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## Initial Configuration Using Manual Setup

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**Time Estimate: 60 – 90 minutes**

### **Task 1: Power Up and Access the Administrative Interface**

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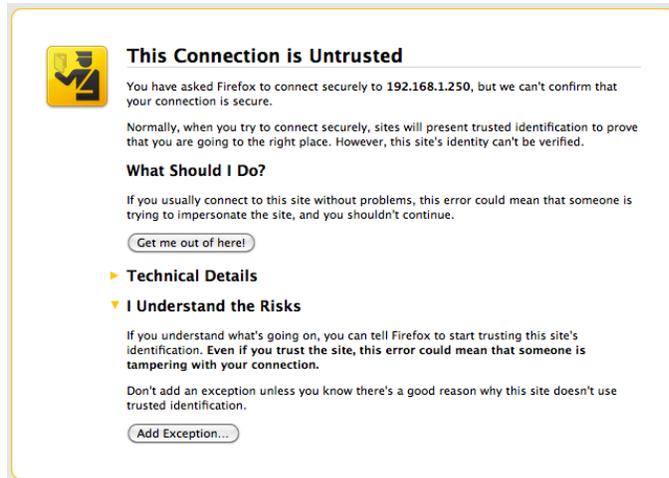
**NOTE** Take a few minutes to familiarize yourself with the lab topology. Use the Lab Topology Diagram to familiarize yourself with the LAN/WAN IP addresses so that you remain oriented throughout the labs.

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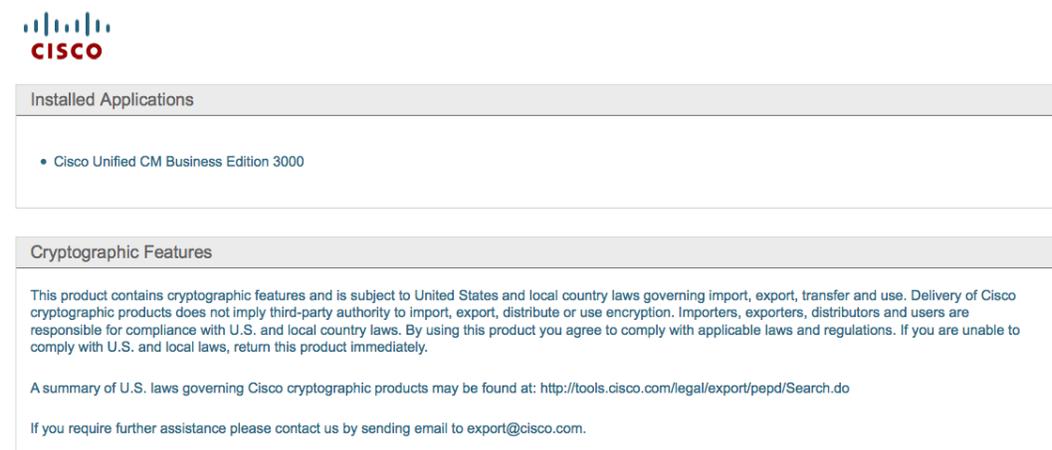
- Step 1** Connect the BE 3000 to a power supply and turn the rocker switch on the back panel to the “ON” position. The system will power on.
- Step 2** If the system does not power on you may have an older firmware that requires an additional step: From the front panel of the BE 3000, press the small POWER button until the green light comes on.
- Step 3** The BE 3000 is now in the initial boot phase – this will take a few minutes.
- Step 4** OPTIONAL: If you wish to observe the boot process you can connect a VGA monitor to the BE 3000 via the video connector on the back panel. You may also connect a USB keyboard via either of the two USB connectors on the back panel.
- Step 5** Connect your PC to the BE 3000 by connecting an Ethernet cable between the NETWORK connection on the back panel of the BE 3000 and the corresponding network connection on your PC.
- Step 6** The default IP address of the BE 3000 is 192.168.1.250 with a network mask of 255.255.255.0. Manually configure a static IP address for your PC, we use 192.168.1.100 and a mask of 255.255.255.0 in our labs.
- Step 7** Using your web browser, access the BE 3000 administration tool via <https://192.168.1.250>.



**Step 8** Your browser will likely not recognize the BE 3000 web security certificate. If so, you will need to accept it or add an exception. The details of doing so will vary by browser but the end result should be that you proceed to the installed applications screen.



**Step 9** After accepting the warning or adding an exception, the installed applications screen appears.



**Step 10** Choose the Cisco Unified CM Business Edition 3000 link and a login screen will appear.



**Step 11** For faster access in future, you should bookmark and go directly to the following URL: <https://192.168.1.250/cucmadmin/>

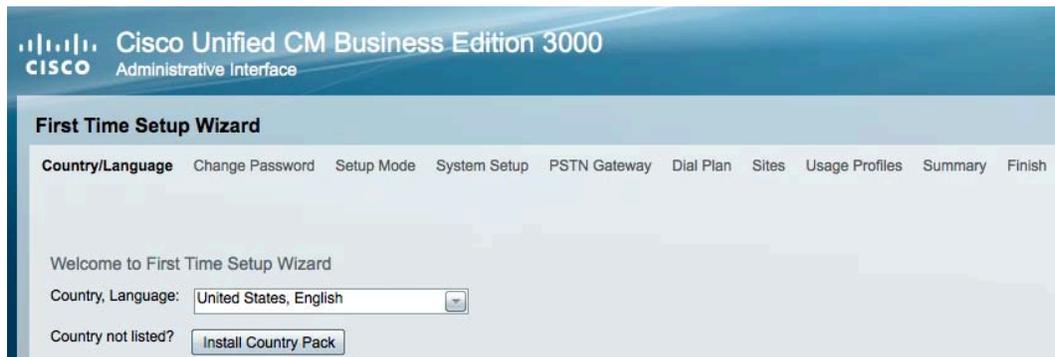
**Step 12** The default username and password are as follows:

User: admin

Password: BE-3000

**Step 13** Click the Login button to proceed.

**Step 14** The BE 3000 Administrative Interface and First Time Setup Wizard will display.



## Task 2: Run the First Time Setup Wizard

**NOTE** It's best to work slowly through the wizard; read the information and help panels. We provide all the information you need to complete the wizard for the demo, but you should think about how to collect similar information for your customers. It will be faster to use the Cisco-provided spreadsheet and automatic installation for production purposes, but useful to know the manual process so that you master all aspects of configuration.

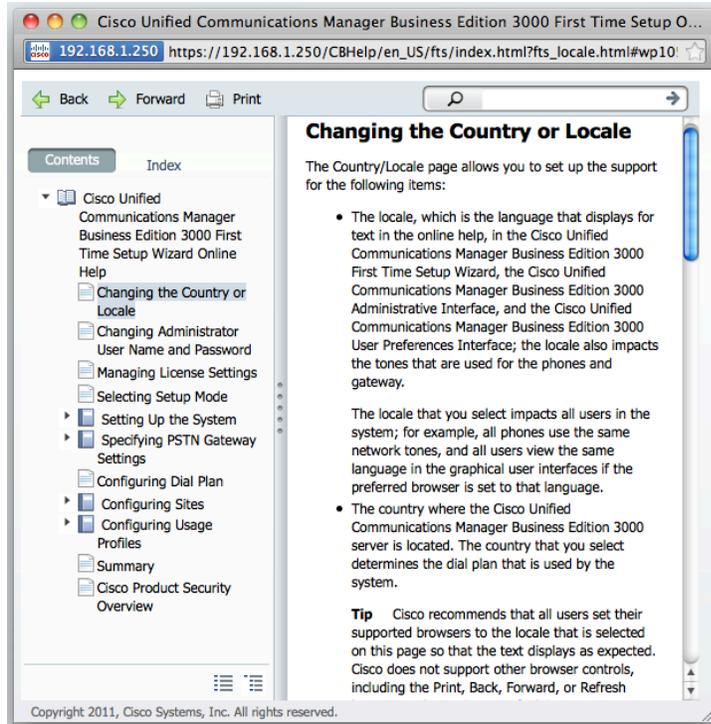
**Step 1** Look at the top right-hand side of the interface and notice that it identifies who you are currently logged in as (admin) and provides links to About and Help.



**Step 2** The About link provides a fast way to determine the software version and licensed organization associated with the BE 3000 unit. Version 8.6.1 is shown in this example. Click the “X” in the upper corner of the About window to dismiss it.



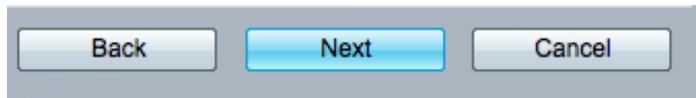
**Step 3** The Help button provides context sensitive information relevant to the specific configuration screen you are on at the time you click the link. In this case, the country selection of the first time setup wizard. You can also browse the help file, search for terms within it or print the current page.



**Step 4** The top of the interface also provides a list of the major steps in the configuration wizard and indicates your progress as you work through the steps.



**Step 5** The bottom right of the interface provides a means to navigate forward and backward through the first time wizard and the ability to cancel the wizard completely and abandon all configuration and progress so far.



**Step 6** The wizard automatically begins at the Country/Language step. From the "Country, Language" drop-down box you can select Canada, India or United States. If one of these selections is suitable you can proceed with the wizard.



**Step 7** Note that you could also install an additional country pack at this time. Country Packs are installed using Cisco-provided files. There will be a later lab for installing country packs that you can follow if you are interested in the details.

The image shows two overlapping windows from a Cisco device's setup wizard. The top window is titled "Welcome to First Time Setup Wizard" and has a dropdown menu for "Country, Language:" set to "United States, English". Below it is a button labeled "Install Country Pack" next to the text "Country not listed?". The bottom window is titled "Install Country Pack" and has a close button (X) in the top right corner. It contains two radio button options: "Desktop" (selected) and "Storage Device Connected to System USB Port". Under "Desktop" is a "File Name:" field with a "Browse..." button. Under "Storage Device Connected to System USB Port" is a "File Path:" field with a "Browse..." button. At the bottom of this window are "Install" and "Cancel" buttons.

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**NOTE** The country/locale selection will impact the language used to display the following: help, first time setup wizard, administrative interface and user preferences interface. It will also impact the dial plan and dial tones used by the system. As a result, once the initial setup wizard completes, you cannot change this selection without re-installing the BE 3000 software.

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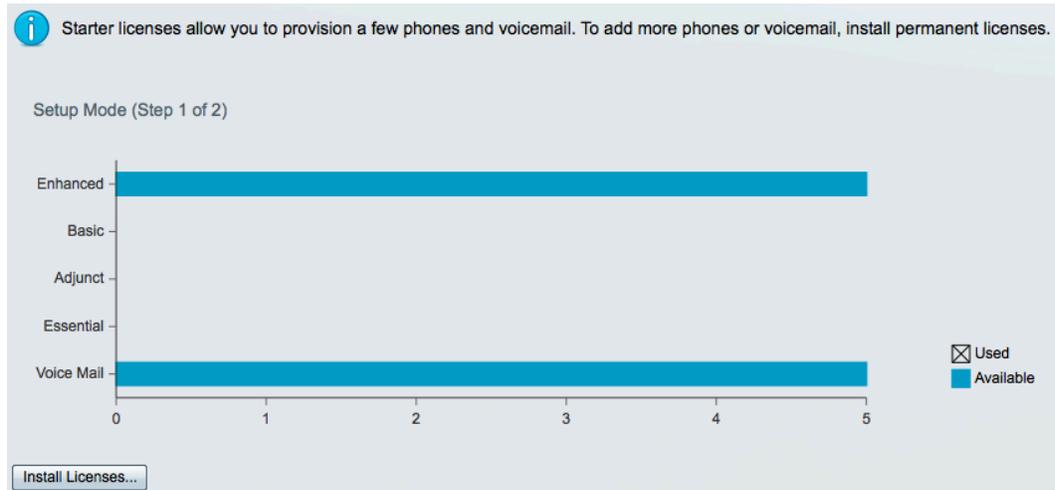
**Step 8** We will use United States, English as our choice and proceed with the wizard. Click the Next button at the bottom right of the screen.

**Step 9** In the Change Administrator Username and Password screen, we will maintain the existing default username and password as a convenience for demonstration purposes only. Set the username as **admin** and the password as **BE-3000**. It is a best practice in a production environment to change these to secure, non-default values.

The image shows a screen titled "Change Administrator Username and Password". It has three fields, each with an asterisk icon to its left: "Username:" with the text "admin" entered; "New Password:" with seven dots representing a masked password; and "Confirm New Password:" with seven dots and a vertical cursor line, indicating the password is being entered.

**Step 10** Click Next to continue.

**Step 11** Starter licenses for 5 phones and voice mailboxes are provided for initial setup and testing purposes only. We will use the 5 trial licenses for our demo.



**Step 12** License files should be installed for production systems by clicking the “Install License” button and providing the proper .lic file. The 5 starter licenses will be deleted when a production license is installed so do not count these trial licenses as part of your permanent allocation.

The screenshot shows a dialog box titled "License File Upload" with a close button (X) in the top right corner. Inside the dialog, there is a "Help" link in the top right. The main content area is titled "Location of license(\*.lic) file:" and contains two radio button options. The first option is "Desktop", which is selected. Below it is a "File Name:" label followed by a text input field and a "Browse..." button. The second option is "Storage Device Connected to System USB Port". Below it is a "File Path:" label followed by a text input field and a "Browse..." button. At the bottom of the dialog, there are "OK" and "Cancel" buttons.

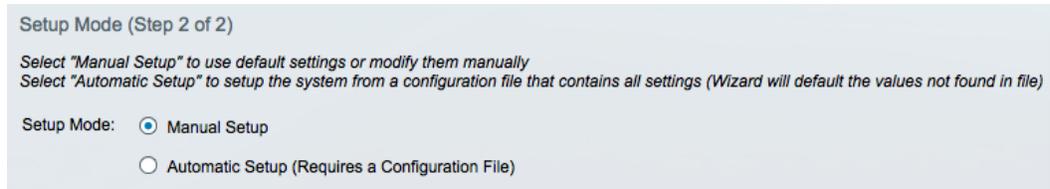
**Step 13** The bottom of the license screen can be used to see descriptions of the various license types and to verify which licenses have been installed on the system.

The screenshot shows a window with two tabs: "Description" (selected) and "License Files". Below the tabs is a list of license types:

License Type
Enhanced User License
Basic User License
Adjunct Device License
Essential User License
Voice Mail License

**Step 14** Click Next to continue.

**Step 15** Setup Mode allows administrators to continue with manual setup or to use the Cisco-provided spreadsheet file to specify settings for initial system configuration. Continue with manual setup for this lab.



Setup Mode (Step 2 of 2)

Select "Manual Setup" to use default settings or modify them manually  
Select "Automatic Setup" to setup the system from a configuration file that contains all settings (Wizard will default the values not found in file)

Setup Mode:  Manual Setup  
 Automatic Setup (Requires a Configuration File)

**Step 16** Click Next.

**Step 17** The first screen for system settings allows changes to the hostname, IP address, default gateway and DNS parameters. Use the following parameters for our demo:

System Hostname: ISS-Demo

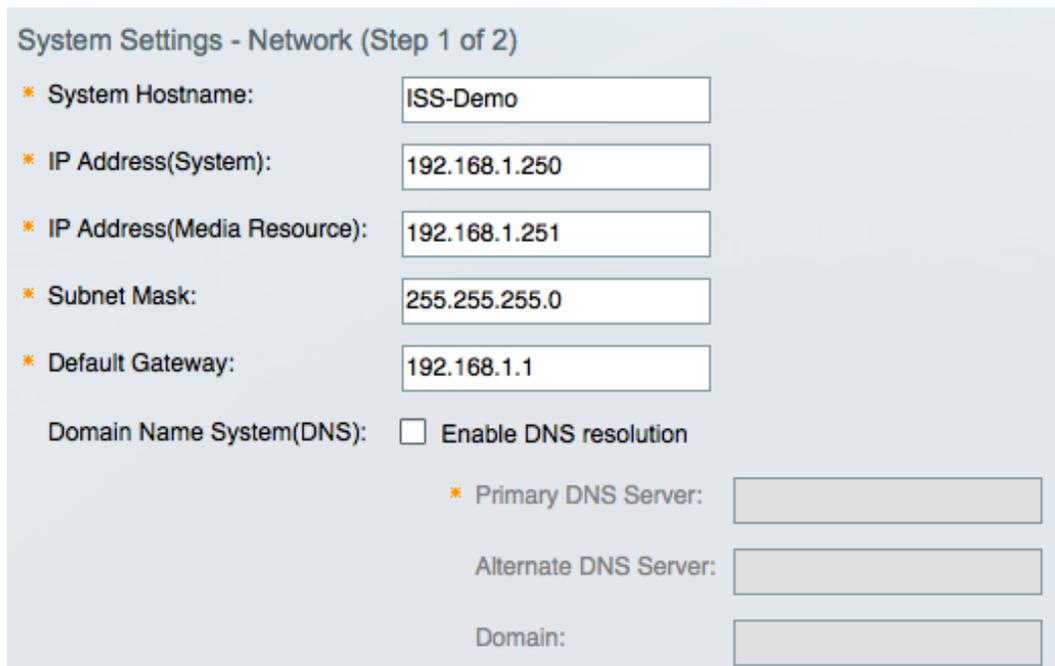
IP Address (System): 192.168.1.250

IP Address (Media Resource): 192.168.1.251

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.1

DNS resolution: Do not enable



System Settings - Network (Step 1 of 2)

\* System Hostname:

\* IP Address(System):

\* IP Address(Media Resource):

\* Subnet Mask:

\* Default Gateway:

Domain Name System(DNS):  Enable DNS resolution

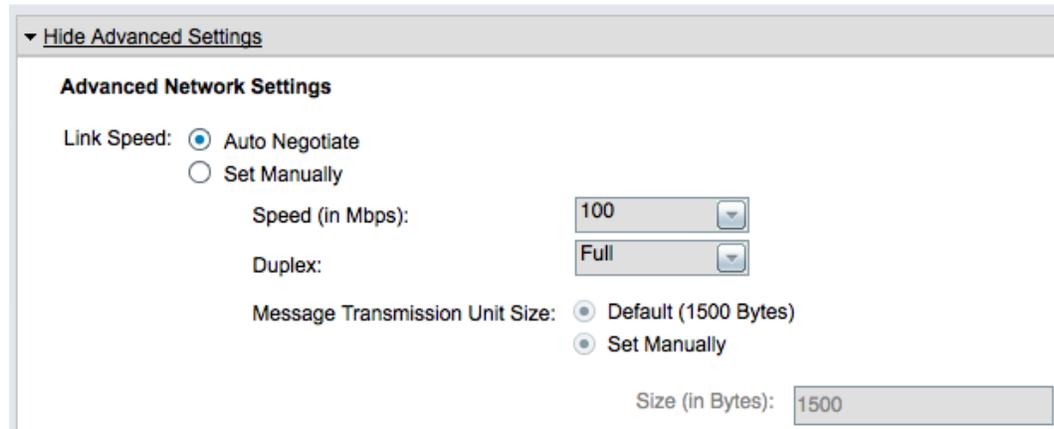
\* Primary DNS Server:

Alternate DNS Server:

Domain:

**Step 18** Click the Show Advanced Setting link.

**Step 19** We will not change the advanced settings, but note that you can manually set network interface settings if desired.

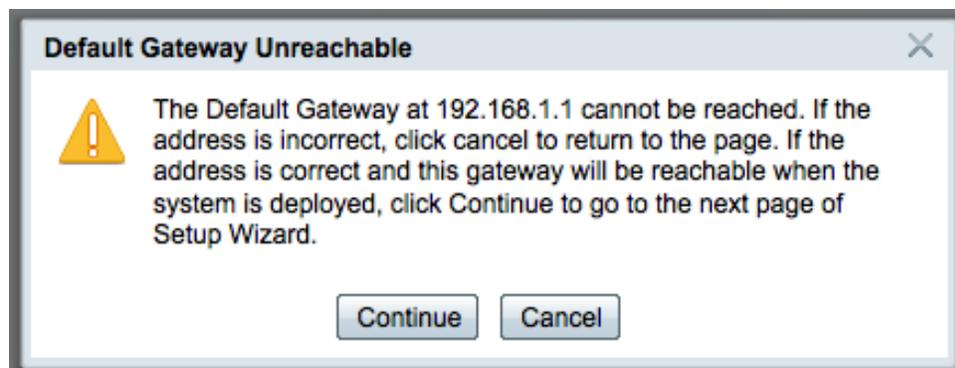


The screenshot shows a dialog box titled "Hide Advanced Settings" with a dropdown arrow. Below the title is the section "Advanced Network Settings". It contains the following options:

- Link Speed:  Auto Negotiate,  Set Manually
- Speed (in Mbps): 100 (dropdown)
- Duplex: Full (dropdown)
- Message Transmission Unit Size:  Default (1500 Bytes),  Set Manually
- Size (in Bytes): 1500 (text input)

**Step 20** Click Next.

**Step 21** The system will automatically test reachability of the default gateway. We have not yet connected to a network, so this test should fail and an error message will display.



The screenshot shows an error dialog box titled "Default Gateway Unreachable" with a close button (X) in the top right corner. It contains a yellow warning triangle icon and the following text:

The Default Gateway at 192.168.1.1 cannot be reached. If the address is incorrect, click cancel to return to the page. If the address is correct and this gateway will be reachable when the system is deployed, click Continue to go to the next page of Setup Wizard.

At the bottom of the dialog are two buttons: "Continue" and "Cancel".

**Step 22** Click Continue.

**Step 23** The second screen for system settings allows changes to the system time zone, date and current time. Set the values as appropriate for your region.



The screenshot shows a dialog box titled "System Settings - Date and Time (Step 2 of 2)". It contains the following settings:

- Country: United States
- System Time Zone: (GMT-5:00) America/New\_York (dropdown)
- System Date: 08/08/2011 (text input with calendar icon)
- System Time: 09 : 53 : 24 (three dropdown menus)

**Step 24** Click Next.

**Step 25** The first PSTN Gateway screen assumes that at least a single T1 connection to the PSTN will be configured. For demo purposes it is not likely that you will set up a call to an outside line. You can review the settings of your system if you wish.

**Configure Port 1 (Step 1 of 2)**

Name: T1/E1 1@ISS-Demo

Description: Slot 0/ Sub Unit 0/ Data Signaling 1-0

Protocol Type: PRI 4ESS

Protocol Side: User

Clock: External

**Step 26** Click on the Show Advanced Settings link to see the extensive list of parameters that can be configured for the BE 3000. In production environments you will work with your service provider to ensure that the appropriate settings are used.

**Step 27** Click Next.

**Step 28** The second PSTN gateway screen will display for sites that require an optional secondary T1 connection to the PSTN. The settings on this screen are similar to those of the first T1 PSTN gateway screen. We will not activate the second T1 or make any changes to this screen.

**Configure Port 2 (Step 2 of 2)**

Configure CTRLR T1/E1 1

Name: T1/E1 2@ISS-Demo

Description: Slot 0/ Sub Unit 0/ Data Signaling 1-1

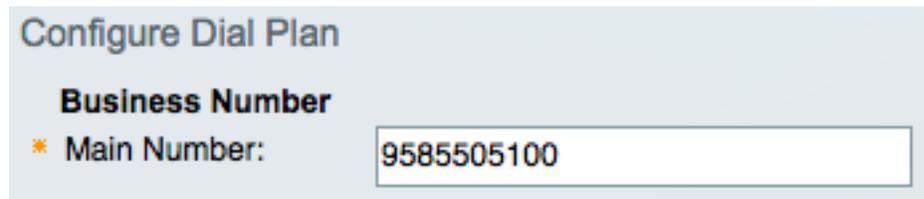
Protocol Type: PRI NI2

Protocol Side: User

Clock: External

**Step 29** Click Next.

**Step 30** The Configure Dial Plan screen has a number of critical entries. The first is the Main Number, which documents the number used by outside callers to reach the BE 3000 when it is connected to the PSTN. We will use 9585505100.



**Configure Dial Plan**

**Business Number**

\* Main Number:

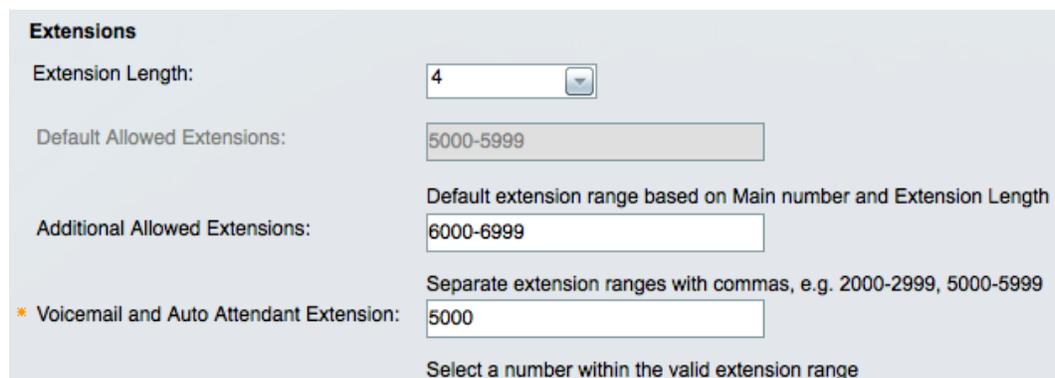
**Step 31** The Extensions section documents the extension length, default and additional allowed extensions and voicemail/auto-attendant extension. Notice that the default extension range is derived from the main number and extension length settings. With an extension length of 4 we count backwards 4 positions from the end of the main number to reach the number “5”. The default extension range will therefore be automatically calculated as 5000 through 5999. We will use the following values:

Extension Length: 4

Default Allowed Extensions (automatically filled in): 5000-5999

Additional Allowed Extension: 6000-6999

Voicemail and Auto Attendant Extension: 5000



**Extensions**

Extension Length:

Default Allowed Extensions:

Additional Allowed Extensions:

\* Voicemail and Auto Attendant Extension:

Default extension range based on Main number and Extension Length

Separate extension ranges with commas, e.g. 2000-2999, 5000-5999

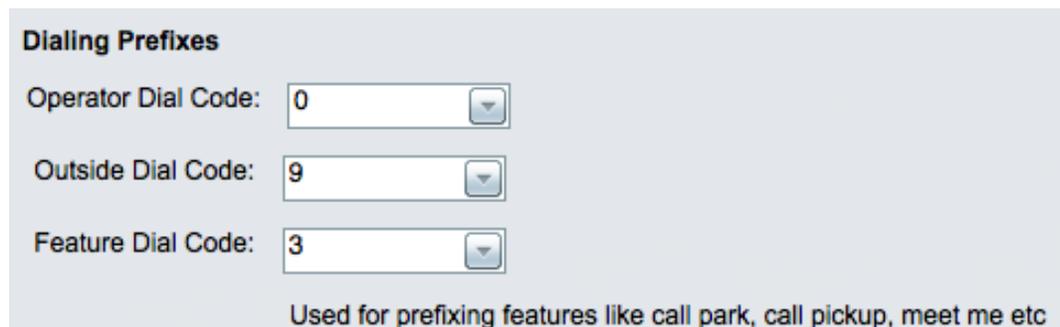
Select a number within the valid extension range

**Step 32** Accept the default values for dialing prefixes:

Operator Dial Code: 0 (used to reach the main operator/receptionist)

Outside Dial Code: 9 (used to indicate the caller wishes to reach an outside line)

Feature Dial Code: 3 (used to access internal telephony features)



**Dialing Prefixes**

Operator Dial Code:

Outside Dial Code:

Feature Dial Code:

Used for prefixing features like call park, call pickup, meet me etc

**Step 33** Based upon the selected feature dial code, the system will display the value of selected features. The call park, call pickup and meet me extensions should be noted and documented in a production system.

Feature Extensions	
Feature	Extension
Call Park	3000-3099
Call Pickup	3200
Meet Me	3400-3499
Message Waiting Indicator Off	3113
Message Waiting Indicator On	3112

**Step 34** Click Next.

**Step 35** At the Configure Sites screen, we will accept the default option to configure a central site only. Later labs will explore multisite configurations, but the demo will focus on single site deployments for simplicity of setup and demonstration.

**Configure Sites**

Site Options:  Configure Central Site Only (Single Site)  
 Configure Central Site and One or More Branch Sites (Multisite)

Number of Branch Sites:

Remote Users:  Support Offsite Phones for Teleworkers

**Step 36** Click Next.

**Step 37** At the first Configure Central Site page use the following General settings:

Name: ISS-HQ

Description: ISS Headquarters

Local Area Code: 958

Internal Networks: 192.168.1.0/24

Allow access to all media resources

Configure Central Site (Step 1 of 1)

**General** | Call Settings | Call Quality

**Basic Site Information**

\* Name:

Description:

\* Local Area Codes:

Separate multiple area codes with commas

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**Internal Networks**

Subnet	Mask	
<input type="text" value="192.168.1.0"/>	<input type="text" value="24"/>	<input type="button" value="+"/> <input type="button" value="-"/>

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**Media Access Allowed**

Access to Media Resources:  Allow Access to Conference Bridge

Allow Access to Music On Hold Server

Allow Access to Transcoders

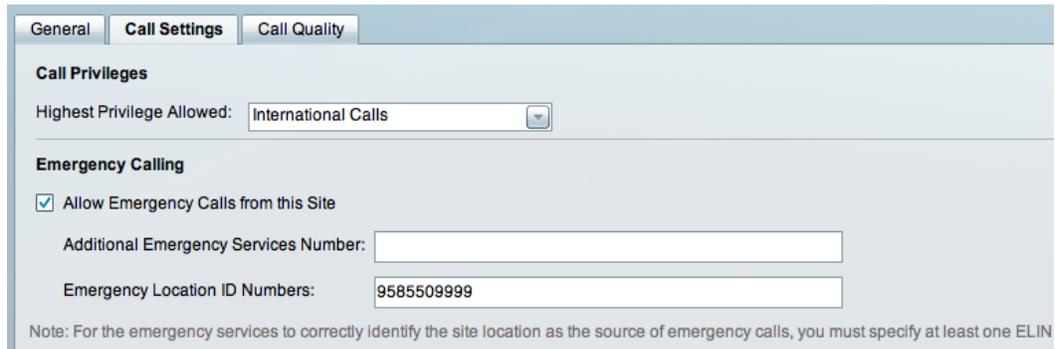
**Step 38** Use the following Call Settings:

Highest Privilege Allowed: International Calls

Allow Emergency Calls from this site: checked

Additional Emergency Services Number: no additional numbers

Emergency Location ID Numbers: 9585509999



The screenshot shows a web interface with three tabs: 'General', 'Call Settings', and 'Call Quality'. The 'Call Settings' tab is active. Under the 'Call Privileges' section, there is a dropdown menu for 'Highest Privilege Allowed' set to 'International Calls'. Under the 'Emergency Calling' section, the checkbox 'Allow Emergency Calls from this Site' is checked. Below it, there are two input fields: 'Additional Emergency Services Number' (empty) and 'Emergency Location ID Numbers' (containing '9585509999'). A note at the bottom states: 'Note: For the emergency services to correctly identify the site location as the source of emergency calls, you must specify at least one ELIN'.

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**NOTE** You must work with your local provider to determine the correct settings for emergency calling, and these settings should be tested as part of the commissioning process for a production system. The values we use are fictional and are not intended for use outside of the demo process.

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**Step 39** Use the following Call Quality settings:

Calls Between Sites

Bandwidth Between Sites: T1

Enable Video Calls Between Sites: checked

Bandwidth Allocated for Audio and Video: 100%

Audio Quality / Call Quality Tradeoff: 3<sup>rd</sup> marker (32 audio calls, 3 video calls)

Calls Within Sites

Audio Quality / Call Quality Tradeoff: Best Quality

Configure Central Site (Step 1 of 1)

General Call Settings **Call Quality**

**Calls Between Sites**

Bandwidth Between Sites: T1 (1.5 Mbits)

Video:  Enable Video Calls Between Sites

Bandwidth Allocated for Audio & Video: 0% 100% 100%

Audio Quality/Call Quantity Tradeoff: Most Calls Best Quality

Approximate Call Capacity To Other Sites: 32 audio only calls  
3 video calls

**Calls Within Sites**

Audio Quality/Call Quantity Tradeoff: Most Calls Best Quality

**Step 40** Click Next.

**Step 41** The Usage Profiles screen displays the default usage profiles for Assistant, Common Area, Manager, Power and Standard. We will not change profiles at this time.

Configure Usage Profiles

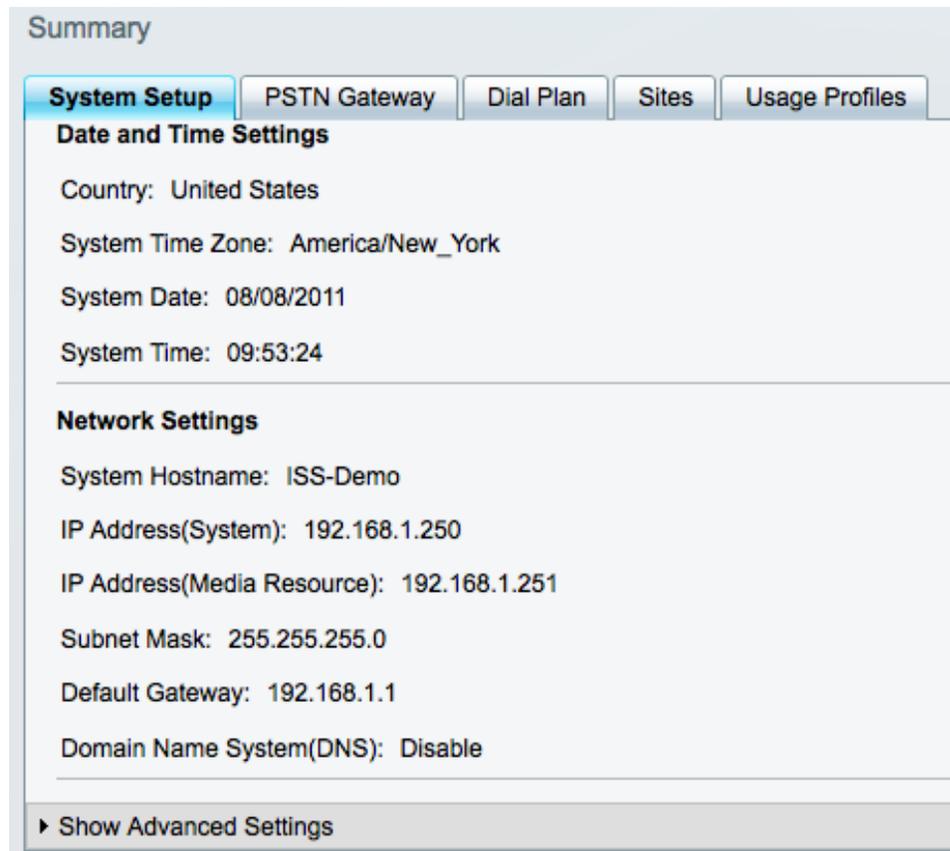
**Usage Profiles**

Name	Description
Assistant	For assistants
Common Area	For uses like common area phones (meeting room phone, etc)
Manager	For managers
Power	For users like IT administrators, etc
Standard	For regular employees

Create Profile...

**Step 42** Click Next.

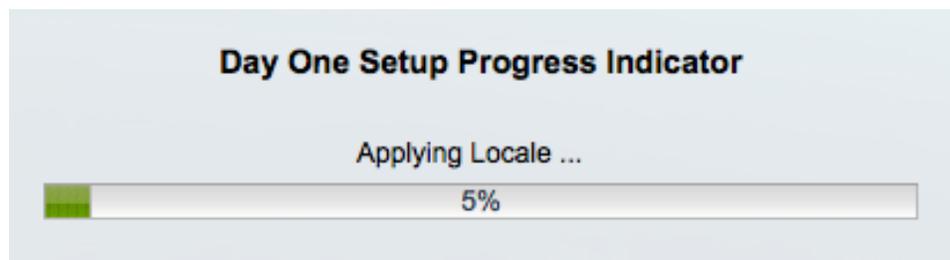
**Step 43** A summary of the manually entered settings will be displayed. Click through the tabs to verify that the settings are as expected and that you did not make any data entry errors.



The image shows a 'Summary' window with several tabs: 'System Setup', 'PSTN Gateway', 'Dial Plan', 'Sites', and 'Usage Profiles'. The 'System Setup' tab is active. Under 'Date and Time Settings', the values are: Country: United States, System Time Zone: America/New\_York, System Date: 08/08/2011, and System Time: 09:53:24. Under 'Network Settings', the values are: System Hostname: ISS-Demo, IP Address(System): 192.168.1.250, IP Address(Media Resource): 192.168.1.251, Subnet Mask: 255.255.255.0, Default Gateway: 192.168.1.1, and Domain Name System(DNS): Disable. At the bottom, there is a button labeled 'Show Advanced Settings'.

**Step 44** Click Finish.

**Step 45** The Day One Settings Progress indicator will display the percentage completion as the settings are applied to the BE 3000.



The image shows a 'Day One Setup Progress Indicator' window. It displays the text 'Applying Locale ...' above a progress bar. The progress bar is partially filled with green, and the text '5%' is shown next to it.

**Step 46** After a few minutes, the system will reboot. This will also take a few minutes. If you have a VGA monitor attached to the BE 3000 you can monitor the progress of the reboot.

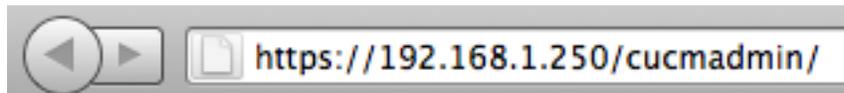
**Setup Wizard completed successfully, system will reboot now.**

**Step 47** If you are monitoring with a connected VGA screen, wait until you see a message similar to the following before resuming your administrative session with the BE 3000.

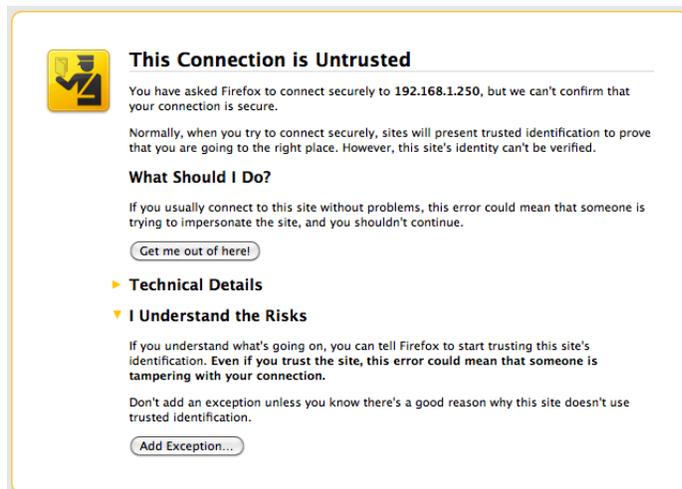
“Cisco Unified CM Business Edition 3000 8.6.1.97031-8 Unrestricted”

The Cisco Unified CM Business Edition 3000 administrative interface can be accessed using a supported web browser at <https://192.168.1.250>. For more information, refer to the Administration Guide for Cisco Unified CM Business Edition 3000.

**Step 48** Test your connection to the BE 3000 by using your web browser to access the BE 3000 administration tool via <https://192.168.1.250/cucmadmin/>



**Step 49** Your browser may not recognize the BE 3000 web security certificate. If so, you will need to accept it or add an exception. The details of doing so will vary by browser but the end result should be that you proceed to the installed applications screen.



**Step 50** After accepting the warning or adding an exception, the administrative interface login screen appears.



**Step 51** If the BE 3000 displays a page not found error or does not seem to respond promptly, simply give the system a few minutes of additional time for the appropriate processes to complete their initialization.

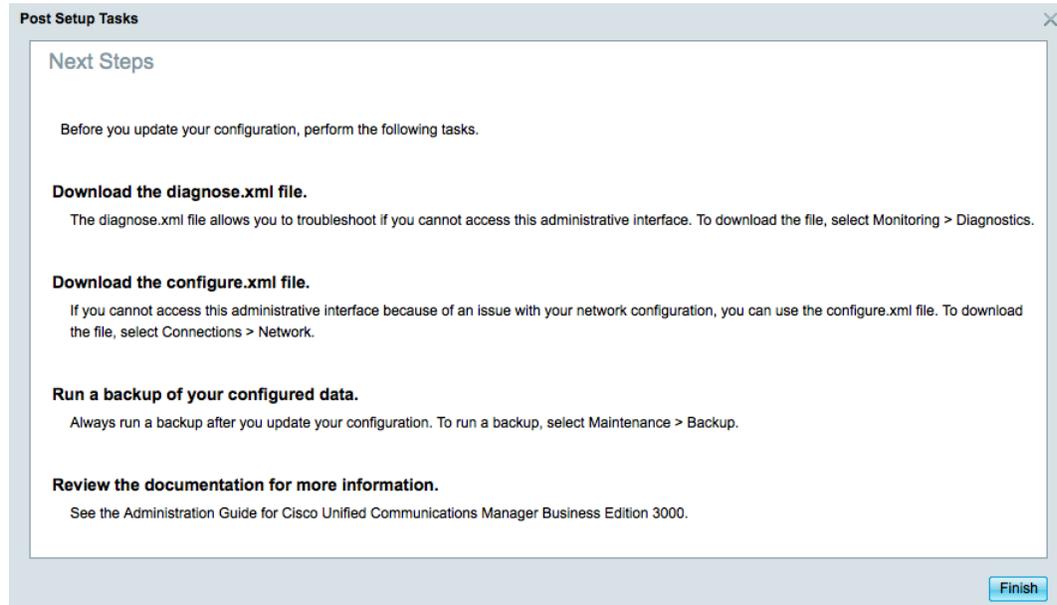
**Step 52** Login with the credentials that were established during the wizard. In our case, the username and password are as follows:

User: admin

Password: BE-3000

**Step 53** Click the Login button to proceed.

**Step 54** You will see a message similar to the following:



**Step 55** We will address these next steps and more in the following labs.

**Step 56** This completes the lab.