

*Interconnect Mediated Access 38.0*

# Connection Guide

*How to set up and connect to IMA*

April 20, 2015

## Document information

If you use this guide, please let us know at [imadocs@centurylink.com](mailto:imadocs@centurylink.com). We welcome your feedback on this document.

The versions of this guide for the new release are listed below:

Document date	Description
March 23, 2015 [Draft]	Draft guide for CMP review posted at <a href="http://www.centurylink.com/wholesale/cmp/review.html">http://www.centurylink.com/wholesale/cmp/review.html</a>
March 30, 2015	Final guide posted at <a href="http://www.centurylink.com/wholesale/cmp/review_archivesystem.html">http://www.centurylink.com/wholesale/cmp/review_archivesystem.html</a>
April 20, 2015	Final guide posted at <a href="http://www.centurylink.com/wholesale/ima/gui/index.html">http://www.centurylink.com/wholesale/ima/gui/index.html</a>

You can find guides for prior releases at  
[http://www.centurylink.com/wholesale/cmp/review\\_archivesystem.html](http://www.centurylink.com/wholesale/cmp/review_archivesystem.html).

## Change log

Changes to IMA for this release are provided through CMP (change management process) at <http://www.centurylink.com/wholesale/cmp/index.html>.

Change for this release:

- None

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## ***Getting started***

This guide provides

- basic information about Interconnect Mediated Access (IMA)
- software and hardware requirements
- instructions for
  - configuring Internet Explorer
  - modifying the java.policy file
  - Internet access to IMA

This guide is intended for employees of the ISC (Interconnect Service Center), IWSC (Interconnect West Service Center), the LOC (Listing Operation Center), and Competitive Local Exchange Carriers (CLECs).

This guide assumes you have a background in telecommunications local service.

IMA is available for use by CLECS in the legacy Qwest territories within the former 14-state Qwest region.

## **CenturyLink SYADs**

CenturyLink™ system administrators create IMA accounts for all CLECs, including establishing the first CLEC system administrator and maintaining user profiles.

## **CLECs**

CLECs interact with IMA on two levels:

- administrators create and manage all CLEC user accounts
- users manage all service requests through IMA

IMA allows CLECs access to local service elements of the CenturyLink network and electronic access to its legacy operations support systems (OSS).

CLECs use IMA to create local service requests (LSRs) and submit them to CenturyLink for processing. LSRs contain the information CenturyLink needs to create service orders for the CLECs.

## System security

IMA provides a secure environment for its users.

System security	Description and access
Username and password	<p>IMA usernames and passwords for CLEC system administrators are obtained from a CenturyLink system administrator. CLEC system administrators must receive these before they can access IMA.</p> <p>CLEC system administrators give CLEC users their username and password. To ensure security, new users should change their individual password the first time they log in to IMA. (See "Changing your password" on page 21.)</p> <p>You can change your password at any time. (System administrators can also reset passwords.)</p>
User PIN and Corporate ID	<p>PINs and IDs are obtained from a CenturyLink Wholesale Markets service manager. Only users who have these credentials can enter the IMA secure environment and access its data, preventing unauthorized persons from gaining access to protected information.</p>

IMA provides an additional level of security by letting the CLEC system administrators decide the access rights users will need—administrator privileges or user privileges. Access rights define specific privileges users have to operate within IMA. If a user performs the tasks of both an administrator and a user, this user requires two IMA usernames and passwords, one as a user and one as an administrator.

An administrator can inactivate a user when necessary, preventing the user from accessing IMA and data stored in any of the databases. For more information on CLEC system administrative privileges, see the *CLEC System Administrator's Guide* (<http://www.centurylink.com/wholesale/ima/gui/index.html>).

## IMA hours (Mountain Time)

Monday–Friday	6 a.m. to midnight
Saturday	6 a.m. to 9 p.m.
Sunday	10 a.m. to 7 p.m.

# Additional resources

## Web sites

### IMA Access

<https://ima.centurylink.com/ima>

### Products and Services

<http://www.centurylink.com/wholesale/pcat/index.html>

### CenturyLink E-Business—Digital Certificate Procedures

<http://ecom.centurylink.com>

### Wholesale Customer Contacts business procedure

<http://www.centurylink.com/wholesale/clecs/escalations.html>

### Wholesale Resources—IMA

<http://www.centurylink.com/wholesale/ima/index.html>

## Documents

In addition to this document, CenturyLink provides four other guides to help you use IMA.

The first three guides are available at

<http://www.centurylink.com/wholesale/ima/gui/index.html>

- *CLEC System Administrator's Guide*—guidelines for managing CLEC users' accounts
- *Facility-Based Directory Listings Guide*—guidelines for submitting orders for facility-based directory listings
- *IMA User's Guide*—guidelines for preparing, submitting, and following up on LSRs

The fourth guide is available at

<http://www.centurylink.com/wholesale/training/coursecatalog.html>:

- *Loop Qualification and Raw Loop Data CLEC Job Aid*—guidelines for retrieving raw loop data and for checking whether a loop qualifies (for CenturyLink HSI/Broadband Service or for unbundled ADSL service)

## Requirements

This chapter describes hardware and software requirements for IMA. If non-IMA applications are running concurrently with IMA, these requirements may need to be increased.

**Note:** When a new version of IMA is installed, you must log out of IMA and log back in to continue working.

## Software requirements

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**Important:** CenturyLink supports and certifies Windows 7 as the operating system for IMA. CenturyLink recommends you to use Internet Explorer 8.0/9.0/10.0 as your browser when running Windows 7. IMA may function using different browsers and Windows operating systems, however, CenturyLink will not be responsible for any problems encountered when using operating systems other than Windows 7.

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- Microsoft Windows 7
- Internet Explorer 8.0/9.0 (recommended)
- Java Runtime Environment 1.7.0\_51 for Internet Explorer. However, CenturyLink recommends that Internet Explorer users upgrade to at least Java Runtime Environment 1.6.0\_30.

## Hardware requirements (minimum)

- 1 gigahertz (GHz) or faster 32-bit (x86) or 64-bit (x64) processor
- 1 gigabyte(GB) RAM (32-bit) or 2GB RAM (64-bit)
- 16 GB available hard disk space(32-bit) or 20 GB(64-bit)
- DirectX 9 graphics device with WDDM 1.0 or higher driver
- LAN connection to CenturyLink
- 200 MB free disk space (after all software installation and Windows virtual memory file allocation)

Additional memory (RAM) and a faster network connection and CPU may improve performance of IMA.

## Java Desktop Runtime Environment for IMA

IMA is certified for Java Runtime Environment (JRE) 1.7.0\_51. Please contact your desktop support if you need the Java RE for your desktop.(Backward compatibility is provided for JRE 1.6.0\_30.).

The Java Desktop Runtime Environment (JRE) can be found at

<http://java.com/en>

If the Java Desktop JRE has not already been installed, a **Java Runtime Environment Not Installed** popup window appears in IMA GUI. This appears only when PreOrder/Order/PostOrder is launched for the first time and the Java Desktop Runtime Environment has not been installed.

**Note:** It might be possible for an unsupported browser to run the PreOrder/Order/PostOrder GUI after the Java Runtime Environment has been installed. If you encounter problems, however, CenturyLink first recommends that you install IE 8 or IE 9 browser.



## Connecting to IMA

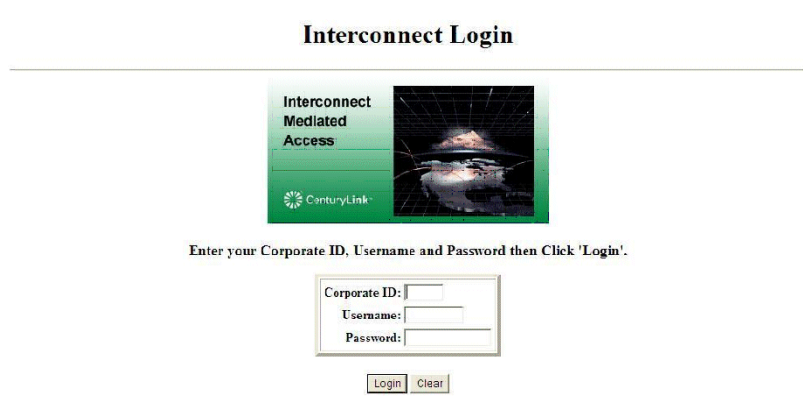
If you are accessing IMA over the Internet, several factors external to CenturyLink (such as your Internet service provider—your ISP—and Internet traffic) may impact response time.

If you're accessing IMA using a digital certificate, use this URL: <https://ima.centurylink.com/ima>. (CenturyLink recommends that you bookmark this URL.)

## Logging in to IMA for the first time

The **Interconnect Login** window ensures that only authorized users access IMA. To log in, you need your corporate ID, username, and password. (You can get this information from your system administrator.)

See "System security" on page 5.



The screenshot shows the 'Interconnect Login' window. At the top, it says 'Interconnect Login'. Below that is a green box with the text 'Interconnect Mediated Access' and the CenturyLink logo. To the right of the green box is a small image of a globe. Below the green box, it says 'Enter your Corporate ID, Username and Password then Click 'Login''. Below this text is a form with three input fields: 'Corporate ID:', 'Username:', and 'Password:'. At the bottom of the form are two buttons: 'Login' and 'Clear'.

- 1 In the **Interconnect Login** window, type your corporate ID, username, and password. (These fields are case-sensitive.)

- 2 Click **Login**.

The first time you log in to IMA, your password is the same as your username. As soon as you create your personal profile, you should change your password. (See page 21.)

## Creating your personal profile

The first time you log in to IMA, you must fill in your personal profile before you can go on to other tasks. Your personal profile contains information that CenturyLink uses to contact you.

**Tip:** Administrators—you might want create a joint e-mail account and phone number so that all users have access to this e-mail or phone number in case of absence, emergency, or work flow. This group e-mail and phone number can then be entered in the individual user's profile.

- 1 Fill in the fields. (**Floor** and **Room/Mail Stop** are optional.)
  - a For your telephone and fax numbers, use the format **555-555-5555**.
  - b Fill in your e-mail address, fax number, or both to indicate how you want to receive system notifications.
- 2 Click **Update Database**. (If you click **Logout**, your profile won't be saved and you'll still need to create your personal profile next time you log in.)
- 3 Click **Return to Main Menu**.

The **Interconnect Functions** window appears. Depending on your access level, you may see fewer options.

### Interconnect Functions

[System Administration](#)  
[User Administration](#)  
[Set CUID](#)  
[PreOrder/Order/PostOrder](#)  
[Status](#)  
[Line Loss](#)  
[Batch Hot Cut Status](#)  
[Firm Order Manager](#)  
[Lock Administration](#)  
[Resource Return](#)  
[SOV Recent Page Report](#)  
[Virtual CSR](#)  
[View Reference Data](#)  
[Logout](#)

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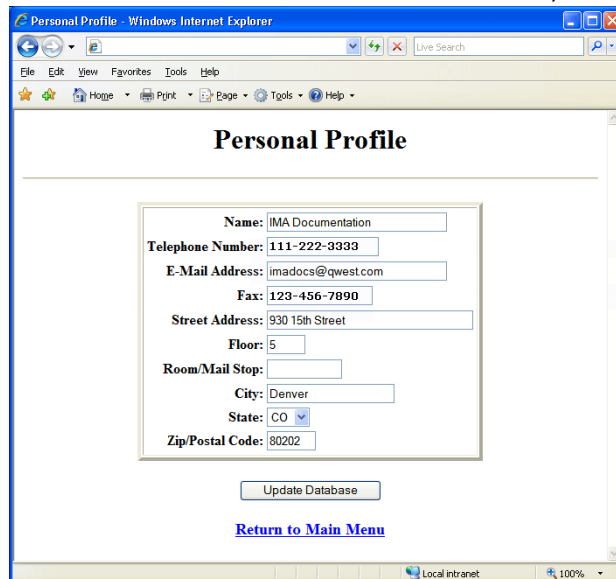
**Important:** Be sure to use buttons within IMA. Don't use the browser's buttons (e.g., **Back**) or you may get an error.

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## Modifying your personal profile

After you have created and saved your personal profile, you can modify it further as needed.

- 1 In the **Interconnect Functions** window, click **User Administration**.

A screenshot of a web browser window titled "Personal Profile - Windows Internet Explorer". The browser's address bar shows "Local intranet" and the page is at 100% zoom. The page content is titled "Personal Profile" and contains a form with the following fields: Name (IMA Documentation), Telephone Number (111-222-3333), E-Mail Address (imadocs@qwest.com), Fax (123-456-7890), Street Address (930 15th Street), Floor (5), Room/Mail Stop (empty), City (Denver), State (CO), and Zip/Postal Code (80202). Below the form is an "Update Database" button and a "Return to Main Menu" link.

- 2 Click in each field to be modified, and change the information. (Remember to use the format **555-555-5555** for the telephone and fax numbers.)
- 3 Click **Update Database**.
- 4 Click **Return to Main Menu**.

## Changing your password

For security reasons, you should change your password often.

- 1 In the **Interconnect Functions** window, click **Set Password**.



Set Password - Windows Internet Explorer

File Edit View Favorites Tools Help

Home Print Page Tools Help

### Set Password

Enter New Password.

Old Password:

New Password:

Re-Type New Password:

[Return to Main Menu](#)

- 2 Do the following:

In this field ...	Type ...
Old Password	Your current password
New Password	Your new password (6–8 characters, at least one of which is a number or special character)
Re-Type New Password	

- 3 Click **Set Password**.  
IMA changes your password.
- 4 Click **Return to Main Menu**.

## ***E-business Internet connection***

CenturyLink E-business digital certificates (or digital IDs) are issued for each of your employees. They are required for each personal computer used to access CenturyLink systems via the Internet.

E-business digital certificate registration is a one-time process and must be renewed every five years.

You must first request a digital certificate before starting the registration process.

## **Requesting a digital certificate**

The CenturyLink E-Commerce group obtains the VeriSign and legacy Qwest cobranded digital certificates needed to access IMA via the Internet.

The digital certificate process is administered by the CenturyLink WSSA (Wholesale Systems Security Administration) group. This group has responsibility over these certificates for end users, including revocation of a certificate and updating user information.

### **To request a digital certificate**

- 1 Contact your CenturyLink service manager at:  
<http://www.centurylink.com/wholesale/clecs/accountmanagers.html>

**Note:** You may also go to the Wholesale Systems Web site at  
<http://www.centurylink.com/wholesale/systems/generalinfo.html> for request information and forms.

- 2 Fill out the digital certificate request form.
- 3 E-mail the completed form to your CenturyLink service manager.

The CenturyLink service manager verifies that the information is complete and correct and then forwards your request to WSSA. The WSSA sends your information to ECOM to assign the certificate and PIN information.

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**Important:** All digital certificate requests must go through a CenturyLink service manager. Under no circumstances should you e-mail your request directly to the CenturyLink Wholesale Systems Security Administration group. Your request will **not** be processed.

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Once your request is processed, the information is updated in the LDAP server and an e-mail reply is sent to you. Please allow a minimum of 48 hours to process and update security databases.

The e-mail contains the following information you must have before registering your digital certificate:

- digital certificate number
- PIN
- instructions for their use

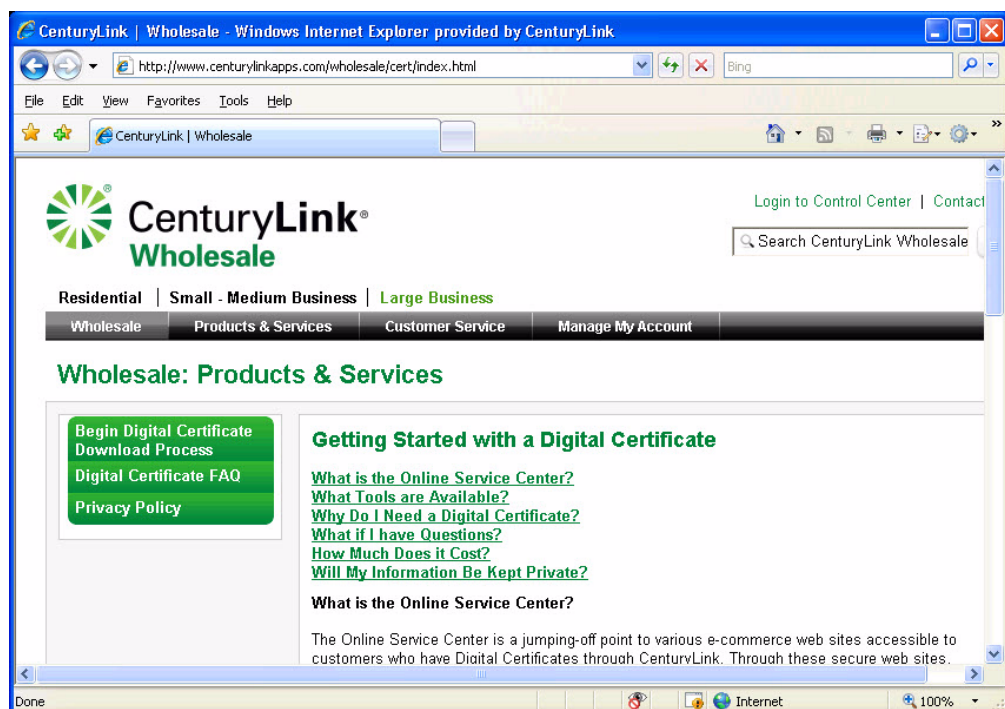
Once you've registered your digital certificate, you must have the following before you can access IMA:

- your company's corporate ID
- username
- password

## Downloading your digital certificate

### To begin the downloading process

- 1 Go to the CenturyLink Online Service Center Web site at (<http://www.centurylinkapps.com/wholesale/cert/index.html>).



- 2 Select **Begin Digital Certificate Download Process**.

**Important:** *Digital certificates must be downloaded within 30 days of receipt. Digital certificates not downloaded within this time are removed from the system. If your digital certificate has been removed, you must request a new one.*

The screenshot shows a web browser window with the URL [https://certs.centurylink.com/enroll\\_msie\\_qwest\\_v6.html](https://certs.centurylink.com/enroll_msie_qwest_v6.html). The page title is "CenturyLink OneStep Certificate Enrollment". The CenturyLink logo is in the top right. The page content is organized into three steps:

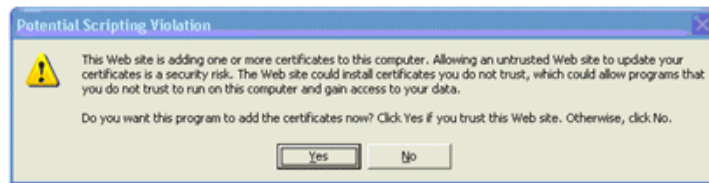
- Step 1: Installing the Root CA Certificate.** It instructs the user to install the Root CA Certificate in their browser. If they already have one, they can proceed to step 2. There is an "Install Certificate" button.
- Step 2: Information for your Digital ID** The information that you enter here is used to create the public portion of your Digital ID. Fill in all fields. There are input fields for "User ID" and "PIN".
- Step 3: Cryptographic Service Provider** The options in the Cryptographic Service Provider drop down box are based upon the configuration of your machine. Choose one of the Microsoft options listed below. We encourage you to choose the strongest encryption available which is either Microsoft Enhanced Cryptographic Provider v1.0 or Microsoft Strong Cryptographic Provider v1.0. There is a dropdown menu for "Cryptographic Service Provider" and a "Key Size" of 1024.

**3** Fill in the **User ID** and **PIN** fields and click **Accept**.

**Note:** The client certificate is a personal certificate that identifies an individual CLEC user via a 9 character ID stored in their CenturyLink /Legacy Qwest issued client Public / Private Keys. This client certificate is requested via CenturyLink / Legacy Qwest form and the certificate key Pair is downloaded into the browser on your local machine to encrypt data that is transmitted from you, the CLEC user to CenturyLink. (Note: These certificates are still being issued by the Qwest certification authority (CA)).

**This certificate is stored only on the workstation and browser for that you downloaded it into.** Multiple users' client certificates may be stored on a single workstation. However, if another workstation or a different browser version is to be used by the same user, then either the Public / Private Key pair must be re-downloaded to the new browser version / workstation or the certificate must be exported from the existing location and imported into the new browser/workstation. For this, you must use the Windows certificate export tools and export the client certificate (look for the 9 character user ID) to a USB drive/CD and then on the new workstation/browser use certificate import tools to download the same files from the USB Drive/CD.

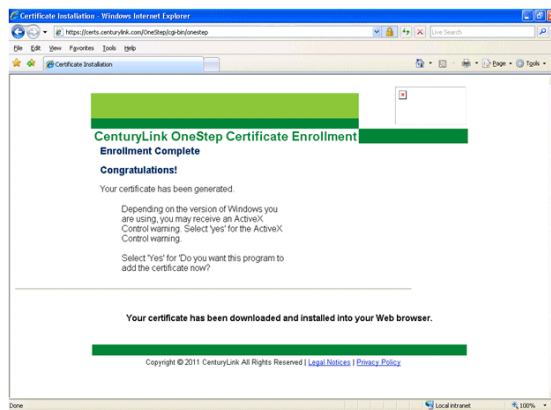
- 4 Click **Yes** if you receive an ActiveX Control warning.



- 5 Click **Yes** at the security warning to proceed with installation.

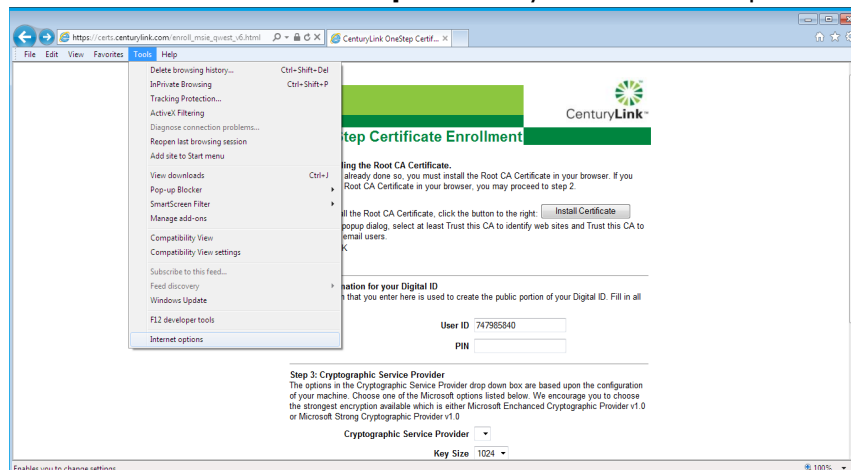


When the client digital certificate is fully loaded on the workstation, the registration process is complete.

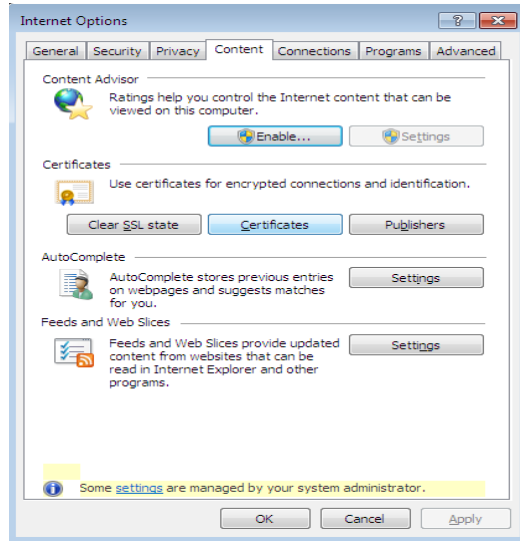
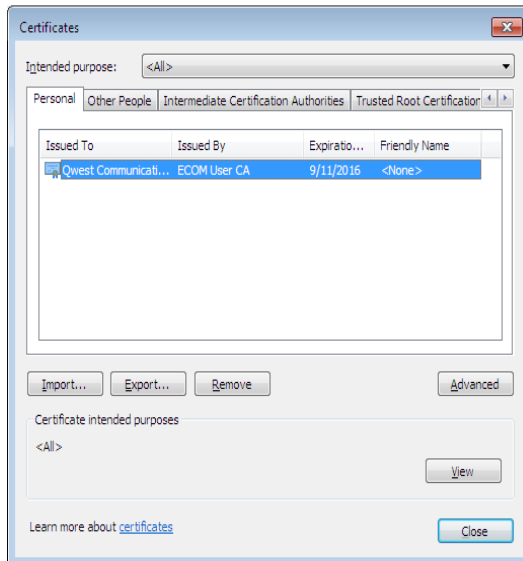


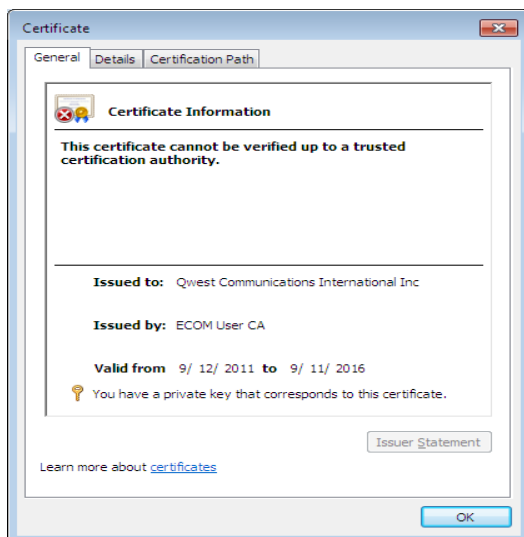
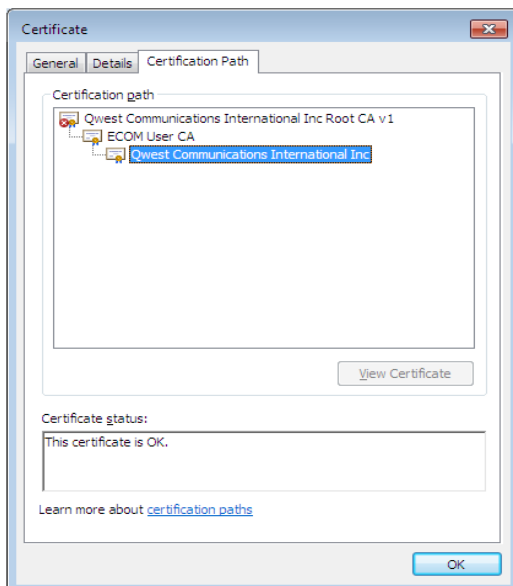
## Verifying the installed certificate

- 1 Choose **Tools > Internet Options** in your Internet Explorer browser.





**2 On the **Content** tab, choose **Certificates**.****3 Double click on the certificate's name.**

**4 View the General tab.****5 View the Certification Path tab.**

## Modifying the java.policy file

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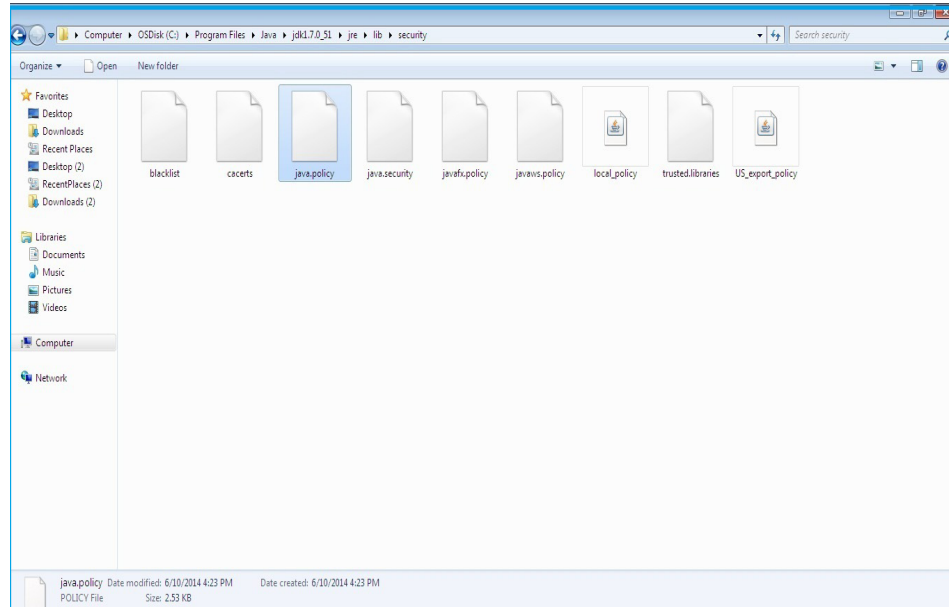
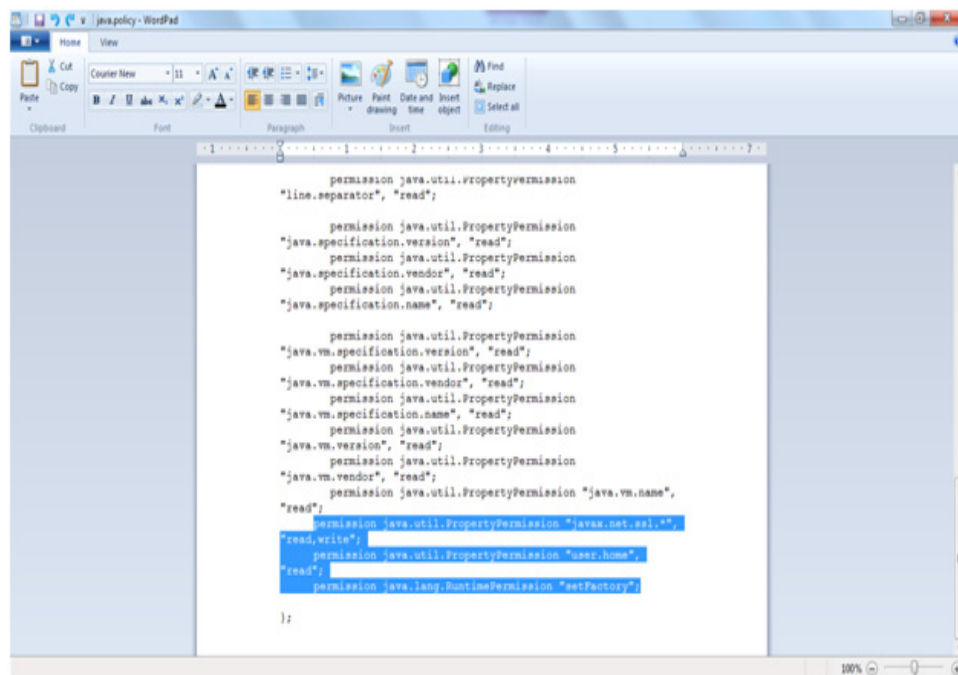
**Important:** CenturyLink highly recommends that you create a backup copy of the java.policy file.

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- 1 Using Windows Explorer, access the java.policy file from the folder C:\ProgramFiles(x86)\Java\jre1.7.0\_51\lib\security for a 32 bit Internet explorer or C:\ProgramFiles\Java\jre1.6.0\_xx\lib\security for a 64 bit Internet Explorer
- 2 Select the **java.policy** file.

**3 Select Edit > Copy, then select Edit > Paste.**

A copy of the java.policy file appears in this same folder.

**4 Using WordPad, open the java.policy file.****5 Edit the java.policy file by adding the following 3 lines:**

- permission java.util.PropertyPermission "javax.net.ssl.\*", "read,write";
- permission java.util.PropertyPermission "user.home", "read";
- permission java.lang.RuntimePermission "setFactory";

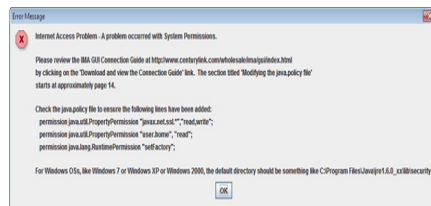
Insert these lines at the bottom of the file just above the **};** symbol.

**Tip:** If you're reading these guidelines in Adobe Acrobat, you can use the **Select Text** tool to select the lines of text, copy them, and paste them into the java.policy file. Copy and paste one line of text at a time eliminating the leading bullet.

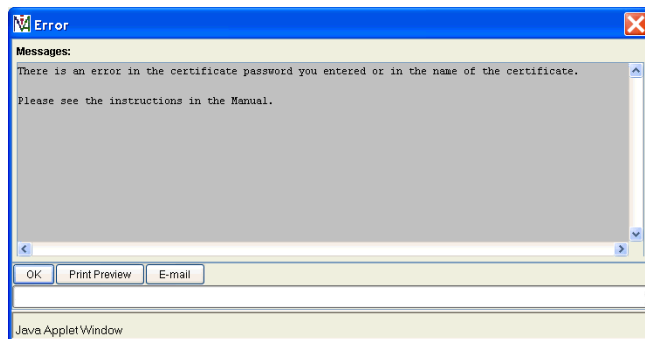
## 6 Save and close the **java.policy** file.

If you are unable to access the IMA PreOrder/Order/PostOrder functions after completing the above procedure, do one of the following:

- If you do not receive an error message, close all active windows and programs and restart your computer.
- If one of the following error messages displays, follow the instructions and try accessing IMA PreOrder/Order/PostOrder again:



If this error message displays, check the **java.policy** file and make sure the 3 new additional lines you entered are accurate and placed correctly.



If this error message displays, check to make sure the certificate password and name are correct. The password is one you previously entered for the certificate or **qwest1**. The certificate name in your **UserID** folder must be **QwestIMACertificate.p12**.

**Note:** For digital certificate assistance, call the CenturyLink Wholesale Systems Help Desk (888-796-9102, option 2).

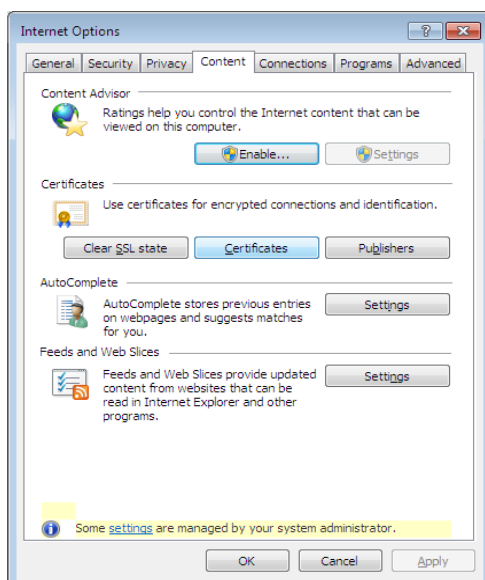
# Importing your digital certificate to Internet Explorer

This section is for current and new Internet Explorer users and explains how to "move" your digital certificate.

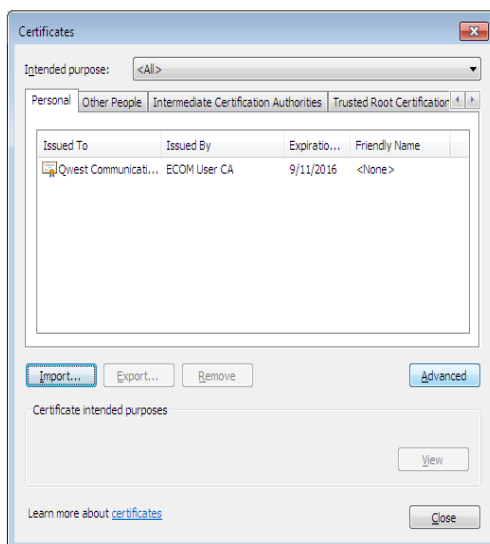
All requirements for modifying the java.policy file must be completed before continuing.

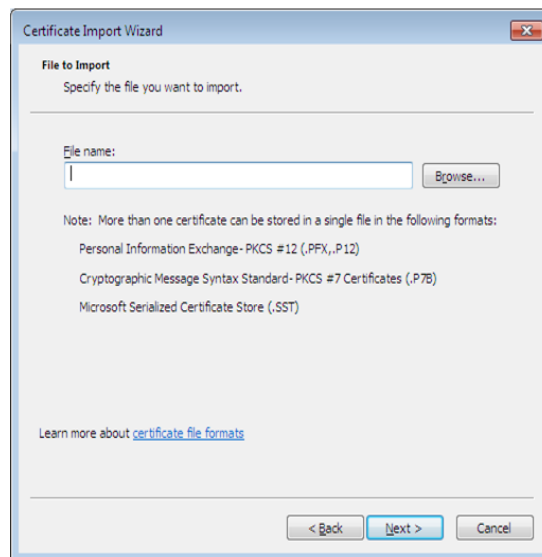
## 1 Open Internet Explorer.

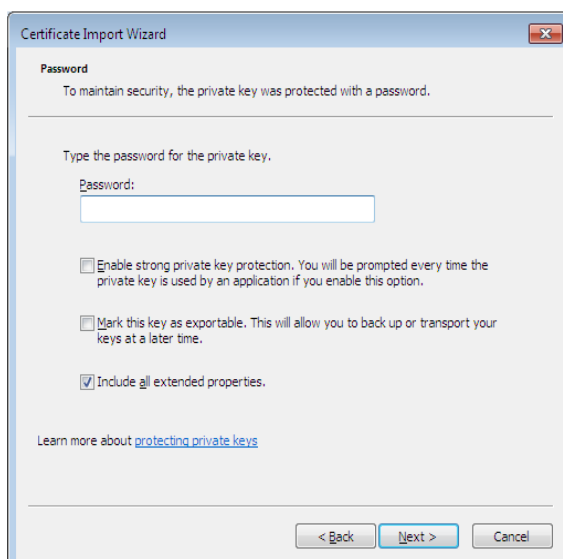
- 2 From the **Tools** menu, select **Internet Options**.
- 3 Click the **Content** tab.



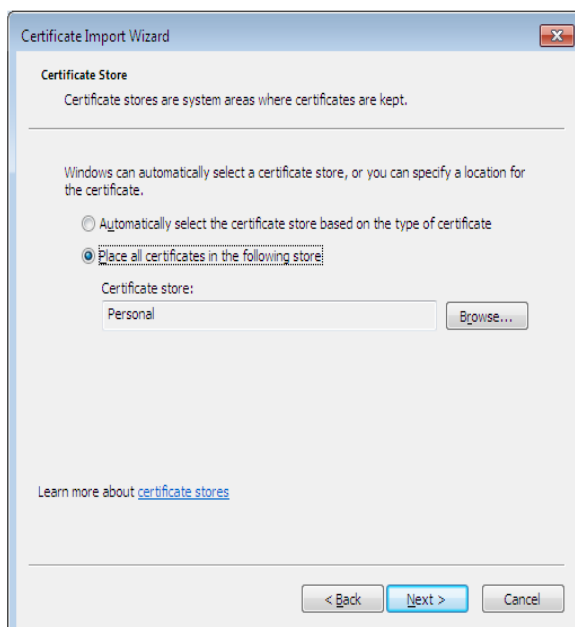
- 4 Click **Certificates**.



**5 Click **Import** to activate the **Certificate Wizard**.****6 Click **Next**.****7 Type the URL or select **Browse** to locate your certificate. Your certificate should be located at **C:\Documents and Settings** under your specific **UserID** and the file name of the certificate should be **QwestIMACertificate.p12**.**

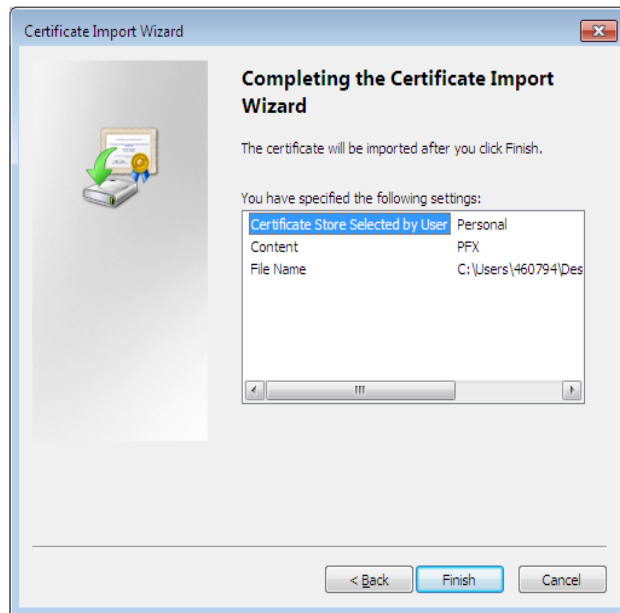
**8 Click Next.**

The screenshot shows the 'Certificate Import Wizard' window, specifically the 'Password' step. The title bar reads 'Certificate Import Wizard'. The main text says 'To maintain security, the private key was protected with a password.' Below this, it says 'Type the password for the private key.' There is a text box labeled 'Password:'. Below the text box are three checkboxes: 'Enable strong private key protection. You will be prompted every time the private key is used by an application if you enable this option.' (unchecked), 'Mark this key as exportable. This will allow you to back up or transport your keys at a later time.' (unchecked), and 'Include all extended properties.' (checked). At the bottom, there is a link 'Learn more about [protecting private keys](#)'. At the very bottom are three buttons: '< Back', 'Next >', and 'Cancel'.

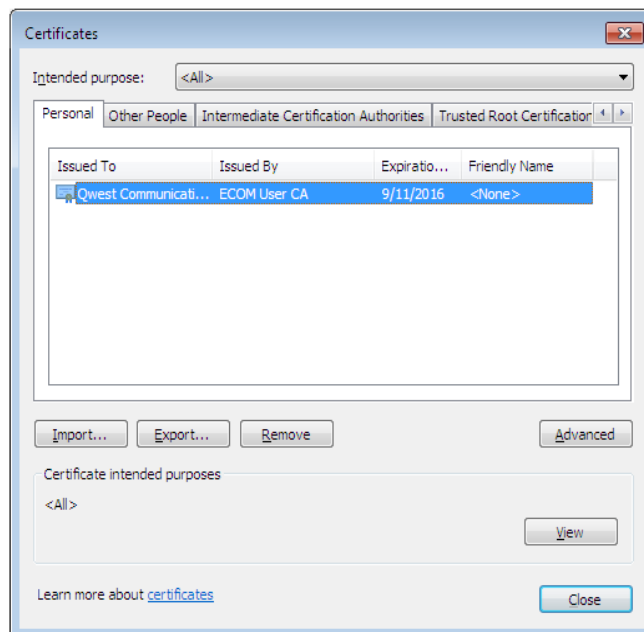
**9 In the Password field, type **qwest1**. This password is case-sensitive.****10 Click Next.**

The screenshot shows the 'Certificate Import Wizard' window, specifically the 'Certificate Store' step. The title bar reads 'Certificate Import Wizard'. The main text says 'Certificate stores are system areas where certificates are kept.' Below this, it says 'Windows can automatically select a certificate store, or you can specify a location for the certificate.' There are two radio buttons: 'Automatically select the certificate store based on the type of certificate' (unchecked) and 'Place all certificates in the following store' (checked). Below the radio buttons is a text box labeled 'Certificate store:' with the word 'Personal' entered. To the right of the text box is a 'Browse...' button. At the bottom, there is a link 'Learn more about [certificate stores](#)'. At the very bottom are three buttons: '< Back', 'Next >', and 'Cancel'.

**11** Leave the settings at their default positions and click **Next**.



**12** Click **Finish**.



The name of the certificate appears in the **Certificates** list box along with a confirmation message.

**13** Click **OK** and close all active windows.



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