

Ezy Imaging Suite – Ezy Image Print

Java Applet Version (v4.8.0) for Oracle Apex

Deployment Guide

Since we have bundled ALL our 6 different products available within Ezy Imaging Suite as one Oracle Apex sample application to make it easy to demo all the available functionalities and features of each product, you will only need to deploy this Zip file once. You can skip this Deployment Guide if you have already performed this task before.

- Unzip the Evaluation Version Zip file, **EIS_Applet_OracleApex_V480.zip**, into a temporary folder on your Web/Application Server deployment platform, which may be Apache Tomcat Server, Oracle GlassFish Server or Oracle WebLogic Server with Oracle REST Data Services (formerly Apex Listener) installed within this server.
- On your Web/Application Server platform that is used to serve requests for Oracle Apex applications, create a Virtual Path **“/EIS”** that maps to the physical filepath that will be used for downloading the Java JAR files to your client machine from its **‘java’** subfolder, and the sample Apex Application images from its **‘images’** subfolder.
- The sample Apex application uses this **“/EIS”** virtual path within 2 Substitution Variables, namely **“EIS_IMAGES_PATH”**, which currently points to **“http://asus-bob:8086/EIS/images/”** and **“EIS_JAVA_PATH”**, which points to **http://asus-bob:8086/EIS/java/**.

Following are the instructions on how to do this within the various deployment platforms under Windows environment, as an example. Similar settings need to be done under Linux/UNIX environment:

Apache Tomcat Server

In the **‘conf’** folder where Tomcat has been deployed, example, **‘C:\Program Files (x86)\Apache Software Foundation\Tomcat 8.5\conf’**, create the Context entry in the file called **‘server.xml’** inside the **‘Host’** tag, as follows:

```
<Host name="localhost" appBase="webapps"
      unpackWARs="true" autoDeploy="true">

    <Context path="/EIS" docBase="C:\Applications\EzyImagingSuite\Applet/"

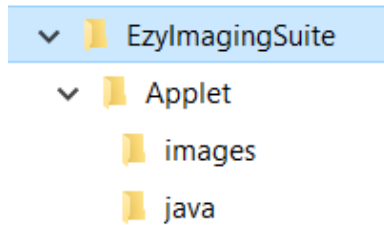
    <!-- SingleSignOn valve, share authentication between web applications
         Documentation at: /docs/config/valve.html -->
    <!--
    <Valve className="org.apache.catalina.authenticator.SingleSignOn" />
    -->

    <!-- Access log processes all example.
         Documentation at: /docs/config/valve.html
         Note: The pattern used is equivalent to using pattern="common" -->
    <Valve className="org.apache.catalina.valves.AccessLogValve" directory="logs"
          prefix="localhost_access_log" suffix=".txt"
          pattern="%h %l %u %t &quot;%r&quot; %s %b" />

</Host>
```

On your Tomcat deployment platform, create the physical folder as per your physical filepath specified above. Copy the subfolders, '**java**' and '**images**' from your temporary folder into this EIS root folder.

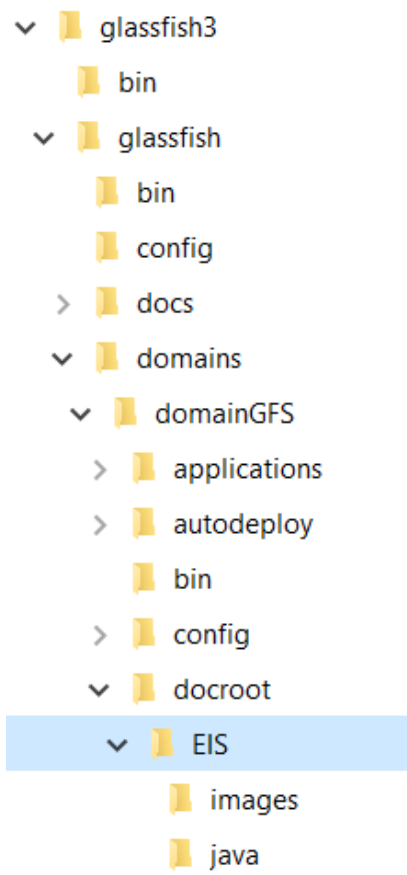
Example on Windows platform you should have:



Oracle GlassFish Server

To create the virtual path, create a folder called '**EIS**' under your Glassfish Domain's '**docroot**' folder, and copy both the '**images**' and '**java**' folders into this 'EIS' folder.

For example on a Windows platform, assuming that you have a domain called '**domainGFS**', you should have a structure similar as follows:



Oracle WebLogic Server

Creation of the virtual path, '**EIS**' is not straightforward within WebLogic Server. To provide a way of referencing the images and Java JAR files within the sample Apex application, one way of doing this is to create a Web Application and deploying its WAR file through WebLogic Admin Console, and defining the Virtual Directory Mapping within '**weblogic.xml**' file, which is as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<weblogic-web-app xmlns="http://www.bea.com/ns/weblogic/weblogic-web-app">
  <context-root>/EIS</context-root>
  <virtual-directory-mapping>
    <local-path>C:/Applications/EzyImagingSuite/Applet/</local-path>
    <url-pattern>/*</url-pattern>
  </virtual-directory-mapping>
</weblogic-web-app>
```

We have provided the sample WAR file, "**EISVirtualDirMapping.war**" within our Zip file, which only contains **web.xml** and **weblogic.xml**.

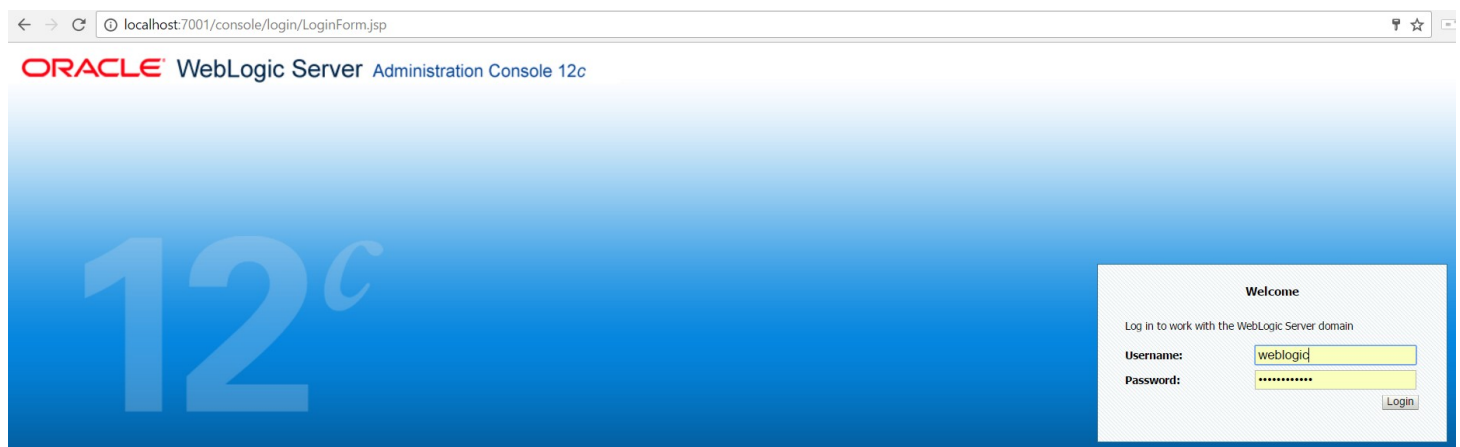
You can create a similar named Web Application Project using NetBeans or Eclipse or any other IDE, and copy both these files into the project's **WEB-INF** folder, and modify the '**<local-path>**' value to point to the physical folder that contains both your '**images**' and '**java**' folder within your WebLogic Server environment.

This project does not need any index.html or any other web page file. Once you have done this, you can build the project to generate its WAR file, as per the same name above.

To deploy this WAR file, access the WebLogic Server Administration Console. Open a web browser and enter the URL of the domain's administration console:

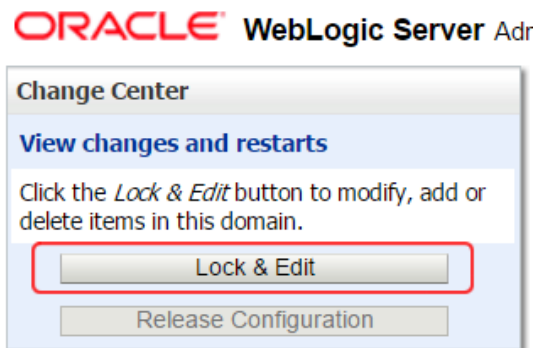
`http://hostname:port/console`

In this tutorial, that is: **`http://asus-bob:7001/console`**



Change the hostname and port according to your own environment. Log in as '**weblogic**' and its password and press '**Login**' button.

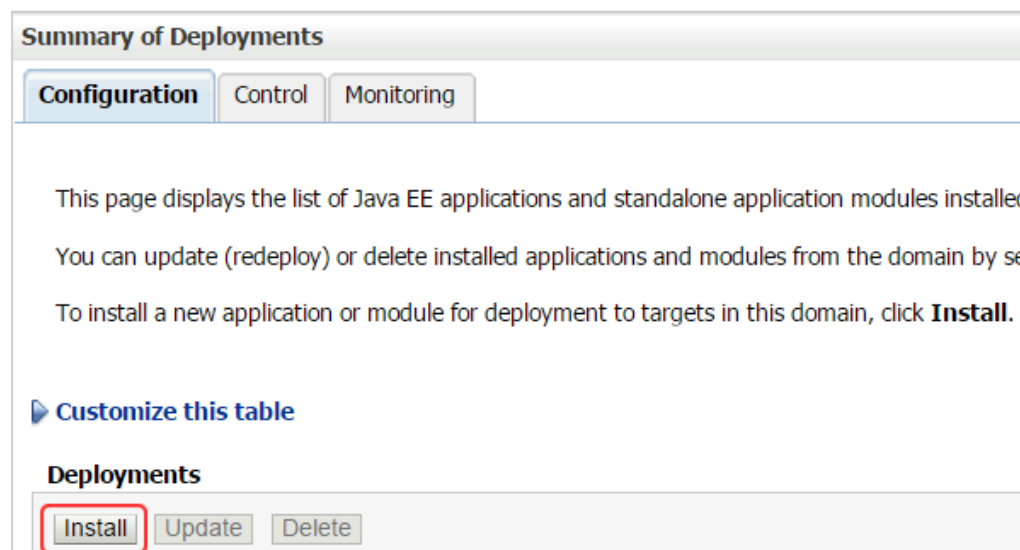
Deploying an application is a change to the domain's configuration, so it must first be locked. In the Change Center, click the **Lock & Edit** button, highlighted in a red border.



Under Domain Structure, click **Deployments**.



On the right, under Deployments, click the **Install** button.



Find the **Current Location** field. Use the links to browse to the location in which you placed the “**EISVirtualDirMapping.war**” file. There you will see this filename with a radio button next to it. Select that radio button. By using the links and the radio button, the console fills in the **Path** field for you.

Alternatively, you can type in the path and file name in the **Path** field yourself.

Then click **Next**.

Install Application Assistant

Back
Next
Finish
Cancel

Locate deployment to install and prepare for deployment
 Select the file path that represents the application root directory, archive file, exploded archive directory, or application module descriptor that you want to install. You can
 Note: Only valid file paths are displayed below. If you cannot find your deployment files, [Upload your file\(s\)](#) and/or confirm that your application contains the required

Path:
C:\Users\bob\Documents\NetBeansProjects\EISVirtualDirMapping\dist\EISVirtualDirMapping.war

Recently Used Paths:
C:\Users\bob\Documents\NetBeansProjects\EISVirtualDirMapping\dist
D:\LB_EzySolutions\EzyImageCapture\ProductDistribution\OracleApex

Current Location:
localhost \ C: \ Users \ bob \ Documents \ NetBeansProjects \ EISVirtualDirMapping \ dist

EISVirtualDirMapping.war

Back
Next
Finish
Cancel

On the next screen, ensure that **Install this deployment as an application** is selected.

Then click **Next**.

Install Application Assistant

Back
Next
Finish
Cancel

Choose installation type and scope
 Select if the deployment should be installed as an application or library. Also decide the scope of this deployment.
 The application and its components will be targeted to the same locations. This is the most common usage.

☒ **Install this deployment as an application**
 Application libraries are deployments that are available for other deployments to share. Libraries should be available on all of the targets running their referencing applications.

☐ **Install this deployment as a library**
 Select a scope in which you want to install the deployment.

Scope:
Global ▼

Back
Next
Finish
Cancel

On the next screen, select the servers and/or clusters to which you want to deploy this application.

Then click **Next**.

On my own WebLogic Server, I am deploying this to the Admin Server as well as 'cluster_forms' cluster. You should select the required deployment targets according to your own environment.

The screenshot shows the 'Install Application Assistant' window with the 'Select deployment targets' step. At the top, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'. Below the title bar, the text reads: 'Select deployment targets' followed by 'Select the servers and/or clusters to which you want to deploy this application. (You can reconfigure deployment targets later)'. The section 'Available targets for EISVirtualDirMapping :' contains two main categories: 'Servers' and 'Clusters'. Under 'Servers', the 'AdminServer' is listed with a checked checkbox. Under 'Clusters', 'cluster_forms' is selected with a checked checkbox, and its sub-options 'All servers in the cluster' (selected with a radio button), 'Part of the cluster' (radio button), and 'WLS_FORMS' (checkbox) are visible. Below this, 'cluster_reports' is listed with an unchecked checkbox, and its sub-options 'All servers in the cluster' (radio button), 'Part of the cluster' (radio button), and 'WLS_REPORTS' (checkbox) are also visible. At the bottom, there are again navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

On the next screen, keep all the default values and click **Next**.

— General —

What do you want to name this deployment?

* Name:

— Security —

What security model do you want to use with this application?

☒ **DD Only:** Use only roles and policies that are defined in the deployment descriptors.

☐ **Custom Roles:** Use roles that are defined in the Administration Console; use policies that are defined in the deployment descriptor.

☐ **Custom Roles and Policies:** Use only roles and policies that are defined in the Administration Console.

☐ **Advanced:** Use a custom model that you have configured on the realm's configuration page.

— Source Accessibility —

How should the source files be made accessible?

☒ **Use the defaults defined by the deployment's targets**

Recommended selection.

☐ **Copy this application onto every target for me**

During deployment, the files will be copied automatically to the Managed Servers to which the application is targeted.

☐ **I will make the deployment accessible from the following location**

Location:

Provide the location from where all targets will access this application's files. This is often a shared directory. You must ensure the application files exist in this location and that each target can reach the location.

— Plan Source Accessibility —

How should the plan source files be made accessible?

☒ **Use the same accessibility as the application**

Recommended selection.

☐ **Copy this plan onto every target for me**

During deployment, the plan files will be copied automatically to the Managed Servers to which the application is targeted.

☐ **Do not copy this plan to targets**

You must ensure the plan files exist in the shared location and that each target can reach the location.

On the next screen, select **No, I will review the configuration later**. Then click **Finish**.

Install Application Assistant

Back Next Finish Cancel

Review your choices and click Finish

Click Finish to complete the deployment. This may take a few moments to complete.

Additional Configuration

In order to work successfully, this application may require additional configuration. Do you want to review this application's configuration after completing this assistant?

☐ Yes, take me to the deployment's configuration screen.

☒ No, I will review the configuration later.

Summary

Deployment: C:\Users\bob\Documents\NetBeansProjects\EISVirtualDirMapping\dist\EISVirtualDirMapping.war

Name: EISVirtualDirMapping


Staging Mode: Use the defaults defined by the chosen targets

Plan Staging Mode: Use the same accessibility as the application

Security Model: DDOnly: Use only roles and policies that are defined in the deployment descriptors.

Scope: Global

Target Summary

Components 	Targets
EISVirtualDirMapping	AdminServer, cluster_forms

Back Next Finish Cancel

Notice the messages that the deployment was installed, but changes must be activated. Also notice the **EISVirtualDirMapping** application listed in the Deployments table.

Home > Summary of Deployments

Messages

- ✓ The deployment has been successfully installed.
- ✓ You must also activate the pending changes to commit this, and other updates, to the active system.

Summary of Deployments

Configuration Control Monitoring

This page displays the list of Java EE applications and standalone application modules installed to this domain.

You can update (redeploy) or delete installed applications and modules from the domain by selecting the checkbox next to the application name and then using the controls on this page.

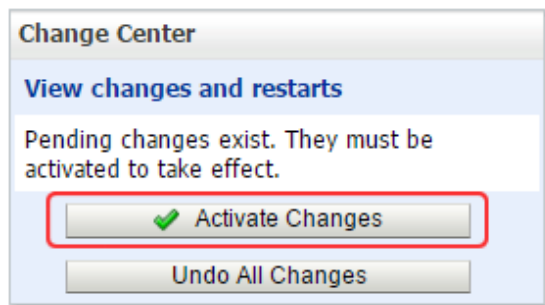
To install a new application or module for deployment to targets in this domain, click **Install**.

Customize this table

Deployments

Showing 1 to 10 of 61 Previous Next								
Install Update Delete								
<input type="checkbox"/>	Name	State	Health	Type	Targets	Scope	Domain Partitions	Deployment Order
<input type="checkbox"/>	adf.oracle.businesseditor(1.0,12.2.1.1.0)	Active		Library	AdminServer, cluster_forms, cluster_reports	Global		100
<input type="checkbox"/>	adf.oracle.domain(1.0,12.2.1.1.0)	Active		Library	AdminServer, cluster_forms, cluster_reports	Global		100
<input type="checkbox"/>	adf.oracle.domain.webapp(1.0,12.2.1.1.0)	Active		Library	AdminServer, cluster_forms, cluster_reports	Global		100
<input type="checkbox"/>	coherence-transaction-rar	Active	✓ OK	Resource Adapter	AdminServer, cluster_forms, cluster_reports	Global		100
<input type="checkbox"/>	DMS Application (12.2.1.1.0)	Active	✓ OK	Web Application	AdminServer, cluster_forms, cluster_reports	Global		5
<input type="checkbox"/>	EISVirtualDirMapping	distribute Initializing		Web Application	AdminServer, cluster_forms	Global		100
<input type="checkbox"/>	em	Active	✓ OK	Enterprise Application	AdminServer	Global		400
<input type="checkbox"/>	emagentsdkimplpriv_jar(12.4,12.1.0.4.0)	Active		Library	AdminServer	Global		100
<input type="checkbox"/>	emagentsdkimpl_jar(12.4,12.1.0.4.0)	Active		Library	AdminServer	Global		100
<input type="checkbox"/>	emagentsdk_jar(12.4,12.1.0.4.0)	Active		Library	AdminServer	Global		100
Install Update Delete								
Showing 1 to 10 of 61 Previous Next								

In the Change Center, click the **Activate Changes** button.



Notice the message that the changes have been activated. Also notice the **EISVirtualDirMapping** application listed in the Deployments table is now in the "Prepared" state.

<input type="checkbox"/>	<input type="checkbox"/>	EISVirtualDirMapping	Prepared	✓ OK	Web Application
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Click on the 'Control' tab, select the check box to the left of the **EISVirtualDirMapping** application in the Deployments table. Then use the **Start** drop-down list to select '**Servicing all requests**'.

Summary of Deployments

Configuration **Control** Monitoring

This page displays the list of Java EE applications and standalone application modules installed to this domain.

You can start and stop applications and modules from the domain by selecting the checkbox next to the application name and then using the controls on this page.

[Customize this table](#)

Deployments

Start Stop				
Servicing all requests				
Servicing only administration requests				
			State	Health
				Type
			Active	OK
				Resource Adapter
			Active	OK
				Web Application
			Prepared	OK
				Web Application

In the 'Start Application Assistant' screen, click 'Yes' button to continue.

Start Application Assistant

Yes No

Start Deployments

You have selected the following deployments to be started. Click 'Yes' to continue, or 'No' to cancel.

- EISVirtualDirMapping

Yes No

A message is displayed indicating a start request was sent. Momentarily you will see the State of the **EISVirtualDirMapping** application become "Active." This means that the application is available to those that have access to the server.

			State	Health
				Type
			Active	OK
				Web Application

To test if you can access one of the image files within your 'images' folder, enter the following in another web browser session (change hostname and port according to your environment):

http://asus-bob:7001/EIS/images/EIS_Logo.png

You should see displayed within the browser:



For more information on how to deploy, update and undeploy applications on Oracle WebLogic Server, please refer to the following website:

<http://www.oracle.com/webfolder/technetwork/tutorials/obe/fmw/wls/12c/03-DeployApps/deployapps.htm>

Confirm that you have the following image files within the 'images' subfolder of the EIS root folder:

- **EIS_Logo.png**
- **warnProgress.gif**

- Confirm that you have the following JAR files within the 'java' subfolder of the EIS root folder:

- **imgscalr-lib-4.2.jar**
- **jai_codec.jar**
- **jai_core.jar**
- **jai_imageio.jar**
- **jdeli.jar**
- **joda-time-2.7.jar**
- **jPDFNotes.jar**
- **LB_EIC_Applet.jar**
- **LB_EIM_Applet.jar**
- **LB_EIP_Applet.jar**
- **LB_EPC_Applet.jar**
- **LB_EPM_Applet.jar**
- **LB_EPP_Applet.jar**
- **morena.jar**
- **morena_license.jar**
- **morena_windows.jar**
- **ojdbc6.jar**
- **pdfbox-app-2.0.3.jar**
- **plugin.jar**
- **thumbnailator-0.4.3.jar**

- The sample Ezy Imaging Suite (EIS) Oracle Apex application provided uses a number of database objects, which need to be created under a database schema that needs to own these objects. This user needs to be created with CONNECT and RESOURCE database roles.

For the purpose of this Evaluation Version demo, create a schema called '**EISDEMO**' with a password of '**EISDEMO**' too.

This password is referenced, in clear text form, in the sample EIS application when showcasing how Image BLOB columns are stored and retrieved through JDBC calls within EIS Java-side components.

In your own real-life production environment, you will need to implement your own mechanism of how to pass in the schema owner's password that is not in clear text form, unless it is perfectly acceptable to do so.

NOTE:

For 11g and above databases, should you create the username with a case insensitive password, ie, '**eisdemo**', please alter within your D/B thru ALTER SYSTEM statement or Parameter setting in init<db>.ora file should your organization be using case insensitive passwords:

alter system set sec_case_sensitive_logon=false scope=spfile;

- Login as EISDEMO into SQL*Plus or TOAD or any other tool, and run the SQL file called '**cr_EIS_objs.sql**'. This will create 3 database tables, namely:
 - **LB_BLOB_DOCS**
 - **LB_IMAGE_BLOB_DOCS**
 - **LB_PDF_BLOB_DOCS**

Other objects are the table's Unique Indexes as well as 3 Database Sequences.

NOTE:

ONLY **LB_BLOB_DOCS** is a MANDATORY Temporary Table used by Ezy Imaging Suite Java components when using the Database Table as an Imaging/PDF Documents Repository. When a document is saved using the Database Server Table Repository, you will need to implement your own Apex routine that will copy the BLOB column from this temporary table into the actual database table that your application uses.

See Application Process '**odp_savelImageDoc_DB**' and '**odp_savePDFDoc_DB**' as examples of these routines that are used in our sample application.

- To import the Ezy Imaging Suite Oracle Apex sample application, developed using Application Express 4.2.6.00.03, into your Oracle Database Server, log into the **INTERNAL** Oracle Apex Workspace using the Apex **ADMIN** account, and create a Workspace called '**EIS**' for the purpose of this demo and associate the existing Schema **EISDEMO** to this Workspace.
- Log into **EIS** Workspace as **ADMIN** with the correct password and press '**Import**' button to import this sample EIS application. Choose the relevant Oracle Apex Application SQL file that is within your temporary folder on your deployment platform.

If you are using **Windows**, select **f500_DOS.sql**, otherwise if using **Linux/UNIX**, select **f500_UNIX.sql**.

- Select '**EISDEMO**' as the Parsing Schema and Reuse the same **Application ID 500** or any other ID & press 'Install Application' button.
- Since our sample application is based on Theme 24, ie, Cloudy Theme, there was a slight issue with multiple regions not being displayed with any margin between 2 or more regions. As such, we have made a small modification to the CSS file, '**4_1.css**' for this theme. You should copy this file from the unzipped temporary folder into the location of your Oracle Apex images folder, particularly, '**\$APEX_IMAGES_HOME\images\themes\theme_24\css**', where **\$APEX_IMAGES_HOME** represents the folder where you have deployed all the subfolders within the 'images' folder of your Oracle Apex installation into the deployment platform.

The change made to this CSS file is to '**section.uRegion**' class, where the following line has been modified on Line# 628:

```
margin:0px 0px 2px 2px !important
```

- Should everything be installed properly without any errors, you should be able to run the application to get a good overview all the features & functionalities of Ezy Imaging Suite products when integrated with an Oracle Apex application.

Pre-requisites to run the sample EIS application:

- Ensure that you always use the latest **JRE Plug-In** to run our Ezy Imaging Suite Oracle Apex sample application. You can download the latest JRE from:

<http://java.com/en/download/>

- ALL our JAR files are signed with LongBridge's Trusted Certificate which is valid until 21-May-2019.
- Since Google Chrome no longer supports Java Applets, it is **BEST** to use the latest **Internet Explorer browser** with our sample application.
- As for **Mozilla Firefox**, you need to install the **Extended Support Release Firefox 38.4.0esr**, which works with our 'Select Folder' API. Otherwise Firefox may have issues with JVM crashing especially during selection of the Folder location where you wish to store your newly captured imaging/PDF document into, or unless you use your own method or key in the correct folder name, which will be validated to exist within one of our Java methods.
- For more info on Extended Support Release of Mozilla Firefox, check out the following URL link:

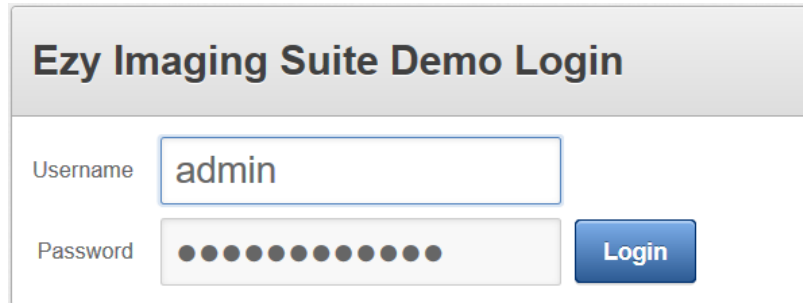
<https://support.mozilla.org/en-US/questions/1094365>

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- To run the sample application, enter a similar URL as follows in your browser (change Hostname & Port according to your environment):

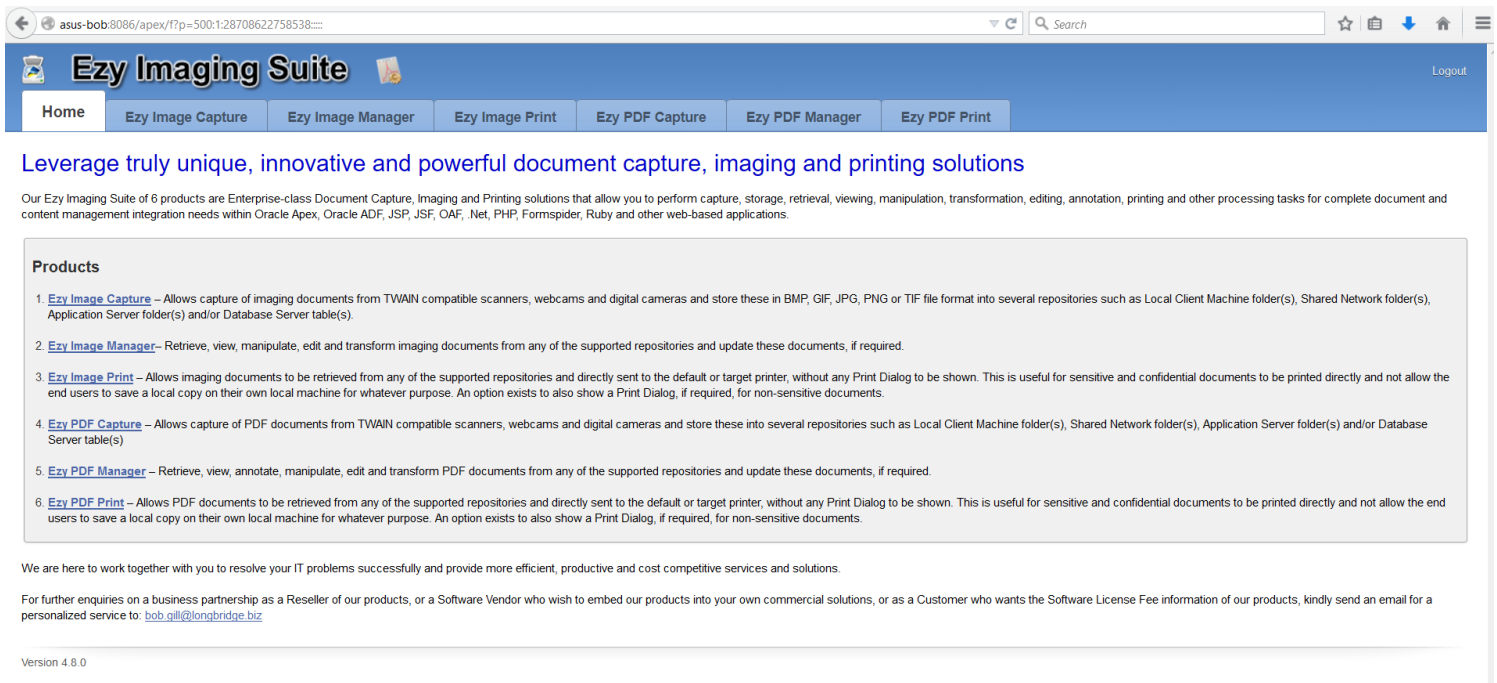
http://asus-bob:8086/apex/f?p=EIS

- Enter 'admin' and it's password in the following screen and press 'Login' button:



The login form is titled "Ezy Imaging Suite Demo Login". It contains two input fields: "Username" with the text "admin" and "Password" with masked characters (dots). A blue "Login" button is positioned to the right of the password field.

- This is the Home Page that will be presented upon successful login:



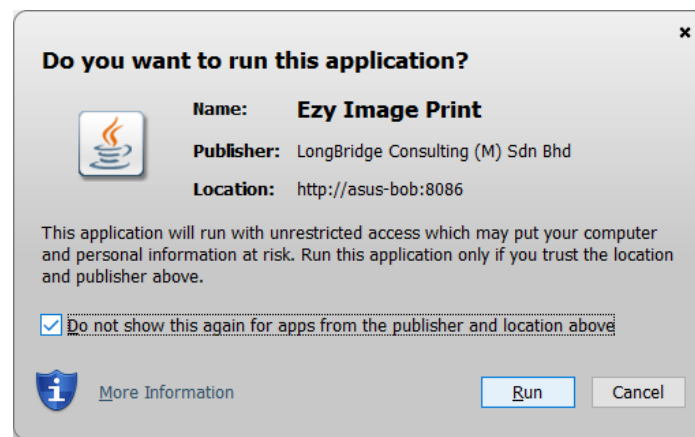
The screenshot shows the Ezy Imaging Suite Home Page in a web browser. The browser address bar shows the URL: `asus-bob:8086/apex/f?p=500:1:28708622758538::...`. The page has a blue header with the "Ezy Imaging Suite" logo and a "Logout" link. Below the header is a navigation bar with tabs: "Home", "Ezy Image Capture", "Ezy Image Manager", "Ezy Image Print", "Ezy PDF Capture", "Ezy PDF Manager", and "Ezy PDF Print". The main content area is titled "Leverage truly unique, innovative and powerful document capture, imaging and printing solutions". It includes a paragraph about the suite's capabilities and a "Products" section listing six products with their descriptions. At the bottom, there is a footer with contact information and the version number "Version 4.8.0".

- The Home Page provides an overall summary of what Ezy Imaging Suite using our Java Applet components is all about, and a description of each of the 6 products that we currently have that can be integrated into any of the web-based technologies such as Oracle Apex, Oracle ADF, JSP, JSF, OAF, .Net, PHP, Formspider, Ruby and other web-based applications.
- Since our focus for this Tutorial is ONLY on Ezy Image Print, please refer to the other products' Tutorial Guides on how to use the relevant product for integration into your own Enterprise Document / Content Management application.

- **Ezy Image Print** is a product that allows imaging documents to be retrieved from any of the supported repositories, ie, Local Client Machine, Shared Network Folder(s), Web/Application Server URL location(s) and Database Server; and directly sent to the default or target printer, without any Print Dialog to be shown.

This is useful for sensitive and confidential documents to be printed directly and not allow the end users to save a local copy on their own local machine for whatever purpose. An option exists to also show a Print Dialog, if required, for non-sensitive documents.

- To navigate to the Apex Page that is integrated with this product, either click on the link '**Ezy Image Print**' within the 'Products' region on the Home Page or click on its Tab folder.
- If this is the first time that you are visiting this Apex Page and you had not confirmed the acceptance of running Ezy Image Print and allow our Trusted Certificate to be stored on your local client machine, then tick the checkbox that says 'Do not show this again for apps from the publisher and location above' and press the 'Run' button, when presented with the Applet Security popup alert window, as shown below:



- Next, the following screen will then be presented to you, with an animated message in the Printer Settings Region that says '**Fetching Printer Details. Please Wait...**'

- Once the Printer details such as Default Printer attached to your local client machine, as well as a list of all other printers accessible from your local client machine has been fetched, you will see the 'Printer Settings' Region updated automatically with these details, similar to the following screen:

Printer Settings

Default Printer
Foxit Reader PDF Printer

Target Printer
WorkForce 630 Series - Network FAX ▼

Delete Image File after Print Job executed?
(ONLY applicable for Local or Shared Network Folder file) ☐

Paper Orientation
Portrait ▼

In my case, 'Foxit Reader PDF Printer' is my default Printer, and the following set of Printers are available within the Target Printer dropdown list item:

Target Printer

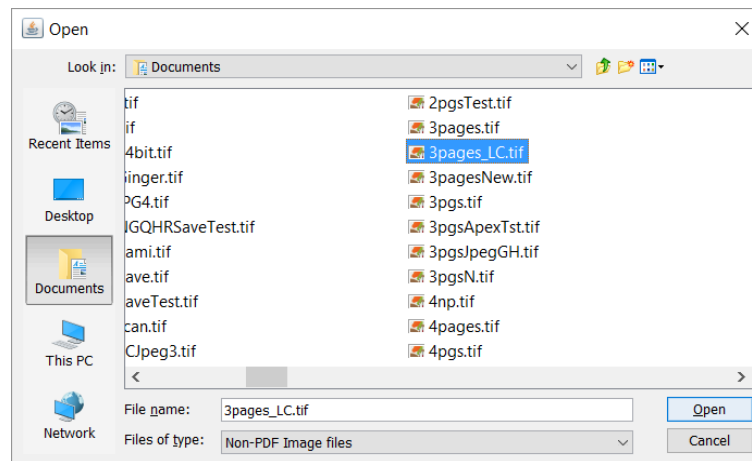
WorkForce 630 Series - Network FAX
Microsoft XPS Document Writer
Microsoft Print to PDF
Foxit Reader PDF Printer
Fax
CutePDF Writer

You should see a change within your own environment as per the printers that have been installed and accessible from your own local client machine.

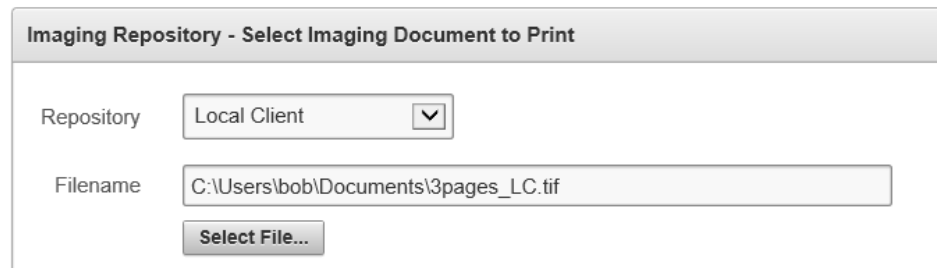
The following sections show how Ezy Image Print can interface with all the 4 supported repositories to print imaging documents from, directly to the default or target printer with/without the Print Dialog window.

Local Client Repository

With the **Repository** dropdown list item set to '**Local Client**', and the "Value Placeholder" Hint within the Filename field set to "e.g. C:\Users\bob\Documents\image1.tif", select the file called '**3pages_LC.tif**' using the **Select File...** button, which will open the '**Open File Dialog**' window, as shown below:



Once you have selected the required file as shown above, press the '**Open**' button. This will copy the selected file into the Apex application '**Filename**' field, as shown below:



If you also wish to delete the source imaging document before printing it, you could do so by ticking the '**Delete Image File after Print Job executed?**' checkbox. By default, the Image File is NEVER deleted once the Print Job has been executed.

If you wish to delete the file programmatically, then the API below MUST be called BEFORE the Print API:


```
EIP.setDeleteImageDoc('Y');
```

You may also set the **Paper Orientation** as desired. By default '**Portrait**' has been selected, or you may change it to '**Landscape**' as desired by using its dropdown list.

To do this programmatically, then the API below MUST be called, passing in '**P**' for 'Portrait', or '**L**' for '**Landscape**', BEFORE the Print API:

```
EIP.setPrintOrientation('P');
```

Print to Default Printer


To print the imaging document and send it directly to the Default Printer without having to see the Print Dialog, press  button.

This action would call the JavaScript function '**sendDocToPrinter**' passing in '**default**' as the Printer Name argument value. Refer to the logic within the Apex application, which is well commented to help you understand the process flow.

Should there be no processing errors, which ensures that at least 1 Printer has been installed and is accessible; a valid filename has been provided; and no unusual printer exception had occurred; your imaging document would have been successfully sent to the Printer Queue for the printing job to be activated. Check your printer after a few minutes to ensure that your document has been printed out on the default printer.

Print to Target Printer

To send the imaging document to a particular printer, use the Target Printer dropdown list item as shown on Page 16 to select the desired printer. You may also set '**Delete Image File after Print Job executed?**'

checkbox and **Paper Orientation** dropdown list item, as desired, before pressing  button.

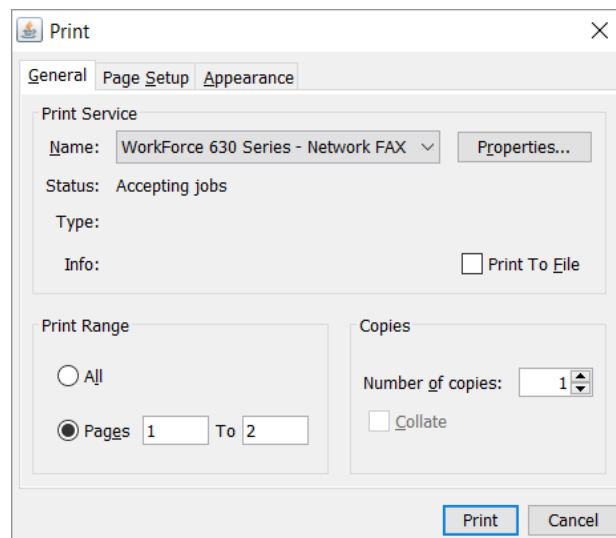
This action would call the JavaScript function '**sendDocToPrinter**' passing in the Target Printer Name selected, eg, '**WorkForce 630 series**' as the Printer Name argument value.

Check your printer after a few minutes to ensure that your document has been printed out on the target printer, provided no processing errors had occurred prior to the print job being activated.

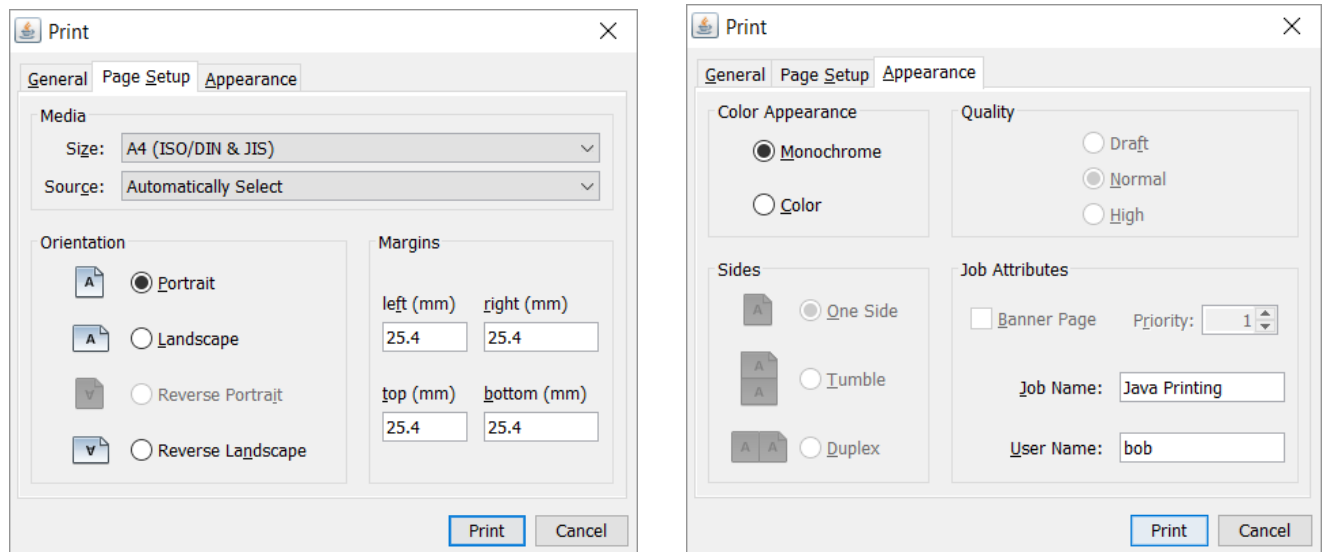
Print using Print Dialog

To send the imaging document to a particular printer where you also need the Print Dialog to be shown so that you can set whatever Printer Properties such as Page Range, Number of Copies, Media Size, Margins,

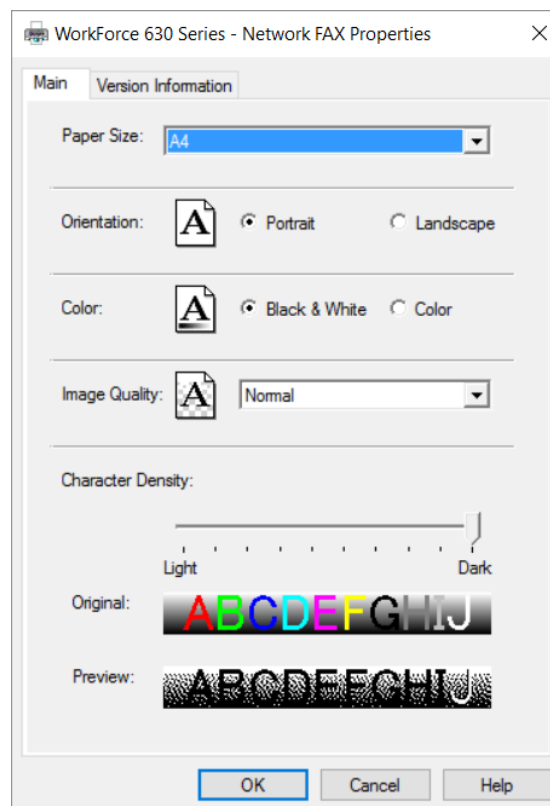
Appearance and other advanced settings, then press  button. This pops up the following Print Dialog Window showing the '**General**' tab folder contents initially:

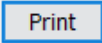


The 'Page Setup' tab folder and 'Appearance' tab folder contents are as follows:



Depending on the chosen Printer, pressing 'Properties...' button will pop up the following window:



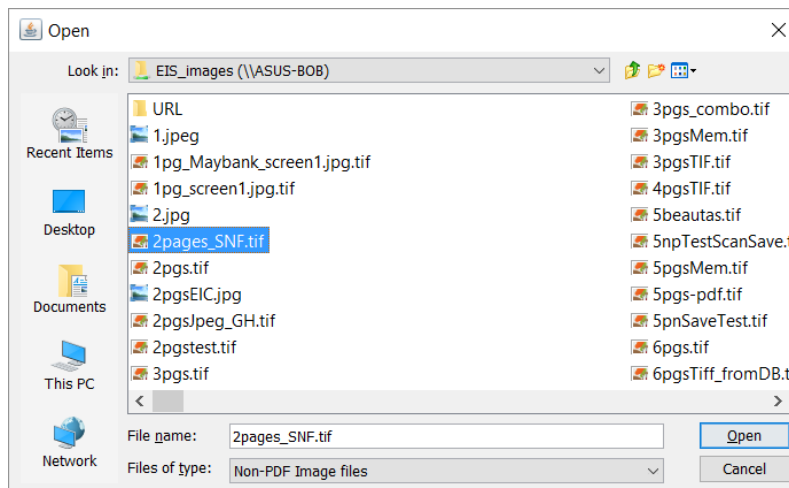
Once you have made all the required Printer Properties settings, you may then press  button to send the imaging document to the Printer Queue.

Check your printer after a few minutes to ensure that your document has been printed out on the target printer, provided no processing errors had occurred prior to the print job being activated.

Shared Network Folder Repository

To print an imaging document from this repository, which you should have read access from, change the **Repository** to **'Shared Network'**, which will automatically change the "Value Placeholder" Hint within the Filename field to "e.g. \\ASUS-BOB\\EIS_images\\image1.tif".

To select the desired Shared Folder Filename, press **Select File...** button, which will popup the **'Open Dialog' window**. From the 'Look in' dropdown list of this window, select 'Network', which will list all the Network Drives from where you will be able to select your desired network folder filename to open the imaging document from.



Once you have selected the required file as shown above, ie, **"\\ASUS-BOB\\EIS_images\\2pages_SNF.tif"**, press the **'Open'** button. This will copy the selected file into the Apex application **'Filename'** field, as shown below:

Imaging Repository - Select Imaging Document to Print

Repository

Shared Network

Filename

\\ASUS-BOB\\EIS_images\\2pages_SNF.tif

Select File...

You may also set **'Delete Image File after Print Job executed?'** checkbox and **Paper Orientation** dropdown list item, as desired, before pressing the relevant Print button depending on whether you wish to send the imaging document to the Default Printer or a specific Target Printer, or use the Print Dialog to set additional printer properties before sending the document to the Printer Queue for the print job to be activated.

Web/Application Server URL Repository

To open an imaging document from this repository, which you should have read access from, change the **Repository** to '**URL (Web/App Server)**', which will automatically change the "Value Placeholder" Hint within the Filename field to "e.g. http://asus-bob:8080/images/image1.tif".

Since the 'Select File...' button and 'Delete Image File after Print Job executed?' checkbox are not applicable, they are disabled as well.

For URL locations to work, ensure that any Virtual Path that you had defined is accessible from the host and port that is being used as part of the filename. As explained within the Deployment Notes, it is pretty straightforward to define virtual paths within Apache Tomcat Server and Oracle GlassFish Server, while it takes some extra effort to do so within Oracle WebLogic Server.

Let us assume that we are using Apache Tomcat Server to store our previously captured imaging documents and saved them in the subfolder called 'URL' within the 'EIS' root folder. '**EIS**' Virtual Path on Tomcat was defined to map against:

'D:\LB_EzySolutions\InternetRuntime\EzyImagingSuite\Applet'

which means that a 'URL' subfolder had also been created within its 'Applet' parent folder.

Enter a valid URL location of an imaging document, example:

'http://asus-bob:8086/EIS/URL/bird.jpg'

Pressing the relevant Print button depending on whether you wish to send the imaging document to the Default Printer or a specific Target Printer, or use the Print Dialog to set additional printer properties will send the document to the Printer Queue for the print job to be activated.

Database Server Repository

To open an imaging document from this repository, which you should have 'SELECT' privileges from the database server table(s) to be accessed, change the **Repository** to '**Database Server**', which will automatically blank out the 'Filename' field, disable Select File...' button and 'Delete Image File after Print Job executed?' checkbox as they are not applicable, and position the cursor into the Primary Key Value(s) field.

For simplicity, we have provided default values within '**Database Connection and Table Data**' Region to reduce the time required to enter the values.

Refer to Application Process '**set_JDBC_app_items**', which is executed '**On Load: Before "Body" Region(s)**', which sets the default values for Hostname, Port, Database Instance and Schema Owner.

The other default values for Database Table, BLOB Column Name and Primary Key Column Name(s) are set within Ezy Image Print Apex Page fields. The sample Apex application is using '**LB_IMAGE_BLOB_DOCS**' as the database table to store Imaging Documents into, and as such we have set this value in the field '**P30_DB_TABLE**' as its default value. '**P30_BLOB_COL_NAME**' field has been set with a default value of '**BLOB_DOC**' as this is the database column within the database table that has been defined as a BLOB Column to store the imaging document into. '**P30_PK_COLS**' field has been set with a default value of '**DOC_ID**' as this is the 1 Column Primary Key that identifies the unique row to identify each record within this database table.

The screen below shows all the default values that have been set within this region, as well as the imaging document where the DOC_ID has a value of 12 that I wish to print from the stated table:

Database Connection and Table Data

Hostname / IP	Port	D/B Instance
<input type="text" value="192.168.43.109"/>	<input type="text" value="1521"/>	<input type="text" value="DB11gR2"/>
Database Table	BLOB Column Name	
<input type="text" value="LB_IMAGE_BLOB_DOCS"/>	<input type="text" value="BLOB_DOC"/>	
Primary Key Column Name(s)		
<input type="text" value="DOC_ID"/>		
<small>More than 1 Primary Key Column MUST have ' ' as its delimiter between the various column names.</small>		
Primary Key Value(s)		
<input type="text" value="12"/>		
<small>More than 1 Primary Key Value MUST have ' ' as its delimiter between the various values, and MUST have the appropriate Data Type specification.</small>		

You need to look through your own LB_IMAGE_BLOB_DOCS table to see what values exists for the DOC_ID column amongst the records in this table after performing several Document Capture tasks using Ezy Image Capture to store the imaging documents in this Database Server table.

Pressing the relevant Print button depending on whether you wish to send the imaging document to the Default Printer or a specific Target Printer, or use the Print Dialog to set additional printer properties will send the document to the Printer Queue for the print job to be activated.

To help you understand how Ezy Image Print is able to handle any number of Database Server Tables with any number of Primary Key Columns with the corresponding value(s) to be passed to the **'sendDocToPrinter'** JavaScript function that allows imaging documents stored as BLOBs to be printed, following is an example of a database server table with 2 Primary Key Columns.

Let us assume that we have a table called **'LB_2COLSPK_BLOB_DOCS'** with the Primary Key Columns being **PROD_CODE** defined as **VARCHAR2(20)**, and **EDITION** defined as **NUMBER**. As per the helpful information and comments in our sample Apex application that we have provided, more than 1 Primary Key Column MUST have '|' as its delimiter between the various column names for us to define the 2 columns that identifies each unique record within the 'Primary Key Column Name(s)' screen field. In this case, we will enter: **PROD_CODE|EDITION** within this field.

To provide the corresponding values for both these fields within the screen field 'Primary Key Value(s)', more than 1 Primary Key Value MUST have '|' as its delimiter between the various values, and MUST have the appropriate Data Type specification. In this case, I have entered the following values within this field: **'4567'|1**.

Since the first column is of type VARCHAR2, its value is a quoted literal, followed by '|' that acts as a delimiter to separate the first value from the second column's value that is of type NUMBER.

Error Processing

Any validation or processing errors will automatically be displayed as a popup Alert window to indicate the problem for each process being performed that does not provide the correct values or a processing error that had occurred during the execution of the chosen function.

Summary

Ezy Image Print is the only known solution for a number of various application development technologies where both our **Java Applet version** suitable for **Oracle Apex, ADF, JSP, JSF, OAF, .Net, ASP, PHP, Ruby, Formspider, etc.** and the **Java Bean version** for **Oracle Forms applications** makes it the BEST and most cost effective and affordable solution that provides a uniform and consistent Look & Feel and User Experience across your organization's various application development platforms.

Although this sample Apex application has provided regions with Apex screen fields to showcase the features and functionalities of what Ezy Image Print can do; in your own real live Apex production applications, you may just pass the necessary parameters to the various JavaScript functions that call the Java-side APIs that handle the same tasks that have been presented within this sample application.

The sample application provides you with the knowledge on how to integrate the various JavaScript functions and it's APIs into your own applications and makes it simple enough for you to just copy and paste the relevant sections to quickly implement this product within a period of ONLY 1 day for your own unique needs and requirements.

Upon an interest to purchase this product, we will provide the Technical Guide on how to achieve the customizations where you just use the APIs and pass the relevant values to the Java methods, and quickly integrate Ezy Image Print within your own Apex applications.

Technical Assistance & Support

Kindly contact Bob Gill on bob.gill@longbridge.biz for any technical assistance and support in case of any issues during deployment or evaluation of Ezy Image Print for your Oracle Apex environment.

We are also happy to enhance and customize Ezy Image Print to fit in with your specific needs and requirements. Please do not hesitate to contact Bob Gill for a further discussion on your project.