CALLISTO



# PLATFORM

INSTALLATION MANUAL

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# Requirements

## Network

- Cisco Unified Communications Manager Release 3.3 and higher
- DHCPDynamic Host Configuration Protocol Server on the LANLocal Area Network
- LAN connection via RJ45 ethernet cable with 10/100 Base-T
- LAN connection between Cisco Unified Communications Manager and the Callisto Platform
- 110–220 V at 50/60 Hz (UPS and overload protection are recommended)
- Environmental conditions (light, temperature, air humidity, EMC), similar to the Cisco Unified Communications Manager environment
- 2 rack units rack space

## User side

- A Internet Explorer, Firefox , Chrome, or Safari
- Free TCP Port 80 to the Callisto Platform for web access
- Phone with DTMFDual Tone Multi Frequency – supported by most regular phones capability for remote access to the VoiceMail box
- Cisco Unified Communications Manager compatible IP phones (features may vary according to the phone model)

# Cisco Unified Communications Manager settings

Callisto works with Cisco Unified Communications Manager's standard settings. Only a few settings specifically related to the Callisto Platform are needed to be modified. Communication between Callisto and the Cisco Unified Communications Manager needs to be configured according to the Cisco UCM configuration manual and the appendix. If optional fax services are required, a fax dial peer needs to be configured on the appropriate PSTNPublic Switched Telephony Network gateway according to Cisco's documenation at www.cisco.com.

# Quick start

## Installation of a virtual appliance for VMware ESXi 4.1

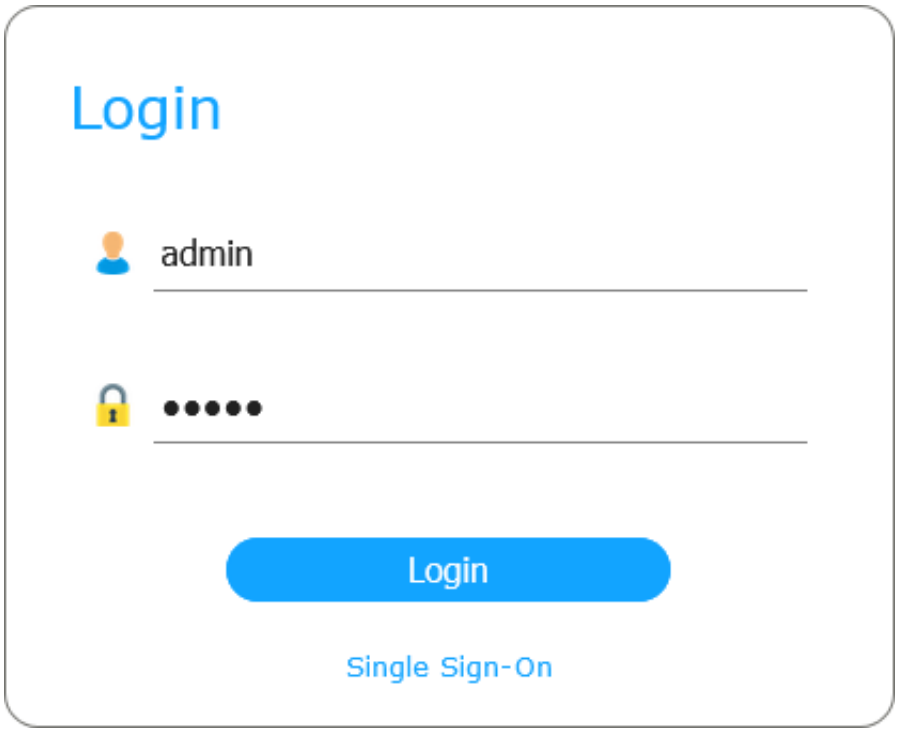
Information regarding the virtual deployment of the Callisto Platform can be found within the virtual deployment manual.

# Callisto UCM web configuration

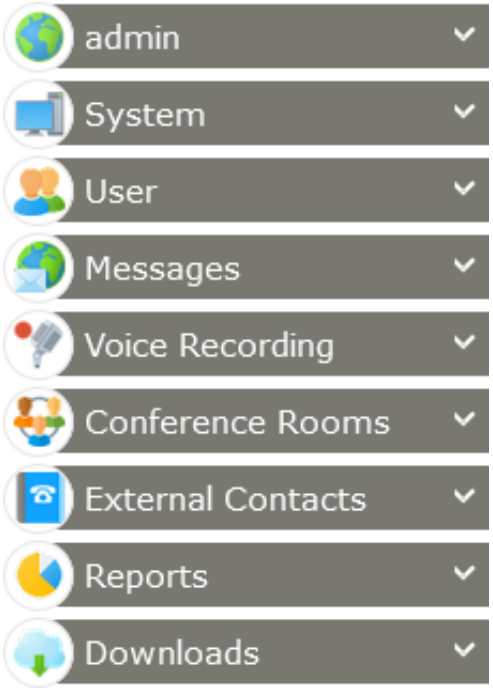
## Admin account parameters

1. Type http://callisto into the address bar of a regular web browser to access Callisto from a client PC (see Requirements – User side)

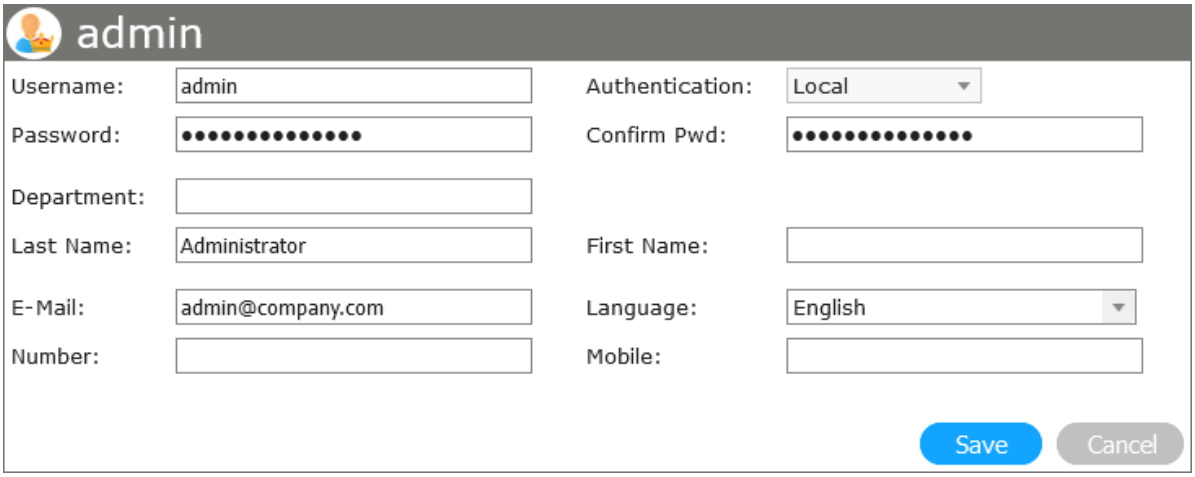
2. Type username admin and password admin for the first logon.




The following menu appears.

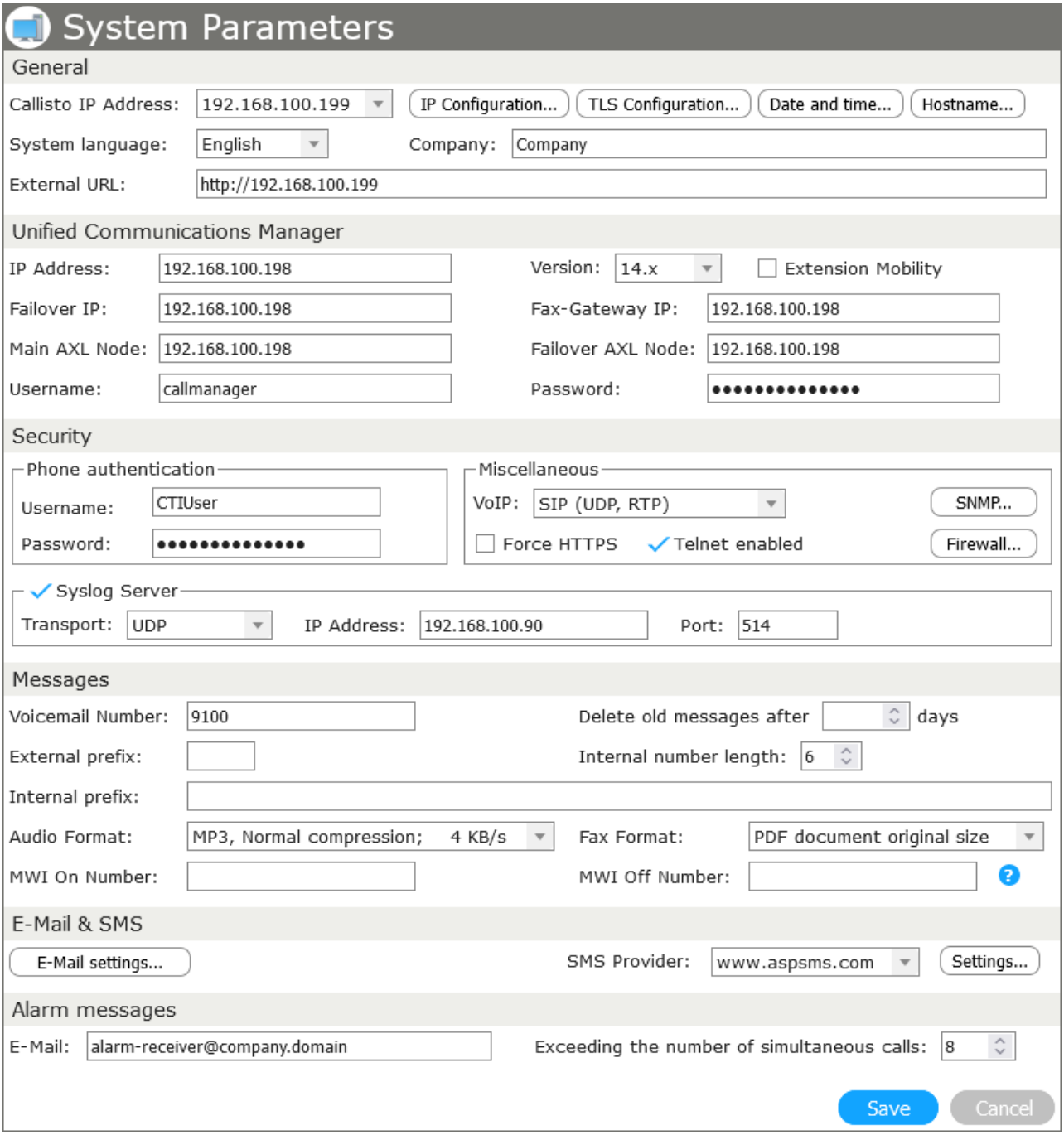


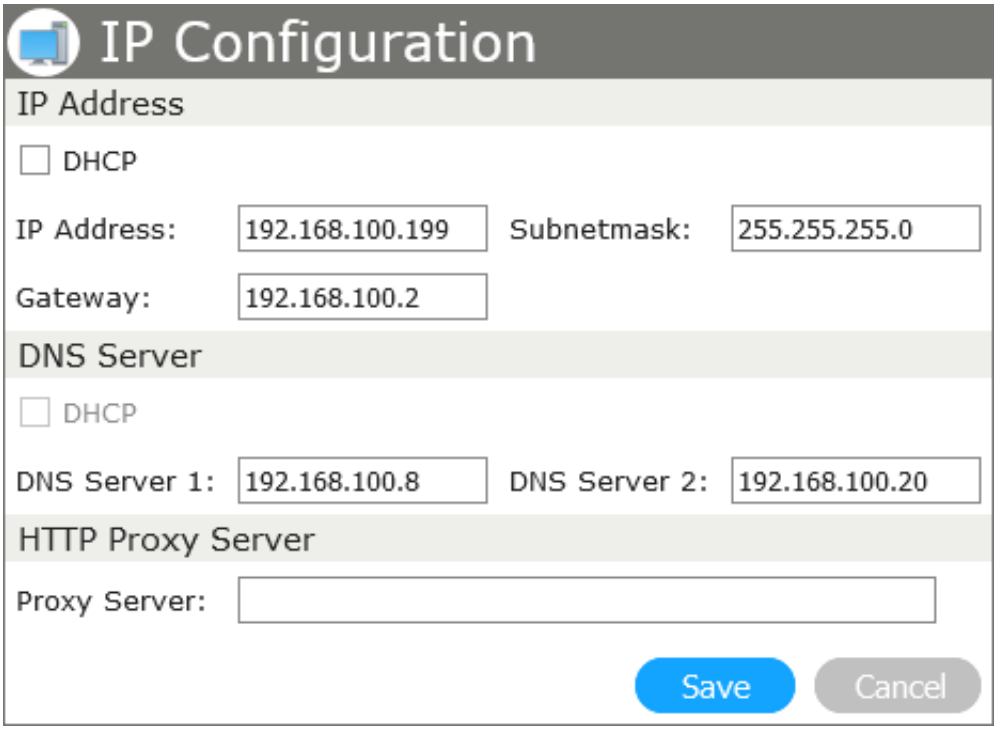

3. On the menu, choose Admin > Account to change the Username and Password. Supply the required data and select the preferred language.




Save the new settings.

## System parameters


System Parameters
General
Callisto IP Address:
192.168.100.199
IP Configuration...
TLS Configuration...
Date and time...
Hostname...
System language:
English
Company:
Company
External URL:
http://192.168.100.199
Unified Communications Manager
IP Address:
192.168.100.198
Version:
14.x
Extension Mobility
Failover IP:
192.168.100.198
Fax-Gateway IP:
192.168.100.198
Main AXL Node:
192.168.100.198
Failover AXL Node:
192.168.100.198
Username:
callmanager
Password:
Security
Phone authentication
Username:
CTIUser
Password:
Miscellaneous
VoIP:
SIP (UDP, RTP)
SNMP...
Force HTTPS
Telnet enabled
Firewall...
Syslog Server
Transport:
UDP
IP Address:
192.168.100.90
Port:
514
Messages
Voicemail Number:
9100
Delete old messages after
days
External prefix:
Internal number length:
6
Internal prefix:
Audio Format:
MP3, Normal compression; 4 KB/s
Fax Format:
PDF document original size
MWI On Number:
MWI Off Number:
E-Mail & SMS
E-Mail settings...
SMS Provider:
www.aspsms.com
Settings...
Alarm messages
E-Mail:
alarm-receiver@company.domain
Exceeding the number of simultaneous calls:
8
Save
Cancel




On the System menu, click System Parameters and enter the relevant system parameters:

For static IP address configuration parameters, click IP Configuration. After assigning a new IP address, reboot Callisto.
An IP Address for the Cisco Unified Communications Manager
A Username for the Cisco Unified Communications Manager administrator
A Password for the Cisco Unified Communications Manager administrator
The Gateway IP Address (for fax termination)
A Subnet mask
The System Language (system generic language that is used when external users call Callisto without first logging on)
A Voice Mail Number and the number of days the old messages are stored (0 = no deletion)
An External Prefix (the prefix required to be entered by users to facilitate external calls during normal operation)
The MWI On and MWI Off numbers that correspond to the MWI numbers configured on the Cisco Unified Communications Manager as described in the Cisco UCM Configuration Manual and the Appendix.

- Selection of SMS Provider:

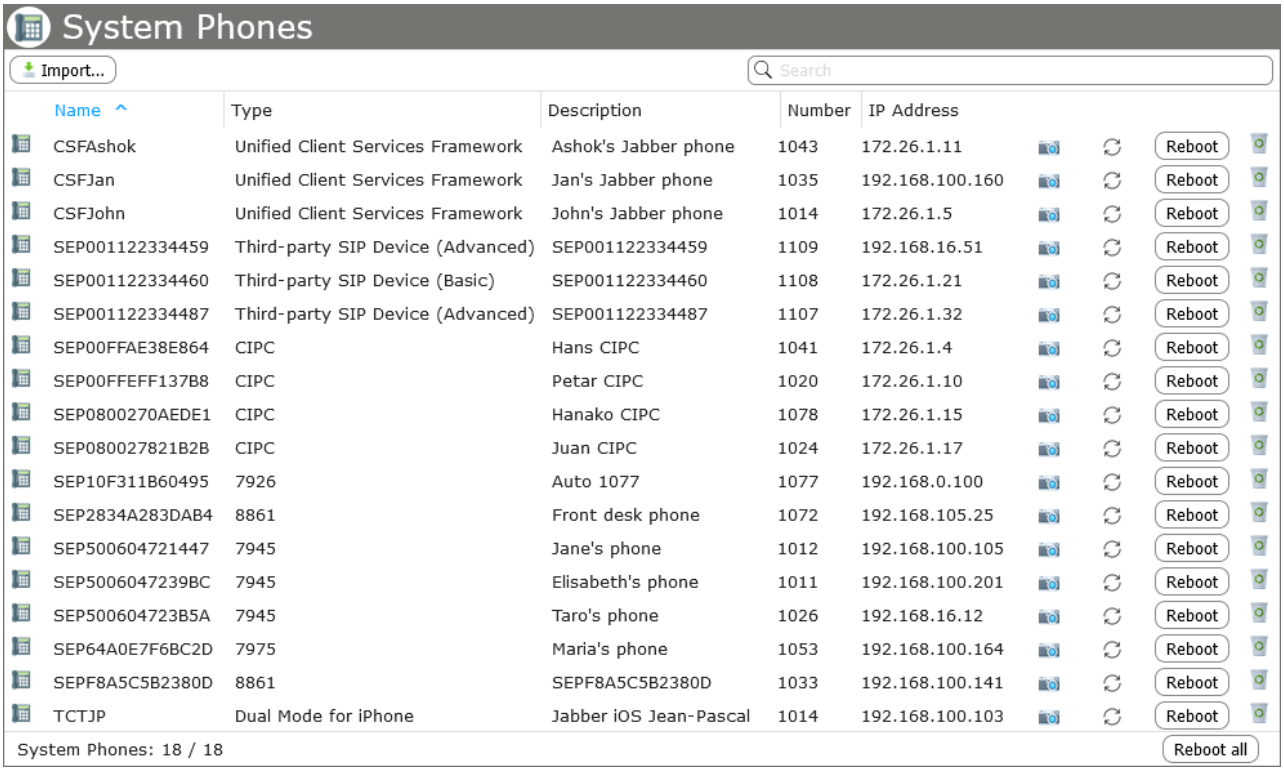
  a. *aspsms.com*: Click Settings, then type Username and Password corresponding to an active aspsms.com account.
  b. *E-Mail to SMS*: Enter a Receiver address (Please note: change expression SMSNumber to the target phone number), an Addressor address and the subject in Settings. For correct settings refer to the relevant provider. You can find a detailed description in the Administration Manual.
- SMTP-Server and Addressor. Optionally, a Username and Password can be set for SMTP Auth (RFC 2821) authentication.

Save the new settings.

To listen to voice mail by phone, users call an internal voice mail number. For external access, an external number on the public telephone network must point to the internal number.

## System > Cisco phones & services

On the System menu, click System and then Cisco Phones, and all IP phones connected to the system are listed. By clicking Reboot or Reboot all, the IP phones can be rebooted individually or simultaneously.



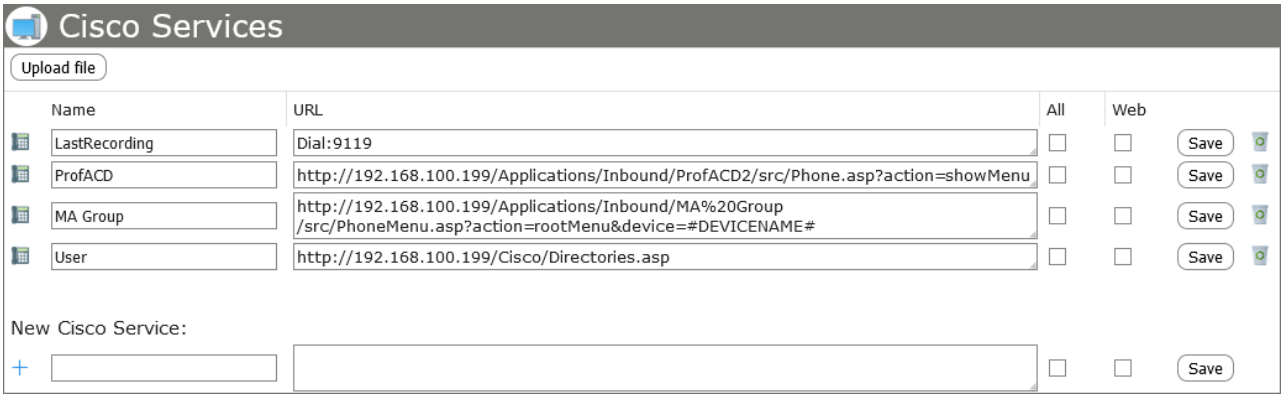

Generating a complete list of all phones can sometimes take a long time.

## Cisco services



*Services* button

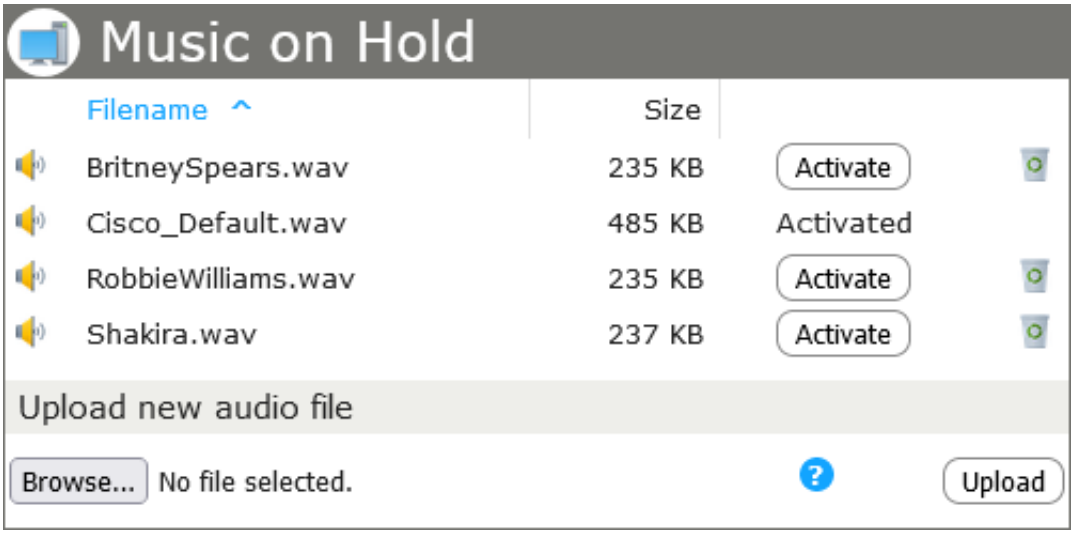
Add custom services from the System menu by clicking Cisco Services; users can select these by pressing the *Services* button on their Cisco IP phone. Administrators can add custom services or services from third parties to this menu. For further details consult the Callisto Administration Manual.




## Music on hold

You can change the music that plays when a phone user is put on hold by uploading a custom *.wav* file to Callisto. To do so, navigate to Music on hold > Browse > Upload.

After uploading, select the file and click Activate.






*Recycle* icon

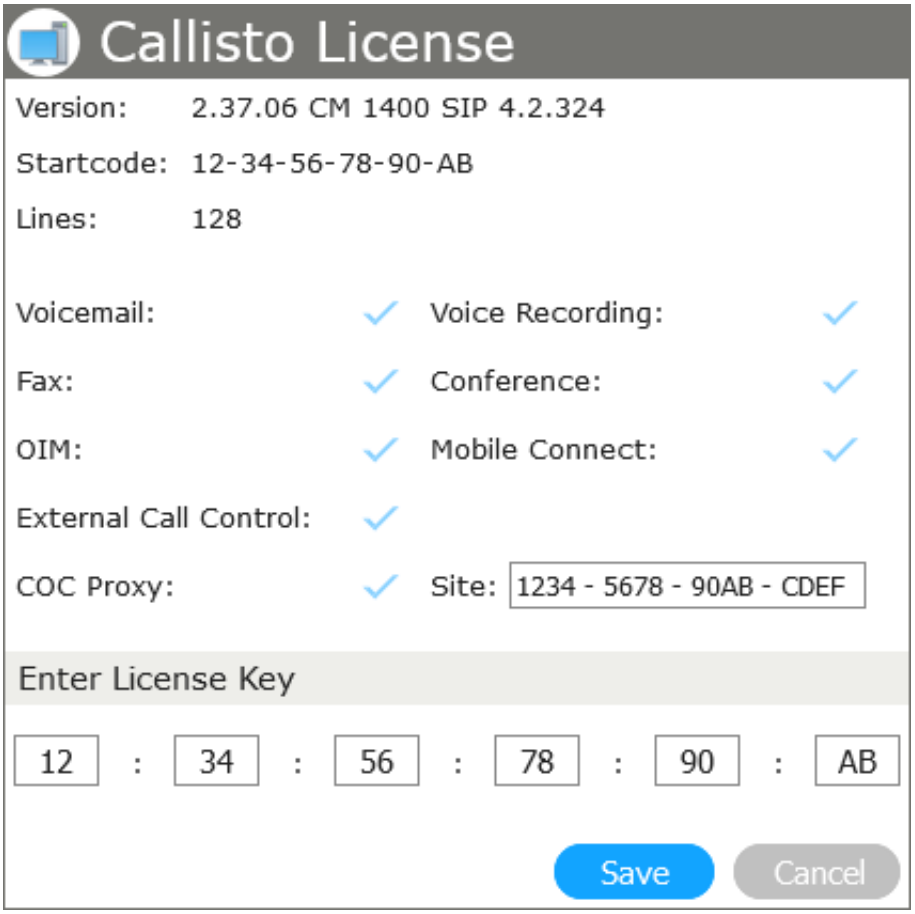
Files can be deleted by clicking the *recycle* icon.

The *.wav* files need to be of the following format: CCITT A-Law 8 kHz; 8 Bit; Mono.

Per default, a Cisco music file (*Cisco_default.wav*) is activated.

## Callisto License

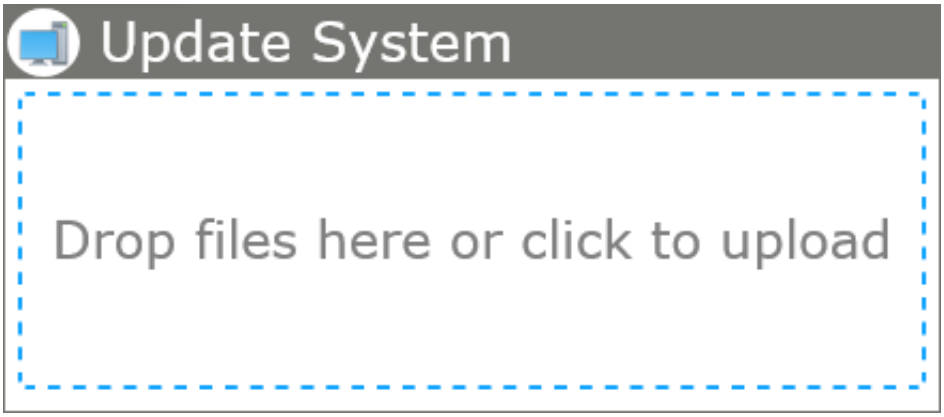
Standard Callisto appliances are normally delivered with four lines (*Callisto for UCM, HCS, Webex*) or two lines (*Callisto for UCME*) and excluding any options. To upgrade Callisto with additional features, enter a valid license key under System > Callisto License. Contact support@ctmodule.com for a new upgrade license key; the Callisto General Terms and Conditions (GTC) apply.




The optional modules *Virtual Conference Room* and *Mobile Connect* are only available with the Callisto SIP version (Callisto UCM version 1.5x or higher).

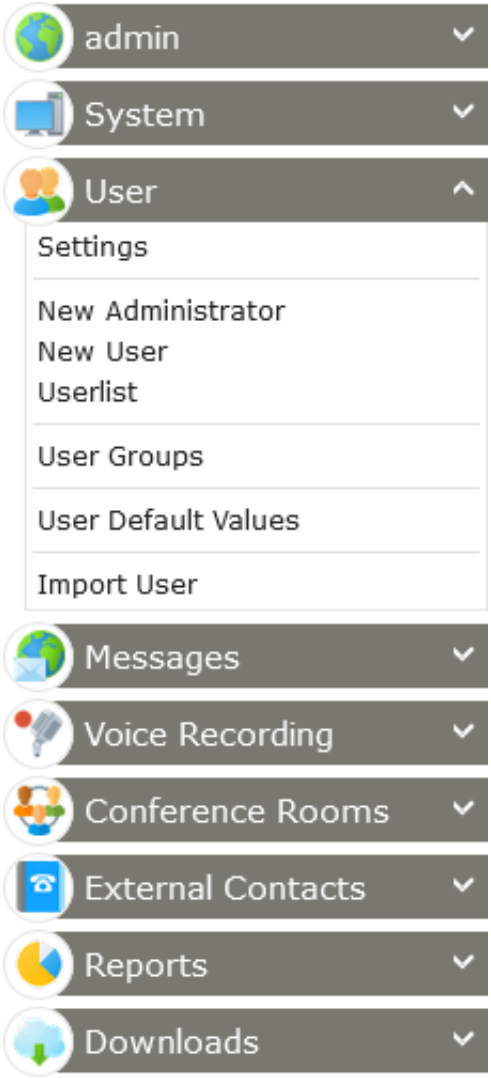
## Update System

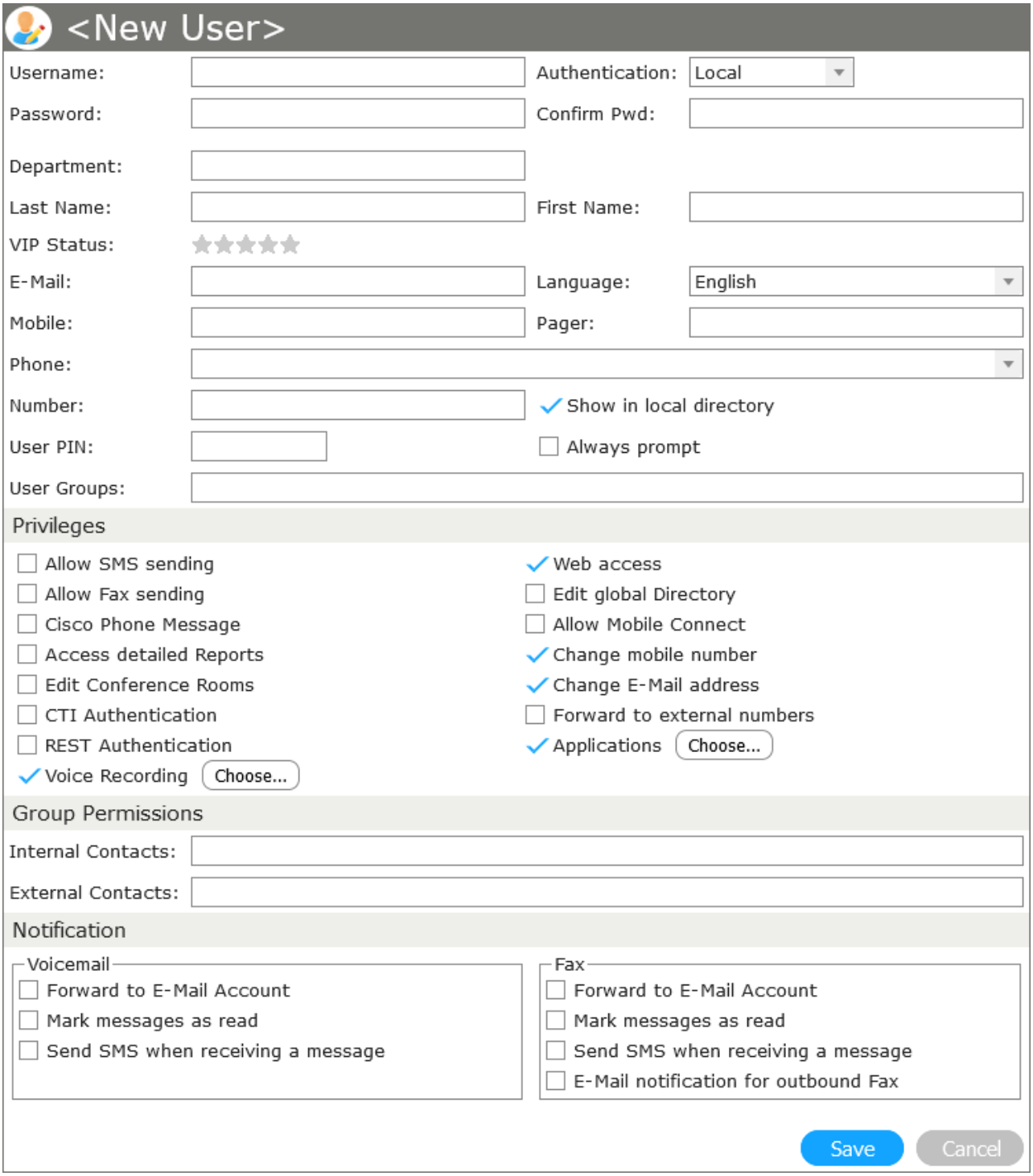
You will find the most recent updates at www.ctmodule.com. Verify under Callisto License that the latest Callisto software version is installed. Upload an update (executable file) to Callisto UCM from the System menu by clicking System Menu > Install.




## User

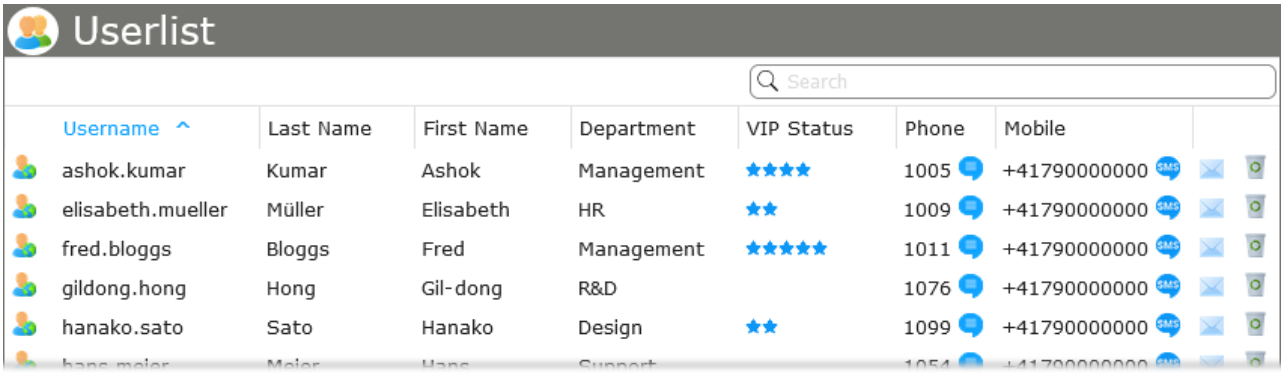
To add new users, go to User >New User, select the appropriate IP phone from the Phone list (all IP phones connected and active), enter all the other parameters and assign Privileges (for example, allow: SMS sending and notification, editing of the Global Directory, optional Fax sending, etc.)


admin
System
User
Settings
New Administrator
New User
Userlist
User Groups
User Default Values
Import User
Messages
Voice Recording
Conference Rooms
External Contacts
Reports
Downloads




Save the new settings.

Choose User > Edit User to access the user list. Here, new users can be verified, changed or deleted.




Use the Search box to find any user or selection of users. For details on available search operators, refer to the search operators quick reference.

All users from the Cisco Unified Communications Manager can be imported into Callisto UCM. Under User > User Import, verify that the system is operating correctly and then create a backup.

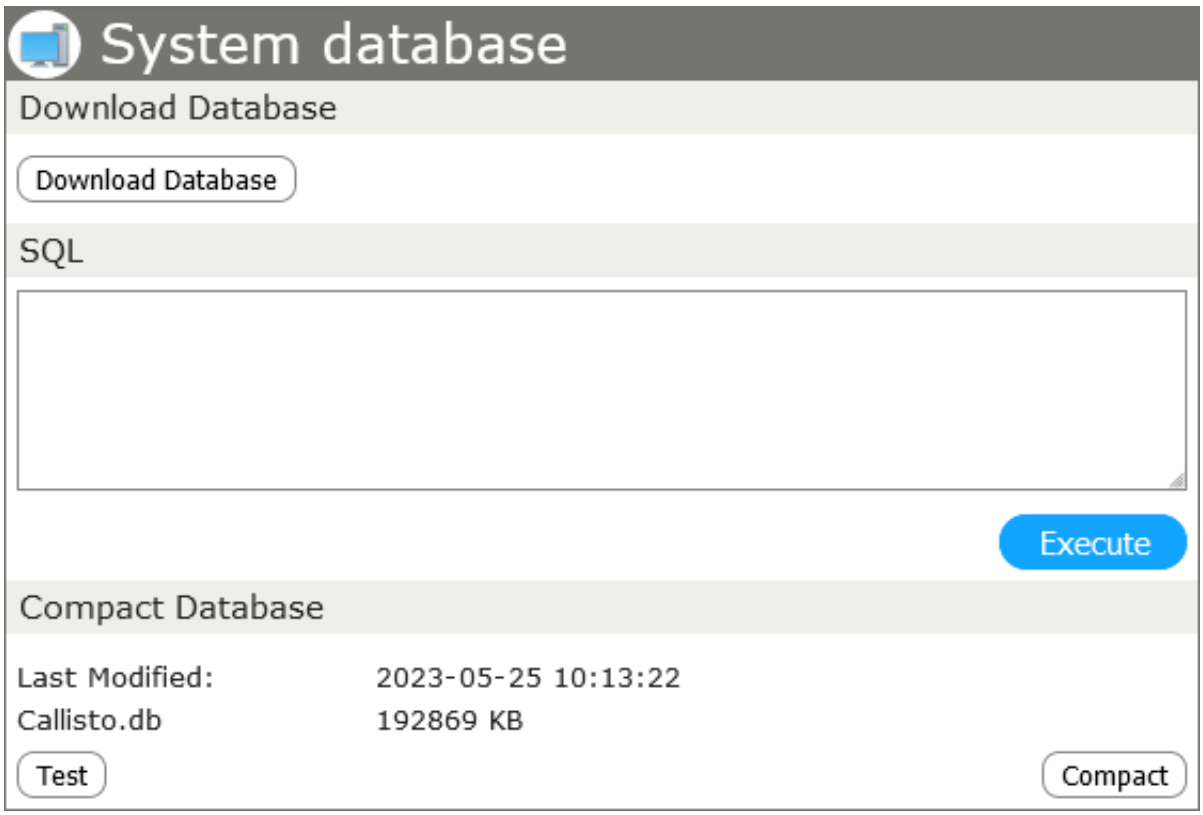
Should you encounter unexpected difficulties, check the Callisto FAQ, call your Callisto service and sales partner, or follow the instructions according to Callisto's General Terms and Conditions (GTC) and/or Service Level Agreement (SLA).

# Maintenance and service

The Callisto concept ensures a maintenance free system over years. This is achieved through modern, efficient, integrated technology design.

In the unlikely event of a system failure we differentiate between services within a defined warranty period and those outside a defined warranty period.

The warranty duration is defined as per the relevant GTC document, valid at date of purchase. After warranty expiration, CTModule endeavors to facilitate replacements quickly and efficiently in order to keep down-time at a minimum.



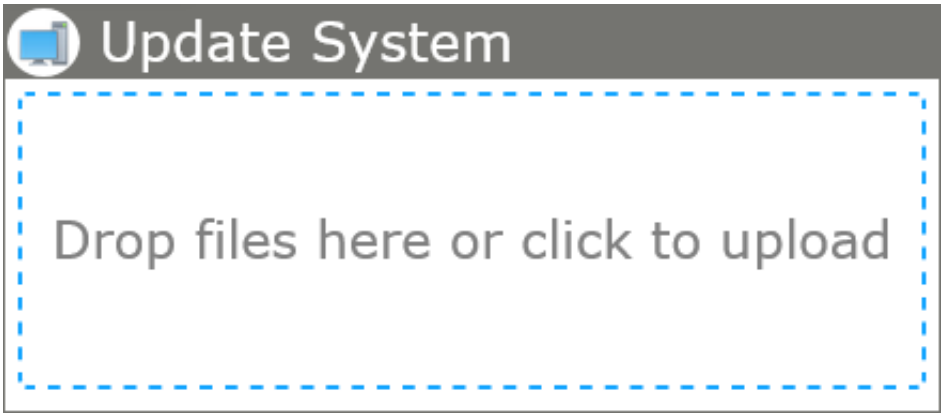

It is highly recommended to backup system parameters and user settings periodically, especially immediately before and after larger changes. Additionally, the system database should be cleaned from time to time.

To backup the database, go to the System menu, and click Backup. The downloaded and archived system database contains all Callisto Platform configurations and settings.

When restoring a database, ensure that the file name is *Callisto.mdb*.

Restoring a system database requires a backup originating from a system with an identical Callisto version.

CTModule provides occasional Callisto Platform updates and upgrades, which can be downloaded from www.ctmodule.com. They can be uploaded and installed by choosing System > Update System. A system restart may or may not be required.




After a system update, it is essential to generate a new backup. Earlier backups may possibly not be compatible any longer.

Before reporting an error, check the following:

- Are the LEDs at the front of the Callisto appliance on? Or, do they flash from time to time?
- Is the power cable plugged in firmly and properly?
- Is the correct power supply in use?
- Can the fan and/or the hard disk be heard in the Callisto appliance?
- Do the LEDs flash on the RJ45 LAN plug socket at the back of the Callisto appliance?
- Does DHCPDynamic Host Configuration Protocol function correctly in the LAN?
- Do you get the login screen on a Client PC's browser if you type http://callisto/ into the browser's address bar?
- Is the Cisco Unified Communications Manager configured correctly according the Cisco UCM Configuration Guide and the Appendix? Is the communication link between the Cisco Unified Communications Manager and Callisto working?

Should there be any unexpected malfunctions, please consult the Callisto FAQ list, call your Callisto dealer or follow the instructions according to the Callisto GTC and/or SLA.

In case of software or configuration problems, our technicians might need to activate trace logging on your Callisto Platform. Further information about this can be found on the page Telnet access of the Administration Guide (see also Additional administration).

# Additional administration

Additional system administration tasks are described in the Callisto platform administration manual. An administrator defines a range of parameters, with validity for either single users or for all users; for security reasons, only an administrator may edit these values. To take full advantage of both systems, Cisco Unified Communications Manager and Callisto, your customers might consider reading the Administration Guide.

# Appendix

## Configuration of Cisco Unified Communications Manager 5.x to 12.x

The dedicated guide for establishing the communication link between Callisto UCM and versions 5.x to 12.x of the Cisco Unified Communications Manager can be found here.

## Example dial-peer for T.38 fax on a Cisco gateway

Because the Cisco Unified Communications Manager older than version 5.x does not support SIP/T.38 reliable, Callisto uses SIP/T.38 on the PSTN gateway directly.

Example of a VoIP Callisto dial-peer:

```
voice class uri Callisto sip
 host CALLISTO

dial-peer voice 100 voip
description CALLISTO_FAX
destination-pattern <Internal Callisto fax number>;
session target ipv4:<Callisto IP address>;
fax protocol t38 ls-redundancy 0 hs-redundancy 0
ip qos dscp cs5 media
no vad
codec g711alaw
session protocol sipv2
incoming uri from Callisto
dtmf-relay sip-notify
```

The settings t38 (support of real time Fax over IP) and no vad (disable “Voice Activity Detection”) are crucial.

In case of problems like incompletely transmitted documents, refer to chapter Network Clock Timing in the Cisco High Density Voice/Fax Network Modules documentation.

## Activating T.38 and pass-through on a Cisco gateway

To transport T.38 and still able to use analog pass-through devices use the following settings on the gateway:

```
voice service voip
  fax protocol t38 fallback pass-through g711alaw
```

## Used TCP/UDP Ports

| Source | Destination | Protocol | Port | Description |
|---|---|---|---|---|
| Client | CALLISTO | http/https | TCP/80, TCP/8080, | Web Frontend, Fax |

| Source | Destination | Protocol | Port | Description |
|---|---|---|---|---|
| | | | TCP/443 | Service |
| Client (admin) | CALLISTO | telnet | TCP/23 | CLI |
| Client (COC) | CALLISTO | TCP | TCP/27864 | COC encrypted |
| Client (COC) | CALLISTO | TCP | TCP/27866 | COC unencrypted |
| Phone | CALLISTO | http/https | TCP/80, TCP/16002, TCP/443 | Phone Services |
| CALLISTO | CUCM | https | TCP/443 | AXL |
| CALLISTO | CUCM | SIP/SIPS | TCP&UDP/5060, TCP/5061 | SIP Trunk |
| CALLISTO | CUCM | RTP/SRTP | UDP 49152-65535 | SIP Trunk |
| CALLISTO | CUCM | CTI/QBE | TCP/2748 | JTAPI |
| CALLISTO | CUPS | REST | TCP/8082, TCP/8083 | Presence Server |
| CALLISTO | Phone | http/https | TCP/80, TCP/443 | XML Message |
| CALLISTO | Phone | RTP/SRTP | UDP 49152-65535 | SIP RTP |
| CALLISTO | Mail Server | SMTP | TCP/25 | E-Mail delivery |
| CALLISTO | Time Server | NTP | UDP/123 | TimeSync |
| CALLISTO | Backup Server | FTP | TCP/21 | FTP Backup |
| CALLISTO | Backup Server | FTP | TCP/(depends on server) | FTP Backup passive range |
| CALLISTO | Syslog Server | Syslog | UDP/514, TCP/6514 | Syslog |
| CUCM | CALLISTO | SIP/SIPS | TCP&UDP/5060, TCP/5061 | SIP Trunk |
| CUCM | CALLISTO | RTP/SRTP | UDP 49152-65535 | SIP Trunk |
| CUCM | CALLISTO | CTI/QBE | TCP/2789 | JTAPI |
| CUCM | CALLISTO | SFTP | TCP/22 | SFTP CDRs |
| CUPS | CALLISTO | REST | TCP/8843 | Presence Server |
| CUPS | CALLISTO | SIP | TCP/27865 | SIP SIMPLE Presence Server |
| SNMP Client | CALLISTO | SNMP | UDP/161, UDP/162 | SNMP |

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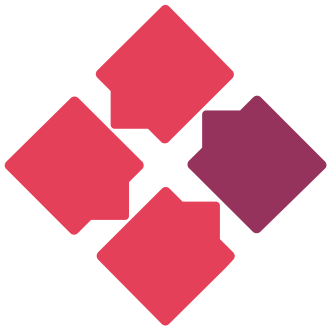

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