business service	100—RMS 101—MR
	101—MK 102—AWU
	103—MHVS
	208—MAID ID
	210—HSE

Port capacity

HMS 400 3.0 is scalable up to 120 channels per server.

Chapter 7: Differences in PMS integration between CS 1000 and CM

HMS 400 Release 3.0 on Communication Manager uses the Intuity Lodging interface to the hotel Property Management System (PMS). This provides the easiest transition for Avaya-heritage sites upgrading from the now-discontinued Intuity Lodging solution to the HMS 400. Because of differences between the capabilities of the Nortel-heritage PMSI interface and the Avaya-heritage Intuity Lodging interface, there are differences in HMS 400 functionality between Communication Manager (CM) and Communication Servber 1000 (CS 1000) in the following areas:

- Automatic Wakeup
- Do Not Disturb
- Maid/room status
- Minibar inventory

Automatic Wake-up

Because the Intuity Lodging interface cannot pass packets related to Automatic Wake-up (AWU) to the PMS or to the CM, the customer must choose whether to use the legacy Communication Manager AWU features or use the new AWU of the Avaya Hospitality Messaging Server 400 (HMS 400).

The following table compares AWU on Communication Manager and HMS 400.

Table 9: Comparison of AWU on Communication Manager and HMS 400

Legacy AWU on Communication Manager	AWU on HMS 400
Daily wake-up repeated each day.	Ability to snooze wake-ups
Dual wake-up – up to two wake-up calls per day	Multiple wake-ups per day
VIP wake-up – wake-up call goes to front desk personnel so they can place personal call to guest.	Multiple daily repeat wake-ups
AWU configuration option for guest is routed to the operator.	Ability to upload professional recorded greetings
	Multiple levels of alert for failed wake-ups

Legacy AWU on Communication Manager	AWU on HMS 400
	1. Call to operator
	2. Windows pop-up
	Report printout to a remote printer (security or housekeeping)
	Alert on third-party console through XML link
	Ability for guests to create their own wake- ups from within their mailboxes
	Group wake-up
	VIP wake-up. Wake-up call goes to front desk personnel so they can place a personal call to guest.

If the Communication Manager-based AWU is used, then fewer ports have to be provisioned on the HMS 400 (since the HMS 400 will not be placing AWU calls to guests). This calculation is handled automatically by the Avaya Solution Design or Enterprise Configurator systems.

Do Not Disturb

The Communication Manager Do Not Disturb (DND) feature blocks HMS 400 AWU automatic wake-up (AWU) calls.

It is not possible to control the DND status of a room through the Intuity Lodging interface. This means, if an AWU call is placed by the HMS 400, but DND is configured for the guest phone on the Communication Manager, then the AWU call will fail.

For the CS 1000 integrated version of HMS 400, the system can be configured so that an AWU call can override the DND status.

Maid and room status

The Intuity Lodging voicemail interface does not support sending maid status codes to the Property Management System; therefore, the maid status feature available on the HMS 400 with CS 1000 are not available for Communication Manager. Communication Manager customers must continue to use the Communication Manager maid status feature.

The following table compares the maid status feature on Communication Manager and on HMS 400 integrated with CS 1000.

Table 10: Maid status feature comparison

Communication Manager	HMS 400 module with CS 1000
Up to six status can be set.	Multi-lingual IVR prompting for maids.
Maids can enter the status from a guest phone or other phone.	Up to 20 different statuses (configurable by the hotel).
Status can be set from operator console.	Tracks maid IDs for employee performance.
	Provides PMS integration and productivity reporting.

Fewer voicemail ports are required on Communication Manager-integrated versions of HMS 400 because the maid status feature cannot be used.

Minibar inventory

There is no support in the Intuity Lodging Interface to send minibar inventory information to the Property Management System, so this feature is unavailable on Communication Managerintegrated versions of HMS 400. Fewer voicemail ports are required on Communication Manager-integrated versions of HMS 400 because the minibar inventory feature cannot be used.

Differences in PMS integration between CS 1000 and CM

Chapter 8: Installation and commissioning fundamentals

This chapter explains Avaya HMS 400 installation and commissioning fundamentals. For step-by-step information about Avaya HMS 400 installation and commissioning, see Avaya Hospitality Messaging Server 400 Installation and Commissioning, NN42350-301.

- PBX configuration on page 51
- HMS 400 hardware on page 52
- HMS 400 software on page 64
- HMS 400 licensing on page 64

PBX configuration

HMS 400 Release 3.0 connects to SIP Virtual trunks on the CS 1000 (Release 7.5 and later) as well as Communication Manager (CM). The CS 1000/CM takes care of the call-processing (incoming and outgoing) tasks, while the HMS 400 system handles the RTP sessions and DTMF transmission and processing. The supported codecs are G.711 (A-Law and u-Law) and G.729.

The maximum number of channels is 120 on one server. Therefore, up to 120 simultaneous SIP sessions can be established between HMS 400 and CS 1000/CM. To enable SIP interoperability, virtual D-channel, SIP routes, and 120 virtual SIP trunks must be configured on the CS 1000 side; or Signaling Group, Trunk Group, Switch Trunks and Messaging Ports must be configured on the CM side.

Additionally, the channel routing is done using virtual ACD Queues on CS 1000, or using VDNs on CM. The number of ACD Queues/VDNs depends on the number of services (for example: AA call flows, TUI, Set AWU) required by the hotel.

The SPS (SIP Proxy Server) and Session Manager are not supported with HMS 400 Release 3.0. With CS 1000, either an NRS or a SIP Trunk Gateway dedicated to HMS 400 are required.

HMS 400 also enables PMSI to the CS 1000 call processor over the ELAN (using rlogin). This is facilitated by programming a PTY port with PMS functionality on the switch and creating a corresponding PWD user.

! Important:

It is the installer's responsibility to be sure that all security measures are adhered to when programming the switch.

HMS 400 hardware

The following sections provide information about the HMS 400 hardware. Avaya HMS 400 uses either HP ProLiant DL360 G7 or IBM x3350 servers.

HMS 400 hardware navigation:

- HP ProLiant DL360 G7 server on page 52
- HP ProLiant DL360 G7 front panel features on page 53
- <u>HP ProLiant DL360 G7 rear panel features</u> on page 54
- HP ProLiant DL360 G7 internal USB port on page 56
- IBM x3350 server on page 57
- IBM x3350 front panel features on page 58
- IBM x3350 rear panel features on page 61
- Environmental specifications on page 63
- Supported peripheral devices on page 63

HP ProLiant DL360 G7 server

The base system package for HMS 400 Release 3 includes an HP DL360 G7 server. The HP ProLiant DL360 G7 server comes with the following:

- Intel E5620 2.4GHz Quad Core Westmere processor
- 6 GB of DDR3 (3x2 GB) running at 1066 MHz
- 2 hot-swap 300GB 15K SAS Drives in a RAID 1 array
- Two redundant hot-swap AC power supplies
- Four onboard 1 Gbps Ethernet NICs
- One DVD/CD R/W Drive
- P410i Raid controller with 256 MB battery-backed write cache
- Four USB ports
- One serial port

Table 11: HP ProLiant DL360 G7 server dimensions

Component	Dimensions
Height	1.7 inches (4.3 cm)
Width	16.78 inches (42.6 cm)
Depth (distance from front to back)	27.25 inches (69.2 cm)
Weight of a fully loaded system	17.92 kg (39.5 lb)

HP ProLiant DL360 G7 front panel features

The following diagram shows the HP ProLiant DL360 G7 server front panel features.

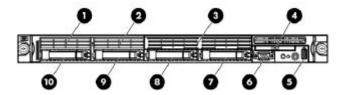


Figure 4: HP ProLiant DL360 G7 front panel

Item	Description
1	Hard drive bay 5 (optional)*
2	Hard drive bay 6 (optional)*
3	DVD tray/hard drive bays 7 and 8 (optional)*
4	HP Systems Insight Display
5	Front USB connector
6	Video connector
7	Hard drive bay 4
8	Hard drive bay 3
9	Hard drive bay 2
10	Hard drive bay 1

The following diagram shows the HP ProLiant DL360 G7 front panel LEDs and buttons.

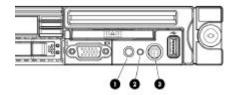


Figure 5: HP ProLiant DL360 G7 front panel LEDs and buttons

Item	Description	Status
1	UID LED/button	Blue = Identification is activated. Flashing blue = System is being managed remotely. Off = Identification is deactivated.
2	Health LED	Green = System health is normal. Amber = System health is degraded. Red = System health is critical. Off = System health is normal (when in standby mode).
3	Power On/Standby button and system power LED	Green = System is on. Amber = System is in standby, but power is still applied. Off = Power cord is not attached, power supply failure has occurred, no power supplies are installed, facility power is not available, or the power button cable is disconnected.

For more information about HP ProLiant DL360 G7 servers, see the documentation that was included with your server.

HP ProLiant DL360 G7 rear panel features

The following diagram shows the HP ProLiant DL360 G7 rear panel features.

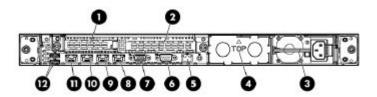


Figure 6: HP ProLiant DL360 G7 rear panel

Item	Description	
1	Slot 1 PCle2 x8 (8, 4, 2, 1)	
2	Slot 2 PCle2 x16 (16, 8, 4, 2, 1), 75W +EXT 75W*	

Item	Description
3	Power supply bay 1 (populated)
4	Power supply bay 2
5	iLO 3 connector
6	Serial connector
7	Video connector
8	NIC 4 connector
9	NIC 3 connector
10	NIC 2 connector
11	NIC 1 connector
12	USB connectors (2)
*This control of the TEW of the section of the State of Tew of Te	

^{*}This expansion slot provides 75 W of power to an adapter, with an additional 75 W of power supplied by external power.

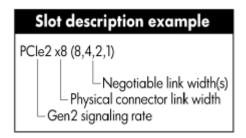


Figure 7: HP ProLiant DL360 G7 server slot description example

The following diagram shows the HP ProLiant DL360 G7 rear panel LEDs and buttons.

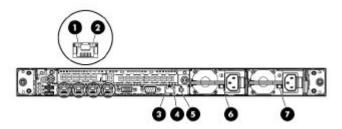


Figure 8: HP ProLiant DL360 G7 rear panel LEDs and buttons

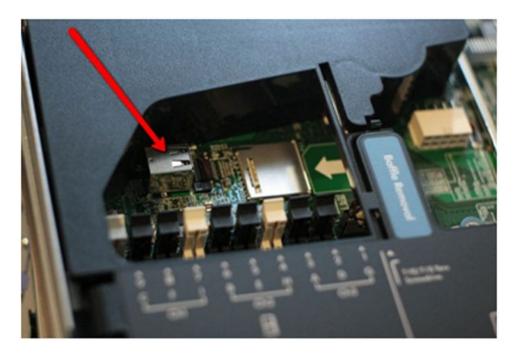
Item	Description	Status
1	10/100/1000 NIC activity LED	Green = Activity exists. Flashing green = Activity exists. Off = No activity exists.

Item	Description	Status
2	10/100/1000 NIC link LED	Green = Link exists. Off = No link exists.
3	iLO 3 NIC activity LED	Green = Activity exists. Flashing green = Activity exists. Off = No activity exists.
4	iLO 3 NIC link LED	Green = Link exists. Off = No link exists.
5	UID button/LED	Blue = Identification is activated. Flashing blue = System is being managed remotely. Off = Identification is deactivated.
6	Power supply 2 LED	Green = Normal Off = One or more of the following conditions exists:
		AC power unavailable
		Power supply failed
		Power supply in standby mode
		Power supply exceeded current limit
7	Power supply 1 LED	Green = Normal Off = One or more of the following conditions exists:
		AC power unavailable
		Power supply failed
		Power supply in standby mode
		Power supply exceeded current limit

HP ProLiant DL360 G7 internal USB port

About this task

The following diagram shows the HP ProLiant DL360 G7 internal USB port.



Item	Description
1	Internal USB Connector.

IBM x3350 server

HMS 400 Release 3.0 is supported on the IBM x3350 blade server. The IBM x3350 blade server has the following:

- Quad Core Processor
- 4 GB DRAM
- Two hot-swap disks configured for RAID 1 redundancy
- Two redundant hot-swap power supplies
- Two Ethernet ports
- Four USB ports
- One serial port

Table 12: IBM x3350 server dimensions

Component	Dimensions
Height	1.7 inches (4.3 cm)
Width	17.3 inches (44.0 cm)

Component	Dimensions
Depth (distance from front to back)	28.0 inches (71.14 cm)
Weight of a fully loaded system with Quad- Core Intel Xeon Processor X3350 2.5GHz/ 1333MHz-6MB that includes:	approximately 15 kg (34 lb)
• 2 -Internal SAS RAID - 146GB 15K 3.5" Hot-Swap SAS	
CD-RW/DVD Combo V Ultrabay Enhanced	
PCI-E Riser Card	

IBM x3350 front panel features

The following diagram shows the IBM x3350 server front panel features.

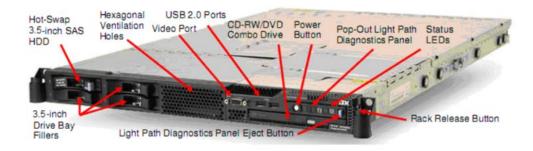


Figure 9: IBM x3350 front panel

The following diagram shows the IBM x3350 server controls, LEDs, and connections on the front of the server.

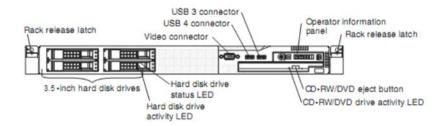


Figure 10: IBM x3350 front panel controls, LEDs, and connections

The following diagram shows the operator information panel. This panel contains controls and LEDs that indicate the status of the server.

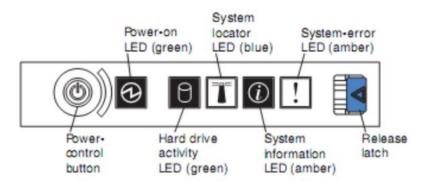


Figure 11: IBM x3350 operator information panel

The following table describes the IBM x3350 front panel LEDs and buttons.

Table 13: IBM x3350 front panel LEDs and buttons

Component	Description
Power-control button	Press this button to turn the server on and off manually.
Power-on LED	When this green LED is lit and not flashing, it indicates that the server is turned on. When this LED is flashing, it indicates that the server is turned off and is still connected to an AC power source. When this LED is off, it indicates that AC power is not present, or the power supply or the LED itself has failed. A power LED is also on the rear of the server.
	Important:
	If this LED is off, it does not mean that there is no electrical power in the server. The LED might be burned out. To remove all

Component	Description
	electrical power from the server, you must disconnect the power cord from the electrical outlet.
System locator LED	Use this blue LED to visually locate the server if it is in a location with other servers. You can use IBM Director to light this LED remotely. This LED is controlled by the BMC.
System-error LED	When this amber LED is lit, it indicates that a system error has occurred. A system-error LED is also on the rear of the server. An LED on the light path diagnostics panel on the system board is also lit to help isolate the error. This LED is controlled by the BMC.
Release Latch	Press the release latch to the left to slide out the operator information panel and view the light path diagnostics panel. See the Problem Determination and Service Guide on the IBM x3350 Documentation CD that was shipped with your server for more information about the light path diagnostics panel.
System information LED	When this amber LED is lit, it indicates that a non-critical event has occurred. Check the error log for additional information. See the information about light path diagnostics in the Problem Determination and Service Guide on the IBM x3350 Documentation CD that was shipped with your server for more information about error logs.
Hard drive activity LED	When this green LED is lit, it indicates that one of the hard disk drives is in use. Note the following:
	Hard disk drive activity LEDs for the SAS drives are in two places: on the hard disk drive and on the operator information panel.
	 There is no hard disk drive activity LED on a SATA drive. The only hard disk drive activity LED is on the operator information panel.
Rack release latches	Press the latches on each front side of the server to remove the server from the rack.
Video connector	Connect a monitor to this connector. The video connectors on the front and rear of the server can be used simultaneously.
USB connectors	Connect a USB device, such as a USB mouse, keyboard, or other device to any of these connectors.
CD-RW/DVD eject button	Press this button to release a DVD or CD from the CD/DVD drive.
CD-RW/DVD drive activity LED	When this LED is lit, it indicates that the CD-RW/DVD drive is in use.
Hard disk drive status LED	This LED is used on SAS hard disk drives. When this LED is lit, it indicates that the drive has failed.
Hard disk drive activity LED	This LED is used on SAS hard disk drives. Each hot-swap hard disk drive has an activity LED, and when this LED is flashing, it indicates that the drive is in use.

IBM x3350 rear panel features

The following diagram shows the IBM x3350 rear panel features. There is only one serial port. To use PMSI over serial for the Hotel PMS and PBX, you must install an additional adapter for the second serial port.

3 Note:

The IBM x3350 server supports serial connection to the CS 1000 only on CS 1000 Release 6.0 and earlier

For more information about the IBM x3350 rear panel, see Avaya Hospitality Messaging Server 400 Installation and Commissioning, NN42350-301.

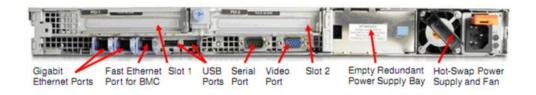


Figure 12: IBM x3350 rear panel

Table 14: IBM x3350 rear panel component descriptions

Component	Description
PCI slots 1 and 2	Connect the PCI Express adapters to these connectors.
NMI button	(For service only) This button can be used to generate an non-maskable interrupt (NMI) to the server.
Power connector	Connect the power cord to this connector.
AC power LED	Each hot-swap power supply has an AC power LED and a DC power LED. When the AC power LED is lit, it indicates that sufficient power is coming into the power supply through the power cord. During typical operation, both the AC and DC power LEDs are lit. For any other combination of LEDs, see the Problem Determination and Service Guide on the IBM x3350 Documentation CD that was shipped with your server.
DC power LED	Each hot-swap power supply has a DC power LED and an AC power LED. When the

Component	Description
	DC power LED is lit, it indicates that the power supply is supplying adequate DC power to the system. During typical operation, both the AC and DC power LEDs are lit. For any other combination of LEDs, see the Problem Determination and Service Guide on the IBM x3350 Documentation CD that was shipped with your server.
System-error LED	When this LED is lit, it indicates that a system error has occurred. An LED on the light path diagnostics panel is also lit to help isolate the error.
Power-on LED	When this LED is lit and not flashing, it indicates that the server is turned on. When this LED is flashing, it indicates that the server is turned off and still connected to an AC power source. When this LED is off, it indicates that AC power is not present, or the power supply or the LED itself has failed.
System-locator LED	Use this LED to visually locate the server among other servers. You can use IBM Director to light this LED remotely.
Video connector	Connect a monitor to this connector. The video connectors on the front and rear of the server can be used simultaneously.
Serial connector	Connect a 9-pin serial device to this connector. The serial port is shared with the baseboard management controller (BMC). The BMC can take control of the shared serial port to perform text console redirection and to redirect serial traffic, using Serial over LAN (SOL).
USB connectors	Connect a USB device, such as a USB mouse, keyboard, or other device to any of these connectors.
Systems-management Ethernet connector	Use this connector to connect the server to a network for systems-management information control. This connector is active only if you have installed a Remote Supervisor Adapter II SlimLine, and it is used only by the Remote Supervisor Adapter II SlimLine.
Ethernet activity LEDs	When these LEDs are lit, they indicate that the server is transmitting to or receiving

Component	Description
	signals from the Ethernet LAN that is connected to the Ethernet port.
Ethernet link LEDs	When these LEDs are lit, they indicate that there is an active link connection on the 10BASE-T, 100BASE-TX, or 1000BASE-TX interface for the Ethernet port.
Ethernet connectors	Use either of these connectors to connect the server to a network.

Environmental specifications

The following table identifies the environmental specifications for the HMS 400.

Table 15: HMS 400 environmental specifications

Environmental condition	Specification
Operating temperature	10°C to 35°C (50°F to 95°F) – up to 3000 ft. 10°C to 32°C (50°F to 90°F) – 3000 ft to 7000 ft.
Maximum altitude	2133 m (7000 ft)

Supported peripheral devices

The following table identifies external devices that are supported by the HMS 400 servers.



Caution:

Risk of data loss or equipment damage

Connect the monitor or KVM switch to the video card before powering up the server, as turning on the server before connecting the monitor or KVM switch can cause damage to the video card.

Table 16: Supported peripheral devices

Device	Description
Modem USB	The USB modem can either be the Avaya-supplied NTUB30HA or a customer-supplied unit. The NTUB30HA is only certified for use in North America and cannot be ordered in other regions.
Monitor, keyboard, and mouse	• Monitor

Device	Description
	Since the monitor is an external device, it requires its own AC power source referenced to the same ground as the HMS 400 server and the switch to which it is connected.
	USB Keyboard
	USB Mouse
	Avaya recommends using a Keyboard Video Monitor (KVM) switch for multi-server configuration.
Portable USB drive	The USB drive is used for disk-to-disk backups.

HMS 400 software

Avaya does not preload the Windows operating system and the HMS 400 software on new Avaya HMS 400 servers. An authorized technician must install the OS and software via an image DVD on-site after unpacking the server.

HMS 400 licensing

To correctly license the HMS 400 system, Avaya Enterprise Configurator determines the number of voice channels you require for the features you want to use. Based on the number of voice channels you require, Avaya Enterprise Configurator calculates the number of ports you must configure and license.

Avaya includes all HMS 400 guest and staff features with the base software, with the exception of the following three separately-licensed features:

- Group Code
- VPIM
- Attendant Console API

Whether using Communication Server 1000 or Communication Manager, Avaya protects the software through a USB dongle, and controls the feature sets for each HMS 400 system by issuing an encrypted keycode. This keycode enables only the features or capacities that you require. You can order SIP voice channels in increments of 1, up to a maximum of 120 channels.

Channels and features can be added to existing servers.

Chapter 9: Administration fundamentals

This section explains Avaya HMS 400 administration fundamentals. For step-by-step information about HMS 400 administration, see Avaya Hospitality Messaging Server 400 Administration, NN42350-600.

- Auto Attendant Flow on page 65
- Staff voice mail administration on page 66
- Guest voice mail administration on page 67
- General system administration on page 68
- Room status administration on page 68
- Minibar administration on page 69
- Auto Wake-Up administration on page 69
- Staff Telephone User Interface on page 70
- Reports on page 71
- Backup and restore on page 71
- System recovery on page 72

Auto Attendant Flow

The HMS 400 uses Auto Attendants to eliminate the need for a receptionist. An Auto Attendant uses voice menus and options to transfer callers to a user's extension.

To configure an Auto Attendant, you must create one or more Auto Attendant Flows (AAF). An AAF is a flowchart of voice menus and options available to callers after they call a specific preconfigured number. Each Auto Attendant Flow can contain up to 25 menus or layers. The HMS 400 system supports an unlimited number of AAFs.

Before creating an AAF, Avaya recommends that you map out your call flow configuration on paper. With this approach, you can configure the system quickly, and prevent errors and confusion.

To create an AAF, you must open the Auto Attendant application and configure options such as the times of day (TOD), holidays, operator Directory Numbers (DN), language selections, layers, announcement layers, and entry points. You must also record any associated prompts.

- TOD Configure this option if you want the Auto Attendant to offer different options at different times of day. You can add several periods that cover different hour ranges on different days of the week.
- Holidays Configure this option if you want the Auto Attendant to offer different options on holidays. You must set particular days of the year as holidays.
- Operator DNs Configure this option if you want the Auto Attendant to transfer calls to an operator. You can set a DN for a day operator, and if applicable, for a night operator.
- Language selections Configure this option to enable different languages for a flow.
 HMS 400 only offers languages that you installed on your system.
- Layers Configure this option to assign a prompt, define key press options and/or add notes to describe the layer.
- Announcement layers Configure this option to create a layer that functions only as an announcement, without options from which a caller can choose.
- Entry points Configure this option to instruct the system how to respond to and handle calls.
- Prompts Record prompts to build the prompt components that you add to an AAF.

For step-by-step information about working with Auto Attendant Flows, see *Avaya Hospitality Messaging Server 400 Administration*, *NN42350-600*.

Staff voice mail administration

Hotel staff mailboxes do not require as much administration as guest mailboxes.

Staff mailbox owners can administer most of the properties of their mailboxes through the Web user interface (UI), which allows the System Administrator (SA) to focus more time on other tasks. However, the System Administrator (SA) must perform a few of the staff voice mail administration tasks. Only the SA can configure an admin user's Extension Type and Class of Service (COS). Also, only the SA can reset mailbox PINs if users forget them or if the PINs expire.

Through the Web UI, the SA can:

- Configure an admin user's properties, such as the user's extension, mailbox and COS.
- Disable an admin user.
- Check the number of new and old messages in a staff voice mailbox, as well as the mailbox number of a particular extension.

- Reset the staff member's password and personal greeting prompt.
- Restore deleted voice messages.

Through the Web UI, staff mailbox owners can:

- Change their mailbox PINs.
- View and edit their profiles.
- Restore messages.
- View COS details.
- View their message details.
- View and create personal distribution lists.
- Check personal greetings in use.
- Reset an alternate Dialed Number (DN).
- Enable remote message notification (COS dependent).

To view or edit admin users, open the Web UI and click **Administration**.

To administer staff voice mail and mailbox attributes, open the Web UI, click Administration and then click on the available options under Mailbox Maintenance.

For step-by-step information about administering staff voice mail boxes, see Avaya Hospitality Messaging Server 400 Administration, NN42350-600.

Guest voice mail administration

In the day-to-day hotel operation, data is constantly exchanged between the Hotel PMS, HMS 400, and the PBX. The system provides hotel staff with the up-to-date information they need to perform many of their daily activities for guest services.

Using the guest-related features available through the Web UI, you can:

- View the latest guest status.
- View in-house or checked-out guests' mailbox information, including the number of messages.
- Manually post check-ins, check-outs, room changes, guest information updates, and Message Waiting Lamp for voice/text messages.
- Restore deleted guest voice messages.
- Reset guest PINs and Personal Greeting prompts.

To view guest information, open the Web UI and click **Hotel Operation**.

To manually perform PMS transactions, open the Web UI, click **Hotel Operation** and then click on the available options under **Manual Posting** .

To maintain guest voice mail and mailbox attributes, open the Web UI, click **Administration** and then click on the available options under **Mailbox maintenance**.

For step-by-step information about administering guest voice mail boxes, see *Avaya Hospitality Messaging Server 400 Administration*, *NN42350-600*.

General system administration

Common tasks that require frequent interaction from the System Administrator (SA) include:

- Creating and maintaining hotel employees' IDs—These IDs allow hotel employees to access the hotel services such as Minibar, Room Status, Supervisor, and the Telephone User Interface (TUI).
- Creating and maintaining system distribution lists (DL)—These lists can contain admin extensions only, guest rooms only, or a mixture of both.
- Viewing group DLs—These lists contain the following details: list number and list description. You can use this function to locate a particular DL, or to locate the group DL for a particular guest extension. The system automatically creates group lists whenever a user checks in a group of rooms with a corresponding group code.

To create and maintain hotel employee IDs, open the Web UI and click on the available options under **Hotel Services**.

To create and maintain system or group DLs, open the Web UI, click **Administration** and then click on the available options under **General Distribution List**.

For step-by-step information about administering the hotel, see *Avaya Hospitality Messaging Server 400 Administration*, NN42350-600.

Room status administration

The person in charge of room status administration can use this feature to inform staff which rooms are available for guests to check in, and to inform housekeepers which rooms to clean or inspect.

A room status administrator can:

- Create and maintain maid user profiles.
- Create Room Status codes and map them to Property Management System Interface (PMSI) codes—You must map codes to allow the HMS 400 system to properly

communicate room status codes to the Property Management System Interface (PMSI).

 Post Room Status through the Web—Normally, staff performs room status posting over a telephone. However, maid supervisors or staff can also post room status manually if telephones are not available at specific areas.

To perform room status administration, open the Web UI, click **Hotel Operation** and then click on the available options under **Room Status**.

For step-by-step information about administering room status, see Avaya Hospitality Messaging Server 400 Administration, NN42350-600.

Minibar administration

The Minibar feature allows you to setup and maintain the minibar item codes and prices, and to manually post minibar items. HMS 400 now supports both total and itemized posting methods.

The SA must first record all the minibar item prompts before users can start posting them over the telephone.

With the Minibar feature, you can:

- Create minibar users. To do this, you must set up a user ID, and select Minibar in the Type Description list.
- Configure minibar items, including codes, description, price (buying and selling), stock level, surcharge and tax, and rounding of total charge. The system supports up to 99 minibar items.
- Manually post minibar items to PMS system if you cannot post over a telephone.

To administer the minibar, open the Web UI, click **Hotel Operation**, and then click an item on the Minibar menu.

For step-by-step information about administering minibars, see Avaya Hospitality Messaging Server 400 Administration, NN42350-600.

Auto Wake-Up administration

The Auto Wake-Up call feature is a voice announcement system that automates and manages the wake-up call services in a hotel. It also monitors the responses to all wake-up calls that staff members or guests set.

With the Auto Wake-Up (AWU) feature, you can:

- Set, edit, or cancel individual wake-up calls—Hotel staff can set or cancel single or multiple wake-up calls for individual as well as a range of rooms. Guests can set their own single or recurring wake-up calls by dialing the Auto Wake-Up extension from the room telephone. Alternatively, a hotel staff member with access to the Web module can set a wake-up call upon a guest's request. Hotel staff can set a maximum of nine wake-up calls for each room. Hotel staff can also set wake-up calls more than 24 hours in advance.
- Set, edit, or cancel group wake-up calls—Hotel staff can use a group code to set a wakeup call for rooms belonging to the same group.
- View all wake-up calls set for that day (by guests and manually via the Web UI).

To perform Auto Wake-Up administration, open the Web UI, click **Administration** and then click on the available options under **AWU**.

For step-by-step information about administering Auto Wake-Ups, see *Avaya Hospitality Messaging Server 400 Administration, NN42350-600.*

Staff Telephone User Interface

The Staff Telephone User Interface (TUI) provides an easy, convenient way for administrators to perform common maintenance and administrative tasks from a telephone instead of directly from the system. It offers similar, but not all, functions provided by the Meridian Mail Hospitality Voice Service (HVS) Guest Administration Console (GAC).

The system can play the TUI prompts in different languages, depending on the profile of the user calling in.

Staff can access the TUI by dialing the TUI access number and entering the password. The System Administrator must provide staff with both the TUI access number (DN) and password.

The three main options on the Staff TUI include:

- Property Management Services (PMS) Options include check in a guest, check out a
 guest, move a guest to another room, and change the language of the guest mailbox.
- Mailbox Services Options include reset mailbox password, enable a mailbox, disable a mailbox, set or cancel a wake-up call for one guest or a group of guests, retrieve postcheck out messages, undelete a message, and delete all messages.
- Prompt Recording Menu This option provides the ability to record welcome, Auto Wake-Up (AWU), introductory, and Auto Attendant (AA) prompts.

For step-by-step information about configuring Staff TUI access, see *Avaya Hospitality Messaging Server 400 Administration*, *NN42350-600*.

For step-by-step information about working with the Staff TUI, see Avaya Hospitality Messaging Server 400 Staff Telephone User Interface User Guide, NN42350-100.

Reports

The HMS 400 reporting framework enables administrators to generate reports on demand. You can either print a report from the screen, or export to Excel, Word, PDF, RPT, CSV, XML, or RTF format.

You can generate a number of reports using HMS 400. There are five categories of reports.

- System Traffic
- AWU
- Hotel Employee Setup—This category includes reports for hotel employee listing, admin mailbox listing, and guest room listing.
- Minibar—This category includes reports for minibar consumption by items, user postings, item list, and sales.
- Room Status
- Guest Directory

To generate reports, open the Web UI, click Reports and then select the relevant menu item.

For step-by-step information about working with reports, see Avaya Hospitality Messaging Server 400 Administration, NN42350-600.

Backup and restore

It is important to back up your data so that you can restore your system to its original working state in the event of a system crash, virus attack or database corruption.

Backup and restore navigation:

- Backup on page 72
- Restore on page 72

Backup

HMS 400 offers the Backup application from the Web UI, which enables users to remotely execute a backup operation.

On the **Auto Backup Configuration** page, you can select a time for an automatic backup, or you can perform an ad hoc backup. You can configure a scheduled backup to run the backup task at a specific time every day.

On the Web UI, you can configure the following:

- the location to store backup files, including a specific directory on the local drive, network drive, or portable USB drive.
- the type of files to archive, including database files, system-critical files, system logs, mailboxes and messages, call flows and user recorded voice prompts.
- the number of backup generations to store.

To perform backup tasks on the Web UI, click the **Utilities** link, which displays the Auto Backup Configuration page.

For step-by-step information about backing up the HMS 400 system, see *Avaya Hospitality Messaging Server 400 Administration*, *NN42350-600*.

Restore

You can restore the system from backup files to reconstruct your data if your hard disk fails or data corrupts.

You can access the Restore application only from the server itself.

You can use any of the following backup source options:

- the default backup destination (C:\Backup)
- an uploaded backup file that you stored on your computer or in a folder on the network
- a removable/portable USB drive

For step-by-step information about restoring the HMS 400 system data, see *Avaya Hospitality Messaging Server 400 Administration, NN42350-600*.

System recovery

You can recover the HMS 400 system to restore critical operations if your hard disk fails.

If you experience a hard disk failure, you must reconstruct your system from the latest image DVD to reestablish critical operations. After you reconstruct your system, you must then restore the latest backup and install the latest Service Pack (SP).

For step-by-step information about recovering an HMS 400 system, see Avaya Hospitality Messaging Server 400 Administration, NN42350-600.

Administration fundamentals

Chapter 10: Maintenance fundamentals

This section provides information about Avaya HMS 400 maintenance. For additional information, see Avaya Hospitality Messaging Server 400 Maintenance, NN42350-101.

- Channel Monitor session trace on page 75
- <u>Database transactions trace using Voice System</u> on page 76
- PMS transactions trace from the PMSI and PBXI modules on page 77
- System logs on page 79
- Software updates on page 81

Channel Monitor session trace

The HMS 400 Channel Monitor module interfaces to the PBX using the SIP Trunk. The system displays all channel activities on the Channel Monitor screen. You can trace a call from the moment the call is answered and view everything that transpires (including all user inputs) until the call is terminated. The Channel Monitor can verify whether calls originate from the HMS 400 or elsewhere.

The system transcribes all traces to log files daily.

The following figure displays the Channel Monitor screen.

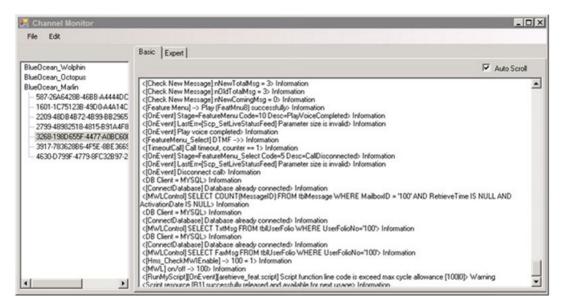


Figure 13: Channel Monitor module

The left side of the Monitor Tools screen displays the channels available and the right side displays the selected channels activities.

Database transactions trace using Voice System

Use the Voice System interface to view records sent to and received by Voice System for all database-related processing. The system saves all traces to daily log files. Voice System provides tracing with the following modules:

- BlueOcean_Wolphin, BlueOcean_Octopus, and BlueOcean_Marlin
- Web UI
- ExtLink (Operator Console Interface)
- PMSI
- PBXI

You can use traces or logs to check all database-related transactions such as the following items:

- Check-ins
- Check-outs
- Room moves
- When a message was recorded
- Into whose mailbox it was recorded

- When it was retrieved
- When a personal greeting was recorded
- When an AWU was set or canceled
- AWU status after each call
- Message Waiting Lamp (MWL) activation/deactivation
- Room status postings
- Minibar postings
- Manual postings from Web UI

The following figure displays the Voice System module.

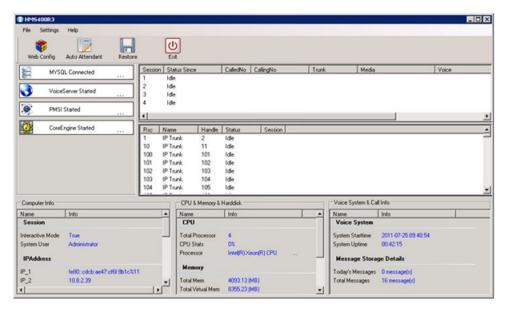


Figure 14: Voice System module

PMS transactions trace from the PMSI and PBXI modules

The Property Management System Interface (PMSI) module and PBX Interface (PBXI) module bridge the Hotel PMS interface with the PBX PMS port. The PMSI transmits all data from the Hotel PMS and updates the HMS 400 database. The PBXI get the updates from the HMS 400 database and transfers them to the PBX. The PBXI module is not activated during Communication Manager integration setup.

Use the three debug panes to trace records being received or sent. The system captures all records in real time.

The system transcribes all traces daily into database log files (voicestatistic tbl_trace database) for troubleshooting.

The following figure displays the PMSI module.

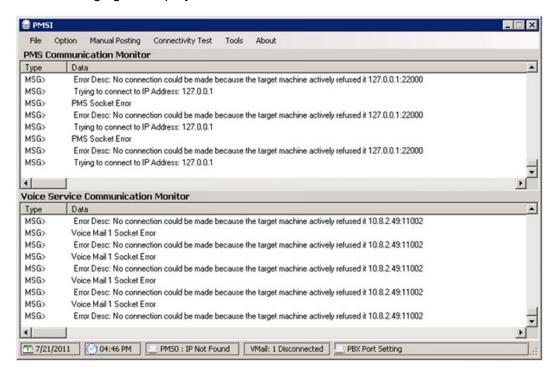


Figure 15: PMSI module

The following figure displays the PBXI module.

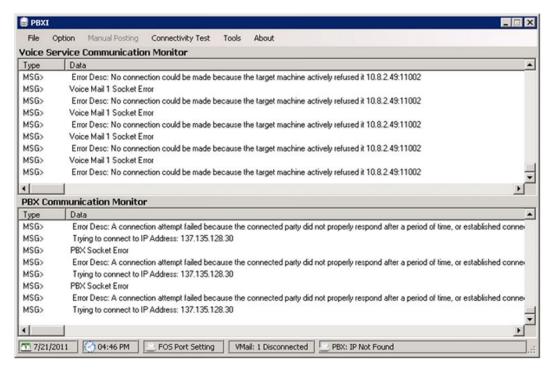


Figure 16: PBXI module

System logs

The log files for all the trace screens and each module are in the Log folder in the C: \HMS400R3\Log directory. All log files are in text format and you can open the log files with a text editor such as Notepad.

HMS 400 automatically creates log files every day and even if you delete the log files, the system re-creates them when you reboot. When performing remote support for troubleshooting purposes, download the relevant logs. If you are unsure of the problem, download every log for the days the problem was reported. An Administrator can also use the Download Log feature from the Web UI and send the log file to technical support by e-mail. Alternatively, use the Log Extractor program to locate and make a copy of only the relevant log information. For more information on using the Log Extractor, see *Avaya Hospitality Messaging Server 400 Maintenance, NN42350-101*.

The following table list the available log files. In the log file name, dd denotes the date the log was created (these files are circular and the system overwrites them every month). When the log file size reaches 5 MB, the system creates a backup file (.log.bk0) and a new log file. If the backup file (.log.bk0) size reaches 5 MB, the system creates a second backup file (.log.bk1).

Table 17: System logs

Module	Log files	Description
BlueOcean_Marlin	BlueOcean_Marlin.sys	General information and errors.
	BlueOcean_Marlin.log	Shows activities for each channel from the call flow perspective.
BlueOcean_Octopus	BlueOcean_Octopus.sys	General information and errors.
	BlueOcean_Octopus.log	Shows activities for each channel from the call flow perspective.
BlueOcean_Wolphin	BlueOcean_Wolphin.sys	General information and errors.
	BlueOcean_Wolphin.log	Shows activities for each channel from the call flow perspective.
Auto Wake Up	AWU_yyyymmdd.LOG (in AWU folder)	Shows general UI information and all transactions
	SetAWU_yyyymmdd.LOG CnclAWU_yyyymmdd.LOG AnsSnz_yyyymmdd.LOG NoAns_yyyymmdd.LOG Failed_yyyymmdd.LOG (In AWULog folder)	Each transaction has a separate log. These logs show all AWU jobs set and canceled (manually and through the system), attempts, and status (Answered/No Answer/Rescheduled/Snooze/Failed) respectively.
DBEngine	DBLog_dd.LOG	Shows all SQL transactions when writing to/reading from the database
Maintenance	Maintenance_yyyymmdd.LO G	Logs all transactions pertaining to the daily maintenance routine
Minibar	MINIBAR_yyyymmdd.LOG	Logs all Minibar transactions
Voice Server	Voice Server_yyyymmdd.LOG	Logs all database transactions from and to all modules – all internal packets

Module	Log files	Description
PMSI/PBXI	VoiceStatistic_tbl-trace (database)	Shows all transactions to and fro between FOS (Hotel PMS), HMS, and PABX.
VoiceLinePrinter	VoiceLinePrinter_yyyymmdd .LOG	Shows all information sent from relevant modules to the printer
Room Status	RoomStatus_yyyymmdd.LO G	Logs all room status transactions
SNMP	SNMPdd.LOG	Captures the traps/ messages sent from relevant modules/applications to an SNMP server
VoiceSystem	VoiceSystem_yyyymmdd.L OG	Logs all inter-module communications as well as the status of each module
VPIM	vpim_client_yyyymmdd.log	Logs transactions from HMS 400 to CallPilot.
	vpim_server_yyyymmdd.log	Logs transactions from CallPilot to HMS 400.
	vpim_service_yyyymmdd.lo g	Shows the general information for VPIM service.
WebUI	WebUI_dd.LOG	Logs all Web UI transactions – including login and logout
XDLink	VMdd.txt	Logs transactions between ExtLink and VoiceSystem component.
	XTdd.txt	Logs all activities conducted by ExtLink.

Software updates

A Service Pack (SP) is an executable file used to release patches for the HMS 400 system. The SP file has the following naming convention:

HMSZZZAccc. exe, where Z identifies the HMS 400 version number, A refers to the SP type: G is General Release and L is Language Release, and ccc is the SP Release Control number.

Maintenance fundamentals

Chapter 11: Upgrades

This section provides information about HMS 400 hardware and software upgrades. For additional information, see Avaya Hospitality Messaging Server 400 Upgrades, NN42350-400.

- Upgrading from 703t servers on page 83
- Software upgrade on page 83

Upgrading from 703t servers

Customers on 703t servers can migrate to the new HP server and SIP integration.

For more information about upgrading HMS 400, see Avaya Hospitality Messaging Server 400 Upgrades, NN42350-400.

Software upgrade

To upgrade the HMS 400 software from Release 2.0 to Release 3.0, you must perform the following sequence of procedures:

- back up the database, messages, files and audio prompts and then copy them to portable media
- reimage the server
- restore the backup files, prompts and messages to the server
- run the HMS400R3 Migration Utility
- install the latest HMS400R3 Service Pack
- re-enter the keycode

For information about HMS 400 software upgrade procedures, see Avaya Hospitality Messaging Server 400 Upgrades, NN42350-400.

Upgrades

Chapter 12: User interface

This chapter provides information about the Avaya HMS 400 user interface.

Visual layout

The HMS 400 main interface contains the following sections:

- Title bar
- Menu bar
- Tool bar

The following figure displays the HMS 400 main interface.

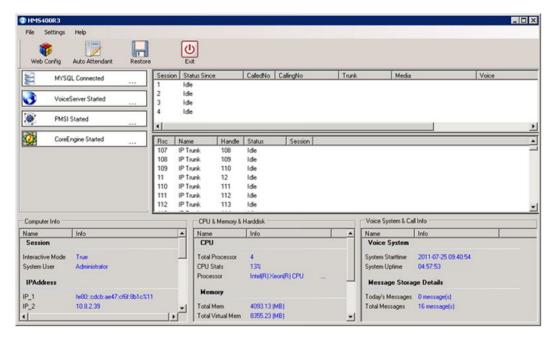


Figure 17: HMS 400 main interface

Visual layout navigation:

- Title bar on page 86
- Menu bar on page 86
- Tool bar on page 87

Title bar

The title bar displays the HMS 400 name and the HMS 400 version number.

Menu bar

The menu bar has three options: File, Settings, and Help.

Table 18: Menu bar options

Menu	Menu option	Description
File	Launch Web UI	Launch Web UI application from this window.
	Channel Monitor	Launch Channel Monitor module from this window.

Menu	Menu option	Description
	Exit	Exit the HMS 400 application. To exit the application, a PIN is required because exiting the application ends all calls and stops the system.
Settings	Run VoiceEngine on Startup	Set VoiceEngine to run during Startup of VoiceSystem.
	Auto Reconnect VoiceEngine	Auto reconnect VoiceEngine if VoiceEngine is disconnected.
	Stop Engine when Shutdown	Stop or exit VoiceEngine when exit from VoiceSystem.
Help	About HMS 400 R3.0	View the version numbers of the system modules.
	Update HMS Keycode	Open the Keycode Information window. In this window, you can view the current system parameters that apply to the current keycode or you can update the keycode.

Tool bar

The tool bar contains the following icons:

- Web Config
- Auto Attendant
- Restore
- Exit

Table 19: Tool bar options

Tool bar icon	Description
Web Config Web Config	Opens an Internet Explorer window with the default HMS 400 Web UI URL.

Tool bar icon	Description
Auto Attendant Auto Attendant	Opens the Auto Attendant module.
Restore Restore	Opens the Restore module that is used for a system restore.
Exit	Stops the system and all modules except the PMSI module. An Administrator password is required. Make sure all channel activities are complete before you exit the system.

Voice System window

The Voice System window has three sections:

- System Application modules
- Line activity status box
- Information panel

The following figure displays the Voice System window.

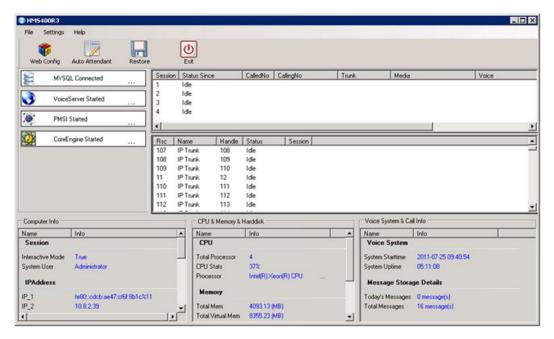


Figure 18: Voice System window

The following table provides information about the System Application modules. The System Application modules section displays the interconnectivity between all HMS 400 modules. A green outline around the module indicates that the module is running; a red outline indicates the connection is down.

Table 20: System Application modules

Module	Description
8	This module shows the general information and disk size for the database
MYSQL Connected Click on the dotted lines at the far right for more information.	
	This application handles interaction for all modules with the system database. It is responsible for retrieving information from and updating the database
Voice Server	, ,
PMSI/PBXI	This interface module links up the PBX, HMS 400, and Hotel PMS. PBXI will only be shown in the CS 1000 integration setup.

Module	Description
CoreEngine Started	This application communicates with the PBX using Dialogic Host Media Processing (HMP) software; it controls all voice processing functions.

The Line Activity status box displays the status of each channel. The transactions are shown in real time.

The following figure shows the Line Activity status box.

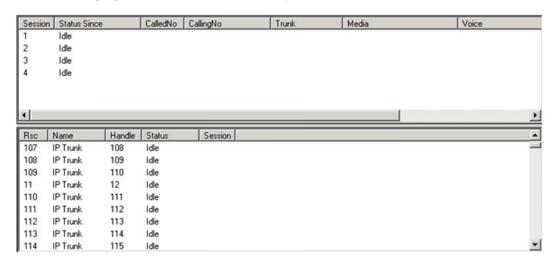


Figure 19: Line Activity status box

The following table describes the Line Activity status box components.

Table 21: Line Activity box options

Column title	Description
Session	Shows the call/line number and available lines.
Status Since	Shows the status of the session/line with date and time stamp.
Called No	Shows the phone number that was called.
Calling No	Shows the phone number that makes the call.
Trunk	Shows the trunk information being used to establish the call.
Media	Shows the media information being used for RTP streaming
Voice	Shows the voice information being used for voice prompt and recording.
CRN	Shows the Dialogic CRN for tracing the call.

Column title	Description
Script	Shows which Call Flow is being used.
Rsc	Shows the resource number that handles the calling point.
Name	Shows the name of the resource number.
Handle	Shows the resource number that handles the called point.
Status	Shows the status of resources/line.
Session	Shows the session number that utilised the resources.

The Information panel displays the following information:

- General Info—Provides details such as CPU type, CPU usage, operating system information, and the IP address.
- CPU/MEM/HDD—Provides information about disk capacity, disk free space, physical memory, and virtual memory.
- Voice System & Call Info—Provides real-time voice mail information such as the number of messages, and remaining capacity for messages and voice.

The following figure shows the Information panel.



Figure 20: Information panel

User interface

Chapter 13: Terminology

The following table describes common terminology associated with Avaya HMS 400.

Term	Description
703t	Avaya server used with HMS 400 Release 1.0.
AA	Auto Attendant. A feature of HMS 400 that eliminates the need for a receptionist. An Auto Attendant uses voice menus and options to transfer callers to a user's extension.
AAF	Auto Attendant Flow. A flowchart of voice menus and options that the Auto Attendant makes available to callers after they call a specific preconfigured number.
ACD	Automatic Call Distribution. The HMS 400 system uses ACD for channel routing.
API	Application Programming Interface. HMS 400 uses the Operator Console API to build applications. See Operator Console.
AWU	Auto Wake-Up. A voice announcement system that automates and manages the wake-up call services in a hotel. It also monitors the responses to all wake-up calls that staff members or guests set.
Call flow	See AAF.
CallPilot	Avaya product that provides access to e-mail, faxes, and voice mail from any touchtone phone, desktop PC e-mail client, browser-enabled PC, or mobile e-mail enabled device.
Communication Manager	An open, extensible IP telephony platform that can be deployed as an IP PBX or feature server supporting a SIP-only environment, or as an evolution server supporting both SIP and non-SIP environments. Communication Manager (CM) provides 700+ PBX features, high reliability and scalability, and advanced features for productivity and mobility. Built-in capabilities include conferencing and contact center applications. A wide range of servers, gateways, and analog, digital, and IP-based communication devices is supported.
COS	Class Of Service. Configure a COS to classify Admin users and guests in the HMS 400 system. An Admin COS determines the characteristics and behavior of the admin mailbox. A guest COS determines the type of features and functions available to the guest.
COTS	Commercial Off The Shelf. Generic purchased hardware that can be used in a wide variety of installations.
CS 1000	Communication Server 1000. An Avaya server-based, full-featured IP PBX.

Term	Description
DL	Distribution List. Use DLs to send voice mail to a specific group of mailboxes (for example, hotel promotions and announcements).
DN	Directory Number. The number that a caller or the HMS 400 system uses to initiate a call.
Dongle	Hardware that connects to a computer to enable you to run secured software.
DSE	Digital Set Emulation. Card-based system for creating and removing communication sessions over a network.
DTMF	Dual Tone Multi-Frequency. A signaling technology used for signaling over a telephone network.
Entry point	Entry points act like a translation table to enable the HMS 400 system to determine how to respond to a call. Entry points define the Calling Party and Called Party data, as well as the call flow to access based on party data.
Group code	Feature that allows staff to identify rooms belonging to the same group (for example, a tour group). This code can be used to create custom welcome messages, distribution list messages, and Auto Wake-Up messages.
HMS 400	Hospitality Messaging Server 400. Server-based messaging solution for hotels. A comprehensive, simple-to-use solution for both guest and staff messaging, as well as advanced communication features that provide hospitality businesses with better overall guest satisfaction, and operational efficiency.
HP ProLiant DL360 G7 server	COTS rack-mounted server used with Avaya HMS 400.
IBM x3350 server	COTS rack-mounted server used with Avaya HMS 400 Release 2.0.
IVR	Interactive Voice Response. A technology for interpreting voice and tones in a telephone network.
MWL	Message Waiting Lamp. Light that indicates if a mailbox contains new voice and text messages.
Operator Console	This interface permits third-party operator consoles to control the HMS 400 Auto Wake-Up feature using a TCP/IP link.
Orion module	An application that handles interaction for all modules with the system database. The Orion module is responsible for retrieving information from and updating the database.
PBX	Private Branch eXchange. The telephone exchange that serves the hotel.
PMS	Property Management System. System used to manage hotel functions such as guest bookings, online reservations, and sales.
PMSI	Property Management System Interface.

Term	Description
PMSI/PBXI module	Property Management System Interface module. Interface module that links up the PBX, HMS 400, and Hotel PMS.
RTP	Real-time Transfer Protocol. A protocol for transmitting audio and video over a network.
SA	System Administrator.
SIP	Session Initiation Protocol. A protocol for creating and removing communication sessions over a network.
SP	Service Pack. Software enhancements and updates for HMS 400 Release 2.0 and later that are available for download. HMS 400 Release 1.0 uses the term Product Enhancement Package (PEP) for these enhancements and updates.
TUI	Telephone User Interface. Allows simple access to common hotel features through IVR.
UDP	User Datagram Protocol. Simple transport protocol used for the Internet.
USB	Universal Serial Bus. Interface between a computer and peripheral devices.
Voice Engine module	An application that communicates with the PBX using Dialogic HMP; controls all voice processing functions.
Voice System module	An application that connects all the other modules together. It also monitors connectivity state and transactions for all modules.
VPIM	Voice Profile for Internet Messaging. Protocol used to send voice mail messages over IP networks. VPIM encodes voice mail messages through SMTP protocol.
Web UI	Web User Interface. The primary user interface used to access the HMS 400 system software. Access the Web UI through a Web browser using the URL: https://hms400v3/hms400webui

Terminology