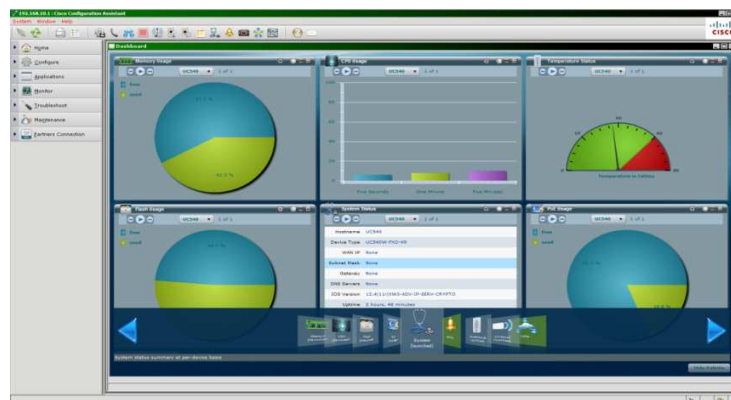
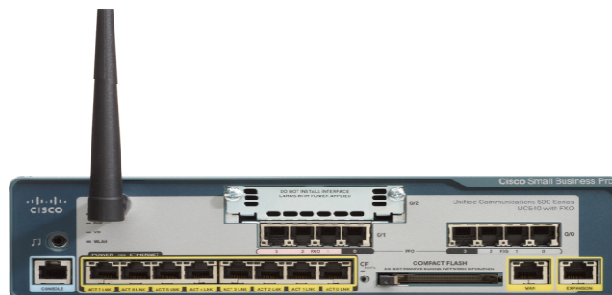


Cisco Small Business Pro

Smart Business Communication System

Technical Enablement Labs



Lab 1

Initial System Discovery, SW Upgrade,
Phone Loads and Licensing

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Introduction

Staging is a critical step to any successful practice deploying SBCS. It represents the opportunity for you to enter configuration data you collected during your site survey/customer questionnaire. This should be done in your (Partner) office in preparation for site deployment. This allows lead time prior to actual deployment to address concerns or questions.

For this stage/phase of the UC540 lifecycle, you will want to interconnect the network infrastructure equipment (UC540 chassis, ESW switch, Wireless Controllers and or APs) at a minimum, if part of the deployment.

In this lab, you will:

- Build a CA 2.1 Community and discover your topology
- Perform SW Upgrade
- Manage the Phone Loads to be stored on Flash
- Set a Static IP Address on the ESW switch
- Add License SKU to your UC540

Depending on your staging practice/model, you can also include the actual phones so a complete configured system can be delivered and installed at the customer premise. Recognize that extension numbers for phones will be assigned (Smart Assist) according to the order they are discovered, but you can modify this subsequently.

Regarding the phones, you have a few options in order of recommended best practice:

- 1) Connect the actual Phones (exact MAC addresses you will use on site)
- 2) Optionally manually enter or import the phone data (with MAC Address) into CCA
- 3) Don't do phones until later

Note: careful for typos since the phone MAC has to match when it is later connected

For this lab, we will not address phones, so you can save them for later.

Connecting the Equipment

CCA

The PC running CCA 2.1 must be connected to one of the POE switch ports of the UC540.

CCA 2.1: <http://www.cisco.com/go/configassist>

Make sure the system and the PC Meets the CCA requirements & criteria explained here:

<https://www.myciscocommunity.com/docs/DOC-9827>

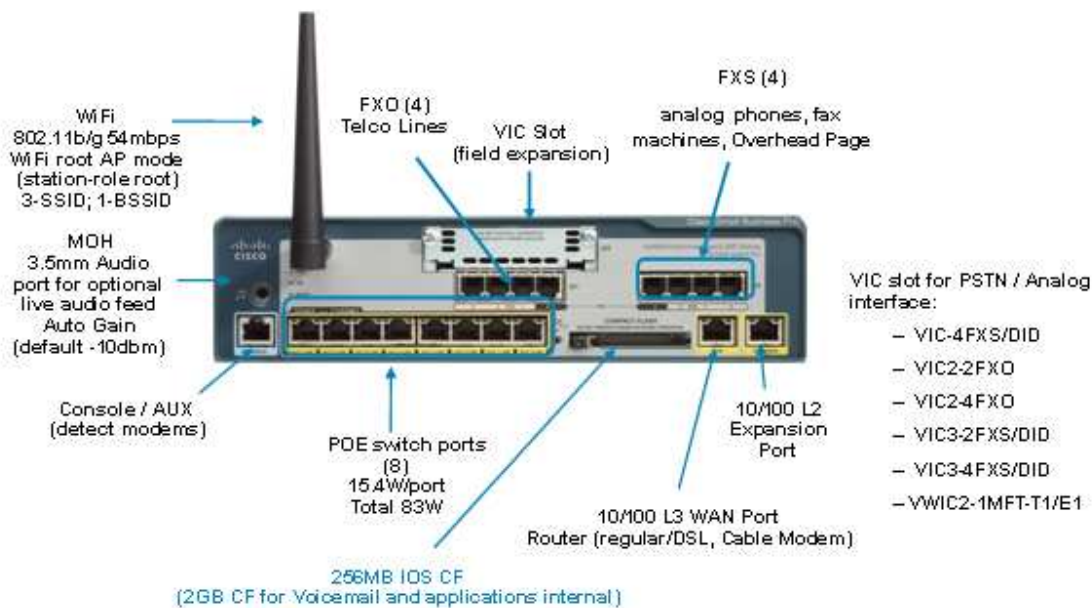
- CUE Operational Status
- CUE Interfaces status on IOS
- disable Dual NIC on your PC
- Ensure PC DGW set to UC500
- Check Local Routing from your PC to UC500

- Check Routing from CUE to your PC
- Turn off FTP/TFTP Services running on your PC
- Turn Off PC Firewall (determined by trying to ping the PC from CUE shell)

SBCS Equipment Connection

Power up your UC 540, which comes preconfigured with a factory default system configuration file

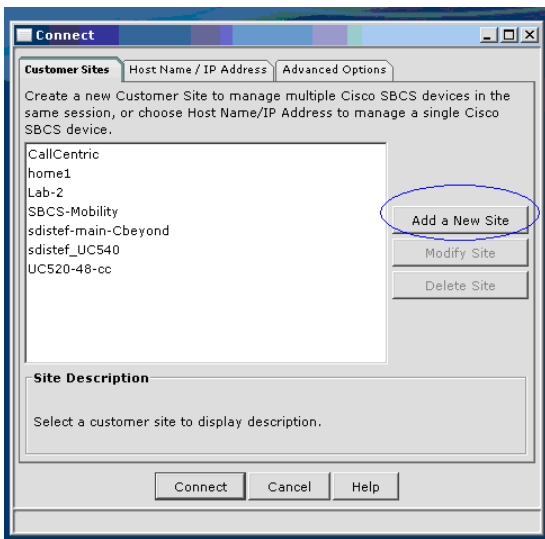
UC 540 detects the equipment plugged in the Power over Ethernet (PoE) port or Expansion port and accordingly configures the system. FXS are auto configured regardless of connection and FXO can be added for PSTN connectivity at any time (will be shown in a later lab).



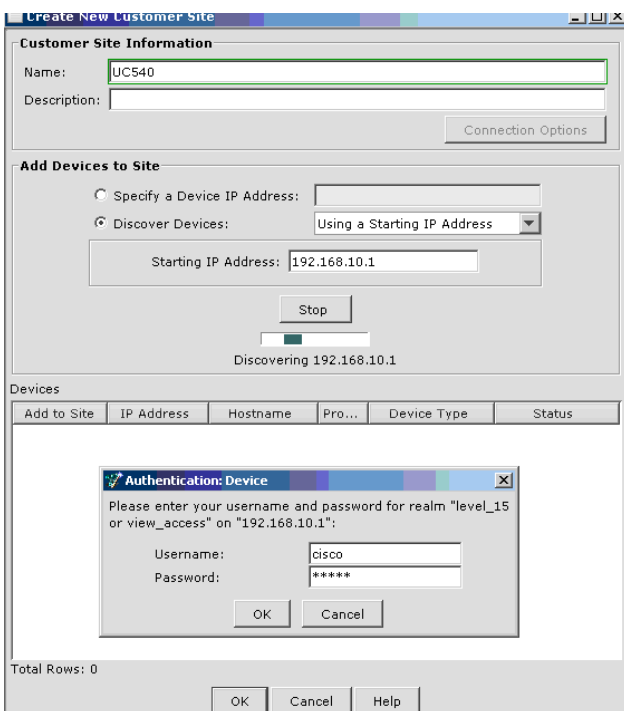
The switch is connected to the UC 540 expansion port and the WLC and APs are connected to UC540 switch ports if included (Optional)

Build a CCA 2.1 Community

Select Add a New Site



Enter authentication credentials for UC540 (cisco/cisco default) and allow it to discover the discovered equipment.



The Devices should include all the equipment that is discovered. With Green Checkboxes, the SBCS elements you want to import, in Red things like your PC and the phones (which is a cosmetic issue we will correct in mtce release of CCA) which do not need to be imported. Once you see the main infrastructure elements, you can stop the discovery if it starts to discover phones in the 10.x.x.x network.

Create New Customer Site

Customer Site Information

Name: UC540

Description: RTP Lab

[Connection Options](#)

Add Devices to Site

☐ Specify a Device IP Address:

☒ Discover Devices:

Starting IP Address: 192.168.10.1

Discovering 10.1.1.21

Add to Site	IP Address	Hostname	Pro...	Device Type	Status
<input checked="" type="checkbox"/>	192.168.10.1	UC540	https	UC540W-FXO-K9	Discovered
<input type="checkbox"/>	192.168.10.21	CVTA	http	Associated PC	Connection ...
<input checked="" type="checkbox"/>	192.168.10.18	ESW-520-24P	https	ESW-520-24P	Discovered

Total Rows: 3

So click OK, and then Connect:

Connect

Customer Sites | Host Name / IP Address | Advanced Options

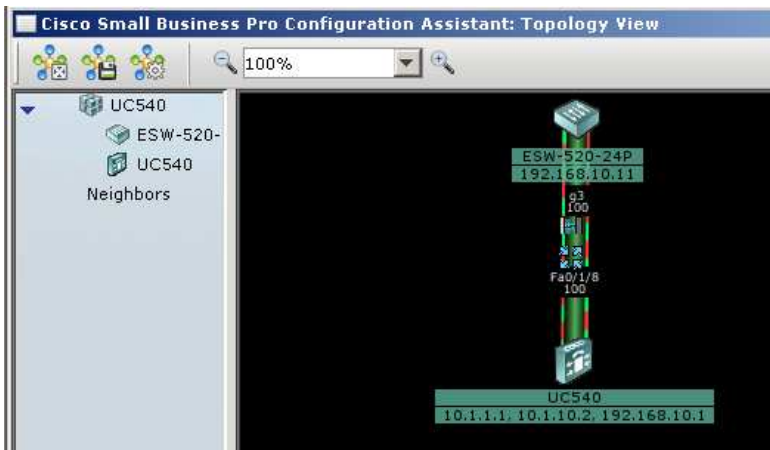
Create a new Customer Site to manage multiple Cisco SBCS devices in the same session, or choose Host Name/IP Address to manage a single Cisco SBCS device.

CallCentric
home1
Lab-2
SBCS-Mobility
sdistef-main-Cbeyond
sdistef_UC540
UC520-48-cc
UC540

Site Description

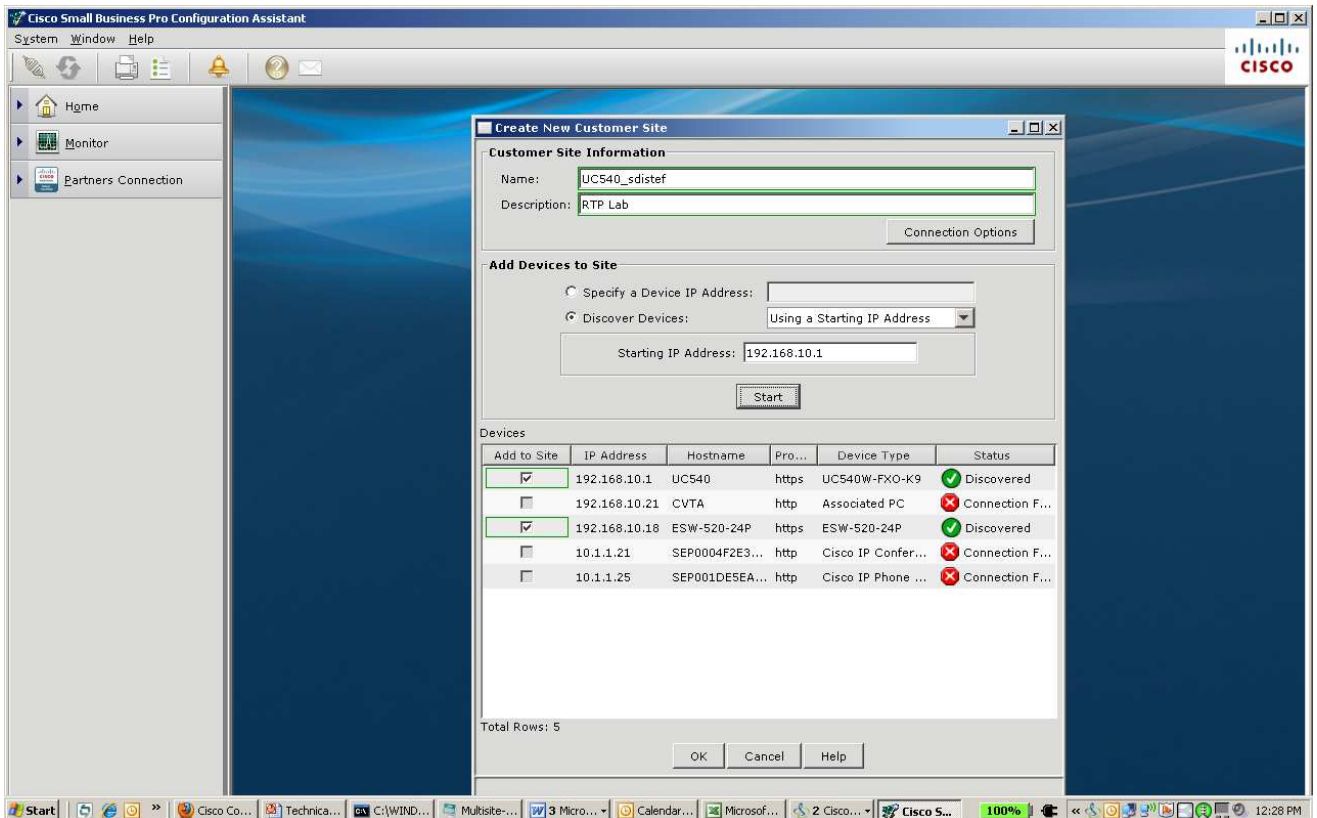
** Description was not entered for this site **

This will launch CCA 2.1 and the Dashboard and topology will reflect what you discovered (in this case I don't yet have phones connected, but if you did, you would see them too).



Here is the alternative way of discovering the UC540 with an ESW switch and a bunch of phones connected.

Click STOP when phone discovery starts (Phone discovery is not required and actually a cosmetic bug of CCA 2.1). You would then click OK and then connect to your community.



SW Upgrade

CCA 2.1 has what we call “drawers” in the left frame of the GUI. One of them is Maintenance. Inside the Maintenance drawer is SW Upgrade. Understand that CCA will perform upgrades on all SBCS products.

While UC500 has a built in EZVPN Server you can connect to from a remote location, best practice recommendation is to NOT perform SW upgrades over the WAN, since it is critical that it not be interrupted.

UC540 & Switch

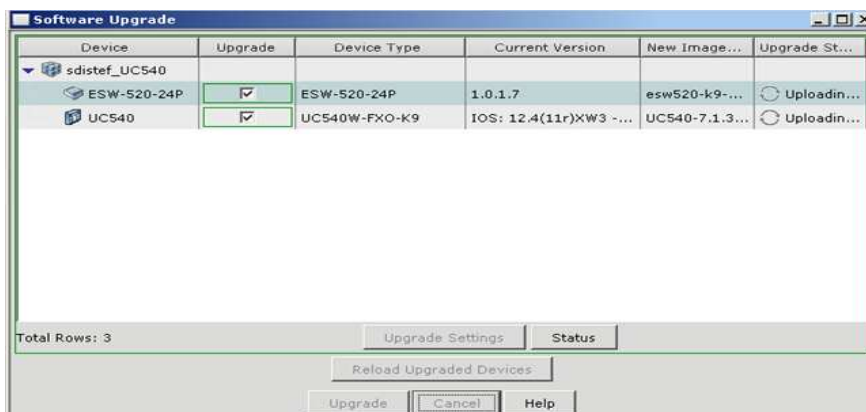
The factory default release that comes loaded on the UC 540 is the UC540-7.1.3 bundle zip.

<https://www.myciscocommunity.com/docs/DOC-10361>

So this is in case you want to see how it works so your first upgrade isn't after a deployment, or if we released a new bundle since this was written. This bundle includes all the SW and support files. Selecting ALL instead of IOS or CUE is the best practice as it will prompt you if it finds a part of the upgrade that's optional if the version is the same. You download the whole ZIP to your CCA PC and don't unzip it. You select it from CCA when prompted.

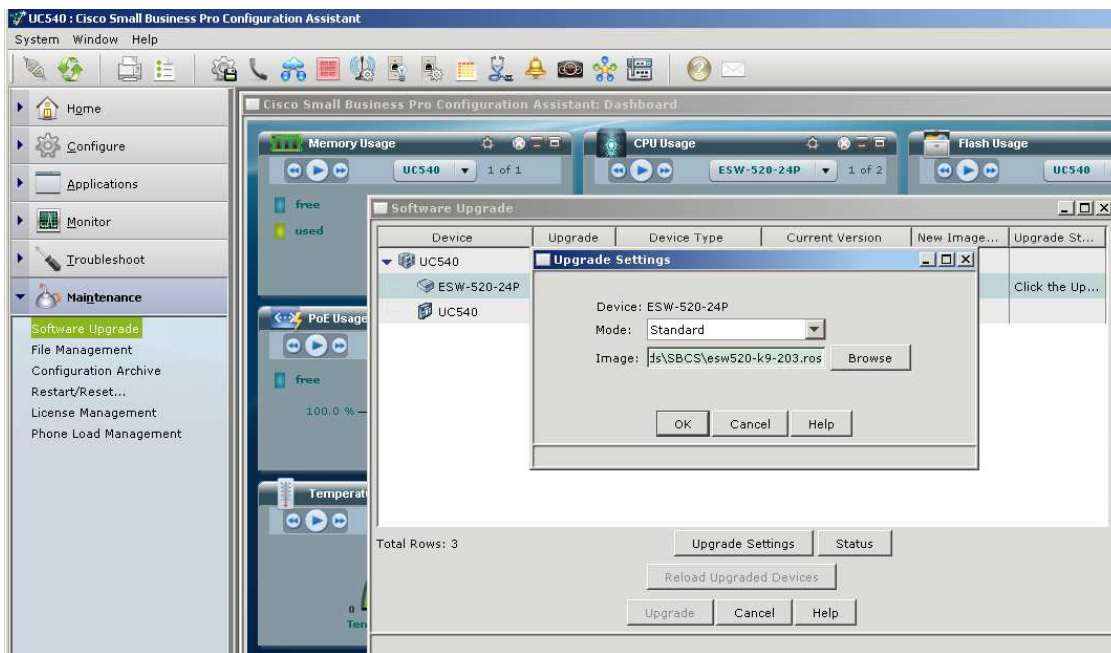
*NOTE: If you are upgrading and select either **Apply Default Configuration** or **Auto Disk Cleanup**, you should FIRST copy off any customized files you may have added since installed.*

Here we have the switch and UC540 on the wrong SW just to see it work. Count on the Switch having older FW since they have been in DISTY longer.



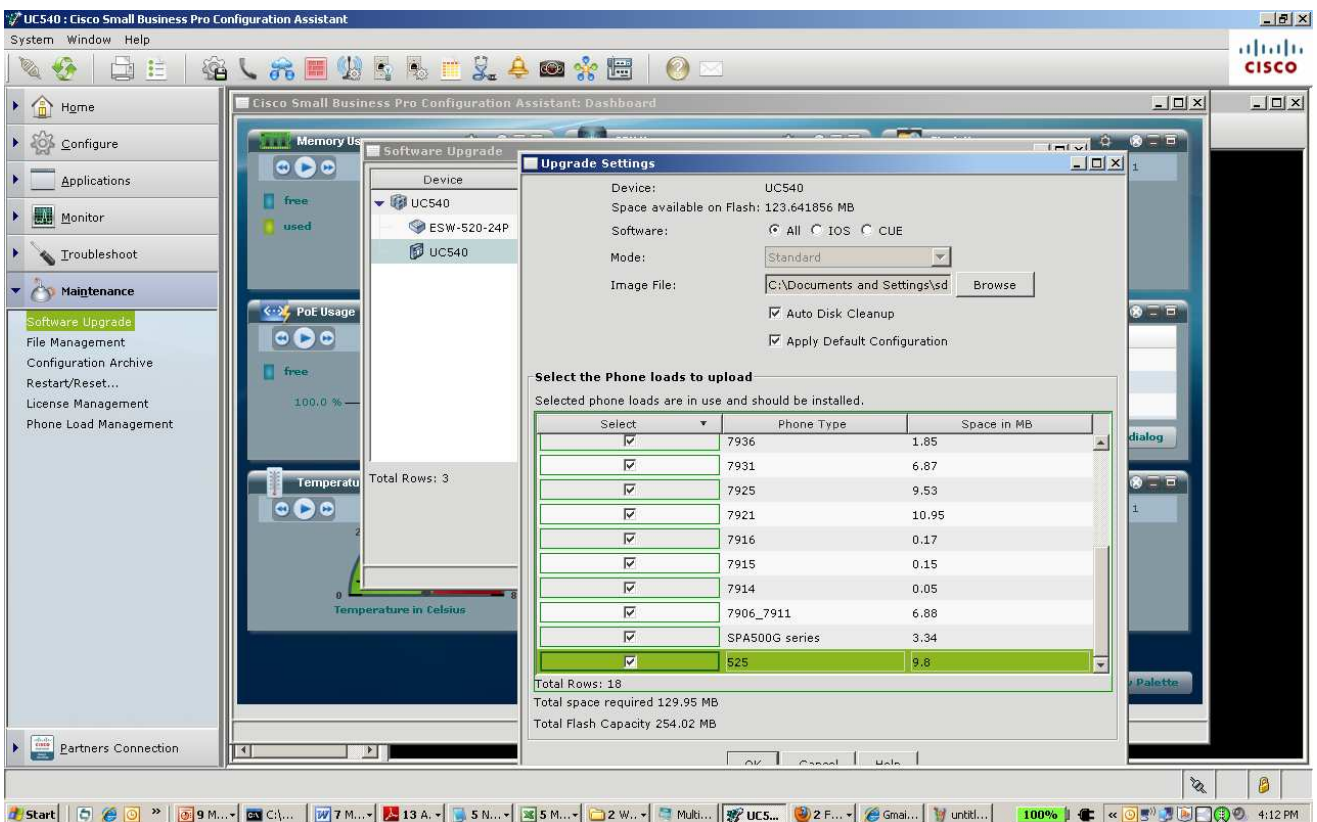
Select each one and configure the Upgrade settings, pointing to the SW you already downloaded to your PC running CCA 2.1

It makes for a nice screen shot to show them both, but best practice recommendation is do one network element at a time. This is because in the case of UC upgrade, part of it requires a reconnect, so that would prevent the ESW from happening. Not a big deal, but just note you want to do them one at a time.



Phone Loads

When you select the Bundle Zip for UC540, the Phone Load manager will interrupt you to analyze the phone loads. This is a good thing.



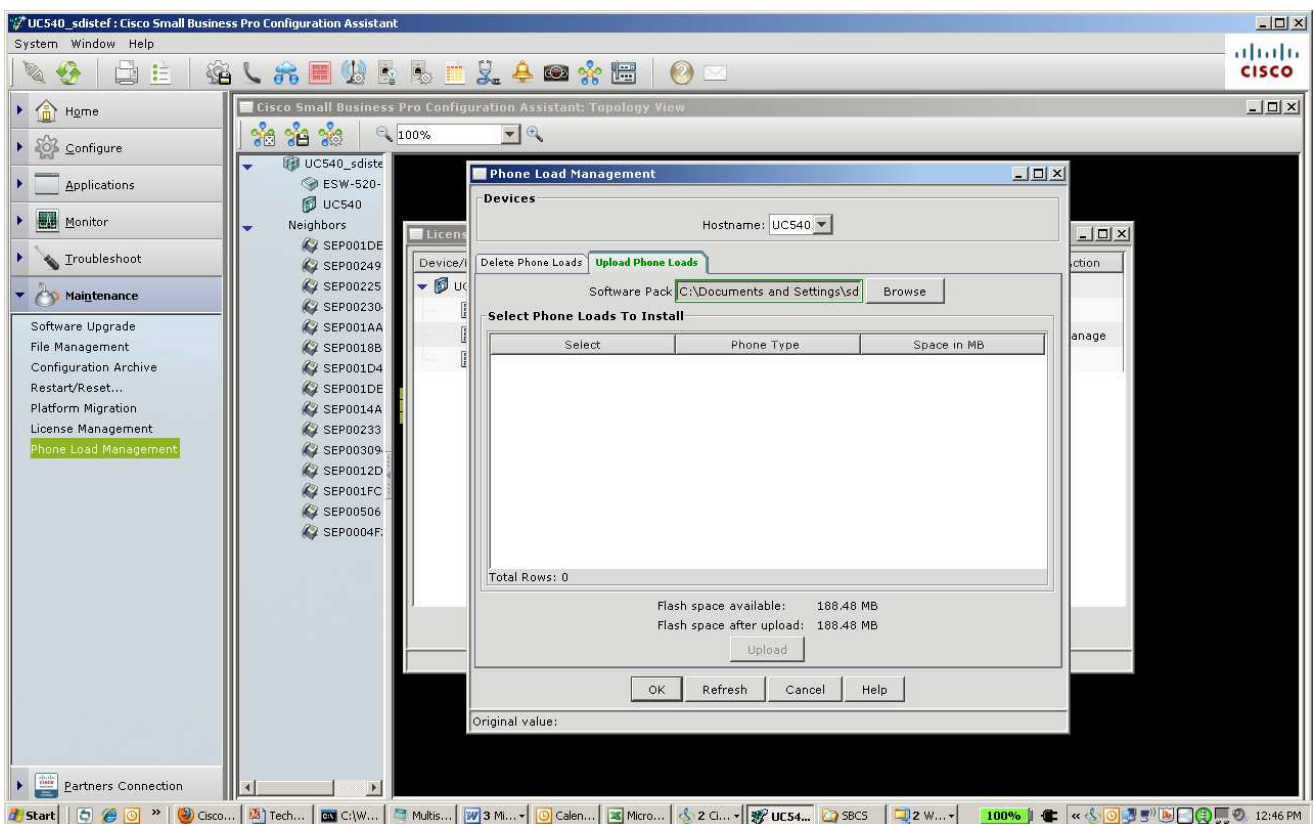
The Phone Load Manager is new for CCA 2.1. Select all the phone loads you plan to deploy with this system. Select any that you will eventually use.

Note that this is more important for UC520 where flash: space is limited; not a problem on UC540.

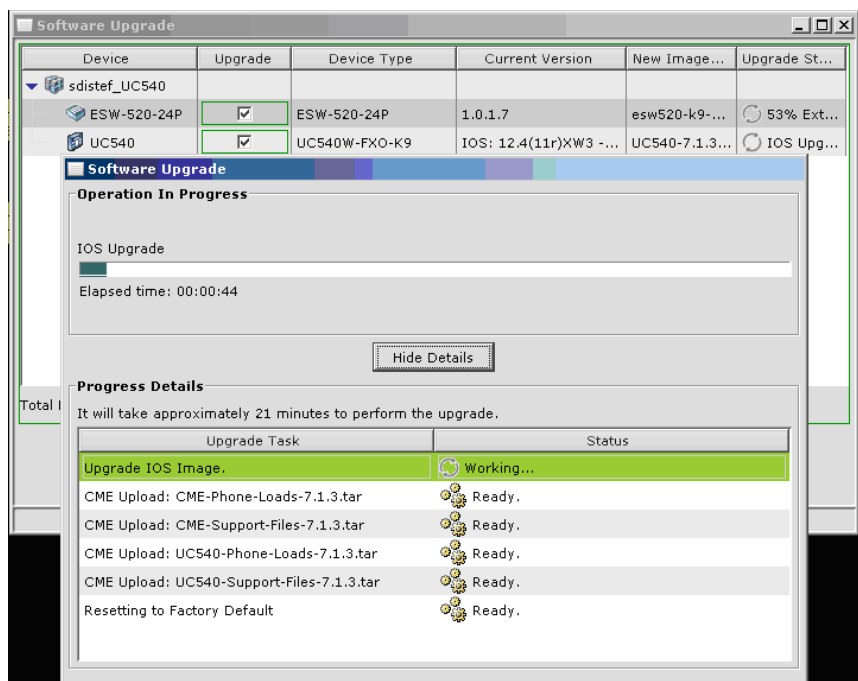
Another note on 5x5 phone loads, which pertains only to UC520, but good to make the point that you can manage phone loads without doing SW Upgrade using the standalone Phone Load Management Drawer:

When you upgrade a UC520 system from 7.0.3 to the new release (7.1.3-EA bundle or the 7.0.4 Default Release) you will be performing the upgrade on an older IOS. There are a few commands that have to be sent to the CME telephony service that require the phone loads to be built on the new IOS, so for this case of adding 500 series phones to a UC520 and then upgrading, you basically need to launch the phone load manager and delete, and then read the 5x5 phone loads AFTER the SW Bundle is upgraded. Again, this is only for UC520.

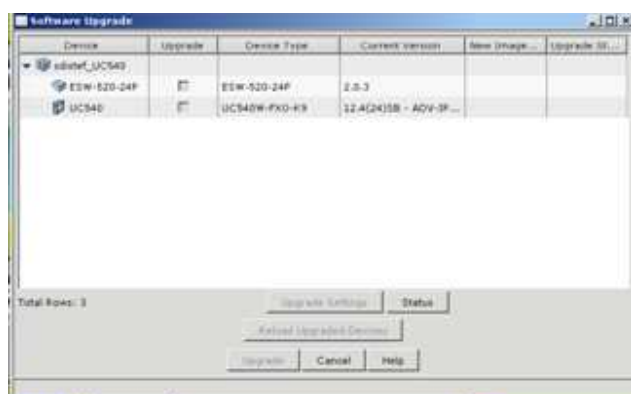
The PLM has a nice two tab GUI. Delete phone loads that are there. Upload Phone loads that are not. If your Upload tab is blank, you have them all.



OK, back to the SW Upgrade. When you set all the element upgrade settings, click upgrade. You will get some time estimates and then some questions making sure your PC is ready and some advise on what versions that may already exist, which can be skipped. Then you start the upgrade. This could take 40-60 minutes for full blown upgrade, but the estimate will be shown along with status, as follows:



When it's done it will advise you and want to reconnect and rediscover. Allow that to happen. As I mentioned earlier as a best practice, you will want to do them one at a time, so when it comes back, do the switch next. Then you should be all set:



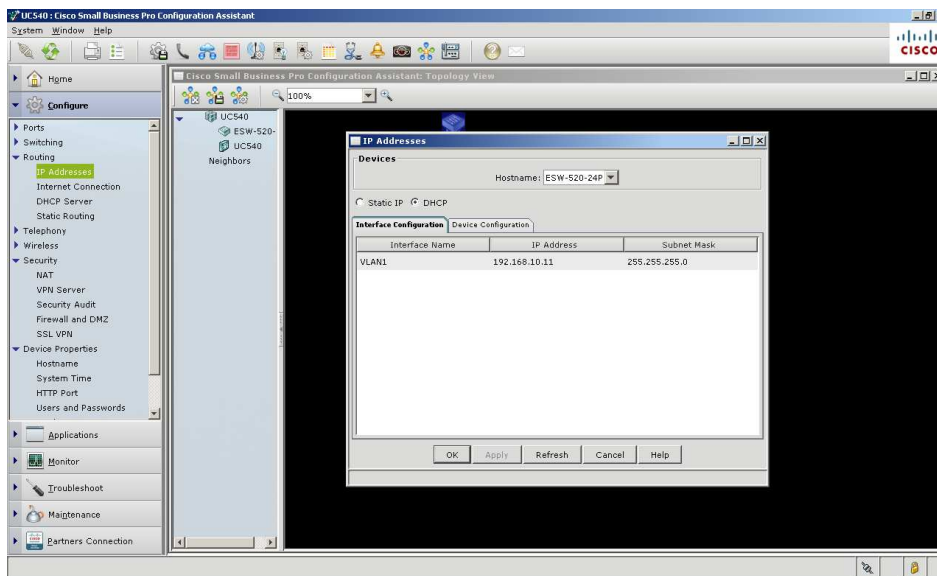
Setting a Static IP Address on the ESW Switch

This you want to do since CCA community is based on IP Address discovered initially. While you can modify a community when you want, its a lot easier if the switch comes with the same IP every time it is rebooted or restores from power loss.

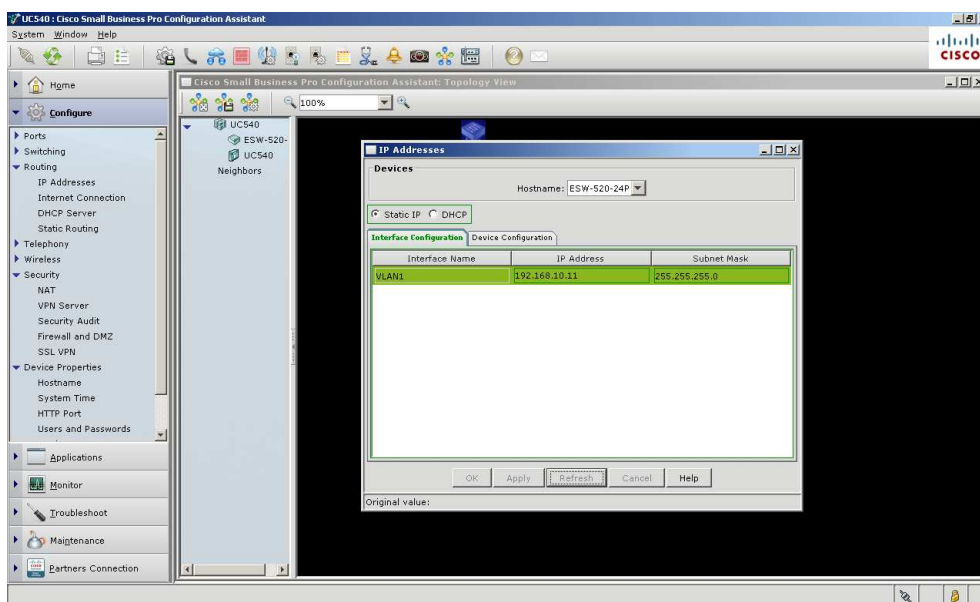
Use the Configure drawer and select routing and select the hostname for the ESW switch.

Click the Static Radio Button and set it to the desired IP.

Before:



After:



Please note, that while the CCA updates the community, it will for a minute or so show the switch as unreachable and with possible VLAN conflict. Tolerate this and take no action, as the CCA will perform a rediscovery and rectify itself in less than a minute or 2.

Licensing

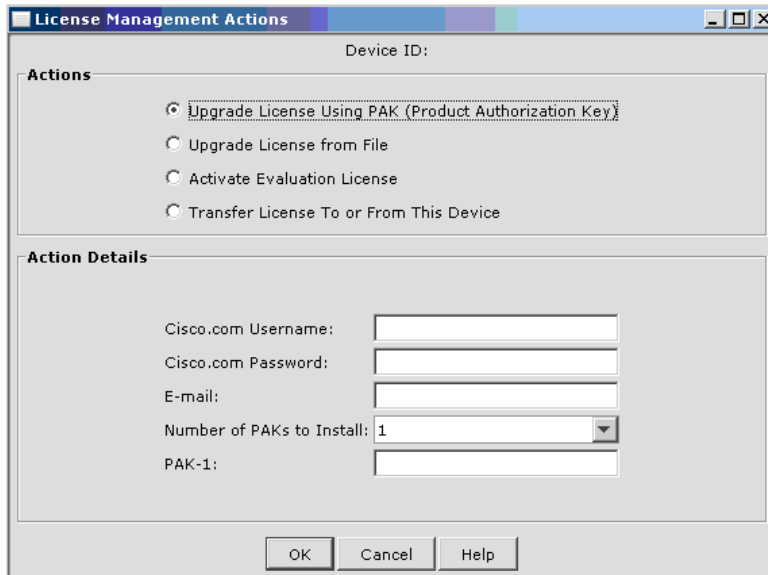
So you got a UC540W (comes with 8 licenses) and you ordered the license SKU for 8 more.

Here is how it works. Of course, using CCA 2.1 using the Maintenance Drawer and the License management GUI.

Options

There are 4 options available and accommodated.

Upgrade using PAK



The dialog box is titled "License Management Actions" and has a "Device ID:" label at the top right. It contains two main sections: "Actions" and "Action Details".

Actions: This section contains four radio button options:

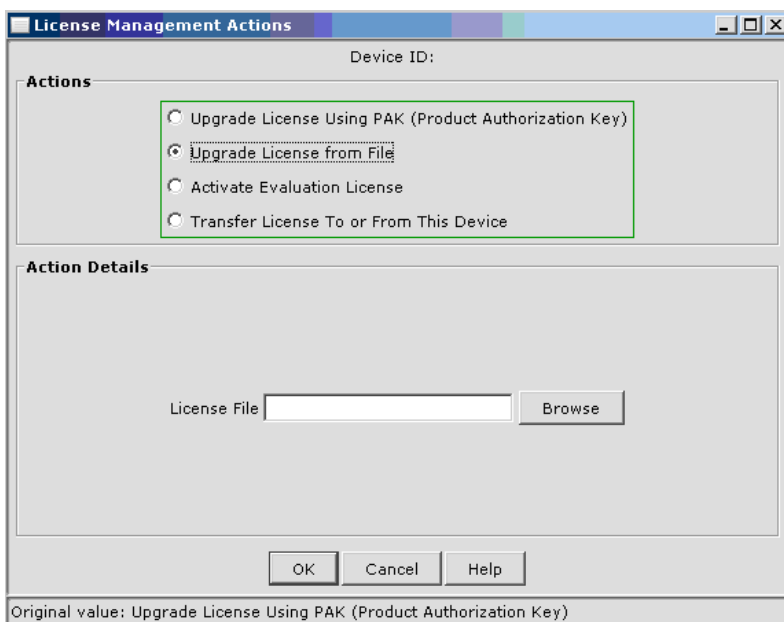
- ☒ Upgrade License Using PAK (Product Authorization Key)
- ☐ Upgrade License from File
- ☐ Activate Evaluation License
- ☐ Transfer License To or From This Device

Action Details: This section contains several input fields:

- Cisco.com Username: [text input]
- Cisco.com Password: [text input]
- E-mail: [text input]
- Number of PAKs to Install: [text input with value "1" and a dropdown arrow]
- PAK-1: [text input]

At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help".

Upgrade from File



The dialog box is titled "License Management Actions" and has a "Device ID:" label at the top right. It contains two main sections: "Actions" and "Action Details".

Actions: This section contains four radio button options. The "Upgrade License from File" option is selected and highlighted with a green border:

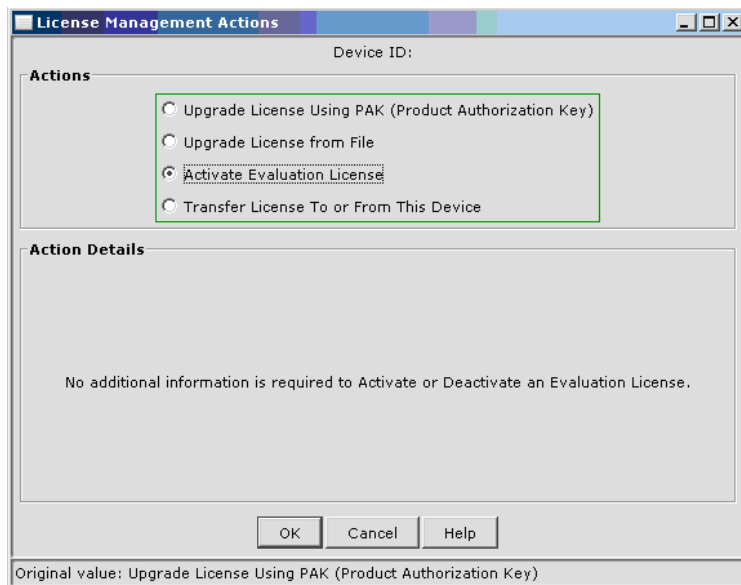
- ☐ Upgrade License Using PAK (Product Authorization Key)
- ☒ Upgrade License from File
- ☐ Activate Evaluation License
- ☐ Transfer License To or From This Device

Action Details: This section contains a "License File" label followed by a text input field and a "Browse" button.

At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help".

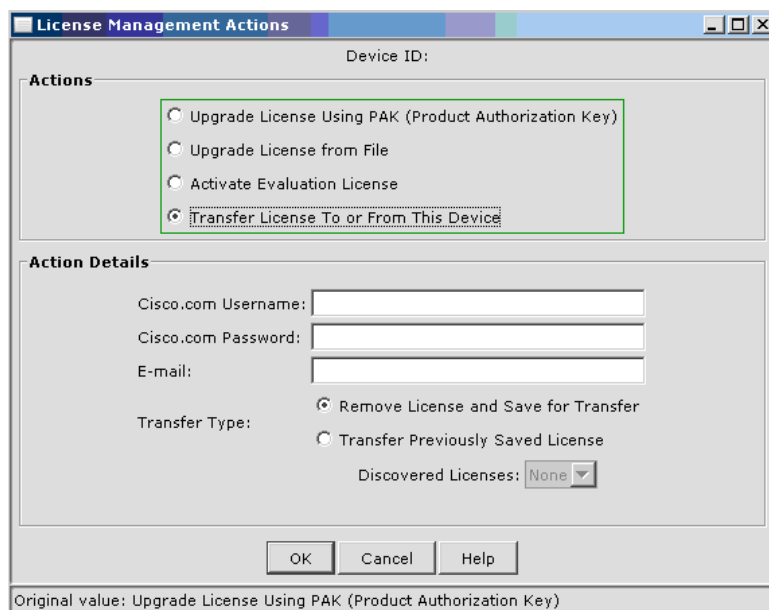
Original value: Upgrade License Using PAK (Product Authorization Key)

Activate Evaluation License



The screenshot shows a window titled "License Management Actions" with a "Device ID:" label. The "Actions" section contains four radio buttons: "Upgrade License Using PAK (Product Authorization Key)", "Upgrade License from File", "Activate Evaluation License" (which is selected and highlighted with a green box), and "Transfer License To or From This Device". The "Action Details" section below is empty, displaying the message: "No additional information is required to Activate or Deactivate an Evaluation License." At the bottom are "OK", "Cancel", and "Help" buttons. A status bar at the very bottom indicates "Original value: Upgrade License Using PAK (Product Authorization Key)".

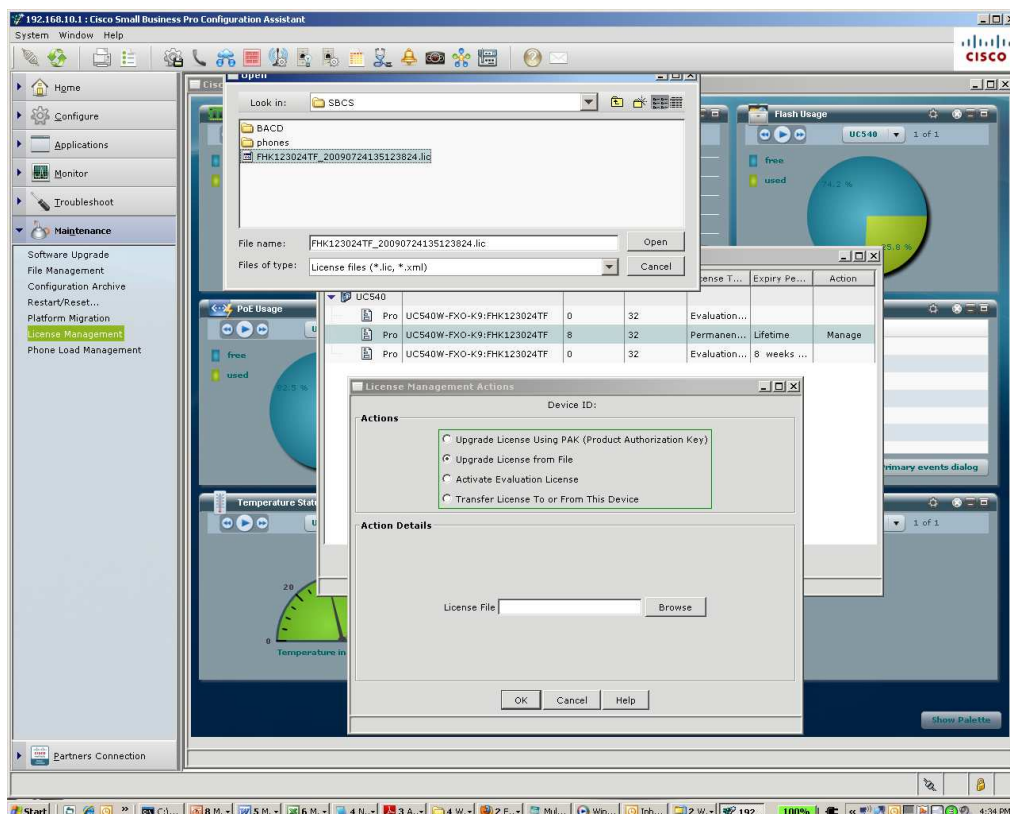
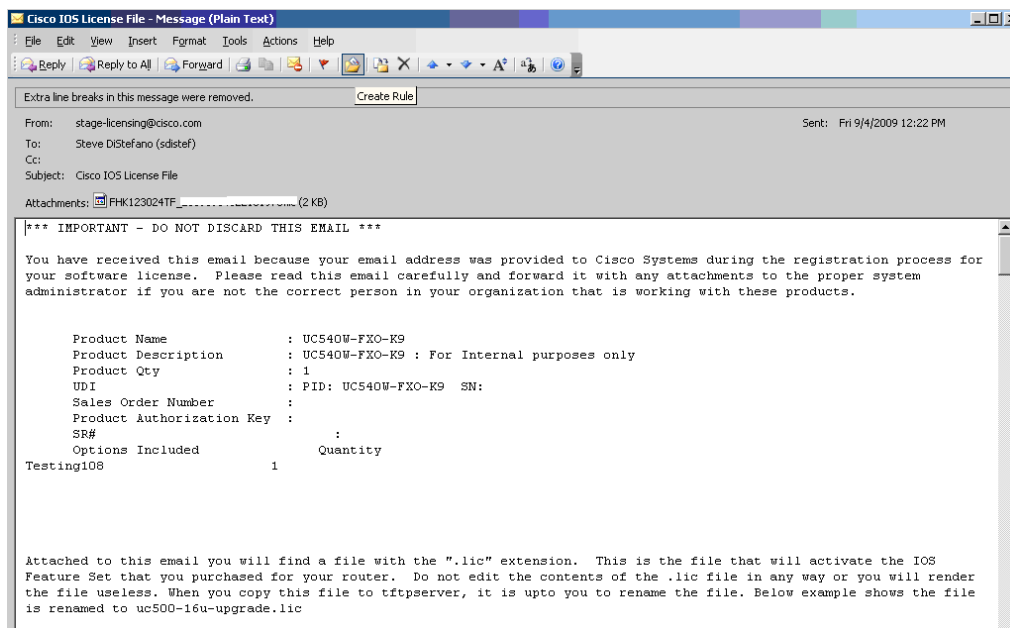
Transfer License to/From this Device



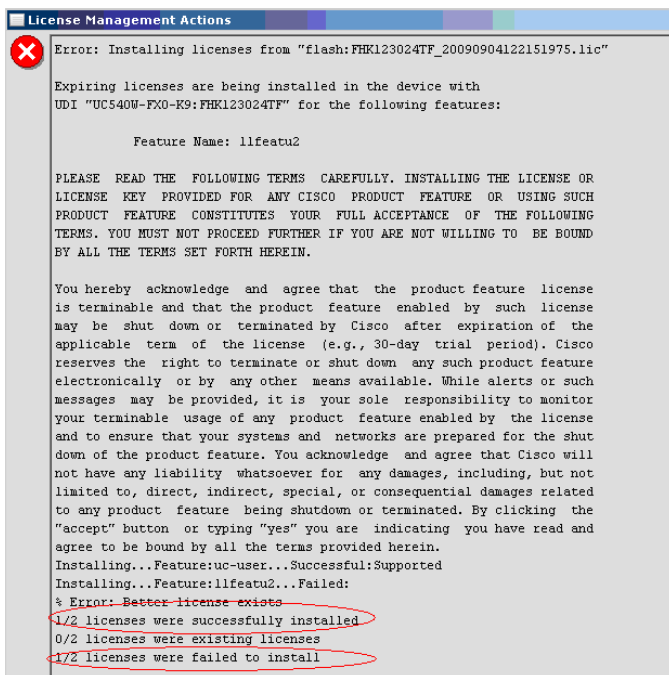
The screenshot shows the same "License Management Actions" window, but now "Transfer License To or From This Device" is selected and highlighted with a green box. The "Action Details" section is populated with several fields: "Cisco.com Username:" and "Cisco.com Password:" (both empty text boxes), "E-mail:" (empty text box), "Transfer Type:" with two radio buttons ("Remove License and Save for Transfer" selected, "Transfer Previously Saved License" unselected), and "Discovered Licenses:" with a dropdown menu showing "None". "OK", "Cancel", and "Help" buttons are at the bottom. The status bar at the bottom shows "Original value: Upgrade License Using PAK (Product Authorization Key)".

Upgrade

In my case, I received an email with a license file for my specific SN. I saved the file on my PC and pointed to it.



Remember that this is going to become a 16 user system, so the following "Error" isn't a problem. Notice the circled items.



The proof is in the result. 16 users (+ 2 teleworkers or soft phones of course):

