IBM WebSphere Application Server Feature Pack for Communications Enabled Applications

Installation guide

What this exercise is about

The objective of this lab is to walk through the installation pieces needed to use the IBM WebSphere Feature Pack for Communications Enabled Applications (CEA). You will first install the IBM WebSphere Application Server Feature Pack for CEA. Then you will install the sample IP-PBX included in the IBM WebSphere Application Server Feature Pack for CEA (this is included in the feature pack for test purposes only). The last part of the lab will walk through the installation of two different soft phones (these are not included in the feature pack and used just for test purposes only).

This lab is provided **AS-IS**, with no formal IBM support.

Lab requirements

This lab requires you to have a machine that has a microphone, speakers and to have the following software required to complete the lab:

- WebSphere Application Server Version 7.0.0.5 : http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27004980#ver70

  o **Note**: this requires you to install WebSphere Application Server V7.0 : http://ibm.com/developerworks/downloads/ws/was/, and then the WebSphere Application Server V7.0 Fix Pack 5

  o You also need to install the Java SDK Fix Pack 5 update which is located on the same support site as WebSphere Application Server Version 7.0.0.5.

- IBM WebSphere Application Server Feature Pack for CEA : http://www.ibm.com/software/webservers/appserv/was/featurepacks/cea/

What you should be able to do

At the end of this lab you should be able to:

- Install the IBM WebSphere Application Server Feature Pack for CEA and various products needed to use the IBM WebSphere Application Server Feature Pack for CEA.

Introduction

The IBM WebSphere Application Server Feature Pack for Communications Enabled Applications product is a system application that resides on top of the application server. The feature pack provides the ability to easily and rapidly add dynamic Web communications to any application or business process.

The feature pack for CEA is a suite of integrated telephony and collaborative Web assets that extend the interactivity of Enterprise and Web commerce applications. The feature pack allows Enterprise solution architects and developers to use a single core application to enable multiple modes of communication. With a short ramp to implementation, Enterprise developers do not need to have extensive knowledge of telephony or SIP. The communications enabled application delivers call control, notifications, and interactivity and provides the platform for more complex communications.

Using this simplified programming model for adding Web-based communications, Enterprise developers can do the following:

- Enable any application to quickly add communications support (click-to-call integration)

- Enable shared sessions between users and the company

- Push relevant session data (for example, customer telephone number) for application use

- Deliver automated notifications and instant messaging support

- Provide Enterprise-grade security, scalability, and high availability

- Integrate with customer's private branch exchange (PBX)

The feature pack also supports the JSR 289 SIP Servlet 1.1 specification. JSR 289 introduces several enhancements to SIP servlets:

- o Application routing which provides a mechanism for removing application composition logic from applications and simplifying integration of application components.

- o Annotations which speed up SIP servlet application development and reduce the need for deployment descriptors.

- o Other API changes, like improved support for converged applications and the B2buaHelper class, which also simplify application development.

In this lab you will first install the IBM WebSphere Application Server Feature Pack for CEA. Secondly, you will install the sample IP private branch exchange (PBX) application that is included in the IBM WebSphere Application Server Feature Pack for CEA. The sample IP-PBX is in the form of an enterprise application archive (EAR) file and is for test purposes only. An IP-PBX is a business telephone system designed to deliver voice over a data network and interoperate with the Public Switched Telephone Network (PSTN). Finally you will install two softphones that are needed to test out communications enabled applications. A softphone works like a telephone to let you make calls through your computer, using Voice over IP. You can call anyone by way of the internet who has installed it (or any other SIP softphone). For test purposes only you will install everything on one system and on one WebSphere Application Server profile.

Exercise instructions

This lab is Windows® operating-system specific. If you plan on running the lab on an operating-system other than Windows, you will need to run the appropriate commands and use appropriate files (.sh or .bat) for your operating system. This lab requires the installation of WebSphere Application Server Version 7.0.0.5. For test purposes it is suggested that your WebSphere Application Server is set up to use the default profile with the default settings and security does not need to be enabled.

The following table is related to what your environment should look like:

Reference variable	Example: Windows locations	Example: Linux locations	Input your values
<SERVER_NAME>	server1	Server1	
<WAS_HOME>	C:\Program Files\IBM\WebSphere\AppServer	/opt/IBM/WebSphere/AppServer	
<HOSTNAME>	Localhost	Localhost	
<BOOTSTRAP_PORT>	2809	2809	
<SIP_DEFAULTHOST>	5060	5060	
<PROFILE_NAME>	AppSrv01	AppSrv01	
<IM_DATA_HOME>	C:\Program Files\IBM\Installation Manager\eclipse	/opt/IBM/InstallationManager/eclipse	
<IM_DATA>	C:\Documents and Settings\All Users\Application Data\IBM\Installation Manager	/var/ibm/InstallationManager	

Part 1: Verify installation of WebSphere Application Server

In this section of the lab you will verify that you have WebSphere Application Server Version 7.0.0.5 installed and that a profile is created with the default port numbers.

____ 1. Change to the **<WAS_HOME>\bin** directory.

___ a. Windows example:

```
cd C:\Program Files\IBM\WebSphere\AppServer\bin
```

___ b. Linux example:

```
cd /opt/IBM/WebSphere/AppServer/bin
```

____ 2. Run the **versionInfo** command.

___ a. Windows example:

```
versionInfo.bat
```

___ b. Linux example:

```
./versionInfo.sh
```

____ 3. Verify the output includes WebSphere Application Server V7.0.0.5. (Note that the build number might differ from what is shown here.)

```
Installed Product
--------------------------------------------------------------------------------
Name                    IBM WebSphere Application Server - ND
Version                 7.0.0.5
ID                      ND
Build Level             cf050923.16
Build Date              6/10/09
Architecture            Intel (32 bit)
```

Note: If you do not have V7.0.0.5 installed go and download WebSphere Application Server V7.0 Fix Pack 5 from: http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27004980#ver70.

____ 4. Verify that you have the SDK installed.

___ a. From the **<WAS_HOME>\bin** directory run the **versionInfo** command with the maintenancePackages option.

1) Windows example:

```
versionInfo.bat –maintenancePackages
```

2) Linux example:

```
./versionInfo.sh –maintenancePackages
```

___ b. Verify the output includes sdk.FP7005

```
Installed Maintenance Package
--------------------------------------------------------------------------------
Maintenance Package ID     sdk.FP7005
Description                 WebSphere Application Server 7.0.0.5 for SDK
Build Date                 06/10/2009
```

_____ 5.   If you already have a profile created verify that it is set with the default ports. If you do not have a profile created, you can create one later after you install the feature pack. If you do have a profile created and you do not use the default port numbers then you will need to note your port numbers and use those port numbers for various parts of the lab. Not using the default port numbers is not recommended for this lab.

__ a. You can look at your serverindex.xml file to find this information (DO NOT EDIT THIS FILE). One of the locations of the **serverindex.xml** file is

1) Windows:

```
<WAS_HOME>\profiles\<yourprofile>\config\cells\<yourcell>\nodes
\<yournode>
```

2) Linux:

```
<WAS_HOME>/profiles/<yourprofile>/config/cells/<yourcell>/nodes
/<yournode>
```

__ b. Below shows the default port numbers, if yours are different note your values.

```
<specialEndpoints xmi:id="NamedEndPoint_1183122129646"
endPointName="WC_adminhost">
<endPoint xmi:id="EndPoint_1183122129646" host="*" port="9060"/>
</specialEndpoints>

<specialEndpoints xmi:id="NamedEndPoint_1183122129647"
endPointName="WC_defaulthost">
<endPoint xmi:id="EndPoint_1183122129647" host="*" port="9080"/>
</specialEndpoints>

<specialEndpoints xmi:id="NamedEndPoint_1183122129651"
endPointName="SIP_DEFAULTHOST">
<endPoint xmi:id="EndPoint_1183122129651" host="*" port="5060"/>
</specialEndpoints>

<specialEndpoints xmi:id="NamedEndPoint_1183122129652"
endPointName="SIP_DEFAULTHOST_SECURE">
<endPoint xmi:id="EndPoint_1183122129652" host="*" port="5061"/>
</specialEndpoints>
```
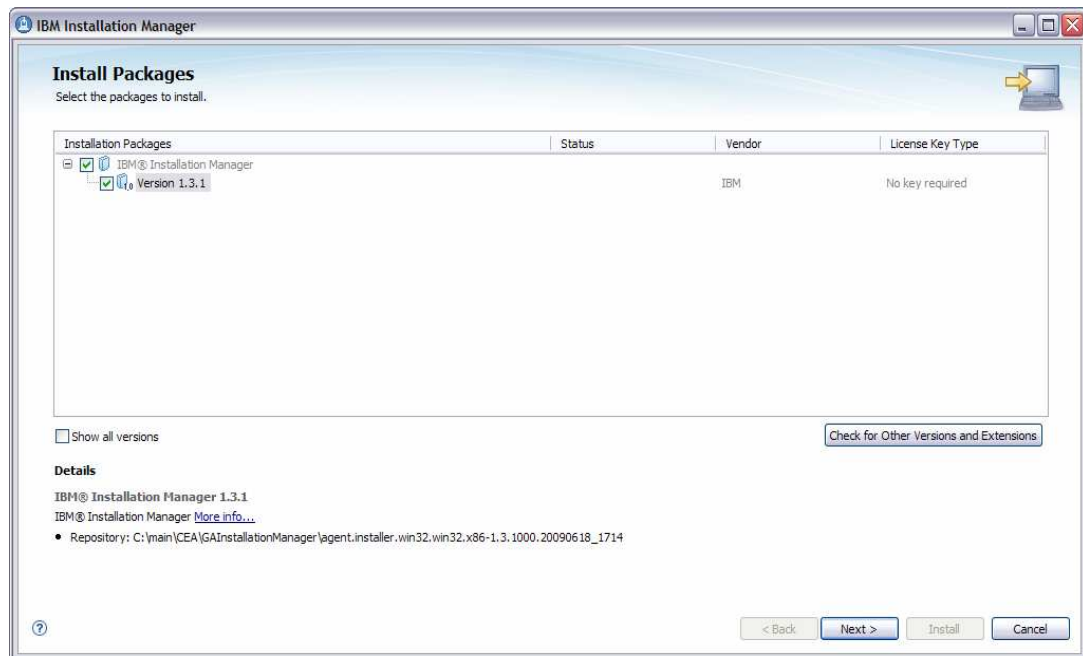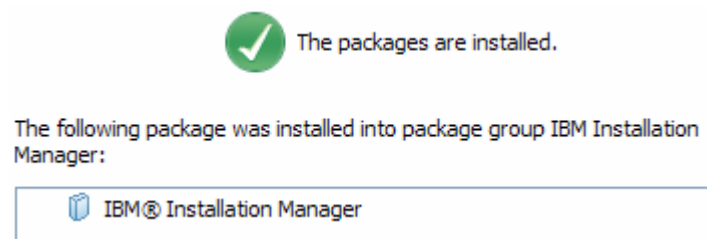
Part 2: Installing the IBM Installation Manager

In this section of the lab you will install the IBM Installation Manager. The IBM Installation Manager is needed to install the IBM WebSphere Application Server Feature Pack for CEA. You need to have downloaded the IBM WebSphere Installation Manager Archive file already. If you already have Installation Manager on your system, the installation kit will automatically update your installed copy of the Installation Manager.

_____ 1.   Run the installation of the IBM Installation Manager.

     __ a. Locate the IBM Installation Manger archive file.

     __ b. **Unzip** to your local directory.

     __ c. Install the Installation Manager by opening up your directory and running

          1) Windows: **install.exe**

          2) Linux: ./**install**

     __ d. The IBM Installation Manager window will appear, the IBM Installation Manager Version 1.3.1 is selected by default as shown below.

     __ e. Select **Next**.

     __ f. Accept the license and select **Next**.

     __ g. Review the Summary information and select **Install**.

__ h. If the installation is successful, the program displays a message indicating that installation is successful.

The packages are installed.

The following package was installed into package group IBM Installation Manager:

IBM® Installation Manager

__ i. Select **Restart Installation Manager.**

__ j. If the installation is not successful, click **View Log File** to troubleshoot the problem.

Part 3: Installing the IBM WebSphere Application Server Feature Pack for CEA

In this section of the lab you will install the IBM WebSphere Application Server Feature Pack for Communications Enabled Applications.

____ 1. In order to install the feature pack, all WebSphere Application Server processes must be stopped on the installation that is being upgraded.

    __ a. Stop any running servers.

____ 2. There are two ways to install the IBM WebSphere Application Server Feature Pack for CEA. You can either point to a remote repository location to download the feature pack or you can point the IBM Installation Manager to a local copy of the IBM WebSphere Feature Pack installation files.

    __ a. To install the IBM WebSphere Application Server Feature Pack for CEA start by opening your IBM Installation Manager if not already opened.

        1) Windows:

            Start > All Programs > IBM Installation Manager > IBM Installation Manager

        2) Linux:

            Start > IBM Installation Manager > IBM Installation Manager

      Note: If you are prompted to authenticate while the installation manager is restarting, use your IBM ID. Optionally select the Save password so that you will not need to enter your credentials again.

    __ b. Select **File > Preferences**.

        1) To install from a local repository, you will need to download the repository package from the IBM WebSphere Application Server Feature Pack for CEA Web site: http://www.ibm.com/software/webservers/appserv/was/featurepacks/cea/. Extract the local repository and add it as a repository in the installation manager.

            a) If the remote repository already exists first disable the remote repository by unchecking the remote repository.

            b) Next select **Add Repository…** and then enter the path location of the extracted files and point to the **repository.config** file.
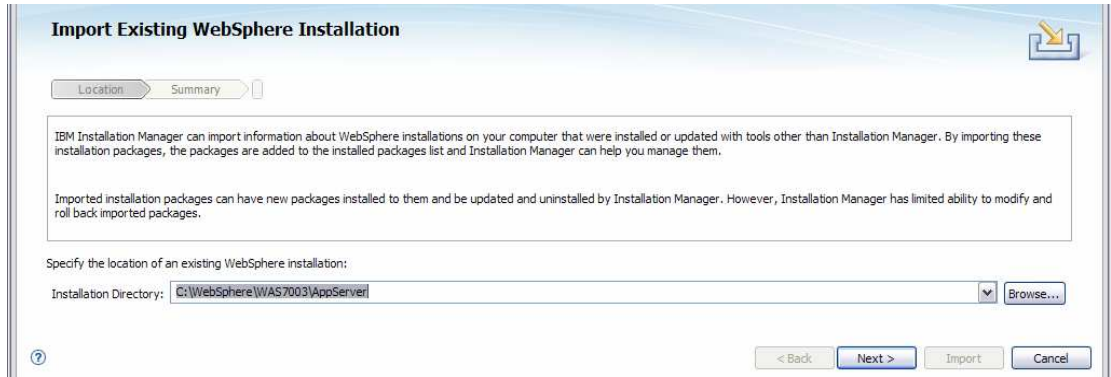
            c) Select Ok.

        2) To install from the remote repository. You should see both http://download.boulder.ibm.com/ibmdl/pub/software/websphere/repositories/repository.config and https://www.ibm.com/software/rational/repositorymanager/repositories/websphere/repository.config repositories already added to your repositories section, if not select **Add Repository…** and then enter the URLs and select **OK**.

            Note: You might be required to authenticate again.

    __ c. Select **Ok** to close out the Preferences panel.

_____ 3. The next step is to make sure the Installation Manager recognizes your existing WebSphere Application Server V7.0.0.5 installation.

__ a. From the main Installation Manager panel, click **Import**.

__ b. Select **Browse…** and browse to the directory of your <WAS_HOME> and select **OK**.

__ c. Select **Next** to bring you to the next panel. Select **Next** to bring you to the next panel and then select **Import**.

__ d. If the import works correctly you will get a success message.

__ e. Select **Finish**.

_____ 4. Install the IBM WebSphere Application Server Feature Pack for CEA.

__ a. Select **Install** on the IBM Installation Manager page.

__ b. Select the **IBM WebSphere Application Server V7 Feature Pack for Communication Enabled Applications** and select **Next**.
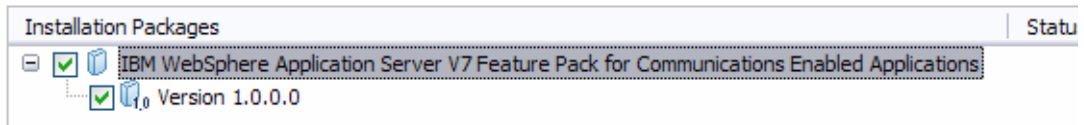
Note: If using the remote repository you might see options to install other feature packs; these other feature packs are not needed for this lab.

__ c. Accept the license agreement and select **Next**.

__ d. If you have multiple WebSphere Application Server installations imported, be sure to pick the server you want to install the feature pack on.

__ e. Continue selecting **Next** until you reach the summary information panel and select **Install**.

__ f. After installation you will receive a success message stating that the packages are installed.

__ g. On the Install Packages page on the right side for **Which package do you want to start?** select **Profile Management** and select **Finish**.

__ h. If you are on a platform that supports the Profile Management Tool, the Profile Management Tool will open and you are to follow along. If you are on a platform that does not support the Profile Management Tool skip to step 7.

__ i. Select the **Launch Profile Management Tool** button.

____ 5.   To use the IBM WebSphere Feature Pack for CEA features you will need to augment your profile. You can now either create a new profile based on the IBM WebSphere Feature Pack for CEA or augment an already existing profile.

__ a. Create a new profile.

1) To create a new profile based on the IBM WebSphere Feature for CEA select the **Create** button.

2) On the Environment Selection panel, depending on your WebSphere Application Server environment select one of the options under the WebSphere Application Server Feature Pack for CEA Version 1.0.
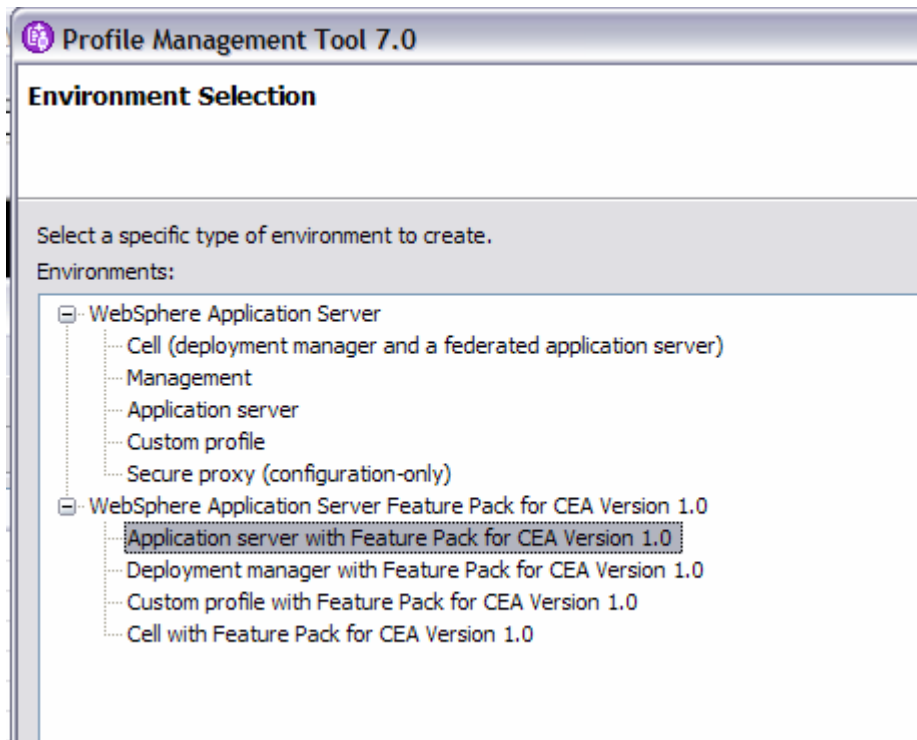
3) Follow the rest of the steps in the Profile Creation to create your profile.

Note: If you select the Advanced profile creation option on the Port Values Assignment panel you can select the Default Port Values to have the profile use the default ports.

__ b. Augment an existing profile.

1) To augment an existing profile select the profile in the table and select **Augment**.

2) Select the Application server with Feature Pack for CEA Version 1.0 and select **Next >**.

3) Review the Profile Augmentation Summary page and select **Augment**.

4) You should receive a success message and then select **Finish**.

_____ 6.   Close out the Profile Management tool and the Installation Manager.

_____ 7.   If you are on a system that does not support the Profile Management tool, then you will need to manually augment your existing file or create a new file based on the feature pack. If you already did this through your Profile Management Tool skip to the next step, if not follow the steps below. You can now either create a new profile based on the IBM WebSphere Feature Pack for CEA or augment an already existing profile.

    __ a. Create a new profile that is enabled for the Feature Pack for CEA. The templates for these profiles are located in the *<WAS_HOME>*/profileTemplates/CEA directory.

        1) The following script is an example for creating an application server profile that is enabled for the Feature Pack for CEA:

            a) Windows:

```
<WAS_HOME>\bin\manageprofiles.bat -create -templatePath
<WAS_HOME>\profileTemplates\CEA\default.ceafep
```

            b) Linux:

```
<WAS_HOME>/bin/manageprofiles.sh -create –templatePath
<WAS_HOME>/profileTemplates/CEA/default.ceafep
```

    __ b. Augment an already existing profile.

        1) Open a command prompt, and navigate to the *<WAS_HOME>*/bin directory.

        2) Back up your current deployment manager profile.

            a) Profile augmentation might result in changes to the configuration of the profile. Use the backupConfig command to back up your current configuration before augmenting your profile. For example, the following command saves your current configuration to the featurePackAugment.zip file:

```
backupConfig(.bat)(.sh) featurePackAugment.zip
```

        3) Augment your profile for the feature pack environment.

            a) Use the **manageprofiles** command, specifying the fully qualified file path for the -templatePath parameter.

            Note: If a relative file path is specified for the -templatePath parameter, then your profile might not be fully augmented.

            b) The following command example augments the myProfile profile:

Windows:
```
manageprofiles.bat –augment –profileName myProfile
-templatePath
<WAS_HOME>\profileTemplates\CEA\default.ceafep
```

Linux:
```
./manageprofiles.sh –augment -profileName myProfile
-templatePath  <WAS_HOME>/profileTemplates/CEA/default.ceafep
```

____ 8.   Verify that the feature pack was installed successfully.

__ a. Change to the <WAS_HOME>\bin directory.

1) Windows example:
```
cd C:\Program Files\IBM\WebSphere\AppServer\bin
```
2) Linux example:
```
cd /opt/IBM/WebSphere/AppServer/bin
```

__ b. Run the versionInfo command.

1) Windows example:
```
versionInfo.bat
```

2) Linux example:
```
./versionInfo.sh
```

__ c. Verify the output includes the IBM WebSphere Application Server Feature Pack for CEA. (Note that the build number might differ from what is shown here.)

```
Installed Product
--------------------------------------------------------------------------------
Name                        CEA Feature Pack
Version                     1.0.0.0
ID                          CEA
Build Level                 a0927.05
Build Date                  7/8/09
Architecture                Intel (32 bit)

Installed Product
--------------------------------------------------------------------------------
Name                        IBM WebSphere Application Server - ND
Version                     7.0.0.5
ID                          ND
Build Level                 cf050923.16
Build Date                  6/10/09
Architecture                Intel (32 bit)
```

Part 4: Configuration steps

After installing the feature pack you can change the Communications Enabled Application settings through the administration console. You can enable/disable the commsrv application, set the context root, virtual host, and max hold time for the REST interface. Also, you can set the host name, port, protocol, super username of the CTI Gateway, and set if you are using a third-party Web services provider for telephony access.

_____ 1.   Start your WebSphere Application Server.

__ a. Log into the administrative console by navigating to http://localhost:9060/ibm/console in a Web browser.

> **Note**: If the default administrative port is not 9060 for your application server profile, the URL above should include the port number for your installation.

__ b. Select **Servers** > **Server Types** > **WebSphere application servers**.

__ c. Select your **server** link.

__ d. On the right side under **Communications** select **Communications Enabled Applications (CEA)**.

General Properties

Communications Enabled Applications services

☐ Enable communications service

REST interface

＊ Context root
`/commsvc.rest`

＊ Virtual host
`default_host`

＊ Maximum hold time
`30`   seconds

Telephony access method

◉ Use SIP CTI (ECMA TR/87) gateway for telephony access

＊ Host name or IP address
`localhost`

＊ Port
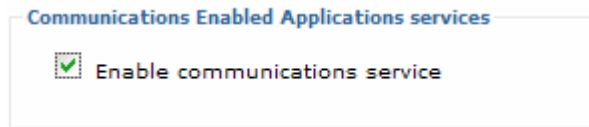`5060`

＊ Protocol
`TCP`

☐ Extract user name from request

Superuser name
`ceauser`

○ Use a third-party Web services provider for telephony access

Third-party Web services provider's WSDL

`_____`

[Apply] [OK] [Reset] [Cancel]

1) Use the **Enable communications service** option to either enable or disable CEA services for this server; disabling this field will prevent the service from starting and save system resources.

    a) By default communication services is not enabled. **Check** next to the **Enable communications service** option to enable the communication services.

Communications Enabled Applications services

    ☑ Enable communications service

2) Configure the **context root** for the REST interface; this will impact the URLs that you use to access communication services.

3) The **virtual host** field specifies the name of the virtual host that the REST interface is mapped to.

4) The **maximum hold time** field specifies the time in seconds that the REST interface will wait for new or changed data or status before timing out.

5) Use the **host name** field to provide the fully-qualified host name or IP address of the SIP CTI gateway that the CEA services connect to, the default is **localhost**.

6) The **port** field specifies the port number of the SIP CTI gateway for connection communication services, the default is **5060**. **Note**: If you are not using the default port then enter your port number here. For example if your port is 5065 then you change to port form 5060 to 5065 as shown below:

Telephony access method

⦿ Use SIP CTI (ECMA TR/87) gateway for telephony access

    ＊ Host name or IP address
    localhost

    ＊ Port
    5065

    ＊ Protocol
    TCP ▾

    ☐ Extract user name from request

    Superuser name
    ceauser

◯ Use a third-party Web services provider for telephony access

    Third-party Web services provider's WSDL

7) Use the **protocol** field to provide the protocol to use when connecting to the SIP CTI gateway, the default is **TCP**.

8) The **superuser** name field specifies the name that is used when opening a new session to the gateway, the default is **ceauser**.

9) The **Use a third-party Web services provider for telephony access** lets you supply the third-party Web services provider's WSDL if you are using a third-party Web service provider.

__ e. If you are using the default values and ports then you will only need to enable communication services. Click **OK** and then **Save** to save your configuration.

__ f. **Restart** the server.

Part 5: Installing the IP-PBX sample

The CEA capability also requires an IP private branch exchange (PBX) as part of your infrastructure. An IP-PBX is a business telephone system designed to deliver voice over a data network and interoperate with the Public Switched Telephone Network (PSTN). A sample IP-PBX application is included in with the IBM WebSphere Application Server Feature Pack for CEA installation. The sample IP-PBX is in the form of an enterprise application archive (EAR) file and is for test purposes only. In this section of the lab you will install the IP-PBX.

_____ 1. Install the IP-PBX application

__ a. Start your **WebSphere Application Server**.

__ b. Log into the administrative console by navigating to http://localhost:9060/ibm/console in a Web browser.

> **Note**: If the default administrative port is not 9060 for your application server profile, the URL above should include the port number for your installation

__ c. From the left navigation panel of the Administrative console, expand **Applications** and select **New Application** and then select **New Enterprise Application.**

__ d. On the installation panel, specify the **Local file system option** and enter the full path or use the **Browse** button to select the **commsvc.pbx.ear** file located:

1) Windows

<WAS_HOME>\feature_packs\cea\samples

2) Linux

<WAS_HOME>/feature_packs/cea/samples

__ e. Click **Next**.

__ f. On the next panel choose the **Fast Path** radio button.

__ g. Click **Next**, and then continue to click **Next** until the Summary panel, and then click **Finish**.

__ h. Click the **Save** link to save to the master configuration.

_____ 2. Start the application.

__ a. After saving your configuration return to the screen under **Applications** > **Application Types** > **WebSphere enterprise applications**.

__ b. Select the check box next to **commsvc.pbx** and then click **Start**.
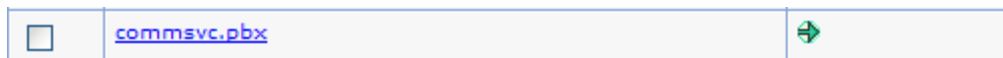
Part 6: Installing softphones

In this section you will install two softphones that are needed to test out communications enabled applications. A softphone works like a telephone to let you make calls through your computer, utilizing Voice over IP. You can call anyone by way of the internet who has installed it (or any other SIP softphone). The softphones are not included as part of the IBM WebSphere Application Server Feature Pack for CEA and are just used for test purposes only. IBM does not support or endorse the softphones or the companies that produce them. To test out the softphones you need to make sure that no other programs are using the default SIP port 5060 or whatever your default SIP port is (this includes making sure Lotus Notes is not started). The lab is intended to install the softphones on a Windows Operating System. You can choose to have your application server on a different operating system, but your softphones on Windows. If you do this, be sure to specify the correct host name in your softphones.

_____ 1.   Install and setup Express Talk.

   __ a. **Download Express Talk**, the professional VoIP Softphone for Business, free download from Professional VoIP Softphone for Business from http://www.nch.com.au/talk/be.html

   __ b. Run the **talksetup.exe** file to install.

   __ c. Follow the installation instructions making sure your microphone and speakers work.

   __ d. Select **Next** until you reach the **SIP Setup** page.

   __ e. On the **SIP Setup** page choose the **Yes, I already have a sip account** option.
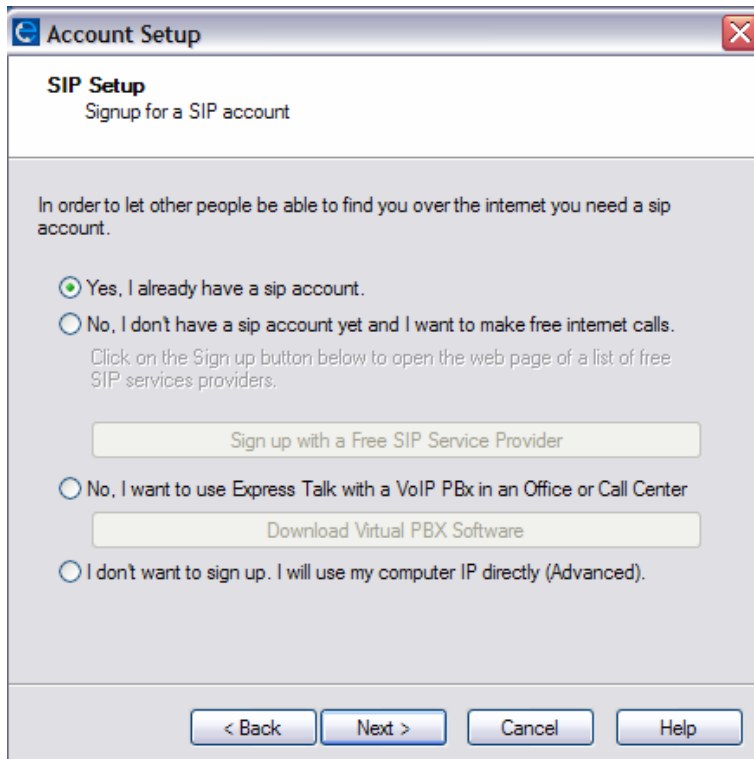
   __ f. Select **Next**.

__ g. On the **SIP Details** page enter the following details:

    1) Enter **Customer** for the Full 'Friendly' Display Name

    2) Enter your **host name** of your IP-PBX for the Server field, this should be **localhost**. **Note:** If your IP-PBX application is NOT listening on localhost then fill in your correct IP address.

    3) Enter **Customer** for the SIP Number (or User Name).

    4) Leave the Password field blank.

__ h. Select **Finish**.

__ i. If your IP-PBX application is NOT listening on the default port then you will need to enter in the default port into Express Talk.

    1) Select **Options** on Express Talk and then select **Lines** and select the **Advanced Line Settings**.
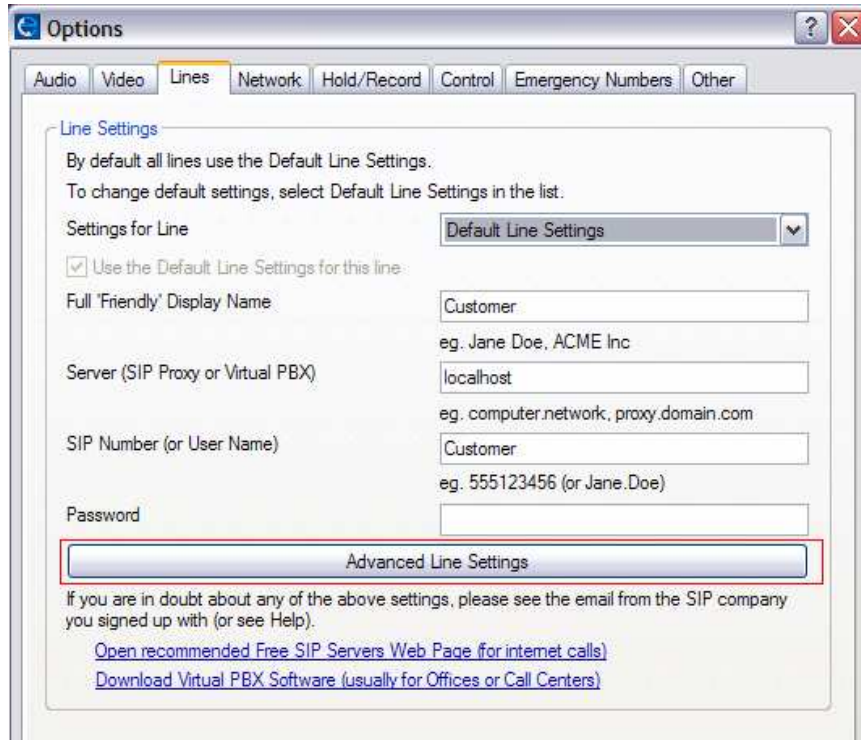
    2) On the Advanced Sip Server Settings panel select **Use a different outbound server** and **enter in your hostname:port** and select **OK**. For example if your host name is localhost and your port is 5065 enter localhost:5065 as shown below:
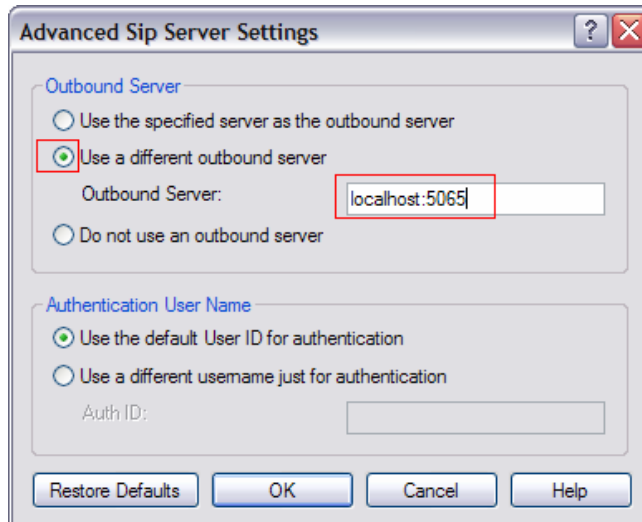
    3) On the Lines panel select **OK**.

__ j. The Express Talk will now attempt to register with the PBX running on the application server.

__ k. You have now successfully installed and setup the Express Talk softphone.

____ 2. Install and setup CounterPath's X-Lite.

__ a. **Download X-Lite**, a free SIP based softphone, available for download at
http://www.counterpath.net/x-lite.html.

__ b. **Run** the X-Lite install exe.

__ c. **Start** the softphone (open the x-lite.exe resulting from the install).

__ d. At the top of the softphone UI, there is a drop down in the top left. Select **SIP Account Settings**.

__ e. On the SIP Accounts page select **Add**.

__ f. On the Account details tab fill in the following:

    1) Enter **CSR** for the Display Name (you will use CSR to represent a Customer Service Representative).

    2) Enter **CSR** for User name. This is the same as the display name, to be used as your contact address.

    3) Leave the **Password** and **Authorization user name** fields blank.

    4) Enter your **host name** of your IP-PBX for the Domain field, this should be **localhost**. **Note:** If your IP-PBX application is NOT on localhost then enter the correct host name or IP address.

    5) **Check** the "Register with domain and receive incoming calls".
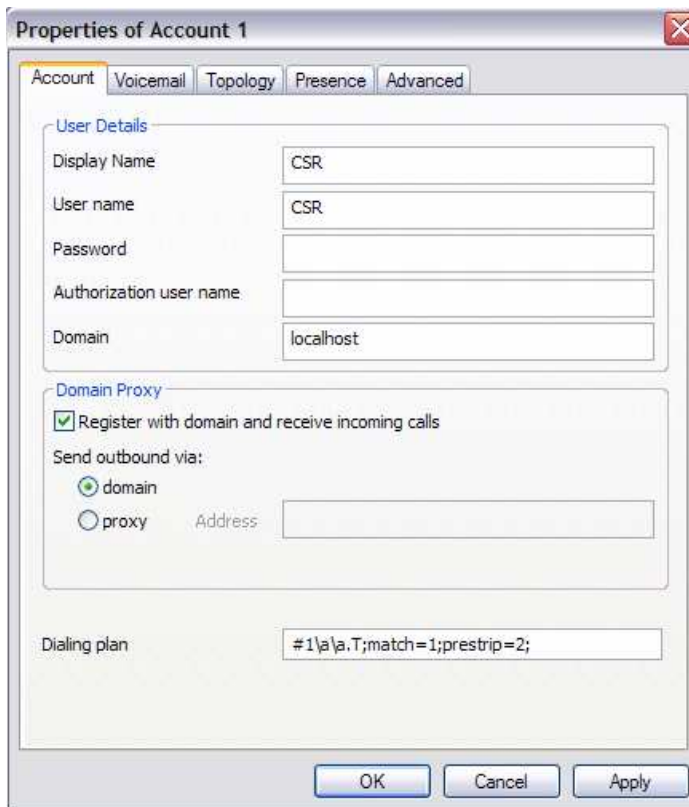
    6) If your IP-PBX application is **NOT** listening on 5060 then select **proxy** under the **Send outbound via:** section and fill in the **hostname:port** of the IP-PBX application into the Address field, for example if your hostname is localhost and SIP port is 5065 then enter localhost:5065 as shown below:

__ g. Select **OK**.

__ h. You will now see your account listed. Select **Close**.

__ i. Given your IP-PBX is started, your softphone will now try to register. If the registration is successful the softphone will display **Ready Your username is: CSR** as shown in the picture below.

____ 3. **Troubleshooting Note**: If your softphones are not registering check to make sure your WebSphere Application Server is started and that your IP-PBX application is started. Check your SIP default host port and make sure that no other programs are using that port (this includes making sure Lotus Notes is not started).

Part 7: Uninstalling the IBM WebSphere Application Server Feature Pack for CEA

This section talks about uninstalling the feature pack. You use the IBM Installation Manager to uninstall the feature pack. This section is here for reference for when you want to uninstall.

____ 4.   Start the installation manager.

   __ a. Windows:

   **Start > All Programs > IBM Installation Manager > IBM Installation Manager**

   __ b. Linux:

   Start > IBM Installation Manager > IBM Installation Manager

____ 5.   Choose the **Uninstall** option from the main page.

____ 6.   In the list of packages that are available to uninstall, select the box next to the IBM WebSphere Application Server V7 Feature Pack for Communications Enabled Applications.

____ 7.   **DO NOT** choose the box next to WebSphere Application Server V7.
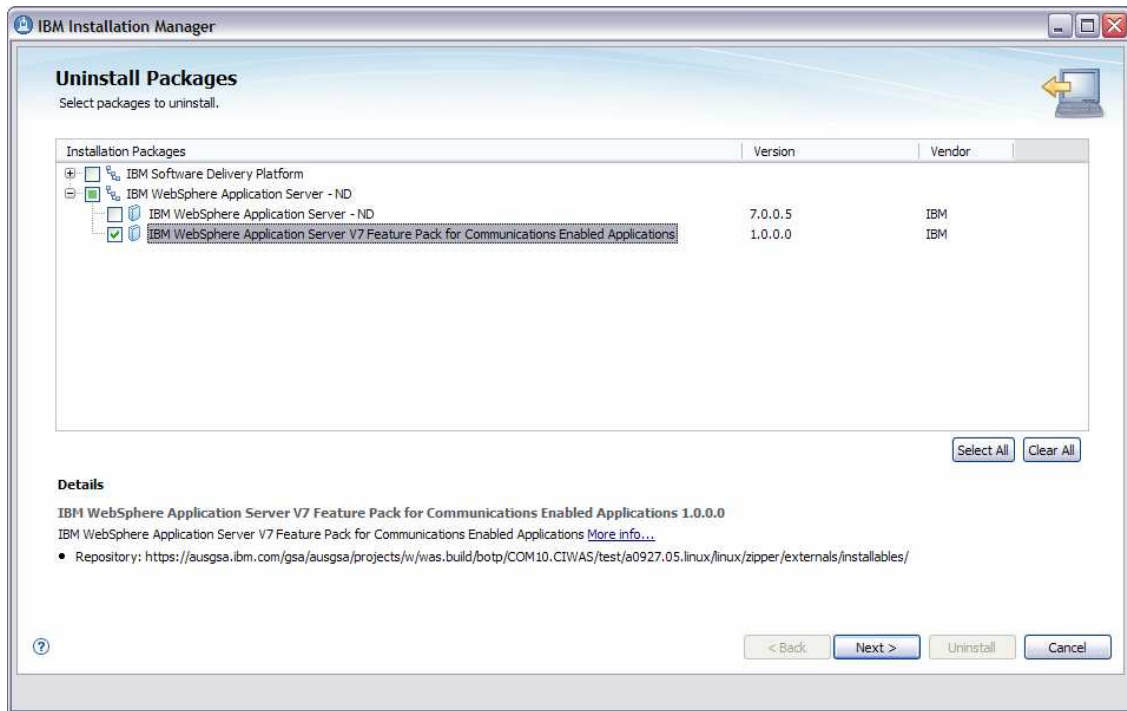

____ 8.   Select **Next**.

____ 9. If you have a profile that has been created or augmented with the feature pack the following panel
will appear. These profiles must be unagumented at uninstallation time. You are recommended to
delete these profiles. You cannot proceed if the check box is unchecked. When uninstalling the
profile is unaugmented. Select **Next >**.
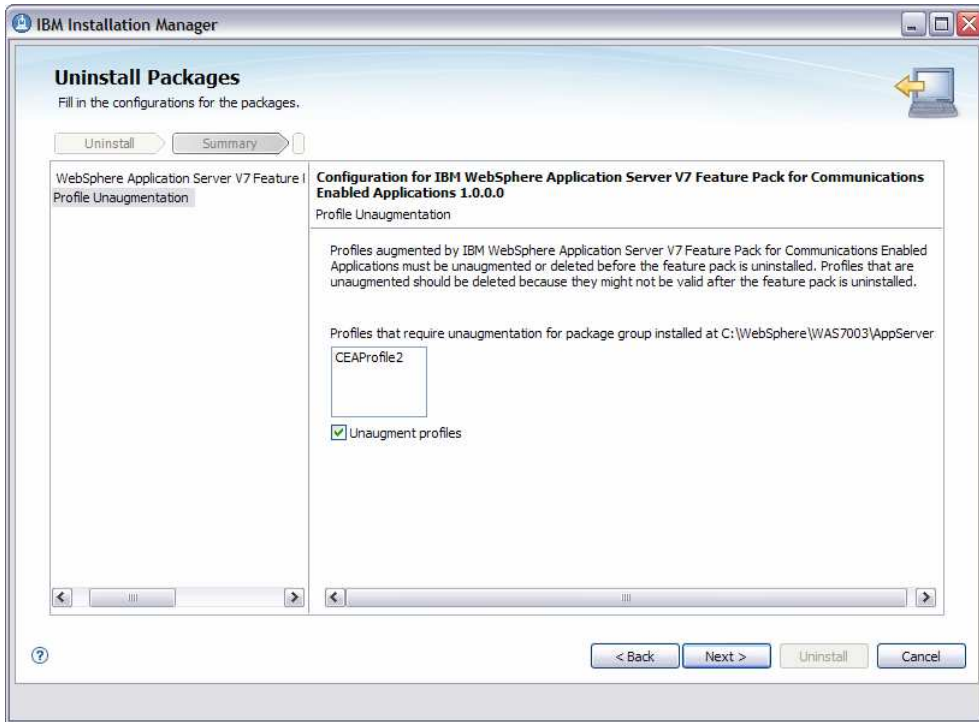
____ 10. Verify that **ONLY** the feature pack shows up in the list of packages to uninstall.

   NOTE: If you include the application server package here by mistake, it will uninstall the application
   server.
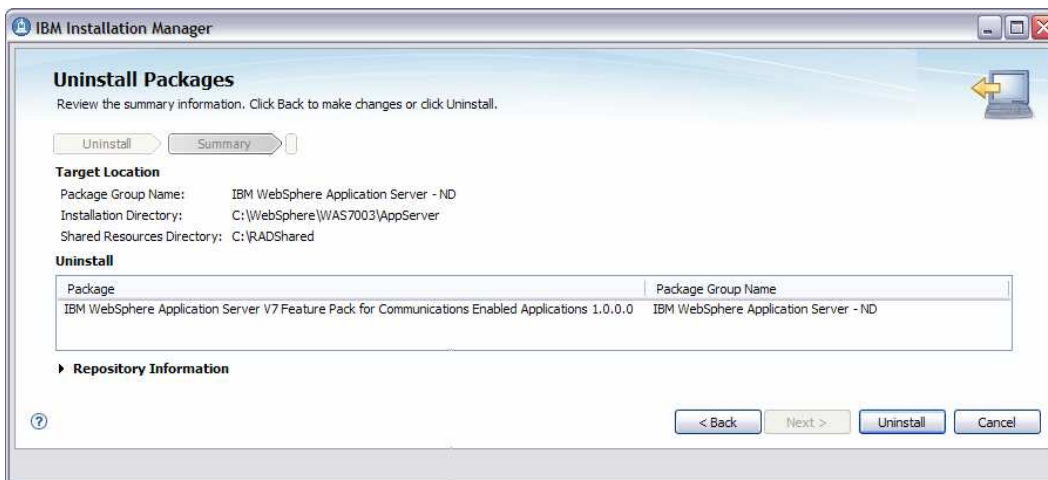
____ 11. Select Uninstall.

____ 12. When the uninstallation completes, select **Finish**.

____ 13. **Close** the installation manager.

Part 8: Uninstalling the IBM Installation Manager (optional)

In order to uninstall the IBM Installation Manager 1.3.1, you need to remove all of the installed packages that the Installation Manager is managing. This includes the WebSphere Application Server package that you had to import before installing the feature pack. To remove the WebSphere Application Server package, you can either uninstall the application server or unimport it from the Installation Manager. The steps in this section describe how to unimport the application server. You should only use these instructions if you want to (1) uninstall the Installation Manager, and (2) leave your WebSphere Application Server installation intact.

Note: If you have other products installed with the Installation Manager you will need to uninstall those products. If you attempt to do an unimport with the Installation Manager you cannot re-import these products, the only product that can be imported at this time is the WebSphere Application Server.

_____ 1.   If you want to uninstall the Installation Manager follow the steps below. You will first unimport the application server from the Installation Manager.

    __ a. Open a **command prompt** and go to the **installation directory** for the installation manager.

        1) Windows:

```
C:\Program Files\IBM\Installation Manager\eclipse
```

        Note: in some Windows variants it can be located at: C:\ProgramData\IBM\Installation Manager

        2) Linux:

```
/opt/IBM/InstallationManager/eclipse
```

    __ b. Start the installation manager with the **–skipInstall** option.

        1) Windows:

```
IBMIM.exe -skipInstall "C:\Documents and Settings\All
Users\Application Data\IBM\Installation Manager"
```

        2) Linux:

```
IBMIM –skipInstall /var/ibm/InstallationManager
```

    __ c. Choose the **Uninstall** option from the main page of the installation manager.

        NOTE: Since the installation manager was started with –skipInstall, choosing Uninstall is NOT going to uninstall the application server, just unimport it from the installation manager.

__ d. Verify that the only package in the list is WebSphere Application Server V7 and **select** the corresponding box.
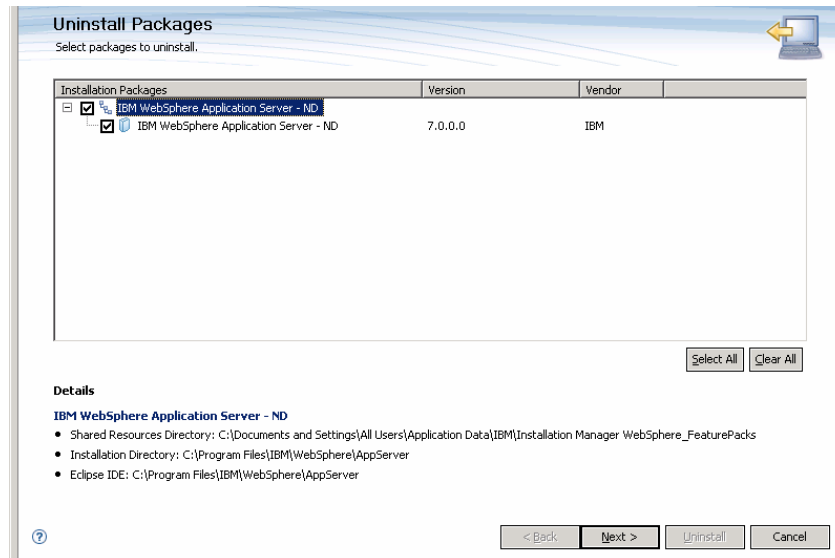
__ e. Select **Next**.

__ f. Click **Uninstall** to unimport the application server from the installation manager.

Note: Any status messages that indicate profiles are being deleted refer to installation manager profile information; no application server profiles are being deleted.

__ g. Click **Finish** to return to the main panel of the Installation Manager.

__ h. After unimporting, **close** the Installation Manager.

_____ 2.   Uninstall the IBM Installation Manager

__ a. Log in to the system with the ID that you used to install the installation manager.

__ b. Close the installation manager if it is running.

__ c. Launch the uninstall.

1) On Windows, use the **Add or Remove Programs** menu in the **Control Panel** to remove the **IBM Installation Manager**.

2) On Linux:

a) Select **Start** (or Applications) **> IBM Installation Manager > Uninstall IBM Installation Manager**

__ d. Use the uninstaller panels to remove the installation manager.

1) Verify the Uninstall Packages panel has the IBM Installation Manager selected.

2) Select **Next**.

3) Select **Uninstall**.

4) Select **Finish**.

Troubleshooting

Log files are located under the logs directory of the installation manager's application data location. The main log files are time-stamped XML files. Below is an example of where the log files might be:

Platform	Installation type	Typical data location
Windows 2003	Administrator	C:\Documents and Settings\All Users\Application Data\IBM\Installation Manager
Windows 2003	Non-administrator	C:\Documents and Settings\<user_name>\Application Data\IBM\Installation Manager
Linux	Root	/var/ibm/InstallationManager
Linux	Non-root	<user_home_directory>/var/ibm/InstallationManager

To troubleshoot problems with installing the feature pack, gather traces for WebSphere Application Server plug-ins. The log.properties file under <IM_DATA>/logs specifies the level of logging and tracing that the installation manager uses. To turn on tracing for WebSphere Application Server plug-ins, create a log.properties file with the content below:

```
com.ibm.ws=DEBUG

PakInstallOperation=DEBUG
```

Restart the installation manager, and it should then produce traces for the plug-ins. Tracing for the plug-ins normally goes into the main log files, except for PAK engine traces, which go under <IM_DATA>/logs/PAKEngine.

Also, you should look at the release notes that come with the feature pack to see what limitations exist when installing.

What you did in this exercise

In this lab you installed the IBM WebSphere Feature Pack for Communications Enabled Applications. Secondly, you installed the sample IP private branch exchange (PBX) application that is included in with the IBM WebSphere Application Server Feature Pack for CEA. Finally you installed two softphones that are needed to test out communications enabled applications.

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