

Hướng dẫn Upgrade Firmware cho Cisco IP Phone 9971

(Bùi Quốc Kỳ - VnPro)

**

Upgrade firmware cmterm-9971.9-4-2SR1-2.cop.sgn cho Phone 9971.

Sau khi cấu hình lộn Phone 7971 trên CUCM, trong quá trình Register, Phone 9971 hiển thị thông báo lỗi sau tại Status Message: upgrade reject: HW compat failure. Must use 9.3(2) or later release on this phone

CUCM System version hiện tại: 9.1.1.10000-11

Firmware hiện tại của Phone 9971:

- sip9971.9-3-2-10

Truy cập và tải Firmware mới nhất dành cho Phone 9971:

- [https://software.cisco.com/download/release.html?mdfid=282749264&softwareid=282074288&release=9.3\(2\)](https://software.cisco.com/download/release.html?mdfid=282749264&softwareid=282074288&release=9.3(2))

The screenshot shows the Cisco Software Download page for Unified IP Phone 9971, Release 9.4(2)SR3. The page includes a navigation menu with options like Products & Services, Support, How to Buy, Training & Events, and Partners. Below the navigation, there is a search bar and a download cart. The main content area displays the release information and a table of files for download.

File Information	Release Date	Size	Actions
9971 SIP IP Phone load signed COP file - Compatible CUCM Versions: 7.1(5)+ cmterm-9971.9-4-2SR3-1.k3.cop.sgn	29-AUG-2016	37.72 MB	Download Add to cart
9971 SIP IP firmware files only - Compatible CUCM Versions: 7.1(5)+ cmterm-9971.9-4-2SR3-1_REL.zip	29-AUG-2016	37.72 MB	Download Add to cart

Kiểm tra Firmware Load của Phone 9971.

Cisco Unified CM Administration page > Device > Device Settings > Device Defaults.

The screenshot shows the Cisco Unified CM Administration web interface. At the top, there is a navigation bar with 'Cisco Unified CM Administration' and a 'Go' button. Below it, a menu bar includes 'System', 'Call Routing', 'Media Resources', 'Advanced Features', 'Device', 'Application', 'User Management', 'Bulk Administration', and 'Help'. The 'Device' menu is expanded, showing options like 'CTI Route Point', 'Gatekeeper', 'Gateway', 'Phone', 'Trunk', 'Remote Destination', and 'Device Settings'. A sub-menu for 'Device Defaults' is also visible, listing items such as 'Firmware Load Information', 'Default Device Profile', 'Device Profile', 'Phone Button Template', 'Softkey Template', 'Phone Services', 'SIP Profile', 'Common Device Configuration', 'Common Phone Profile', 'Remote Destination Profile', 'Feature Control Policy', 'Recording Profile', and 'SIP Normalization Script'. On the left, a warning message states: 'The system is operating on demo licenses. Manager and install sufficient licenses to provision users and devices.' Below this, the system version is '9.1.1.10000-11' and VMware installation details are provided. A copyright notice and a disclaimer about cryptographic features are also present.

The screenshot shows the 'Device Defaults Configuration' page in Cisco Unified CM Administration. It features a 'Save' button and a table of configuration items. Below the table is a 'Dual Bank Information' section with a table listing device types, protocols, load information, inactive load information, device pools, and phone templates. The row for 'Cisco 9971' is highlighted with a red border.

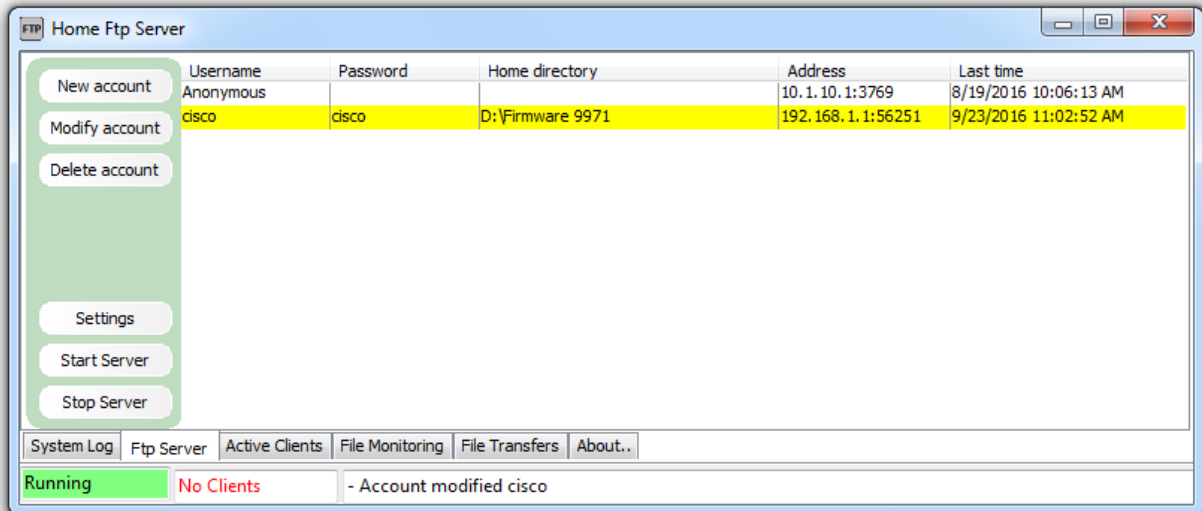
Device Type	Protocol	Load Information	Inactive Load Information	Device Pool	Phone Template
Cisco 8961	SIP	sip8961.9-3-2-10		Default	Standard 8961 SIP
Cisco 9951	SIP	sip9951.9-3-2-10		Default	Standard 9951 SIP
Cisco 9971	SIP	sip9971.9-3-2-10		Default	Standard 9971 SIP
Cisco Cius	SIP	sipcius.9-2-4-45		Default	Standard Cius SIP
Cisco Cius SP	SIP	sipciusSP.9-2-4-45		Default	Standard Cius SP SIP

Cài đặt Firmware Load.

Trước khi sử dụng Cisco Unified IP Phone 9971 với Cisco Unified Communications Manager Release 7.1(5) hoặc các phiên bản mới hơn, ta cần cài đặt firmware mới nhất trên các Cisco Unified Communications Manager servers trong cluster.

Đối với Cisco Unified IP Phone 9971, ta không cần phải thêm .loads extension vào firmware version name trong Cisco Unified Communications Manager database.

Thiết lập trên FTP Server 192.168.3.160.

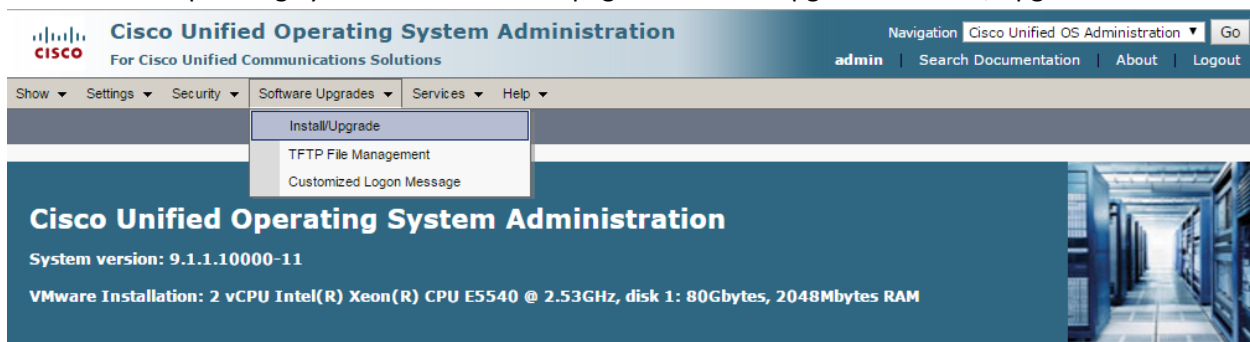


Đăng nhập vào Cisco Unified Operating System Administration.

- username: admin
- password: c1sco123



Cisco Unified Operating System Administration page > Software Upgrades > Install/Upgrade.



Khai baso FTP Server trên Cisco Unified Operating System Administration > Next > Next.

Cisco Unified Operating System Administration
 For Cisco Unified Communications Solutions

Navigation: Cisco Unified OS Administration **Go**
 admin | Search Documentation | About | Logout

Show ▾ Settings ▾ Security ▾ Software Upgrades ▾ Services ▾ Help ▾

Software Installation/Upgrade

Cancel Next

Status
 Status: Ready

Software Location

Source* Remote Filesystem ▾
 Directory* \
 Server* 192.168.3.160
 User Name* cisco
 User Password* *****
 Transfer Protocol* FTP ▾
 SMTP Server
 Email Destination

Cisco Unified Operating System Administration
 For Cisco Unified Communications Solutions

Navigation: Cisco Unified OS Administration **Go**
 admin | Search Documentation | About | Logout

Show ▾ Settings ▾ Security ▾ Software Upgrades ▾ Services ▾ Help ▾

Software Installation/Upgrade

Cancel Next

Status
 Status: Ready

Software Location

Options/Upgrades* cmterm-9971.9-4-2SR3-1.k3.cop.sgn ▾

Invalid Upgrades

Option Names	Status
..	Name does not match any filter pattern.
.	Name does not match any filter pattern.

Cisco Unified Operating System Administration
 For Cisco Unified Communications Solutions

Navigation: Cisco Unified OS Administration **Go**
 admin | Search Documentation | About | Logout

Show ▾ Settings ▾ Security ▾ Software Upgrades ▾ Services ▾ Help ▾

Software Installation/Upgrade

Cancel

Status
 Downloading the file

Download File

File cmterm-9971.9-4-2SR3-1.k3.cop.sgn
 Directory \
 Server 192.168.3.160
 User Name cisco
 Download Status 5 MBytes

Click Next.

Cisco Unified Operating System Administration
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Navigation Cisco Unified OS Administration Go
 admin | Search Documentation | About | Logout

Show Settings Security Software Upgrades Services Help

Software Installation/Upgrade

Cancel Next

Status

Warning: To ensure the integrity of the installation file, please verify the MD5 hash value against the Cisco Systems web site

Warning: You may need to stop some services before you install a locale. You may then restart those services after you complete the locale installation. Refer to your product-specific online help for locale installation details.

File Checksum Details

File cmterm-9971.9-4-2SR1-2.cop.sgn
 MD5 Hash Value 9d:93:13:f5:81:eb:fd:fb:f5:e8:fa:fb:8e:bc:a4:6d

Cancel Next

Cisco Unified Operating System Administration
 For Cisco Unified Communications Solutions

Navigation Cisco Unified OS Administration Go
 admin | Search Documentation | About | Logout

Show Settings Security Software Upgrades Services Help

Software Installation/Upgrade

Cancel

Installation Status

File cmterm-9971.9-4-2SR1-2.cop.sgn
 Start Time Fri Oct 14 21:02:12 EDT 2016
 Status Running

Installation Log

```

sip9971.9-4-2SR1-2.loads skern9971.022809R2-9-4-2SR1-2.sebn
/bin/cp -fp dkern9971.100609R2-9-4-2SR1-2.sebn kern9971.9-4-2SR1-2.sebn rootfs9971.9-4-2SR1-2.sebn sboot9971.031610R1-9-4-2SR1-2.sebn sip9971.9-4-2SR1-
2.loads skern9971.022809R2-9-4-2SR1-2.sebn /usr/local/cm/tftp

/bin/chmod 770 load493.txt
/bin/chown database:ccmbase load493.txt
/bin/cp -fp load493.txt /usr/local/cm/db/loadinfo
/bin/su -l informix -s /bin/sh -c "source /usr/local/cm/db/dblenv.bash /usr/local/cm ; source /usr/local/cm/db/informix/local/ids.env ; /usr/local/cm/bin/installdb -l
/usr/local/cm/db/loadinfo/load493.txt"
  
```

Cancel

Cisco Unified Operating System Administration
 For Cisco Unified Communications Solutions

Navigation Cisco Unified OS Administration Go
 admin | Search Documentation | About | Logout

Show Settings Security Software Upgrades Services Help

Software Installation/Upgrade

Install Another

Installation Status

File cmterm-9971.9-4-2SR1-2.cop.sgn
 Start Time Fri Oct 14 21:02:12 EDT 2016
 Status Locale cmterm-9971.9-4-2SR1-2.cop has been installed successfully.

Installation Log

```

disablenotify rc[0]
xml DSN=ccm_super /usr/local/cm/db/xml/xml
installxml rc[0]
enablenotify dsn[DSN=ccm_super]
enablenotify rc[0]
installdb Success[-x]
[16/10/14_21:03:11] locale_install.sh: Successful final run of installdb
[16/10/14_21:03:11] locale_install.sh: Successful running of copstart for /common/download//cmterm-9971.9-4-2SR1-2.cop
  
```

Install Another

Khởi động lại TFTP Service, Cisco Unified Serviceability page > Tools > Control Center – Feature Services.

Performance and Monitoring Services					
	Service Name	Status:	Activation Status	Start Time	Up Time
<input type="radio"/>	Cisco Serviceability Reporter	Not Running	Deactivated		
<input type="radio"/>	Cisco CallManager SNMP Service	Not Running	Deactivated		

Directory Services					
	Service Name	Status:	Activation Status	Start Time	Up Time
<input type="radio"/>	Cisco DirSync	Not Running	Deactivated		

CM Services					
	Service Name	Status:	Activation Status	Start Time	Up Time
<input type="radio"/>	Cisco CallManager	Started	Activated	Thu Oct 13 21:49:24 2016	0 days 23:20:11
<input type="radio"/>	Cisco Messaging Interface	Not Running	Deactivated		
<input type="radio"/>	Cisco Unified Mobile Voice Access Service	Not Running	Deactivated		
<input type="radio"/>	Cisco IP Voice Media Streaming App	Not Running	Deactivated		
<input type="radio"/>	Cisco CTIManager	Not Running	Deactivated		
<input type="radio"/>	Cisco Extension Mobility	Not Running	Deactivated		
<input type="radio"/>	Cisco DHCP Monitor Service	Not Running	Deactivated		
<input type="radio"/>	Cisco Intercluster Lookup Service	Not Running	Deactivated		
<input type="radio"/>	Cisco Location Bandwidth Manager	Not Running	Deactivated		
<input type="radio"/>	Cisco Dialed Number Analyzer Server	Not Running	Deactivated		
<input type="radio"/>	Cisco Dialed Number Analyzer	Not Running	Deactivated		
<input checked="" type="radio"/>	Cisco Tftp	Started	Activated	Thu Oct 13 21:49:24 2016	0 days 23:20:11

Kiểm tra Firmware Load.

Cisco Unified CM Administration page > Device > Device Settings > Device Defaults.

The system is operating on demo licenses. Manager and install sufficient licenses to provision users and devices.

Cisco Unified CM Administration
System version: 9.1.1.10000-11
VMware Installation: 2 vCPU Intel(R) Xeon(R) CPU E5540 @ 2.53GHz, disk 1: 80Gbytes,

Last Successful Logon: Friday, October 14, 2016 6:59:43 AM EDT

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This product contains cryptographic features and is subject to United States and local country laws governing import, export, distribution or use encryption. Importers, exporters, distributors and users of this product must comply with the laws of the country in which they operate. The importation, exportation, distribution and use of this product may be restricted in certain countries. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with applicable laws and regulations, you should not install, use or distribute this product. Cisco cryptographic products do not encrypt data to protect its confidentiality. Since this product includes cryptographic features, it is important that you take appropriate security measures to protect this information from unauthorized disclosure. Please refer to the applicable laws in your country. Cisco cryptographic products do not encrypt data to protect its confidentiality. Since this product includes cryptographic features, it is important that you take appropriate security measures to protect this information from unauthorized disclosure. Please refer to the applicable laws in your country.

A summary of U.S. laws governing Cisco cryptographic products may be found at our [Export Compliance Product](#).

For information about Cisco Unified Communications Manager please visit our [Unified Communications System Doc](#).

Navigation: Cisco Unified CM Administration | Go
ccmadmin | Search Documentation | About | Logout

System | Call Routing | Media Resources | Advanced Features | Device | Application | User Management | Bulk Administration | Help

Device menu items: CTI Route Point, Gatekeeper, Gateway, Phone, Trunk, Remote Destination, Device Settings, Device Defaults, Firmware Load Information, Default Device Profile, Device Profile, Phone Button Template, Softkey Template, Phone Services, SIP Profile, Common Device Configuration, Common Phone Profile, Remote Destination Profile, Feature Control Policy, Recording Profile, SIP Normalization Script.

Add this system to an Enterprise License in order to avoid losing the ability to

Thông tin Firmware 9971 trước khi Upgrade.

Device Defaults Configuration

Save

Media Termination Point Hardware	Protocol Not Specified	M00104000006	Default	NONE
Motorola CN622	Static SIP Mobile Subscriber	NONE	Default	NONE
SCCP gateway virtual phone	Protocol Not Specified	NONE	Default	NONE
Third-party AS-SIP Endpoint	SIP	NONE	Default	Third-party AS-SIP Endpoint
Transnova S3	SIP	NONE	Default	Standard S3

Dual Bank Information

Device Type	Protocol	Load Information	Inactive Load Information	Device Pool	Phone Template
Cisco 8961	SIP	sip8961.9-3-2-10		Default	Standard 8961 SIP
Cisco 9951	SIP	sip9951.9-3-2-10		Default	Standard 9951 SIP
Cisco 9971	SIP	sip9971.9-3-2-10		Default	Standard 9971 SIP
Cisco Cius	SIP	sipcius.9-2-4-45		Default	Standard Cius SIP
Cisco Cius SP	SIP	sipciusSP.9-2-4-45		Default	Standard Cius SP SIP

Thông tin Firmware 9971 sau khi Upgrade.

Cisco Unified CM Administration
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Navigation: Cisco Unified CM Administration | Go
ccmadmin | Search Documentation | About | Logout

System | Call Routing | Media Resources | Advanced Features | Device | Application | User Management | Bulk Administration | Help

Device Defaults Configuration

Save

Media Termination Point Hardware	Protocol Not Specified	M00104000006	Default	NONE
Motorola CN622	Static SIP Mobile Subscriber	NONE	Default	NONE
SCCP gateway virtual phone	Protocol Not Specified	NONE	Default	NONE
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Transnova S3	SIP	NONE	Default	Standard S3

Dual Bank Information

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Cisco 9951	SIP	sip9951.9-3-2-10		Default	Standard 9951 SIP
Cisco 9971	SIP	sip9971.9-4-2SR1-2	sip9971.9-3-2-10	Default	Standard 9971 SIP
Cisco Cius	SIP	sipcius.9-2-4-45		Default	Standard Cius SIP
Cisco Cius SP	SIP	sipciusSP.9-2-4-45		Default	Standard Cius SP SIP

Ta có thể lấy thông tin **Load Information** và khai báo tại trường **Load Information Name** trong quá trình cấu hình Device.

- Load Information: sip9971.9-3-2-10
- Load Information: sip9971.9-4-2SR1-2

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Navigation: Cisco Unified CM Administration | Go
ccmadmin | Search Documentation | About | Logout

System | Call Routing | Media Resources | Advanced Features | Device | Application | User Management | Bulk Administration | Help

Phone Configuration

Related Links: Back To Find/List | Go

Save

Phone Type
Product Type: Cisco 9971
Device Protocol: SIP

Device Information

Device is trusted

MAC Address*

Description

Device Pool* -- Not Selected -- [View Details](#)

Common Device Configuration < None > [View Details](#)

Phone Button Template* -- Not Selected --

Common Phone Profile* Standard Common Phone Profile

Calling Search Space < None >

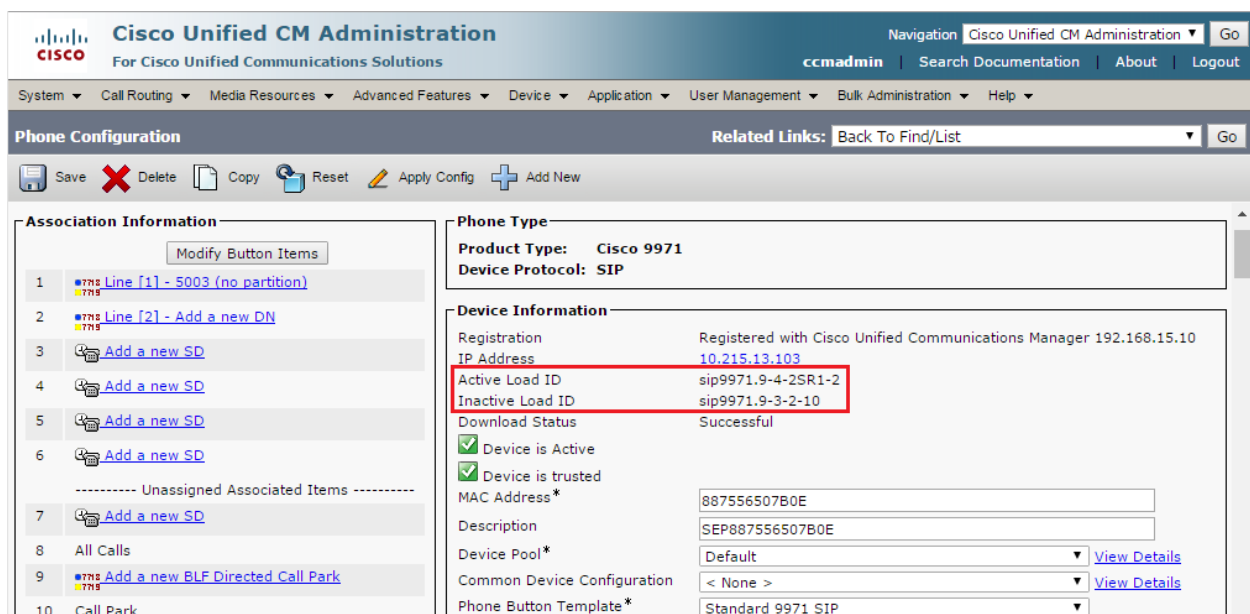
AAR Calling Search Space < None >

Media Resource Group List < None >

Privacy*	Default
Device Mobility Mode*	Default
Owner User ID	< None >
Phone Personalization*	Default
Services Provisioning*	Default
Phone Load Name	sip9971.9-3-2-10
Use Trusted Relay Point*	Default
BLF Audible Alert Setting (Phone Idle)*	Default
BLF Audible Alert Setting (Phone Busy)*	Default
Always Use Prime Line*	Default
Always Use Prime Line for Voice Message*	Default
Geolocation	< None >
Feature Control Policy	< None >
<input type="checkbox"/> Ignore Presentation Indicators (internal calls only)	
<input checked="" type="checkbox"/> Allow Control of Device from CTI	
<input checked="" type="checkbox"/> Logged Into Hunt Group	
<input type="checkbox"/> Remote Device	
<input type="checkbox"/> Protected Device****	
<input type="checkbox"/> Require off-premise location	

Cisco Unified IP Phone 9971 firmware version 9.4 định dạng ở định dạng zip file (cmterm-9971.9-4-2SR1-2_REL.zip) không được tải vào CUCM bằng installer program như trên được, ta chỉ cần giải nén các firmware files rồi copy thủ công vào các thư mục phù hợp trên TFTP server.

Để Phone 9971 cập nhật Firmware mới, ta chỉ cần cấu hình Device Phone 9971 register tới CUCM như bình thường, sau khi kết nối tới CUCM, Phone 9971 tự động tải về Firmware mới, khởi động lại và hoàn tất quá trình upgrade firmware. Kiểm tra Firmware của Phone 9971 sau khi register thành công tới CUCM.



The screenshot shows the Cisco Unified CM Administration interface. The 'Phone Configuration' section is active, displaying 'Association Information' on the left and 'Phone Type' and 'Device Information' on the right. In the 'Device Information' section, the 'Active Load ID' and 'Inactive Load ID' fields are highlighted with a red box, showing 'sip9971.9-4-2SR1-2' and 'sip9971.9-3-2-10' respectively.

Kiểm tra Firmware trên Phone 9971 > Settings button > Phone Information > Active Load.

