

Administration Guide

01 Oct 2020

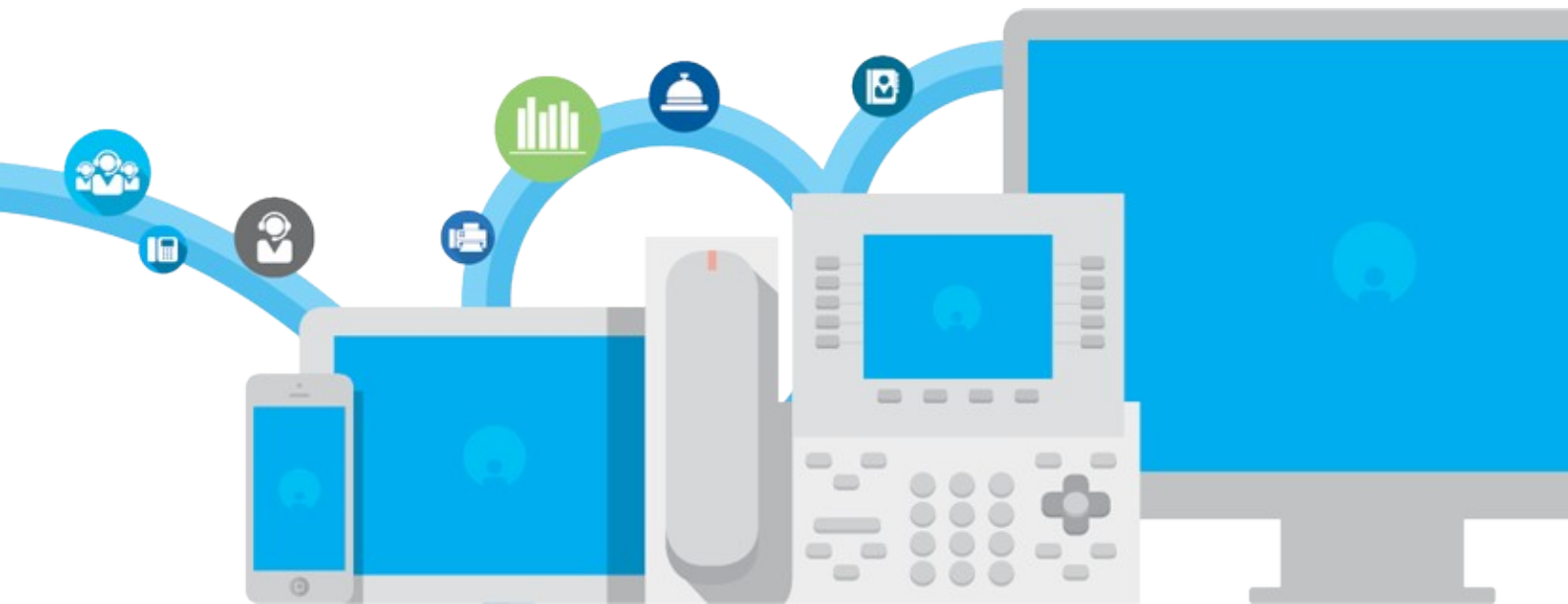


Table of Contents

- Administration Guide.....1/28**
 - Description and Architecture.....1/28
 - Hotel Link Architecture.....4/28
 - Product Configuration.....5/28
 - PBX Configuration.....11/28
 - High Availability.....15/28
 - License activation.....16/28
 - Troubleshooting.....17/28
 - Hospitality Services Detail.....23/28

Administration Guide

Description and Architecture

Imagicle Hotel Pack adds hospitality features to the Cisco unified CallManager PBX, granting a complete integration with hundreds of Property Management Systems, like Micros Opera, Micros Fidelio, Fidelio Cruise, Infor, Protel, Galaxy, Agilysys Visual 1 and more.

Thanks to Imagicle Hotel Pack, the activity on the PMS front end, like checking in a guest, will automatically perform operations on the PBX, such as unlocking the external calls, displaying the guest name on the IP phone, and so on.

Such operations are not provided natively by Cisco Unified CallManager. Hotel Pack leverages the applications included in Imagicle Application Suite to perform them.

Hospitality Features provided by Imagicle Hotel Pack

- **Guest Name** on the phone and on the line description. After the guest is checked in, the IP phone will display his/her name. If the guest calls the reception from the room, the reception IP phone will display the room number and guest name.
- **Phone Lock**. When the room is in use, the guests will be allowed to place external calls from the room phones. When the guest check out, the room phones will only be allowed to reach internal numbers. The call history is also cleared at check out, for privacy reasons.
- **Call Costs Posting**. Whenever a guest places an external call, its cost will be automatically reported to the PMS, which will include it in the guest folio.
- **Call Barring**. Sometimes the guests should not be allowed to place calls to external number from the room phone. You can set a restricted class of service for the room phones directly from the PMS, and the room phones will only be allowed to reach internal numbers. Just like Phone Lock, but applies when the room is occupied.
- **Voicemail** (personal messages). Hotel Pack includes voicemail so the staff can leave messages when the guest is not in the room or does not answer to the phone. The message waiting indicator will automatically turn on, to inform the guest that messages are available.
- **Maid Status**. The cleaning personnel will be able to call an internal number to change the cleaning status of the room directly from the room phones. A voice service, available in five languages, will help the caller to select the right choicche, so there is no need to memorize cleaning codes.
- **Wakeup Calls**. You can schedule wakeup calls on the PMS. They will be executed by Hotel Pack, and the result (answered / not answered) will be reported to the PMS.
- **Guest Directory** on the staff phones. Optionally, you can show and search the list of all the hotel guests on the reception IP phone (or other staff phones), to call them without knowing the room number.
- **Do Not Disturb**: when you set the DND status for a room, all the room IP phones will be set in DND as well.

Imagicle Hotel Pack supports **Room move**, if available from the PMS. Room move is the ability to move the guest information, including voicemail messages, to another room. Hotel Pack can also be configured to lock hall phones and bill conference rooms calls.

A detailed description of the services is provided in the Hotel Services section of this guide.

Additional services for the hotel and for the staff

The following applications of the Imagicle Application Suite are not included in Hotel Pack, but can be added to provide functionalities to the staff:

- **Queue Manager Enterprise**, to provide advanced ACD/IVR customer service to the Hotel
- **Blue's Attendant Console**, to provide Operator Console with guest info to the Hotel receptionist
- **StoneFax**, to provide virtual IP Fax Server functionalities to the Hotel staff
- **Speedy Enterprise**, to provide advanced external directory services and Caller ID to the Hotel staff

For example, the integration with the Attendant console allows the concierge or the operators to instantly look for a guest by name, and to transfer an external call to the room without even touching the phone.

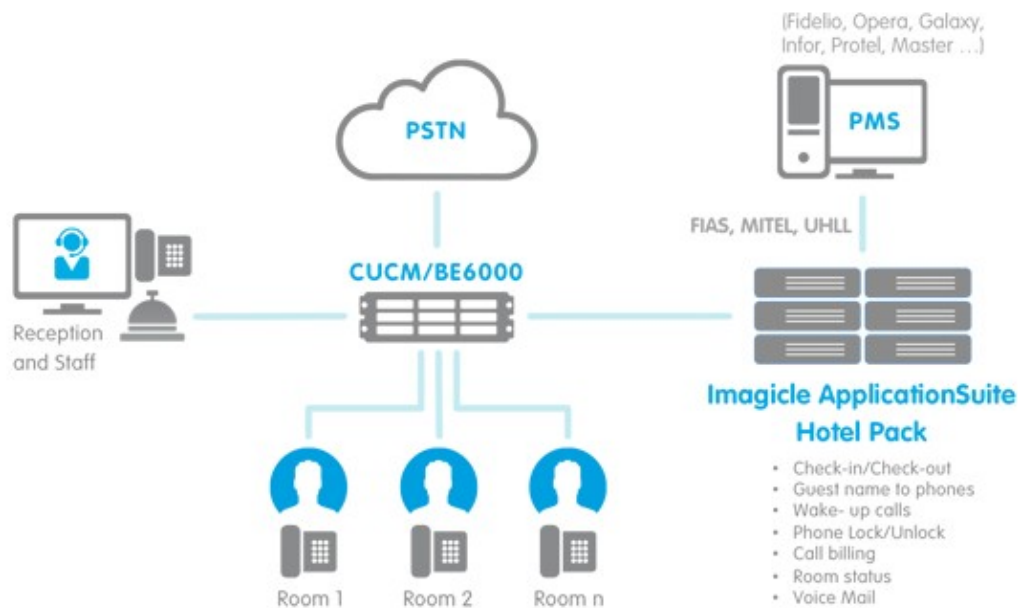
Applications included in Imagicle Hotel Pack

Hotel services are provided by Imagicle Application Suite. Imagicle Hotel Pack for Cisco UC is a commercial bundle which includes four applications of the Imagicle Application Suite:

- **Billy Blue's 4**, for call cost postings
- **StoneLock**, to lock the phones
- **SSAM Enterprise**, to provide voicemail
- **Hotel Link**, to connect to the PMS, place the wakeup calls and provide other hotel services

While the other applications can be licensed individually, Hotel Link can only be bought in the Hotel Pack.

Network Architecture



Imagicle Hotel Pack communicates with the PMS through a permanent and bidirectional TCP link. The PMS vendor makes available an interface, which can be either hardware or software, usually installed at the Hotel. The purpose of the PMS interface is to let the PMS interact with external devices such as air conditioning, TV and PBXes. Imagicle Hotel Pack is seen as a PBX.

The TCP communication between Hotel Pack and the PMS interface leverages well known protocols, such as Fias, Mitel emulation, Uhl1. The network configuration must allow the Imagicle Application Suite server to reach the hotel PMS interface. Firewall configuration is described in the "[AppSuite Installation - Network Setup](#)" section of this guide.

The one-time deployment and configuration of the PMS interface may imply additional charges for the customer, not dependent from Imagicle.

System Requirements

Hardware and Software requirements

Imagicle Hotel Pack is part of the Application Suite. Since Hotel Pack is a bundle of three applications, the hardware must be powerful enough to run three AppSuite applications concurrently. Please refer to the product page on Imagicle web site for

details.

PMS - Software requirements

The list of PMS software compatible with Hotel Pack is available on the [product page](#) on Imagicle web site. Other PMS software supporting one of the standard hospitality protocols might be compatible. Contact Imagicle to request a verification.

IMPORTANT: Basing on the specific PMS vendor and model, an additional license or module could be required on the PMS software to support the required communication protocol. Following the known parts number for some of them:

- Oracle Opera (FIAS protocol): requires part number 5001-345 (FIAS_BUE)
- UHLL compatible products: requires Control Lodging Link, part number [DMM-303](#).

Please, contact your PMS reseller/maintainer for additional details about the PMS requirements.

PMS - Configuration requirements

- The room name (ID) the PMS interface sends to communicate must match the primary extension number of the room phones. E.g. the phone line in room 201 must be 201
- Only numbers are supported for room naming. If you have rooms named with alphanumeric names (such as "Royal Suite"), in order to be supported by Imagicle Hotel Pack, they should be renamed with a numeric string matching the room extension number.

PBX requirements

Hotel Pack is compatible with CuCM 8.0 and above. Version 9.1 is recommended, allowing easier phone lock configuration. Suggested Phone Lock configuration is though Curri - ECC over translation patterns.

Additional PBX configuration requirements:

- The PBX numbering plan must be flat. No overlapping numbers across different partitions.
- All the room phones must share the same line number. The room phones must have one line only

Hotel Link Architecture

Hotel Pack is a commercial bundle including three AppSuite applications (Billy Blue's 4, SSAm Enterprise 4, StoneLock) and the Hotel Link module.

Hotel Link is an AppSuite module which communicates with the PMS and controls the other applications to provide call costs, voicemail and phone lock.

Hotel Link is a windows service, and depends by other AppSuite services:

- **PMSLink2**, providing bidirectional message exchange with the PMS interface
- **Wakeup Service**, placing the wakeup calls to the PBX room numbers and hosting the **Maid Status** voice service

To get the full functionality from the Hotel Pack, you need the three applications licensed, configured and running.

Besides, Hotel Link must be licensed, configured and running. PMSLink2 and the Wakeup service must be running too.

PMSLink2 Main Features

- Supports **multiple PMS protocols**, allowing the Application Suite to provide the same functionality regardless the PMS
- **Message throttling**, which prevents overloading the PMS interface and the Hotel Link service
- **Keep alive**: if the protocol PMS allows it, a PING message is sent every 20 seconds to ensure the network link is alive
- **Automatic reconnection**: if the network connection with the PMS interface is lost, an attempt is made to reconnect every 20 seconds

Product Configuration

Warning: you must install and configure the Application Suite before being able to configure the single applications. Please go through the AppSuite Deployment, Main Configuration, and User Management sections before reading on.

To fully configure Hotel Pack you need to:

- Define the PBX numbering plan
- Complete the Application Suite common configuration
- Create the room list through the users management web interface
- Configure Billy Blue's 4
- Configure StoneLock
- Configure SSAm
- Configure Hotel Link
- Configure CuCM for the Wakeup service and Room Maid status service
- Optionally, add IAS users for the hotel staff
- Activate the applications licenses (within 30 days from installation)
- Evaluate the features without a PMS connection
- When the PMS interface IP address and port are available, configure the PMS connection

PBX Numbering Plan

The most important concept in Hotel Pack is:

`1 room = 1 extension number`

The extension number is what is called "Directory Number" in Cisco CallManager documentation. If you have more than one phone in an hotel room, they must share the same line (shared lines).

Partitions are not supported, i.e. they are ignored. So **the numbering plan must be flat**, meaning no overlapping numbers.

Globalized Numbering Plan (i.e. +E.164 dial plan configuration) including the symbol '+' is not supported for the rooms.

On the PMS, the line number must match the room number.

Only numbers are supported as room names. Therefore, rooms having different names (like "Royal Suite") should be renamed in the PMS with a (unique) numeric id.

On the CuCM the extension number must match the room number.

For instance, room 202 on the PMS must be associated to line 202. On CuCM, you should register one phone with the DN 202. Any secondary phone in the room must share the same DN (202).

Analog phones are supported with some limitations: the guest name on the line and MWI for voicemail are not available.

Multi-Property configuration

In order to support multi-property organizations (that is multiple hotels sharing the same Cisco CallManager cluster) a property prefix number can be used to match each room with the associated directory number defined in CUCM.

As a sample, suppose you have to manage two properties (Hotel Panorama and Hotel Majestic) having an overlapped room numbering schema, for instance, both of them having a room '201'. This scenario can be supported:

- Defining in the PMS of each property the regular room number, that is '201' with phone number 201.
- Defining in the CUCM the directory numbers in a hierarchical format, that is, using a common prefix number for all extensions belonging to the same property. In the sample above it could be:
 - ◆ Hotel Panorama: directory number **1**201 for room 201.
 - ◆ Hotel Majestic: directory number **2**201 for room 201.
- Defining in the Application Suite, two properties each one with a different property prefix . In the sample above:

imagicle

- ◆ '1' for Hotel Panorama
- ◆ '2' for Hotel Majestic
- Defining in the Application Suite each room with a username equal to its phone extension. In the sample above, you should define:
 - ◆ a room with username '1201', having Internal phone number 1201 (room 201 of Panorama)
 - ◆ a room with username '2201', having Internal phone number 2201 (room 201 of Majestic)

Please, notice that this kind of configuration:

- still requires a flat (not overlapping) global numbering plan in the CUCM
- does not permit to have in the same property phone extensions starting by different digits
- permits to manage also single-property scenarios where the room numbers in the PMS are one or more digits shorter than the corresponding CUCM directory numbers or, to be more precise, they are the same number unless a common prefix.

IMPORTANT: if you are going to use the AppSuite without a PMS, please specify a dummy property without any prefix and pointing to a fake IP address.

Global Application Suite Configuration

Ensure you completed all the Application Suite global configuration steps, including all the system parameters, monitoring, TAPI, AXL. Presence is not required.

Application Suite Authentication

In a standard Hotel Pack installation, the authentication type is not meaningful for the rooms. Administration is usually done by the global administrator whose credentials (admin/admin) are created during setup.

For this reason, the suggested authentication type is "Application Suite".

AXL setup and device association with the rooms

Hotel Link needs AXL access to CuCM to change the phone display name and clear the call history. Ensure you complete all the AXL configuration steps, let the AXL service work for some minutes, then check the result through the *Detected phones and devices* web page. It can be displayed by clicking Admin, System Parameters, IP Telephony System Parameters, Detected phones and devices.

Note: Analog phones are not displayed in the *Detected phones and devices* web page

TAPI and TSP configuration

The recommended blocking technology for the room phones is ECC/Curri. Nevertheless, TSP installation is required if you want to integrate Imagicle Attendant Console and to display the lock message on some IP phone model. For this reason, installing Cisco TSP is recommended.

Users List Synchronization

If your Hotel Pack only manages room phones and a few phones for the staff, you do not need User synchronization.

If you need to provide services for the staff, you'll need to create standard users for them. In this case, you can automatically create the users list via user synchronization and select the appropriate Authentication setting.

Network Configuration

Ensure the firewall is configured as described in the [Network Setup](#) page of this guide, which includes Hotel Link.

In particular, the PMSLink2 service must be able to communicate via TCP with the PMS interface.

Creating the room list through the users management web interface

Imagicle Hotel Link must know the list of the room configured in the PMS. You can manage the features associated to a room through the Users Management interface. You can add a new room to the configuration by clicking the "Create room" link.

Here is the list of the mandatory properties for a **room**:

- **Username:** the room ID as defined in the PMS. This is usually equal to the room number. E.g. **201**.
For multi-property configurations the room number must include the property unique prefix.
- **Password:** anything you like. You should never access the web interface as room. E.g. **MyPassword**
- **Pin:** empty
- **First Name:** empty
- **Last Name:** empty
- **First extension number:** this is the line number associated to the room phone or phones. This must be equal to room ID. E.g. **201**.
For multi-property configurations the room number must include the property unique prefix.
- **Department:** Name of the Hotel or property. E.g. **Hotel Bellavista**
- **Enable billing for first extension number:** Checked (**true**)
- **Enable billing for voicemail number:** Unchecked (**false**)
- **Enable billing for fax number:** Unchecked (**false**)
- **Number of masked digits in billing:** 0 (must always be 0)
- **Voicemail number:** must match the number configured in the PBX. E.g. **4201**
- **Do not keep sent voicemails:** Unchecked (**false**)
- **Published directory number:** this is used by the Attendant Console and Speedy Enterprise. Set it to the room line number. E.g. **201**
- **Disable caller lookup on phone:** Checked (**true**)
- **Lock phone:** Unchecked (**false**)
- **Lock phone administratively:** Checked (**true**)

Once the room has been added to the configuration, it can be searched and displayed in the Room and Guests web page.

A room cannot share the same first extension number with another room or user. A common mistake is to create a standard user instead of a room. Users are not displayed in the Rooms and Guests web page, and are not linked to the PMS. Once created, a IAS user cannot be turned into a room, so it must be deleted and a new room created in its place.

Importing the room list from a CSV file

You can import the room list from a CSV file as you would with a standard users list. You download the template, fill it with your favorite application, and save it as a CSV file. The only difference is that the lines which represent "rooms" in the CSV file have the **IsRoom** column value set to **1**.

For general concepts on [how to populate the users list through a CSV file](#), please refer to the general section of this guide.

After importing the list, please verify that the rooms were correctly imported by using the "Rooms and Guest" web page. If a room is not displayed in that web page, it has been created as a standard user. The user must be removed, the CSV file must be fixed, and importation must be repeated.

Warning: after importing the room list from a CSV file, you must restart the StoneLock service.

Adding IAS users for the hotel staff

You may want to enable other Application Suite services for the staff members, such as Attendant console, IVR, ACD, FAX, Corporate Directories, Call Recording and more. Those services are not included in Hotel Pack and require separate licenses.

In this case, you should create one standard IAS user for each person. Please refer to the specific application administration guide.

Configuring Imagicle Billing

Hotel Link relies on Billy Blue's 4 to calculate the call costs, so it must be fully configured and tested before configuring Hotel Link. Please refer to Billy Blue's 4 administration guide.

When configuring Billy Blue's 4, please mind the following:

- Only calls that have a cost will be posted (that is, calls which are Outgoing and Answered). So configure Billy Blue's to discard internal calls, to save database and CPU resources. You should activate internal calls processing only if advanced call analysis is explicitly required by the customer.
- The number of calls placed from the hotel rooms is usually low. When configuring the call check interval for the Recorder service, the recommended value is 30 seconds.
- Calls older than 20 minutes are discarded. For this reason, it is mandatory that the Imagicle Application Suite server time and the PBX time are aligned. Usage of a NTP service is recommended.
- Calls with a wrong date and time are not reported in the Hotel web interface, even if they are displayed in Billy Blue's home page. Please double check the gateway time zone setting on the PBX.
- In the tariff, make sure emergency calls have no cost.
- PMS protocols do not include currency information. Make sure you create a tariff with costs calculated in the currency of the country where the hotel is located.
- PMS protocols do not support masking digits in the called number. This feature might be provided by the PMS on the guest folio. In the IAS room configuration, always set "Number of masked digits in billing" to 0.
- PMS protocols do not support timezone information. Call begin time always refer to the Hotel timezone. Make sure the IAS server timezone is the same as the Hotel timezone.

When testing the call costs posting hotel feature, please keep in mind:

- Any cost lesser than 0.01 is not posted to the PMS.
- Costs are sent to the PMS almost in real time, that is, within 3 minutes from the moment the call is placed.
- Imagicle Billing license limit during the 30 days free evaluation period is 250 extensions. Do not use the free evaluation with more than 250 rooms and users.
- Call details other than the call cost, such as the called number and the call duration, are sent to the PMS only if the connection protocol (FIAS, UHLL...) allows it

Proceed to Hotel Link configuration only when you can see Outgoing Answered calls with a cost displayed in Billy Blue's web home page.

Configuring Phone Lock

Hotel Link locks the room phone by changing the StoneLock "Lock phone administratively" flag, to prevent the room phones to call external numbers when the room is not occupied by guests. This means the StoneLock application must be fully functional and tested before continuing with Hotel Link configuration. Please refer to StoneLock administration guide for the configuration steps.

StoneLock can work through two blocking technologies, TAPI and ECC/Curri. ECC/Curri is recommended because it allows easier troubleshooting and has a lower impact on the system performance.

You should create an **ECC profile** which is involved when the room phones try to reach the PSTN. The recommended configuration is through **Translation Patterns**. Route Patterns call the ECC profile each time a digit is typed on the phone, slowing call processing. ECC profiles for Directory Numbers are triggered only for incoming calls.

Configuring the Annunciator to play a message to let the caller know the call is locked is highly recommended, and simplifies the application testing.

When configuring StoneLock parameters:

- Remember to properly set the numbering parameters in the Application Suite System Parameters. They are needed to tell internal numbers from external numbers.
- On the **room phones**, do not configure the Phone Lock XML service, or the Automatic Lock when Idle url
- Remember to configure the list of the emergency numbers in the "List of allowed numbers when phones are locked" on the Phone Lock -> Global Settings web page.

imagicle

- If you are using the TAPI technology, and redirecting the locked calls to a service number playing the "phone is locked", make sure this number is included in the "List of allowed numbers when phones are locked" on the Phone Lock -> Global Settings web page.

StoneLock also clears the Call history at checkout, provided that Imagicle AXL service is running and configured, as described in the [Main Configuration, System Parameters](#) section of the Application Suite System guide.

Continue Hotel Link configuration only when you are able to administratively lock/unlock a phone from the web interface.

Configuring Voicemail

SSAm is required to allow the guests to receive personal messages, left from internal phones (such as the reception) or from external callers if DID is available.

It must be fully functional and tested before continuing with Hotel Link configuration. Please refer to SSAm administration guide for the configuration details.

SSAm configuration is pretty standard. You might want to customize the default welcome message from the web interface.

When used in a room, the voicemail IVR does not ask for a PIN to listen to the messages. If needed, the guest could set a personal PIN number through the voicemail IVR. The pin is removed at checkout.

The IVR language is the Application Suite default language you choose during setup. To change the IVR language for a specific room, open the room configuration in the Users Management web interface, and enter the language code in the web interface. Warning: the language is not reset at checkout.

If you need the concierge to be notified when a voicemail message has been left on a room IVR, go to the room configuration in Users Management. Fill the **voicemail address** with the reception email address (e.g. info@myhotel.com). Make sure "do not keep sent voicemails" is **not** checked.

Configuring Hotel Link

Hotel Link does not require any additional configuration, if you followed the directions above.

Configuring CuCM for Hotel Link

Provided you have already configured the PBX for other IAS applications (SSAm, Billy Blue's 4, StoneLock), CuCM configuration for Hotel requires just another SIP trunk and a route pattern.

The SIP trunk is needed by the wakeup service to call the room phones. The same SIP trunk is used to reach the Room Maid status IVR from the room phones. The route pattern is needed to assign a number to the maid status service.

[CuCM configuration for Hotel Link](#) is described in the dedicated page in this guide.

Activating the applications licenses

If you already bought the product, activate it through the Admin -> Licenses web page. More details on Hotel Pack licensing can be found on the [License Activation](#) page of this guide.

Hotel Pack can also be evaluated for free for 30 days. During evaluation, you can configure a maximum of 250 rooms/users.

Evaluating Hotel Pack without a PMS connection

The PMS connection is not mandatory to test Hotel Pack features. It can be done at a later time, or in advance.

imagicle

All Hotel Pack features can be tested through the IAS web interface, with the help of two IP phones registered to the PBX, one representing a room, and the other representing the reception.

The tests are detailed in the [Troubleshooting](#) section of this guide.

When the actual PMS configuration is available, the tests should be repeated issuing commands from it.

Configuring the PMS connection

When the PMS interface IP address and port are available, you can easily configure the PMS connection by the Hospitality -> Property settings web page.

PMS connection is provided by Imagicle PMSLink2, included in the Application Suite. PMSLink2 always acts as a TCP client towards the PMS interface. The PMS interface must be configured as a TCP server.

The PMS vendor personnel will let you know the PMS interface IP address and port, and supported connection protocol.

Just enter the data in the web page and press the Save button. PMSLink2 will be automatically restarted. From the moment the IP address is available, it will try to connect to the PMS interface.

Tip: try to reach the PMS interface via TELNET to make sure no firewall is blocking the communication.

Receiving a Database Sync

A Database Sync is the process of sending the current occupation state (occupied or free) and guest name from the PMS to Hotel Pack, for each room.

This operation, when available, should be started from the PMS interface by the vendor personnel.

Receiving a Database Sync requires that all the rooms were configured on the Application Suite in Users Management.

Fine tuning Imagicle Monitoring Service

Whenever a PMS command for a room X, such as a check-in request, is issued by the PMS interface towards Hotel Link, a lookup is made in the IAS room list. If the room X cannot be found, an alert is recorded by the Monitoring Service in the IAS event list.

Checking the Monitoring Service Event History web page for errors can be an effective troubleshooting.

Unfortunately, it is a common practice to define extra "virtual" rooms on the PMS. The PMS messages for those rooms will be sent to Hotel Link, even if they should be ignored. Those messages will always trigger an alert and will be recorder in the Monitoring service Event History.

You may want to disable email notification for those alerts.

Alarms	Events History	Mail Configuration	SNMP				
Filter by: Last Year and then by: All Events Hotel Link All Categories							
Refresh Print Export							
DATETIME	APPLICATION	CATEGORY	TYPE	ID	MESSAGE	MAIL	SNMP TRAP
10/30/2015 12:48:27 PM	Hotel Link	PMS		16001	Error: a request for CHECKIN was received from the PMS with room id 8101 but no room was found for it. Please check the room list configuration.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

PBX Configuration

The Wakeup Service and Maid Status IVR require an additional and dedicated SIP trunk.

Sip Profile

SIP Profile Information	
Name*	Imagicle Maid Service SIP Profile
Description	SIP profile for Hotel Pack - Maid Service IVR
Default MTP Telephony Event Payload Type*	101
Early Offer for G.Clear Calls*	Disabled
User-Agent and Server header information*	Send Unified CM Version Information as User-Agen
Version in User Agent and Server Header*	Major And Minor
Dial String Interpretation*	Phone number consists of characters 0-9, *, #, anc
Confidential Access Level Headers*	Disabled
<input checked="" type="checkbox"/> Redirect by Application	
<input type="checkbox"/> Disable Early Media on 180	
<input type="checkbox"/> Outgoing T.38 INVITE include audio mline	
<input type="checkbox"/> Use Fully Qualified Domain Name in SIP Requests	
<input type="checkbox"/> Assured Services SIP conformance	

Sip Trunk Security Profile

Create a dedicated Sip Security Profile with the following properties:

- Outgoing Transport Type: UDP
- Incoming Port: 5060

SIP Trunk Security Profile Information

Name*

Description

Device Security Mode

Incoming Transport Type*

Outgoing Transport Type

Enable Digest Authentication

Nonce Validity Time (mins)*

X.509 Subject Name

Incoming Port*

Enable Application level authorization

Accept presence subscription

Accept out-of-dialog refer**

Accept unsolicited notification

Accept replaces header

Transmit security status

Allow charging header

SIP V.150 Outbound SDP Offer Filtering*

Conflicting StoneFAX configuration

If StoneFAX was configured on the system, you cannot create a new Sip Security Profile listening on port 5060. In this case, create a Sip Security Profile for Hotel Link which listens on port 5066.

Sip Trunk

- Under Inbound Calls, the selected **CSS** must allow the Imagicle Application Suite server to reach the room phones.
- Under SIP Information
 - ◆ Select the SIP Trunk Security profile and SIP Profile you just created
 - ◆ The Destination Port must be set to **5066**
 - ◆ DTMF mode must include **rfc2833**

SIP Information

Destination

Destination Address is an SRV

1*

MTP Preferred Originating Codec*

BLF Presence Group*

SIP Trunk Security Profile*

Rerouting Calling Search Space

Out-Of-Dialog Refer Calling Search Space

SUBSCRIBE Calling Search Space

SIP Profile* [View Details](#)

DTMF Signaling Method*

Maid Status IVR Route pattern

imgicle

Create a route pattern which can route a specific reserved number routes the calls from the rooms towards the Imagicle Maid Status IVR, hosted by the Wakeup service.

Creating a route pattern ending by X allows the cleaning personnel to select the IVR language, by entering a different digit at the end. For example, if the route pattern is 730X:

- 7301 will call the English speaking IVR
- 7302 will call the Italian speaking IVR
- 7303 will call the French speaking IVR
- 7304 will call the Spanish speaking IVR
- 7305 will call the German speaking IVR

Pattern Definition	
Route Pattern*	730X
Route Partition	Lab_Milano
Description	To Maid Service
Numbering Plan	-- Not Selected --
Route Filter	< None >
MLPP Precedence*	Default
<input type="checkbox"/> Apply Call Blocking Percentage	
Resource Priority Namespace Network Domain	< None >
Route Class*	Default
Gateway/Route List*	HotelLinkMaidService_Demosas (Edit)
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern No Error
Call Classification*	OnNet
<input type="checkbox"/> Allow Device Override	<input checked="" type="checkbox"/> Provide Outside Dial Tone
<input type="checkbox"/> Require Forced Authorization Code	<input type="checkbox"/> Allow Overlap Sending
Authorization Level*	0
<input type="checkbox"/> Require Client Matter Code	<input type="checkbox"/> Urgent Priority

Protecting the Maid Status IVR from unauthorized access

Even if the Maid Status Service route pattern should be known only to the cleaning personnel, the number could be also dialed by the guests. To prevent unauthorized persons to change the cleaning room status, you can request a FAC (Force access code) to access the route pattern.

1. In CuCm Administration, Call Routing, Force Authorization Codes, define one or more FACs. E.g. 0000

The screenshot shows the Cisco Unified CM Administration interface. At the top, there is a navigation bar with the following menu items: System, Call Routing, Media Resources, Advanced Features, Device, and Application. Below this is a header for "Forced Authorization Code Configuration".

Below the header, there are three buttons: "Save" (with a floppy disk icon), "Delete" (with a red X icon), and "Add New" (with a plus icon). Below these buttons is a "Status" section with an information icon and the text "Status: Ready".

The main section is titled "Forced Authorization Code Information" and contains three input fields:

- Authorization Code Name*: HouseKeeping
- Authorization Code*: 0000
- Authorization Level*: 0

At the bottom of this section, there are three buttons: "Save", "Delete", and "Add New".

2. Activate the FAC for the route pattern pointing to the Maid Status Service Sip Trunk

The screenshot shows a configuration form with several fields and checkboxes. A red circle highlights the "Require Forced Authorization Code" checkbox, which is checked. The other fields and checkboxes are:

- Call Classification*: OnNet
- External Call Control Profile: < None >
- Allow Device Override
- Provide Outside Dial Tone
- Allow Overlap Sending
- Urgent Priority
- Require Forced Authorization Code
- Authorization Level*: 0
- Require Client Matter Code

The cleaning personnel will have to enter the code, followed by pound (#) to be able to change the rooms cleaning status.

High Availability

High Availability for Hotel Pack is available on project basis. It requires two Imagicle Application Suite servers with Hotel Pack. Please contact Imagicle for more information.

Warning: High Availability might not be available for some Property Management Services, due to the PMS interface technical limitations not related to Imagicle.

License activation

Hotel Pack is a bundle of four applications, Billy Blue's 4, StoneLock, SSAm and Hotel Link. Each application has a specific "response string" which unlocks the features.

How to activate the license

The license can be activated by purchasing the product from Imagicle. You can enable the license in the license page as described in the Application Suite common configuration section of this guide.

To activate the license, follow the standard procedure you can find in the General configuration section.

How to check the license status

As for the other applications, you can check the license status from the web interface, accessing the License page through the Admin menu.

License Model

Hotel Pack is licensed by the number of the rooms in the property.

Providing voicemail services to the staff

If you want to provide voicemail or billing to the staff, no additional license is required. Just create the IAS users for them, and make sure the sum of the number of rooms and staff members is not higher than the Hotel Pack size.

E.g. if you bought Hotel Pack 250

200 rooms + 15 staff members = 215 < Hotel Pack 250

Evaluation

All the applications can be evaluated for free for 30 days. During evaluation, Imagicle Billing can manage up to 250 lines. For this reason, do not configure more than 250 rooms/users during evaluation.

Troubleshooting

How to use the troubleshooting guide

This page describes basic troubleshooting techniques and most frequent issues you may face during the application setup and usage.

The first part describes the basic tests to be made after you completed the configuration task list. Those test can reveal issues in the configuration and can help you to identify them.

The second part is a list of common issues and their causes. Look for the symptom and follow the tips. To know how to configure the product, please refer to the relevant pages in this guide.

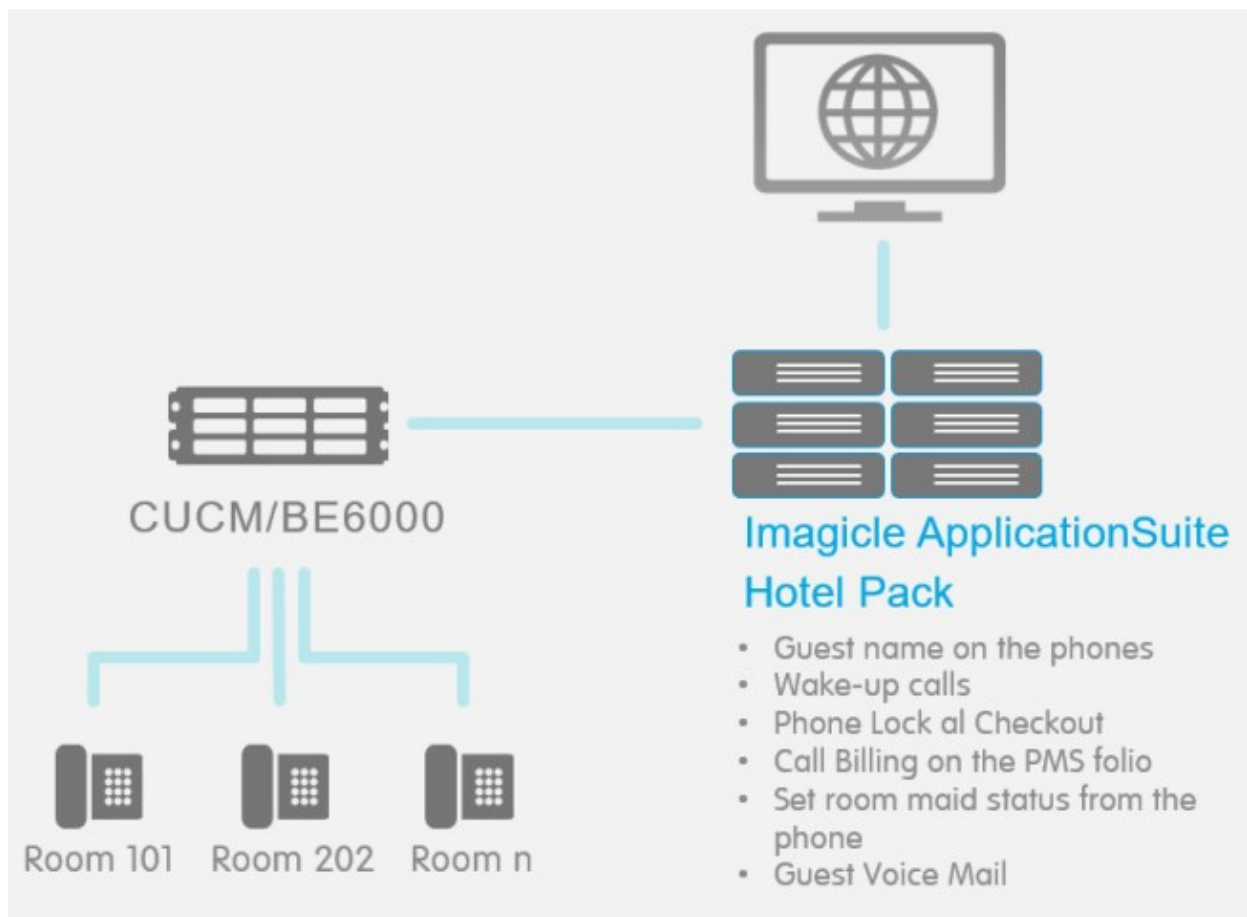
Please understand that the problem may be related to complex PBX and network configurations, and that is not possible to list all them all. This guide must be considered as a tool to guess the origin of the issue.

Testing the AppSuite hospitality features should be done when the PMS interface is available and connected with your system.

However, the AppSuite web interface allows emulating PMS operations to verify the CuCM configuration before the PMS is available.

PBX integration basic tests

PBX integration tests must be executed in the following scenario.



Before continuing, make sure you created a list of rooms as described in the Hotel Pack Product Configuration section of this guide, and the PBX is configured. You only need two rooms, two lines and two IP phones to make the tests. Analog phones are not recommended for testing. You could also use two softphones such as Cisco IP communicator. The PBX must be able to place calls to the PSTN to test call costs postings. A mobile phone could be helpful to receive those calls.

In this example, we will assume you configured two rooms, 101 and 202

Guest name on the IP phone at check-in

- Log onto the IAS web interface as administrator.
- Click on Hospitality -> Room and guests.
- Search for room 101.
- The room status **should be "vacant."**
- Double click on the room line in the room list to see the room details.
- Click on the Check-in button.
- Enter a first name and a last name for the guest and press "check-in".
- If the room phone is a Cisco IP phone:
 - ◆ Wait a minute. IP phone 101 will reset.
 - ◆ After the reset, the IP phone **should display the guest first name and last name.**
 - ◆ Place a call from the room phone to the reception
 - ◆ Ensure the reception phone displays the guest name as **calling party name**, while ringing
 - ◆ Click on the Checkout button.
 - ◆ Wait a minute. IP phone 101 will reset.
 - ◆ After the reset, the IP phone **should display the word "Vacant"**.
- If the room phone is an analog phone:
 - ◆ Wait a minute.
 - ◆ Place a call from the room phone to the reception
 - ◆ Ensure the reception phone shows the guest name as **calling party name**, while ringing
 - ◆ Click on the Checkout button.
 - ◆ Wait a minute.
 - ◆ Place a call from the room phone to the reception
 - ◆ Ensure the reception phone shows **"Vacant"** as **calling party name**, while ringing

Phone locking

- Log onto the IAS web interface as administrator.
- Click on Hospitality -> Rooms and guests.
- Search for room 101.
- The room status should be "vacant."
- Place a call from the IP phone with extension 101 to a PSTN number. The call **should be blocked** by StoneLock.
- If you activated the Annunciator, you **should hear an audio prompt** before the call is dropped.

- Double click on the room line in the room list.
- Click on the Check-in button.
- Enter a first name and a last name for the guest and press "check-in".
- Place a call from the IP phone with extension 101 to a PSTN number. StoneLock **should NOT block** the call.

- Click on the Checkout button.
- Place a call from the IP phone with extension 101 to a PSTN number. **The call should be blocked** by StoneLock.
- If the phone support this feature, a Lock icon should appear on the IP phone display.
- Press the Directory button on the IP phone. **The call history should be empty.**

Call costs postings

- Ensure your system can reach the PSTN, and that the tariff associated with the gateway has charges for calls towards mobile phone destinations.
- Log onto the IAS web interface as administrator.
- Click on Hospitality -> Rooms and guests.

imagicle

- Search for room 101.
- Click on the Check-in button.
- Enter a first name and a last name for the guest and press "check-in".
- Place a call from the IP phone 101 to a mobile number and make the call last 30 seconds, then hang on.
- Wait a minute, so that the CuCM can send the CDRs and Imagicle Billing can calculate the cost.
- In the room web interface, select the "Placed calls" tab. **The call should be reported** with the cost.
- If your call is not displayed, click on "refresh".

DND

- Log onto the IAS web interface as administrator.
- Click on Hospitality -> Room and guests.
- Search for room 101.
- The room status **should be "vacant."**
- Double click on the room line in the room list to see the room details.
- Click on the Check-in button.
- Enter a first name and a last name for the guest and press "check-in".
- Log onto the CuCM administration
- Under Device -> Phone, locate the IP phone with the 101 DN
- Enable the DND status. Check that the DND status is displayed on the phone
- From the IAS web interface, checkout room 101
- After one minute, the DND status should be removed from the IP the phone

How to check which devices support DND

Generate a Phone Feature List:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/11_0_1/featureConfig/CUCM_BK_FE5123E0_00_cucm-feature-config

Useful link:

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/admin/11_0_1/featureConfig/CUCM_BK_FE5123E0_00_cucm-feature-config

Voicemail

- Log onto the IAS web interface as administrator.
- Click on Hospitality -> Rooms and guests.
- Search for room 101.
- Double click on the room line in the room list to see the room details.
- Click on the Check-in button.
- Enter a first name and a last name for the guest and press "check-in".
- From the IP phone 202, place a call to 101 and leave a voicemail message.
- On the IP phone 101, press the voicemail button and listen to the message.
- Refresh the room web page. The Voicemail **should show the voicemail message count.**

- Click on the Checkout button.
- On the IP phone 101, press the voicemail button.
- Press the "0" key to listen to new messages. **There should be no messages.**

Maid status

- Log onto the IAS web interface as administrator.
- Click on Hospitality -> Rooms and guests.
- Search for room 101.
- From the IP phone 101, dial the internal number associated to the Maid Status service.
- Select a valid option and confirm.
- Refresh the room web page. You should see the **Maid Status label** change to reflect the new status.

imagicle

- You may call the Maid Status service again to test other options.

Wakeup calls

- Log onto the IAS web interface as administrator.
- Click on Hospitality -> Rooms and guests.
- Search for room 101.
- Double click on the room line in the room list to see the room details.
- Click on the Check-in button.
- Enter a first name and a last name for the guest and press "check-in".
- Click on the "new wakeup" link, and add a wakeup call that will ring in three minutes.
- After three minutes, the IP phone 101 should ring.
- Do not answer the call.
- After one more minute, the IP phone 101 should ring again.
- You may answer the call. Refresh the room details web page to see **the result and the number of retries**.

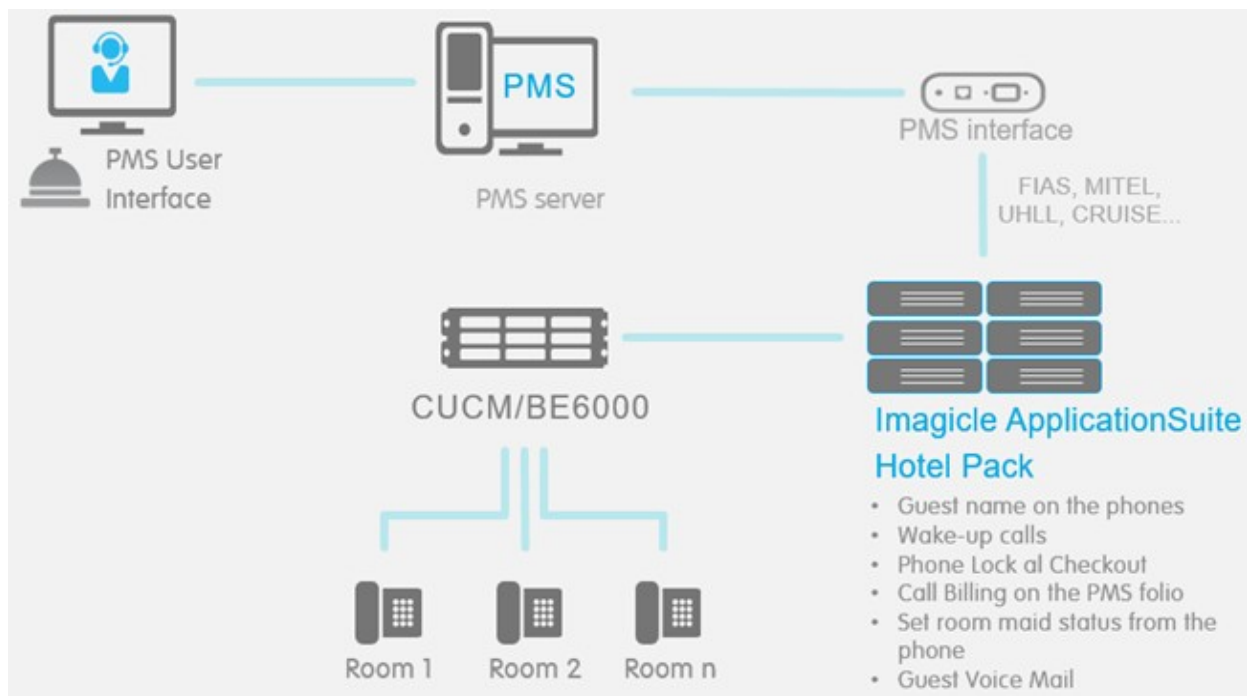
PMS integration basic tests

Before testing with the PMS, please make sure all the conditions required by the previous tests are met.

Then check the PMS interface to be sure the TCP connection with Hotel Pack is up.

To perform the tests, you need to access the PMS UI (User Interface).

PMS integration tests must be executed in the following scenario.



Guest name on the IP phone at check-in

- On the PMS UI, make sure room 101 is vacant.
- On the IAS Hotel Pack web interface, make sure room 101 is vacant.
- On the PMS UI, check in a guest (entering First name and Last name) in room 101.
- Wait a minute. IP phone 101 will reset.
- After the reset, the IP phone **should display the guest first name and last name**.

imagicle

- On the PMS UI checkout room 101
- Wait a minute. IP phone 101 will reset.
- After the reset, the IP phone **should display the word "Vacant"**.

Phone locking

- On the PMS UI, make sure room 101 is vacant.
- Place a call from the IP phone with extension 101 to a PSTN number. The call **should be blocked** by StoneLock.
- If you activated the Annunciator, you **should hear an audio prompt** before the call is dropped.

- On the PMS UI, check in a guest (entering First name and Last name) in room 101.
- Place a call from the IP phone with extension 101 to a PSTN number. StoneLock **should NOT block** the call.

- On the PMS UI, checkout room 101.
- Place a call from the IP phone with extension 101 to a PSTN number. **The call should be blocked** by StoneLock.
- If the phone support this feature, a Lock icon should appear on the IP phone display.
- Press the Directory button on the IP phone. **The call history should be empty**.

Call costs postings

- Ensure your system can reach the PSTN, and that the tariff associated with the gateway has charges for calls towards mobile phone destinations.
- On the PMS UI, check-in a guest to room 101.
- Place a call from the IP phone 101 to a mobile number and make the call last 30 seconds, then hang on.
- Wait a minute, so that the CuCM can send the CDRs and Imagicle Billing can calculate the cost.
- In the PMS interface, check the guest folio. **The call should be reported** with the cost.

Voicemail

- On the PMS UI, check-in a guest to room 101.
- From the IP phone 202, place a call to 101 and leave a voicemail message.
- On the IP phone 101, press the voicemail button, select 0 and listen to the message. **There should be one message**.

- On the PMS UI, checkout room 101
- On the IP phone 101, press the voicemail button.
- Press the "0" key to listen to new messages. **There should be no messages**.

Maid status

- From the IP phone 101, dial the internal number associated to the Maid Status service.
- Select a valid option and confirm.
- On the PMS UI, check the room 101 **cleanup status**.
- You may call the Maid Status service again to test other options.

Wakeup calls

- On the PMS UI, check-in a guest to room 101.
- Add a wakeup call for room 101 that will ring in three minutes (that is, same day, 3 minutes in the future).
- After three minutes, the IP phone 101 should ring.
- Do not answer the call.
- After one minute, the IP phone 101 should ring again.
- You may answer the call.
- If the PMS supports this feature, **you should see the wakeup call result** on the PMS UI.

Room move

imagicle

- On the PMS UI, make sure room 101 and 202 are vacant.
- On the PMS UI, check in a guest (entering First name and Last name) to room 101.
- Wait a minute. Call line 101 and leave a voicemail message.
- On the PMS UI, move the guest from room 101 to room 202.
- On the IP phone 101, press the voicemail button, select 0 and listen to the message. **There should be no message.**
- On the IP phone 202, press the voicemail button, select 0 and listen to the message. **There should be one message.**
- Check the IP phone 202 display. **It should show the guest name.**

DND

- On the PMS, set the DND status for room 101.
- On the room 101 IP phones, the DND status should be displayed.
- On the PMS, remove the DND status for room 101.
- On the room 101 IP phones, the DND status should not be active.

Call Barring

Test at checkin

- On the PMS, check in room 101 setting limiting the calls to "internal only"
- Try to reach a PSTN number (e.g. a mobile number) from the room phone. The call should not be allowed
- On the PMS, checkout room 101
- Try to reach a PSTN number (e.g. a mobile number) from the room phone. The call should not be allowed (phone remains locked after checkout).

Test after checkin

- On the PMS, check in room 101 setting limiting the calls to "unlimited"
- Try to reach a PSTN number (e.g. a mobile number) from the room phone. The call should be allowed.
- On the PMS, limit the calls for extension 101 to "internal only"
- Wait two minutes
- Try to reach a PSTN number (e.g. a mobile number) from the room phone. The call should **not** be allowed

Hospitality Services Detail

Operations at Check-In

Whenever the concierge checks-in a guest in the PMS, Imagicle Hotel Link receives the Check-In message from PMS and the following operations are performed:

- The Guest Name is displayed on the room phone and assigned to the room phone line Caller ID
- The phone is unlocked, that is, it is allowed to call external numbers
- Any voicemail message is deleted, and the MWI is turned off
- The voicemail PIN is cleared, and won't be required to access voicemail

Guest name on the IP phone display and line description

Hotel Pack keeps a list of the rooms which can be access by the Users management web interface. When a guest checks in, the first name and last name fields in users management are filled with the guest data received from the PMS. The guest name is then available to be searched and displayed:

- In Users Management web page
- In the Rooms and guests web page
- In Imagicle Billing reports
- In Speedy Enterprise internal contacts directory
- In the Attendant Console (non included in Hotel Pack)

The guest name is also displayed on the IP phone. More precisely, Hotel Link sets the following properties of the registered phone:

- The **Line Text Label** property, to display the guest name on the room phone display, as provided by the PMS. This feature is available only for room IP phones (not for analog phones).
- The **Display Caller ID**. This way, if the guest calls the reception, both the room number and the guest name will be displayed on the reception phone.

This means that calling the room phone from another extension, the guest name does not appear while the phone is ringing.

Operations at Checkout

When Imagicle Hotel Link receives the Checkout message from PMS, the following operations are performed:

- The IP phone display is set to "Vacant"
- The room First Name and Last Name fields in Users Management are cleared
- The phone becomes *locked*, that is, it is not allowed to call external numbers. If the room phone is an IP phone, the display will show a "Phone locked" message and a lock icon
- All voicemail messages are deleted
- The voicemail PIN is removed and the welcome message is reset to default
- All the scheduled wakeup calls are removed
- The DND status is removed from the IP phones

WakeUp calls

The concierge can schedule one or more WakeUp calls from the PMS. At the scheduled time, a call will be placed by Imagicle Wakeup service. If the call is unanswered, it will be repeated every minutes up to three more times.

The outcome of the wakeup call (answered, unanswered, failed) will then be reported to the PMS. The concierge will be able to see the report of today's wakeup calls directly on the PMS.

Calls that are forwarded to voicemail are considered unanswered.

imagicle

The status of the wakeup call for each room (pending, answered, unanswered, failed) can also be checked on the web interface through a dedicated web page.

The wakeup audio message can be customized (see [this article](#)).

Unanswered wake-up calls are automatically reattempted every 120 seconds, for a maximum of 3 times (values not configurable).

Notes:

- Wakeup calls cannot be set by the guest directly on the room phone.
- Wakeup calls integration is not supported by the Fidelio Cruise protocol. For those systems, wakeup calls can be scheduled by the web interface only.
- The Mitel emulation protocol only allows to schedule calls for the current or next day, one day at a time. To get recurrent wakeup calls, the PMS must be able to repeat the wakeup request every day.
- The wakeup message does not change based on the guest language. Our advice is to provide a multi-language wakeup message.
- When the guest answers, the audio file is played once.

Voicemail

During the stay, guests may receive Voicemail through SSAM application, which provides a customizable greeting message, an interactive menu in five languages, and turns the phone Message Waiting Indicator (MWI) on when there are new messages.

Guests can listen to the messages by pressing the Messages button on the room phone.

Guests are also allowed to protect their messages with a PIN and customize the greeting message.

At check-out, all voicemail messages are deleted and greeting message is restored to the default.

MWI for analog phones or phones vendors other than Cisco

Depending on the model, analog phones connected to Cisco VG or to ATA might not provide a message waiting indicator. The Cisco VG or ATA could not be able to turn it on even if it works when connected to other PABXes.

ATA sometimes provide an "audible alert" which replaces the MWI. If a voice message has been left for a room, when the guest lifts the handset a special tone is played.

This limitation is not related to Imagicle software. Please refer to the phone vendor documentation.

Room Move

Hotel Pack supports Room Move if provided by the PMS. When a guest is moved to another room, all his/her data is assigned to the room move. This includes the placed calls, the received voicemail messages, and the PIN and welcome message customization.

If any voicemail message is still to be listened to, the MWI of the new room will turn on.

Room Cleaning Status (Maid Status)

The cleaning personnel can report the cleaning status for the room by calling an internal number from the room phone.

A voice service, available in five languages, guides the caller to set the right cleaning status. In this way, the cleaning personnel don't need to remember cleaning status codes.

From Imagicle Summer 2018 release, an optional Maid ID can be enabled in the voice service, to allow maid identification. This feature is available, on a property base, for FIAS or MITEL based PMS. UHLL protocol doesn't support Maid ID.

imagicle

When optional Maid ID and cleaning status has been chosen, a message is sent to the PMS, and the concierge can see the change in real time. Please, notice that the Imagicle solution does not perform any check on the user input, the Maid ID code is sent to the PMS as collected by the voice service.

The available cleaning states depend on the communication protocol supported by the PMS. See tables below:

Fias

1. Dirty and Vacant
2. Dirty and Occupied
3. Clean and Vacant
4. Clean and Occupied
5. Inspected and Vacant
6. Inspected and Occupied

Fidelio Cruise

1. Dirty and Vacant (VD)
2. Dirty and Occupied (OD)
3. Clean and Vacant (VC)
4. Clean and Occupied (OC)

Mitel Emulation

0. Cleaning in progress (STS1)
1. Dirty and vacant (STS9)
2. Dirty and occupied (STS7)
3. Clean and vacant (STS8)
4. Clean and occupied (STS6)
7. Out of order (STS4)

UHLL

0. Cleaning in progress (3)
1. Dirty and vacant (14)
2. Dirty and occupied (13)
3. Clean and vacant (12)
4. Clean and occupied (11)
7. Out of order (6)
8. Maintenance required (5)

Fias / Protel

1. Dirty and Vacant
2. Out of order
3. Clean and Vacant
4. Touched
5. Cleaning in progress
6. Inspected

Call Costs Postings

Call Costs are calculated in real time, and sent to the PMS within a few seconds from the moment the call was completed. Depending on the PMS model, the call date and time, duration, and called number could be reported on the guest folio, besides the cost.

imagicle

Imagicle Hotel Pack leverages StoneLock to limit phone functionality, so the available status provided are "locked" (i.e. limited to internal calls) and "unlocked" (i.e. unlimited).

This is the relation between the class of service and the phone lock status for the supported protocols.

Fias

0 = Barred/hotel internal only: Locked Administratively

1 = Local: Unlocked

2 = National: Unlocked

3 = No restrictions: Unlocked

Fidelio Cruise

B = Block (No phone calls allowed): Locked Administratively

I = Internal (Local) Only: Locked Administratively

L = Long Distance and Internal Only: Unlocked

D = Long Distance (requiring card swipe) and Internal Only: Unlocked

A = International, Long Distance and Internal: Unlocked

W = International and Long Distance (require card swipe) and Internal: Unlocked

Mitel Emulation

0 = Internal: Locked Administratively

1 = Local: Unlocked

2 = Long Distance: Unlocked

3 = Option 1: Unlocked

4 = Option 2: Unlocked

5 = Option 3: Unlocked

UHLL

0 = All Allowed: Unlocked

1 = All Restricted: Locked Administratively

2 = Toll Restricted (ECC 1): Unlocked

3 = Local Only (ECC 2): Unlocked

4 = Internal Only: Locked Administratively

The class of service is retained when a guest is moved to another room.

DND

When you can set the DND status for a room on the PMS, it will reflect on all the room phones. When you remove the DND status, it will be removed by the room phones. DND status is retained when you move the guest to another room. DND status will be automatically reset at checkout.

Note: This feature is only available for IP phones. Cisco does not support DND for analog phones connected to ATAs of VG. To know which phones, among the ones registered to your CuCM, support the DND feature, use the Cisco Unified Reporting tool as described in the [Features and Services Guide for Cisco Unified Communications Manager](#).

Note: This feature is not supported by the Mitel and Fidelio Cruise protocols.

Features summary

The following table describes the supported features, by each supported PMS Link protocol.

	FIAS (Opera)	Mitel	UHLL 2	Fidelio Cruise
Guest name	YES	YES	YES	YES
Voicemail	YES	YES	YES	YES
Call costs submission	YES	YES	YES	YES
Call Barring (phone lock)	YES	YES	YES	YES
Wake up alarms from PMS	YES	YES	YES	NO
Wake up alarms from Imagicle Web portal	YES	YES	YES	YES
Wake up alarms from phone (self service IVR)	YES	YES	YES	YES
Room status IVR	YES	YES	YES	YES
Maid ID in Room status IVR	YES	YES	NO	NO
Phone DND status, from PMS	YES	NO	YES	NO
MWI Annotation (with voice announcement)	YES	YES	NO	YES