



CALLISTO⁺



PLATFORM

INSTALLATION MANUAL

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Requirements

Network

- Cisco Unified Communications Manager Release 3.3 and higher
- DHCP Dynamic Host Configuration Protocol Server on the LAN Local 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 DTMF Dual 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 documentation at www.cisco.com.

Quick start

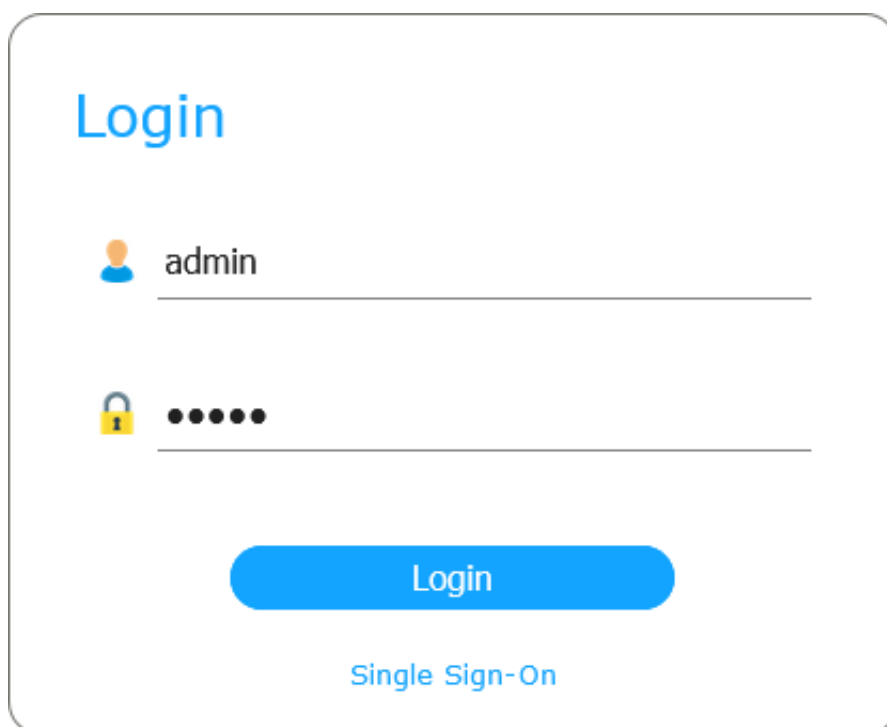
Installation of a virtual appliance for VMware ESXi 4.1

Information regarding the virtual deployment of the Callisto Platform can be found within the [virtual deployment manual](#).

Callisto UCM web configuration

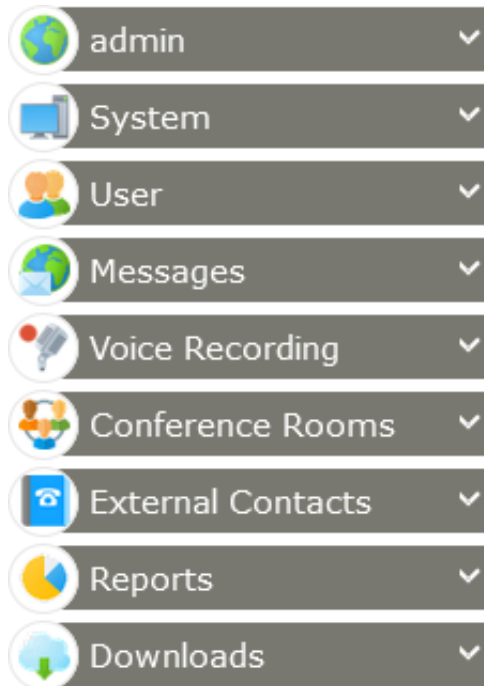
Admin account parameters

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 screenshot shows a web browser window with a login form. The title of the page is "Login" in blue text. Below the title, there are two input fields. The first field is for the username, with a person icon on the left and the text "admin" entered. The second field is for the password, with a lock icon on the left and six black dots representing the password. Below the input fields, there is a blue button labeled "Login". At the bottom of the form, there is a link labeled "Single Sign-On" in blue text.

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.

A screenshot of the 'admin' account settings form. The form is titled 'admin' and contains the following fields: Username (admin), Password (masked with dots), Department (empty), Last Name (Administrator), E-Mail (admin@company.com), Number (empty), Authentication (Local), Confirm Pwd (masked with dots), First Name (empty), Language (English), and Mobile (empty). There are 'Save' and 'Cancel' buttons at the bottom right.

Save the new settings.

System parameters

System Parameters

General

Callisto IP Address: [IP Configuration...](#) [TLS Configuration...](#) [Date and time...](#) [Hostname...](#)

System language: Company:

External URL:

Unified Communications Manager

IP Address: Version: Extension Mobility

Failover IP: Fax-Gateway IP:

Main AXL Node: Failover AXL Node:

Username: Password:

Security

Phone authentication

Username: Password:

Miscellaneous

VoIP: [SNMP...](#)

Force HTTPS Telnet enabled [Firewall...](#)

Syslog Server

Transport: IP Address: Port:

Messages

VoiceMail Number: Delete old messages after days

External prefix: Internal number length:

Internal prefix:

Audio Format: Fax Format:

MWI On Number: MWI Off Number: ?

E-Mail & SMS

[E-Mail settings...](#) SMS Provider: [Settings...](#)

Alarm messages

E-Mail: Exceeding the number of simultaneous calls:

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.

System Phones						
Import...		Search				
Name ^	Type	Description	Number	IP Address		
CSFAshok	Unified Client Services Framework	Ashok's Jabber phone	1043	172.26.1.11		Reboot
CSFJan	Unified Client Services Framework	Jan's Jabber phone	1035	192.168.100.160		Reboot
CSFJohn	Unified Client Services Framework	John's Jabber phone	1014	172.26.1.5		Reboot
SEP001122334459	Third-party SIP Device (Advanced)	SEP001122334459	1109	192.168.16.51		Reboot
SEP001122334460	Third-party SIP Device (Basic)	SEP001122334460	1108	172.26.1.21		Reboot
SEP001122334487	Third-party SIP Device (Advanced)	SEP001122334487	1107	172.26.1.32		Reboot
SEP00FFAE38E864	CIPC	Hans CIPC	1041	172.26.1.4		Reboot
SEP00FFEFF137B8	CIPC	Petar CIPC	1020	172.26.1.10		Reboot
SEP0800270AEDE1	CIPC	Hanako CIPC	1078	172.26.1.15		Reboot
SEP080027821B2B	CIPC	Juan CIPC	1024	172.26.1.17		Reboot
SEP10F311B60495	7926	Auto 1077	1077	192.168.0.100		Reboot
SEP2834A283DAB4	8861	Front desk phone	1072	192.168.105.25		Reboot
SEP500604721447	7945	Jane's phone	1012	192.168.100.105		Reboot
SEP5006047239BC	7945	Elisabeth's phone	1011	192.168.100.201		Reboot
SEP500604723B5A	7945	Taro's phone	1026	192.168.16.12		Reboot
SEP64A0E7F6BC2D	7975	Maria's phone	1053	192.168.100.164		Reboot
SEPF8A5C5B2380D	8861	SEPF8A5C5B2380D	1033	192.168.100.141		Reboot
TCTJP	Dual Mode for iPhone	Jabber iOS Jean-Pascal	1014	192.168.100.103		Reboot

System Phones: 18 / 18 Reboot all

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.

Cisco Services

Upload file

Name	URL	All	Web	
LastRecording	Dial:9119	<input type="checkbox"/>	<input type="checkbox"/>	Save
ProfACD	http://192.168.100.199/Applications/Inbound/ProfACD2/src/Phone.asp?action=showMenu	<input type="checkbox"/>	<input type="checkbox"/>	Save
MA Group	http://192.168.100.199/Applications/Inbound/MA%20Group/src/PhoneMenu.asp?action=rootMenu&device=#DEVICENAME#	<input type="checkbox"/>	<input type="checkbox"/>	Save
User	http://192.168.100.199/Cisco/Directories.asp	<input type="checkbox"/>	<input type="checkbox"/>	Save

New Cisco Service:

+ Save

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.

Music on Hold

Filename ^	Size		
BritneySpears.wav	235 KB	Activate	
Cisco_Default.wav	485 KB	Activated	
RobbieWilliams.wav	235 KB	Activate	
Shakira.wav	237 KB	Activate	

Upload new audio file

No file selected.



Recycle icon

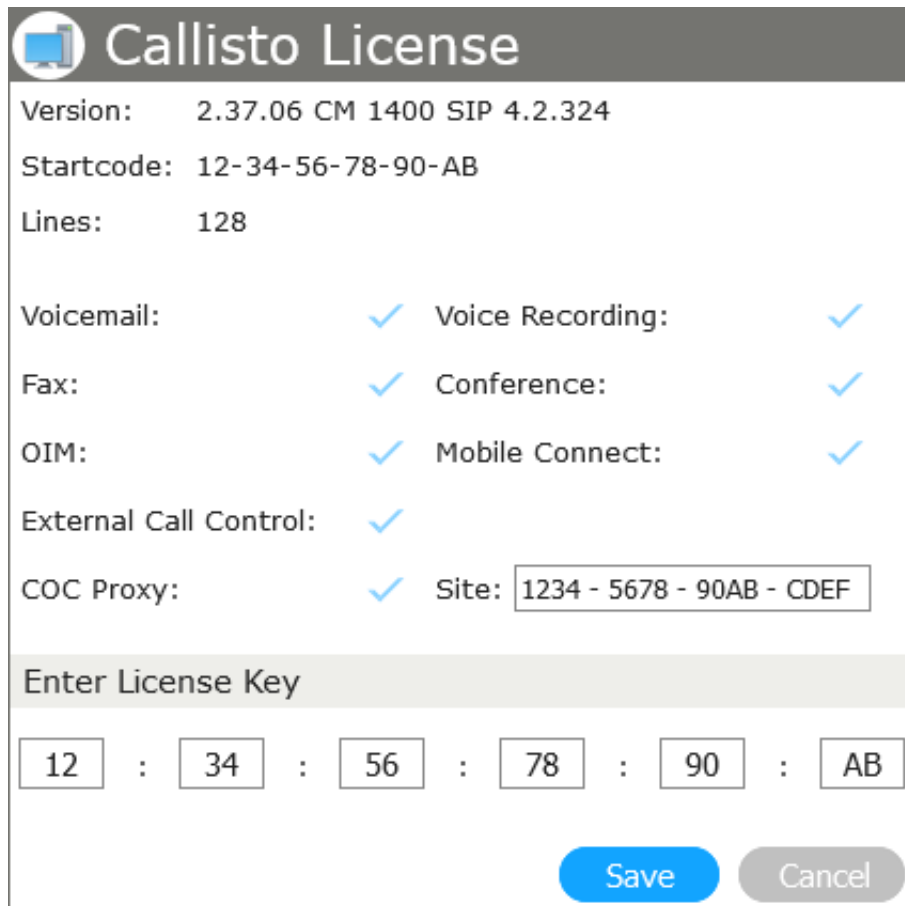
Files can be deleted by clicking the *recycle* icon.

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.



Callisto License

Version: 2.37.06 CM 1400 SIP 4.2.324

Startcode: 12-34-56-78-90-AB

Lines: 128

Voicemail: Voice Recording:

Fax: Conference:

OIM: Mobile Connect:

External Call Control:

COC Proxy: Site:

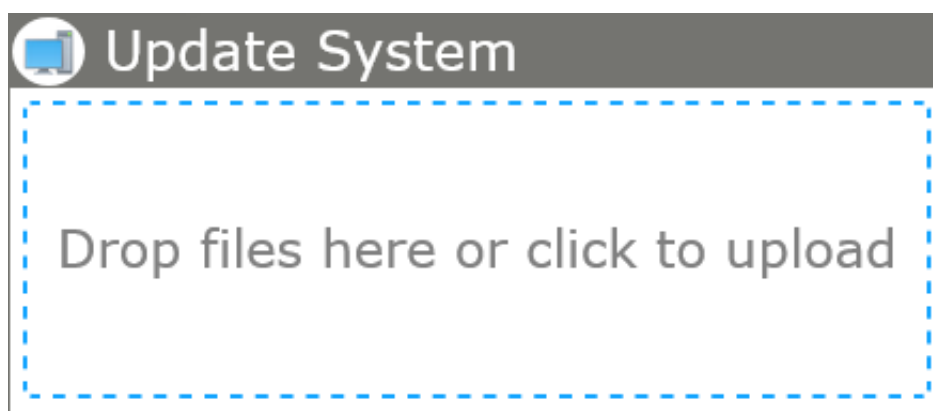
Enter License Key

: : : : :

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.

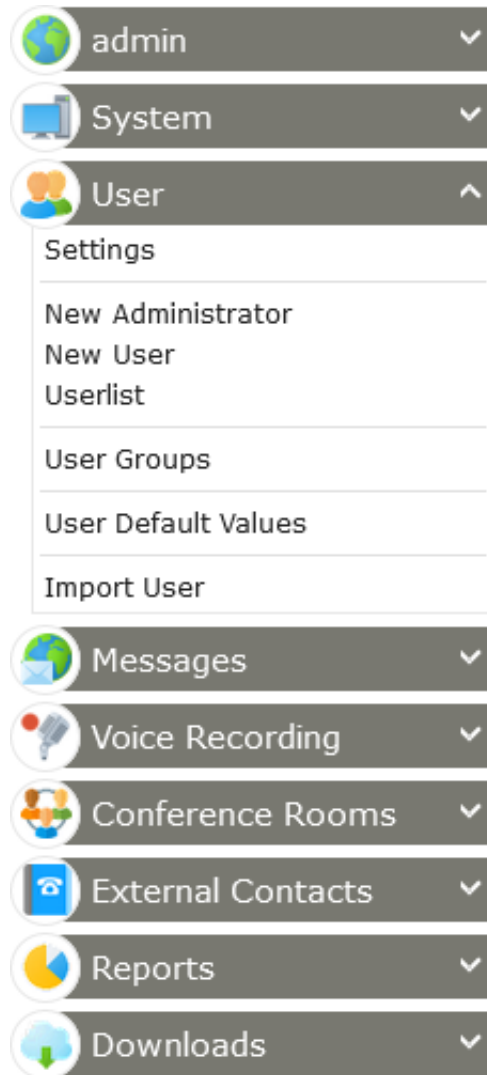


Update System

Drop files here or click to upload

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.)



<New User>

Username:	<input type="text"/>	Authentication:	<input type="text" value="Local"/>
Password:	<input type="password"/>	Confirm Pwd:	<input type="password"/>
Department:	<input type="text"/>		
Last Name:	<input type="text"/>	First Name:	<input type="text"/>
VIP Status:	★★★★★		
E-Mail:	<input type="text"/>	Language:	<input type="text" value="English"/>
Mobile:	<input type="text"/>	Pager:	<input type="text"/>
Phone:	<input type="text"/>		
Number:	<input type="text"/>	<input checked="" type="checkbox"/> Show in local directory	
User PIN:	<input type="text"/>	<input type="checkbox"/> Always prompt	
User Groups:	<input type="text"/>		

Privileges

<input type="checkbox"/> Allow SMS sending	<input checked="" type="checkbox"/> Web access
<input type="checkbox"/> Allow Fax sending	<input type="checkbox"/> Edit global Directory
<input type="checkbox"/> Cisco Phone Message	<input type="checkbox"/> Allow Mobile Connect
<input type="checkbox"/> Access detailed Reports	<input checked="" type="checkbox"/> Change mobile number
<input type="checkbox"/> Edit Conference Rooms	<input checked="" type="checkbox"/> Change E-Mail address
<input type="checkbox"/> CTI Authentication	<input type="checkbox"/> Forward to external numbers
<input type="checkbox"/> REST Authentication	<input checked="" type="checkbox"/> Applications <input type="text" value="Choose..."/>
<input checked="" type="checkbox"/> Voice Recording <input type="text" value="Choose..."/>	

Group Permissions































Internal Contacts:	<input type="text"/>
External Contacts:	<input type="text"/>

Notification

Voicemail <ul style="list-style-type: none"> <input type="checkbox"/> Forward to E-Mail Account <input type="checkbox"/> Mark messages as read <input type="checkbox"/> Send SMS when receiving a message 	Fax <ul style="list-style-type: none"> <input type="checkbox"/> Forward to E-Mail Account <input type="checkbox"/> Mark messages as read <input type="checkbox"/> Send SMS when receiving a message <input type="checkbox"/> E-Mail notification for outbound Fax
---	--

Save the new settings.

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

Userlist							
<input type="text" value="Search"/>							
Username ^	Last Name	First Name	Department	VIP Status	Phone	Mobile	
 ashok.kumar	Kumar	Ashok	Management	★★★★	1005 	+41790000000 	 
 elisabeth.mueller	Müller	Elisabeth	HR	★★	1009 	+41790000000 	 
 fred.bloggs	Bloggs	Fred	Management	★★★★★	1011 	+41790000000 	 
 gildong.hong	Hong	Gil-dong	R&D		1076 	+41790000000 	 
 hanako.sato	Sato	Hanako	Design	★★	1099 	+41790000000 	 
 hans.meier	Meier	Hans	Support		1054 	+41790000000 	 

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.

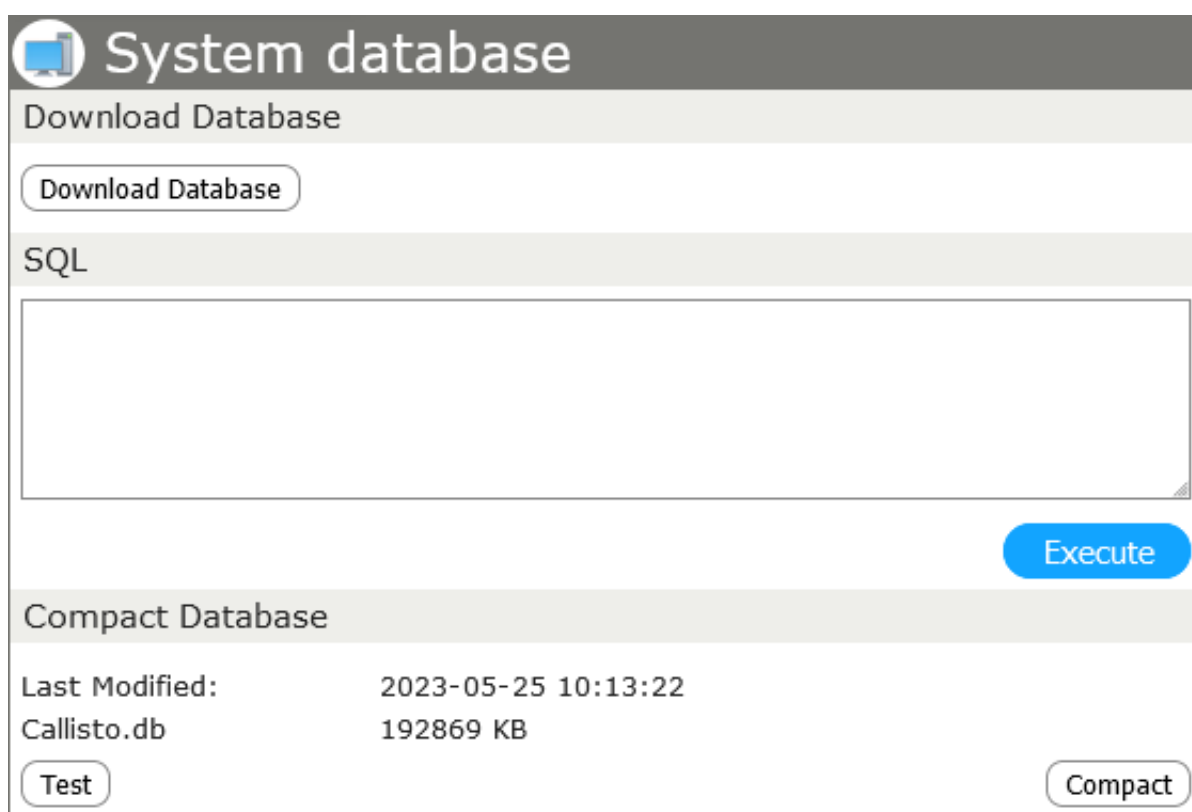
Should you encounter unexpected difficulties, check the Callisto FAQ, call your Callisto service and sales partner, or follow the instructions according to Callisto's General Terms and Conditions (GTC) and/or Service Level Agreement (SLA).

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.



The screenshot displays a web interface for the 'System database'. It features a dark header with a database icon and the title 'System database'. Below the header, there are three main sections: 'Download Database' with a 'Download Database' button; 'SQL' with a large text input area and an 'Execute' button; and 'Compact Database' which shows 'Last Modified: 2023-05-25 10:13:22' and 'Callisto.db 192869 KB', along with 'Test' and 'Compact' buttons.

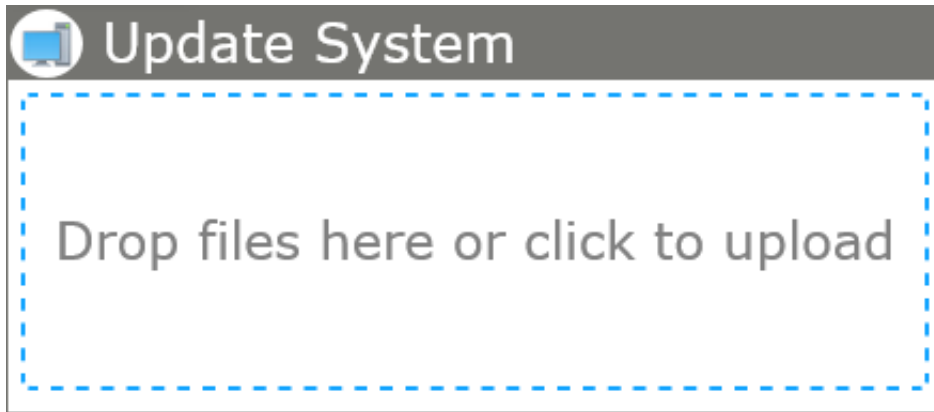
It is highly recommended to backup system parameters and user settings periodically, especially immediately before and after larger changes. Additionally, the system database should be cleaned from time to time.

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 DHCP Dynamic 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 to 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
Client (admin)	CALLISTO	telnet	TCP/443	Service
Client (COC)	CALLISTO	TCP	TCP/23	CLI
Client (COC)	CALLISTO	TCP	TCP/27864	COC encrypted
Phone	CALLISTO	http/https	TCP/27866	COC unencrypted
			TCP/80, TCP/16002,	Phone Services
CALLISTO	CUCM	https	TCP/443	AXL
CALLISTO	CUCM	SIP/SIPS	TCP&UDP/5060,	SIP Trunk
			TCP/5061	
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,	SIP Trunk
			TCP/5061	
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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