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Administrator's Guide for Conversion
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Oracle Fusion Middleware Administrator's Guide for Conversion, 11g Release 1 (11.1.1)

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Preface

This administration guide provides all information required to set up and administer Inbound Refinery version 11gR1 on a computer running either Microsoft Windows or UNIX. Inbound Refinery version 11gR1 manages conversion of digital assets and documents to accessible formats and provides thumbnailing functionality.

Audience

The guide is intended mainly for administrators, managers, and privileged users responsible for managing retention content settings.

Documentation Accessibility

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Related Documents

The following documentation is available:

- *DAM and Conversion Products Release Notes*: provides the most current considerations for installing and administering all version 11gR1 Digital Asset Management (DAM) and conversion products.
- *Oracle Fusion Middleware Installation Guide for Oracle Enterprise Content Management Suite*

In addition to these guides, you can also access information about the product with context-sensitive tooltips, quick help, and help menu.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.
Forward slashes (/)	Forward slashes are used to separate the directory levels in a path to a UNIX server, directory, or file. Forward slashes are also used to separate parts of an Internet address. A forward slash will always be included at the end of a UNIX directory name and might or might not be included at the end of an Internet address.
Backward slashes (\)	Backward slashes are used to separate the levels in a path to a Windows server, directory, or file. A backward slash will always be included at the end of a Windows server, directory, or file path.
<i>DomainHome</i>	This notation refers to the user-specified directory where an Oracle UCM server is deployed to run on an Oracle WebLogic Server application server. <i>DomainHome</i> is a term used in Oracle WebLogic Server deployment.
<i>IntradocDir/</i>	<p>This notation refers to the root directory for actual configuration and data files specific to a Content Server instance deployed on the Oracle UCM domain on an Oracle WebLogic Server. The files include startup files (config.cfg and executables). This Idoc Script variable is configured for one type of Content Server instance: Content Server, Inbound Refinery, or Universal Records Management. It does not refer to run-time media.</p> <p>The path specified in the variable must be an absolute path to the instance directory, and it must be unique to a particular server or node.</p> <p>The default location for the instance directory is specified as <i>DomainHome/ucm/short-product-id</i> where <i>short-product-id</i> can be:</p> <ul style="list-style-type: none">■ cs (Content Server)■ ibr (Inbound Refinery)■ urm (Universal Records Management)

Introduction

This section contains the following topics:

- ["About This Guide"](#) on page 1-1
- ["What's New"](#) on page 1-1
- ["About Inbound Refinery"](#) on page 1-2
- ["Inbound Refinery Conversion Options and Related Components"](#) on page 1-3
- ["Inbound Refinery Process Overview"](#) on page 1-6

1.1 About This Guide

This administration guide provides information required to set up and administer Inbound Refinery version 11gR1 on a computer running either Microsoft Windows or UNIX.

The information contained in this document is subject to change as the product technology evolves and as hardware, operating systems, and third-party software are created and modified.

1.2 What's New

The following product enhancements have been made for Inbound Refinery version 11gR1:

- **Flash Video Conversion supported:** Inbound Refinery now supports FlipFactory version 6.1, which enables conversion to the Flash video format (.flv).
- **Video to Audio Conversion supported:** Inbound Refinery now supports conversion of video files to audio only.
- **New Version of Outside In Image Export:** Inbound Refinery includes Outside In Image Export 8.3.2, which is used for thumbnailing, conversion to multi-page TIFF files, conversion to PDF without third-party applications.
- **Concurrent Conversion:** Inbound Refinery now supports converting multiple content items simultaneously when using any conversion engine that supports concurrent multiple instances. This helps to prevent one content item from monopolizing the system and speeds the processing of content items through the refinery.
- **Microsoft Office 2007 Support:** Inbound Refinery now supports Microsoft Office 2007 on win32 platforms, including saving an office document to HTML.

- **Adobe Photoshop Scripting Support:** Inbound Refinery now supports conversion using Adobe Photoshop scripting.
- **EXIF and XMP Data Now Extracted and Available to Inbound Refinery:** Inbound Refinery now extracts EXIF data from digital photos and XMP data from native digital asset files and passes them to the refinery. This data is displayed on the rendition information page under the Image Data tab. To enable searching for content items using information in the EXIF or XMP data, Oracle Text Search is required.
- **Dynamic Renditions:** Inbound Refinery can now construct renditions dynamically, using metadata input when checking in a digital asset. For example, by using custom metadata fields in conjunction with custom rendition sets, text entered on the check in page can be overlaid as a watermark on a digital asset. Similarly, pixel height and width can be entered and used to create specific rendition sizes. When used in conjunction with the new EXIF or XMP data extraction capabilities, any extracted data can be used for watermarking, such as date/time stamps, camera or location data.

1.3 About Inbound Refinery

Inbound Refinery version 11gR1 is a conversion server that manages file conversions for electronic assets such as documents, digital images, and motion video. In addition to conversion, it also provides thumbnailing functionality for documents and images, the ability to extract and use EXIF data from digital images and XMP data from electronic files generated from programs such as Adobe Photoshop and Adobe Illustrator, and storyboarding for video. Inbound Refinery can be used for the following when running on either a Windows or a UNIX server:

- To create thumbnails of files using Outside In Image Export. Thumbnails are small preview images of content.
- To convert files to multi-page TIFF files using Outside In Image Export, enabling users to view the files through standard web browsers with a TIFF viewer plugin.
- To convert videos to multiple formats for streaming and different playback or storage needs. Video conversion requires the third-party conversion software package FlipFactory by Telestream to be purchase and installed on a separate Windows server.
- To convert images and graphics to different formats to meet display or print requirements.
- To convert files to PDF (Portable Document Format), enabling users to view the files through standard web browsers with a PDF reader plugin (such as Adobe Acrobat Reader). Inbound Refinery has the following options for converting files to PDF:
 - *Convert to PDF using third-party applications.* When running on Windows, Inbound Refinery can use several third-party applications to create PDF files of content items. In most cases, a third-party application that can open and print the file is used to print the file to PostScript, and then the PostScript file is converted to PDF using the configured PostScript distiller engine. In some cases, Inbound Refinery can use a third-party application to convert a file directly to PDF. When using this option, Inbound Refinery requires a PostScript distiller engine, a PostScript printer, and the third-party applications used during the conversion.

- *Convert to PDF using OpenOffice.* When running on either Windows or UNIX, Inbound Refinery can use OpenOffice to convert some file types directly to PDF. When using this multi-platform option, only OpenOffice is required.
- *Convert to PDF using Outside In.* Inbound Refinery includes Outside In, which can be used with WinNativeConverter on Windows to create PDF files of some content items. Outside In is used to print the files to PostScript, and then the PostScript files are converted to PDF using the configured PostScript distiller engine. When using this option, only a PostScript distiller engine is required.

Important: Third-party applications used in conversions, a PostScript distiller engine, and a PostScript printer are not provided with Inbound Refinery. You must obtain all third-party applications required for the conversions you want to perform, as well as a PostScript distiller engine and a PostScript printer of your choice.

- *Convert to PDF Using PDF Export.* Inbound Refinery can convert directly to PDF using Oracle Outside In technology without the need of a third-party application. This facilitates conversion of some formats to PDF on Linux and UNIX platforms.
- On a Windows platform only, the TIFF Converter option is used to convert TIFF (Tagged Image File Format) files to PDF, including the following options:
 - Creation of a managed PDF file from a single or multiple-page TIFF file.
 - Creation of a managed PDF file from multiple TIFF files that have been compressed into a single ZIP file.
 - OCR (Optical Character Recognition) during TIFF to PDF conversion. This enables indexing of the text within checked-in TIFF files, so that users can perform full-text searches of these files.

Tiff Converter is supported on Windows only.

Important: Inbound Refinery requires CVISION CVista PdfCompressor to perform TIFF to PDF conversion with OCR. PdfCompressor is not provided with Inbound Refinery. You must obtain PdfCompressor from CVISION.

- To convert files to XML (eXtensible Markup Language) files using Outside In XML Export, Search Export, and either the FlexionDoc or SearchML schema. In addition, the XSLT (eXtensible Style Language Transformation) feature can post-process the resulting XML document, transforming it to a different XML document based on your XSL (eXtensible File Language) file and validated against your DTD (Document Type Definition) or schema. XML Converter is supported on both Windows and UNIX.
- On a Windows platform only, to convert Microsoft Office documents into HTML using Microsoft Office.

1.4 Inbound Refinery Conversion Options and Related Components

Inbound Refinery can be configured with a variety of options by enabling the proper components using Oracle Universal Content Management component technology.

Most Inbound Refinery options require components to be enabled on each Inbound Refinery server provider and on the repository Content Server using the Inbound Refinery providers. The following tables list the components necessary for each Inbound Refinery conversion option and identifies on which server each component must be enabled.

Table 1–1 Inbound Refinery: Required for All Conversion

Component Name	Component Description	Enabled on Server
InboundRefinery	Enables Inbound Refinery	Inbound Refinery Server
InboundRefinerySupport	Enables the content server to work with Inbound Refinery	Content Server

Table 1–2 PDF Conversion: For Conversion to PDF Formats

Component Name	Component Description	Enabled on Server
PDFExportConverter	Enables Inbound Refinery to use Oracle OutsideIn to convert native formats directly to PDF without the use of any 3rdParty tools. PDF Export is fast, multi-platform, and allows concurrent conversions.	Inbound Refinery Server
WinNativeConverter	Enables Inbound Refinery to convert native files to a PostScript file with either the native application or OutsideInX and convert the PostScript file to PDF using a third-party distiller engine. This component is for Windows platform only. It replaces the functionality previously made available in the deprecated PDFConverter component. WinNativeConverter offers the best rendition quality of all PDF conversion options when used with the native application on a Windows platform. Note that WinNativeConverter does not allow concurrent conversions.	Inbound Refinery Server
OpenOfficeConversion	Provides cross-platform support allowing Inbound Refinery to convert supported files to PDF using Open Office. Like WinNativeConverter, OpenOfficeConversion doesn't allow concurrent conversions, but unlike WinNativeConverter, it does support UNIX platforms.	Inbound Refinery Server

Table 1–3 Digital Asset Manager: For Conversion of Images and Video Assets

Component Name	Component Description	Enabled on Server
DAMConverter	Enables Inbound Refinery to convert digital assets into multiple renditions.	Inbound Refinery Server
DamConverterSupport	Enables the content server to support digit asset management features. This component is highly dependent on the ZipRenditionManagement Component.	Content Server
DigitalAssetManager	Enables the user interface for digital asset management in tight integration with components used to create and manage renditions and zip file archives. This component is highly dependent on the ContentBasket Component.	Content Server
ContentBasket	Enables users to select renditions of content items and place them in a personal storage space called the Digital Asset Basket located under My Baskets.	Content Server
ZipRenditionManagement	Enables Content Server access to digital asset renditions created and compressed into a ZIP file by Inbound Refinery.	Content Server

Table 1–4 XML Converter: For XML Renditions and XLS Transformations

Component Name	Component Description	Enabled on Server
XMLConverter	Enables Inbound Refinery to produce FlexionDoc and SearchML-styled XML as the primary web-viewable file or as independent renditions, and can use the Xalan XSL transformer to process XSL transformations.	Inbound Refinery Server
XMLConverterSupport	Enables Content Server to support XML conversions and XSL transformations.	Content Server

Table 1–5 TIFF Converter: For Converting TIFF Files to PDF

Component Name	Component Description	Enabled on Server
TiffConverter	Enables Inbound Refinery to convert single or multipage TIFF files to PDF complete with searchable text.	Inbound Refinery Server
TiffConverterSupport	Enables Content Server to support TIFF to PDF conversion.	Content Server

Table 1–6 HTML Converter: For Converting Microsoft Office Documents to HTML

Component Name	Component Description	Enabled on Server
HtmlConverter	Enables Inbound Refinery to convert native Microsoft Office files created with Word, Excel, Powerpoint and Visio to HTML using the native Office application.	Inbound Refinery Server
MSOfficeHtmlConverterSupport	Enables Content Server to support HTML conversions of native Microsoft Office files converted by Inbound Refinery and returned to Content Server in a ZIP file. Requires that ZipRenditionManagement component be installed on the Content Server.	Content Server
ZipRenditionManagement	Enables Content Server access to HTML renditions created and compressed into a ZIP file by Inbound Refinery.	Content Server

1.5 Inbound Refinery Process Overview

Inbound Refinery refinery manages file conversions and provides thumbnailing functionality and serves as a provider to Content Server. When a file is checked into the content server, a copy of the native file is stored in the native file repository either on a file system or in a database. The native file is the format in which the file was originally created, for example, Microsoft Word.

If the file format is not set up to be converted, the content server can be configured to place either a copy of the native file or an HCST file that points to the native vault file in the web-viewable file repository. This means that the file is passed through to the library in its native format. Users must then have an application capable of opening the native file installed on their computer to view the file.

If the file format is set up to be converted, the content server creates a conversion job in its pre-converted queue. The content server then attempts to deliver the conversion job to one of its active refinery providers, which is a refinery that is configured to accept the conversion and is not busy. The content server sends the conversion parameters to an active refinery. If the refinery does not accept the job, the content server tries the next available refinery. When a refinery accepts the job, the content server then uploads a ZIP file, containing the conversion data and the file to be

converted, to the refinery. The content server also places an entry in its RefineryJobs table, which it uses to track the conversion job. The refinery places the conversion job in its pre-converted queue.

The refinery then attempts to perform the specified conversion. When the refinery finishes processing the conversion job, it places it in its post-converted queue. The content server polls the refinery periodically to see if conversion jobs in its RefineryJobs table have been completed. When the refinery reports that it has finished processing a conversion job, the content server downloads any converted files (for example, a web-viewable thumbnail file and a PDF file) from the refinery, places the conversion job in its post-converted queue, and kicks off any post-conversion functionality as needed.

If a conversion is successful, the converted files, such as a web-viewable thumbnail file and a PDF file, are available to the content server's users through their web browser. In the case of an videos, images, or graphic files, additional renditions and rendition information are available on the Rendition Information tab of the Content Information page.

If a conversion fails, the content server can be configured to place a copy of the native file in the web-viewable file repository. In this case users must also have an application capable of opening the native file installed on their computer to view the file.

Managing Conversions

Inbound Refinery offers a variety of conversion options depending on what components are installed and enabled on Content Server and Inbound Refinery. At minimum, the following components must be installed and enabled for basic conversion:

Component Name	Component Description	Enabled on Server
InboundRefinery	Enables Inbound Refinery	Inbound Refinery Server
InboundRefinerySupport	Enables the content server to work with Inbound Refinery	Content Server

This section covers the following topics:

- [Section 2.1, "Configuring Content Server and Refinery Communication"](#)
- [Section 2.2, "Configuring Content Servers to Send Jobs to Refineries"](#)
- [Section 2.3, "Configuring Refinery Conversion Settings"](#)
- [Section 2.4, "Monitoring Refinery Status"](#)
- [Section 2.5, "Performing Refinery Administration"](#)

2.1 Configuring Content Server and Refinery Communication

This section covers the following topics:

- ["Content Server and Refinery Configuration Scenarios"](#) on page 2-1
- ["Configuring Refinery Providers"](#) on page 2-5
- ["Editing the Refinery IP Security Filter"](#) on page 2-7
- ["Setting Classpath to OpenOffice Class Files"](#) on page 2-8

2.1.1 Content Server and Refinery Configuration Scenarios

Inbound Refinery can be used to refine content managed by Content Server. Inbound Refinery can be installed on the same computer as Content Server or on one or more separate computers. You must add the refinery as a provider to content servers on the same or separate computers after installation. For details, see ["Configuring Refinery Providers"](#) on page 2-5.

Note: Oracle Inbound Refinery does not support running in a cluster environment. Inbound Refinery can do conversion work for an Oracle Content Server cluster, but cannot run in a cluster environment itself. To ensure that Inbound Refinery functions properly, Inbound Refinery creates and maintains a long-term lock on the /queue/conversion directory. If mistakenly configured as part of a cluster and a second Inbound Refinery attempts to start and lock the same directory, the second Inbound Refinery will fail to start, and the attempt is logged.

Various configurations are possible, so keep the following general rules in mind as you set up your refinery environment:

- If you intend to process a large number of content items per day, do not run Inbound Refinery on the same computer as Content Server.
- The more dedicated refinery systems you have, the faster your content will be processed. Having more refinery systems than content server instances provides optimal speed. Having fewer refinery systems than content server instances can slow down performance if you need to convert large numbers of files.
- Typically, there is no reason to have multiple refineries on the same computer. One refinery can serve as a provider to multiple content servers. Having multiple refineries on one system usually does nothing to improve performance, because the refineries share the system's resources. This includes third-party applications used during conversion. To improve performance, you generally need to use separate computers for each refinery.
- Some file types and/or large files are processed considerably slower than average. If you have a lot of these file types to process in addition to other file types, consider setting up a refinery on a separate system to process just these file types. This requires more than one refinery system, but it does provide optimum refining speed and performance.

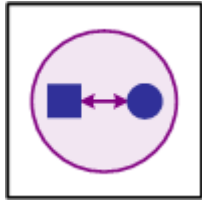
The following scenarios are common. Other refinery configurations are possible in addition to the ones described in this section. Specific content management applications might require their own particular refinery setup, which does not necessarily match any scenario mentioned in this section.

- **Scenario A:** One content server and one refinery on the same computer
- **Scenario B:** Multiple content servers and one refinery on the same computer
- **Scenario C:** Multiple content servers and one refinery on separate computers
- **Scenario D:** One refinery per content server on separate computers
- **Scenario E:** Multiple refineries per content server on separate computers

Each of these scenarios is explained in more detail in the following sections, including the benefits of each scenario and considerations to take into account for each scenario. In the scenario images, the following symbols are used to represent a computer, the Content Server, and the Inbound Refinery:

- Large Circle: computer
- Small Circle: Inbound Refinery
- Small Square: Content Server

2.1.1.1 Scenario A



This is the most basic scenario possible. It comprises one content server and one refinery on the same computer.

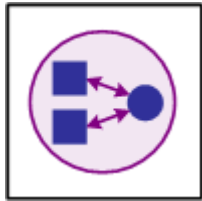
2.1.1.1.1 Benefits ■Least expensive and easiest to configure.

- Only one copy of third-party applications required for refinery conversions must be purchased.

2.1.1.1.2 Considerations ■Number and speed of conversions is limited.

- Not as powerful as scenarios where refineries are not deployed on the content server computer, because refinery processing on the content server computer can slow searches and access to the web site, and vice versa. Each conversion can take between seconds and minutes, depending on the file type and size.

2.1.1.2 Scenario B



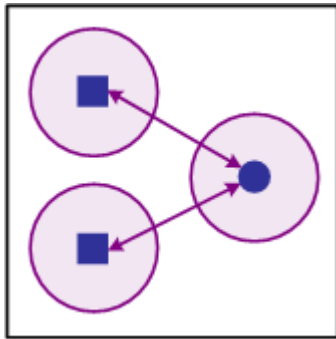
This scenario comprises multiple content servers and one refinery on the same computer.

2.1.1.2.1 Benefits ■Only one copy of third-party applications required for refinery conversions must be purchased.

2.1.1.2.2 Considerations ■Number and speed of conversions is limited.

- Not as powerful as scenarios where refineries are not deployed on the content server computer, because refinery processing on the content server computer can slow searches and access to the web site, and vice versa. Each conversion can take between seconds and minutes, depending on the file type and size.
- In this configuration, typically the following choices should be made when deploying the refinery:
 - The refinery is set as a provider to one of the content servers. After deployment, the refinery will need to be added as a provider to the other content servers. For details, see "[Configuring Refinery Providers](#)" on page 2-5.

2.1.1.3 Scenario C



This scenario comprises multiple content servers and one refinery on separate computers.

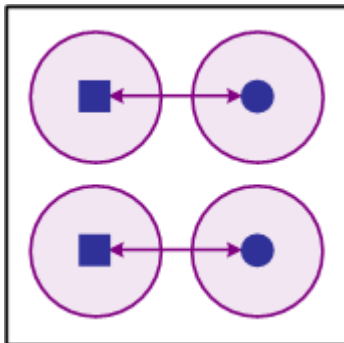
2.1.1.3.1 Benefits ■ Only one copy of third-party applications required for refinery conversions must be purchased.

- Faster processing than when the refinery is deployed on the same computer as a content server.
- Refinery processing does not affect content server searches and access to the web site, and vice versa.

2.1.1.3.2 Considerations ■ Not as powerful as scenarios where there is at least one refinery per content server.

- In this configuration, typically the following choices should be made when deploying the refinery:
 - The refinery will need to be added as a provider to each content server. For details, see "[Configuring Refinery Providers](#)" on page 2-5.

2.1.1.4 Scenario D



This scenario comprises one refinery per content server on separate computers.

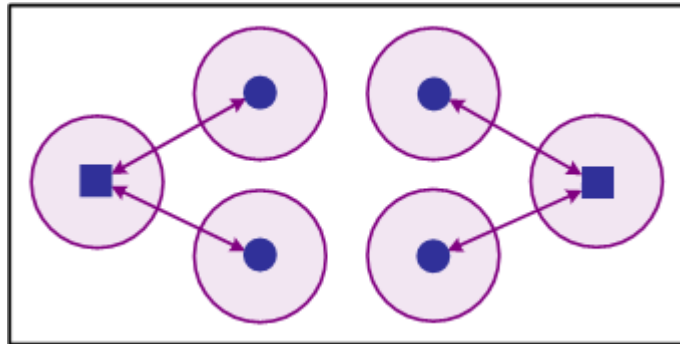
2.1.1.4.1 Benefits ■ Faster processing for high volumes of content and big file sizes.

- Refinery processing does not affect content server searches and access to the web site, and vice versa.

2.1.1.4.2 Considerations ■ Each refinery computer needs a copy of all third-party applications required for conversion.

- Each refinery will need to be added as a provider to each content server. For details, see "[Configuring Refinery Providers](#)" on page 2-5.

2.1.1.5 Scenario E



This scenario comprises multiple refineries per content server on separate computers.

2.1.1.5.1 Benefits

- Fastest processing for high volumes of content and big file sizes.
- Refinery processing does not affect content server searches and access to the web site, and vice versa.

2.1.1.5.2 Considerations

- Each refinery computer needs a copy of all third-party applications required for conversion.
- In this configuration, typically the following choices should be made when deploying the refineries:
 - Each refinery will need to be added as a provider to each content server. For details, see "[Configuring Refinery Providers](#)" on page 2-5.

2.1.2 Configuring Refinery Providers

This section covers the following topics:

- "[About Content Server and Refinery Providers](#)" on page 2-5
- "[Adding Refinery Providers](#)" on page 2-5
- "[Editing Refinery Providers](#)" on page 2-6
- "[Disabling/Enabling Refinery Providers](#)" on page 2-7
- "[Deleting Refinery Providers](#)" on page 2-7

2.1.2.1 About Content Server and Refinery Providers

A content server communicates with a refinery via a provider. A refinery can serve as a provider for one or multiple content servers. For more information about common configurations, see "[Content Server and Refinery Configuration Scenarios](#)" on page 2-1.

You can add the refinery as a provider to a content server on the same computer, or you can add the refinery as a provider to content servers on separate computers after deployment.

2.1.2.2 Adding Refinery Providers

To add a refinery as a provider to a content server, complete the following steps:

1. Log into the content server as an administrator.
2. Choose **Administration, Providers**. The [Providers Page](#) is displayed.
3. In the **Create a New Provider** section, click **Add** in the Action column for the *outgoing* provider type. The [Add/Edit Outgoing Socket Provider Page](#) is displayed.
4. Complete the following fields:
 - **Provider Name** (required): a name for the refinery provider.
 - **Provider Description** (required): a user-friendly description for the provider.
 - **Provider Class** (required): the name of the Java class for the provider. The default is the *intradoc.provider.SocketOutgoingProvider* class.
 - **Connection Class**: not required.
 - **Configuration Class**: not required.
 - **Server Host Name** (required): The host name of the server on which the refinery is installed.
 - **HTTP Server Address**: The HTTP server address for the refinery. Not required when the refinery is on the same computer as the content server.
 - **Server Port** (required): The port on which the refinery provider will communicate. This entry must match the server socket port configured on the post installation configuration page during deployment of Inbound Refinery. For information on post configuration see the *Oracle Fusion Middleware Installation Guide for Oracle Enterprise Content Management Suite*. The default refinery port is 5555.
 - **Instance Name** (required): the instance name of the refinery. For example, *ref2*.
 - **Relative Web Root** (required): the relative web root of the refinery is */ibr/*.
5. Enable the **Use Connection Password** check box if the refinery you are connecting to imposes authentication for the content server (the content server will share the refinery's user base). If enabled, you must specify a user name and password to be used and have the ProxyConnections component installed and configured on the refinery.
6. Select the **Handles Inbound Refinery Conversion Jobs** check box. This is required.
7. Clear the **Inbound Refinery Read Only Mode** check box. Select this check box only when you do not want the content server to send new conversion jobs to the refinery.
8. If necessary, change the maximum number of jobs allowed in the content server's pre-converted queue. The default is 1000 jobs.
9. Click **Add**. The [Providers Page](#) is displayed, with the new refinery provider added to the Providers table.
10. Restart the content server.

2.1.2.3 Editing Refinery Providers

To edit information for an existing refinery provider, complete the following steps:

1. Log into the content server as an administrator.

2. Choose **Administration, Providers**. The [Providers Page](#) is displayed.
3. In the Providers table, click **Info** in the Action column for the refinery provider to edit. The [Provider Information Page](#) is displayed.
4. Click **Edit**. The [Add/Edit Outgoing Socket Provider Page](#) is displayed.
5. Make the required changes.
6. Click Update to save the changes and return to the [Providers Page](#).
7. Restart the content server.

2.1.2.4 Disabling/Enabling Refinery Providers

To disable or enable an existing refinery provider, complete the following steps:

1. Log into the content server as an administrator.
2. Choose **Administration, Providers**. The [Providers Page](#) is displayed.
3. In the Providers table, click **Info** in the Action column for the refinery provider to disable or enable. The [Provider Information Page](#) is displayed.
4. Click **Disable** or **Enable**.
5. Restart the content server.

2.1.2.5 Deleting Refinery Providers

To delete an existing refinery provider, complete the following steps:

1. Log into the content server as an administrator.
2. Choose **Administration, Providers**. The [Providers Page](#) is displayed.
3. In the Providers table, click **Info** in the Action column for the refinery provider to delete. The [Provider Information Page](#) is displayed.
4. Click **Delete**. A confirmation message is displayed.
5. Click **OK**.

2.1.3 Editing the Refinery IP Security Filter

An IP security filter is used to restrict access to a refinery. Only hosts with IP or IPv6 addresses matching the specified criteria are granted access. By default, the IP security filter is `127.0.0.1|0:0:0:0:0:0:1`, which means the Inbound Refinery will only listen to communication from *localhost*. To ensure that a content server can communicate with all of its refineries, the IP or IPv6 address of each content server computer should be added to the refinery's IP security filter. This is true even if the refinery is running on the same computer as the content server. To edit an IP security filter for a refinery, complete the following steps:

1. Access the refinery computer.
2. Start the System Properties application:
 - **Windows:** choose **Start, Programs, Oracle Content Server/Inbound Refinery, <instance_name>, Utilities, System Properties**
 - **UNIX:** run the `SystemProperties` script, which is located in the `/bin` subdirectory of the refinery installation directory
3. Select the **Server** tab.

4. Make sure the IP Address Filter field includes the IP or IPv6 address of each content server computer (even if this is the same physical computer that is also running the refinery server). The default value of this field is 127.0.0.1|0:0:0:0:0:0:0:1 (localhost), but you can add any number of valid IP or IPv6 addresses. You can specify multiple IP addresses separated by the pipe symbol (|), and you can use wildcards (* for zero or many characters, and ? for single characters). For example:

```
127.0.0.1|0:0:0:0:0:0:0:1|10.10.1.10|62.43.163.*|62.43.161.12?
```

Important: Make sure you always include the localhost IP address (127.0.0.1).

5. Click **OK** when you are done, and restart the refinery server.

Tip: Alternately, you can add IP addresses to the IP security filter directly in the config.cfg file located in the *IntradocDir*/config directory. Add the IP or IPv6 address to the SocketHostAddressSecurityFilter variable. For example:

```
SocketHostAddressSecurityFilter=127.0.0.1|0:0:0:0:0:0:0:0:0:0:1|10.10.1.10|62.43.163.*
```

2.1.4 Setting Classpath to OpenOffice Class Files

If converting documents using OpenOffice, Oracle Inbound Refinery requires class files distributed with OpenOffice. You must set the path to the OpenOffice class files in the refinery intradoc.cfg file, located in the *DomainHome*/ucm/ibr/bin directory. To set the path in the intradoc.cfg file, do the following:

1. Navigate to the *DomainHome*/ucm/ibr/bin directory and open the intradoc.cfg file in a standard text editor.
2. At the end of the file, enter the following:

```
JAVA_CLASSPATH_openoffice_  
jars=<OfficePath>/Basis/program/classes/unoil.jar:<OfficePath>/URE/java/ridl.jar:  
r:<OfficePath>/URE/java/jurt.jar:<OfficePath>/URE/java/juh.jar
```

3. Save and close the intradoc.cfg file.
4. Restart the refinery.

2.1.5 Setting Library Path for UNIX Platform

Oracle Content Server and Oracle Inbound Refinery use Outside In Technology. Outside In Technology is dynamically linked with the GCC libraries (libgcc_s and libstdc++) on all Linux platforms as well as both Solaris platforms and HP-UX ia64. Oracle Content Server must be able to access these libraries, however Solaris and HP-UX do not initially make these libraries available. If running Content Server or Inbound Refinery on either Solaris or HP-UX, you need to obtain and install the GCC libraries and configure Content Server to find them. For information about configuring the library paths, see *Oracle Fusion Middleware Installation Guide for Oracle Enterprise Content Management Suite*.

2.2 Configuring Content Servers to Send Jobs to Refineries

This section covers the following topics:

- ["Overview"](#) on page 2-9
- ["About Conversions"](#) on page 2-10
- ["Passing Content Items Through the Refinery and Failed Conversions"](#) on page 2-12
- ["About MIME Types"](#) on page 2-12
- ["Using the File Formats Wizard"](#) on page 2-13
- ["Using the Configuration Manager"](#) on page 2-14
- ["Launching Configuration Manager"](#) on page 2-14
- ["Adding File Formats"](#) on page 2-14
- ["Editing File Formats"](#) on page 2-15
- ["Adding File Extensions"](#) on page 2-15
- ["Editing File Extensions"](#) on page 2-15
- ["Configuring the Content Server for PassThru Files"](#) on page 2-15
- ["Configuring the Content Server Refinery Conversion Options"](#) on page 2-16
- ["Overriding Conversions at Check-In"](#) on page 2-17
- ["Changing the Size of Thumbnails"](#) on page 2-18
- ["Refinery Conversion Job Status Page"](#) on page 2-18
- ["IBR Provider Status Page"](#) on page 2-19

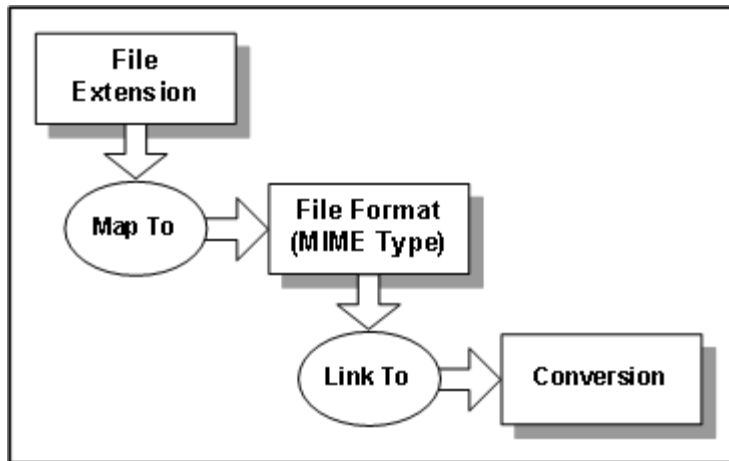
2.2.1 Overview

File extensions, file formats, and conversions are used in Content Server to define how content items should be processed by Inbound Refinery and its conversion add-ons. In addition, application developers can create custom conversions.

File formats are generally identified by their Multipurpose Internet Mail Extension (MIME) type, and each file format is linked to a specific conversion. Each file extension is mapped to a specific file format. Therefore, based on a checked-in file's extension, the content server can control if and how the file is processed by refineries. The conversion settings of the refineries specify which conversions the refineries accept and control the output of the conversions.

Consider the following example: the *doc* file extension is mapped to the file format *application/msword*, which is linked to the conversion *Word*. This means that the content server will attempt to send all Microsoft Word files (with the *doc* file extension) checked into the content server to a refinery for conversion. As another example, if the *xls* file extension is mapped to the file format *application/vnd.ms-excel*, which is linked to the conversion *PassThru*, Microsoft Excel files are not sent to a refinery. Instead, the content server can be configured to place either a copy of the native file or an HCST file that points to the native vault file in the */weblayout* directory. This means that users must have an application capable of opening the native file installed on their computer to view the file.

Figure 2–1 Mapping File Formats to a Conversion



When a file is checked into the content server and its file format is mapped to a conversion, the content server will check to see if it has any refinery providers that accept that conversion and are available to take a conversion job. This means that:

- Refinery providers must be set up for the content server. For details, see ["Configuring Refinery Providers"](#) on page 2-5.
- The refinery(s) need to be configured to accept the conversion. For details, see ["Setting Accepted Conversions"](#) on page 2-22.

2.2.2 About Conversions

Conversions specify how a file format should be processed, including the conversion steps that should be completed and the conversion engine that should be used. Conversions can be linked to a file format using either the [File Formats Wizard Page](#) or the [File Formats Screen](#). For details, see ["Using the File Formats Wizard"](#) on page 2-13 and ["Using the Configuration Manager"](#) on page 2-14.

Conversions available in the content server should match those available in the refinery. When a file format is mapped to a conversion in the content server, files of that format will be sent for conversion upon checkin. One or more refineries must be set up to accept that conversion. For details, see ["Setting Accepted Conversions"](#) on page 2-22.

The following default conversions are available. Additional conversions might be available when conversion add-ons are installed. For more information, see the documentation for each specific conversion add-on.

Conversion	Description
PassThru	Used to prevent files from being converted. When this conversion is linked to a file format, all file extensions mapped to that file format are not sent for conversion. The content server can be configured to place either a copy of the native file or an HCST file that points to the native vault file in the /weblayout directory. For details, see "Configuring the Content Server for PassThru Files" on page 2-15.
Word	Used to send Microsoft Word, Microsoft Write, and rich text format (RTF) files for conversion. The files will be converted according to the conversion settings for the refinery.
Excel	Used to send Microsoft Excel files for conversion. The files will be converted according to the conversion settings for the refinery.

Conversion	Description
PowerPoint	Used to send Microsoft PowerPoint files for conversion. The files will be converted according to the conversion settings for the refinery.
MSProject	Used to send Microsoft Project files for conversion. The files will be converted according to the conversion settings for the refinery.
Distiller	Used to send PostScript files for conversion. The files will be converted to PDF using the specified PostScript distiller engine.
MSPub	Used to send Microsoft Publisher files for conversion. The files will be converted according to the conversion settings for the refinery.
FrameMaker	Used to send Adobe FrameMaker files for conversion. The files will be converted according to the conversion settings for the refinery.
Visio	Used to send Microsoft Visio files for conversion. The files will be converted according to the conversion settings for the refinery.
WordPerfect	Used to send Corel WordPerfect files for conversion. The files will be converted according to the conversion settings for the refinery.
PhotoShop	Used to send Adobe Photoshop files for conversion. The files will be converted according to the conversion settings for the refinery.
InDesign	Used to send Adobe InDesign, Adobe PageMaker, and QuarkXPress files for conversion. The files will be converted according to the conversion settings for the refinery.
MSSnapshot	Used to send Microsoft Snapshot files for conversion. The files will be converted according to the conversion settings for the refinery.
PDF Refinement	Used to send checked-in PDF files for refinement. Depending on the conversion settings for the refinery, this includes optimizing the PDF files for fast web viewing using the specified PostScript distiller engine.
Ichitaro	The Ichitaro conversion is not supported for this version of Inbound Refinery.
OpenOffice	Used to send OpenOffice and StarOffice files for conversion. The files will be converted according to the conversion settings for the refinery.
ImageThumbnail	<p>Used to send select graphics formats for creation of simple thumbnails only. This is useful if Digital Asset Manager is not installed but thumbnail images of graphics formats are wanted. The returned web-viewable files are a copy of the native file and optionally a thumbnail image.</p> <p>When Digital Asset Manager is installed, it can be used instead of the ImageThumbnail conversion to send graphics formats for conversion, including the creation of image renditions and thumbnails.</p>
NativeThumbnail	Used to send select file formats for creation of thumbnails from the native format rather than from an intermediate PDF conversion. Typically, this conversion is used to create thumbnails of text files (TXT), Microsoft Outlook e-mail files (EML and MSG), and Office documents without first converting to PDF. The returned web-viewable files are a copy of the native file and optionally a thumbnail rendition and/or a an XML rendition. For an XML rendition to be created, XMLConverter must be installed and XML step configured and enabled.
MultipageTiff	Used to send files for conversion directly to multi-page TIFF files using Outside In Image Export. When file formats are mapped to this conversion, the conversion settings for the refinery are ignored, and the files are sent directly to Image Export for conversion to a TIFF file.
OutsideIn Technology	Uses Outside In X to print supported formats to PostScript for conversion with WinNativeConverter on the refinery server.

Conversion	Description
Direct PDFExport	Used to send files for conversion directly to PDF using Outside In PDF Export.
FlexionXML	Used to send files for conversion using XML Converter.
SearchML	Used to send files for conversion using XML Converter
XML-XSLT Transformation	Used to send files for XSLT transformation using XML Converter. XSL transformation is used to output XML data into another format.
LegacyCustom	The LegacyCustom conversion is not supported for this version of Inbound Refinery.
Digital Media Graphics	When Digital Asset Manager is installed, this is used to send digital images for conversion into multiple image renditions using Image Manager.
Digital Media Video	When Digital Asset Manager is installed, this is used to send digital videos for conversion into multiple video or audio renditions using Video Manager.
TIFFConversion	Used to send TIFF files for conversion to a PDF format that enables indexing of text in the document.
Word HTML	Used to send Microsoft Word files for conversion to HTML using the native Microsoft Word application.
PowerPoint HTML	Used to send Microsoft PowerPoint files for conversion to HTML using the native Microsoft PowerPoint application.
Excel HTML	Used to send Microsoft Excel files for conversion to HTML using the native Microsoft Excel application.
Visio HTML	Used to send Microsoft Visio files for conversion to HTML using the native Microsoft Visio application.

2.2.3 Passing Content Items Through the Refinery and Failed Conversions

When a file format is linked to the conversion PassThru, all file extensions mapped to that file format are not converted. When a content item with a file extension mapped to PassThru is checked into the content server, the file is not sent to a refinery, and web-viewable files are not created. The content server can be configured to place either a copy of the native file or an HCST file that points to the native file in the weblayout directory. This means that the application that was used to create the file, or an application capable of opening the file, is required on each client for the user to be able to view the file. For details, see ["Configuring the Content Server for PassThru Files"](#) on page 2-15.

If a file is sent to the refinery and the refinery notifies the content server that the conversion has failed, the content server can be configured to place a copy of the native file in the weblayout directory. In this case users must also have an application capable of opening the native file installed on their computer to view the file. For details, see ["Configuring the Content Server Refinery Conversion Options"](#) on page 2-16.

2.2.4 About MIME Types

It is recommended that you name new file formats by the MIME (Multipurpose Internet Mail Extensions) type corresponding to the file extension (for example, the format mapped to the doc file extension would be application/msword).

When a content item is checked in to Content Server, the content item's format is assigned according to the format mapped to the file extension of the native file. If the

native file is not converted, Content Server includes this format when delivering the content item to clients. Using the MIME type for the format assists the client in determining what type of data the file is, what helper applications should be used, and so on.

If the native file is converted, Inbound Refinery assigns the appropriate format to the web-viewable file (for example, if a refinery generates a PDF file, it would identify this file as application/pdf), and Content Server then includes this format when delivering the web-viewable file to clients (instead of the format specified for the native file).

Inbound Refinery includes an extensive list of file formats configured out of the box when installed. Check the listing in the Configuration Manager applet of the content server provider. New formats should only need to be added if working with rare or proprietary formats.

There are several good resources on the Internet for identifying the correct MIME type for a file format. For example:

- <http://filext.com/>
- <http://www.webmaster-toolkit.com/mime-types.shtml>

2.2.5 Using the File Formats Wizard

When the InboundRefinerySupport component has been installed and enabled and at least one Inbound Refinery provider enabled, you can access the File Formats Wizard page by selecting **Refinery Administration, File Formats Wizard** in the content server Administration menu. The File Formats Wizard page enables you to select types of files that should be sent to a refinery for conversion. The corresponding default file extensions, file formats, and conversions are mapped automatically.

Important: The InboundRefinerySupport component must be installed and enabled on the content server and at least one Inbound Refinery provider enabled to make the File Formats Wizard page available. Also, conversion option components might add file types to the File Formats Wizard page.

You can also make file format configuration changes manually using the Configuration Manager applet. For details, see "[Using the Configuration Manager](#)" on page 2-14. The File Formats Wizard page can be used to configure conversions for most common file types, however it does not replicate all of the Configuration Manager applet features.

To use the File Formats Wizard page, complete the following steps:

1. Make sure you are logged into the content server as an administrator.
2. In the navigation menu, click **Administration, Refinery Administration, File Formats Wizard**. The [File Formats Wizard Page](#) is displayed.
3. Select the check box for each file type to be sent to a refinery for conversion. To select or clear all check boxes, select or clear the check box in the heading row.

Important: The Ichitaro conversion is not supported for this version of Inbound Refinery.

4. Click **Reset** if you want to revert to the last saved settings.

5. Click **Update**. The corresponding default file extensions, file formats, and conversions are mapped automatically for the selected file types.

2.2.6 Using the Configuration Manager

The File Formats Wizard can be used to configure default conversions for most common file types. For details, see ["Using the File Formats Wizard"](#) on page 2-13. File extensions, file formats, and conversions can also be managed in Content Server using Configuration Manager, which is one of the Administration Applets. You should only need to use the Configuration Manager to change default conversions and set up conversions for uncommon file types.

This section covers the following topics:

- ["Launching Configuration Manager"](#) on page 2-14
- ["Adding File Formats"](#) on page 2-14
- ["Editing File Formats"](#) on page 2-15
- ["Adding File Extensions"](#) on page 2-15
- ["Editing File Extensions"](#) on page 2-15

2.2.6.1 Launching Configuration Manager

To launch Configuration Manager, complete the following steps:

1. Make sure you are logged into the content server as an administrator.
2. In the navigation menu, click **Administration**.
3. Click **Admin Applets**. The Administration Applets for <server name> page is displayed.
4. Click **Configuration Manager**. The Configuration Manager applet is started.
5. Select **Options, File Formats**. The [File Formats Screen](#) is displayed.

2.2.6.2 Adding File Formats

To add a file format and link it to a conversion, complete the following steps:

1. In the File Formats section, click **Add**. The [Add New/Edit File Formats Screen](#) is displayed.
2. In the Format field, enter the name of the file format. Any name can be used, but Oracle recommends that you use the MIME type associated with the corresponding file extension(s). For details, see ["About MIME Types"](#) on page 2-12.
3. From the Conversion drop-down list, choose the appropriate conversion. For details, see ["About Conversions"](#) on page 2-10.

Important: The Ichitaro conversion is not supported for this version of Inbound Refinery.

4. In the Description field, enter a description for the file format.
5. Click **OK** to save the settings and return to the [File Formats Screen](#).

2.2.6.3 Editing File Formats

To edit a file format, including changing the conversion to which it is linked, complete the following steps:

1. In the File Formats section, select the file format and click **Edit**. The [Add New/Edit File Formats Screen](#) is displayed.
2. The Format field cannot be changed.
3. From the Conversion drop-down list, choose the appropriate conversion. For details, see "[About Conversions](#)" on page 2-10.
4. In the Description field, edit the description of the file format (if desired).
5. Click **OK** to save the settings and return to the [File Formats Screen](#).

2.2.6.4 Adding File Extensions

To add a file extension and map it to a file format (and thus associate the file extension with a conversion), complete the following steps:

1. In the File Extensions section, click **Add**. The [Add/Edit File Extensions Screen](#) is displayed.
2. In the Extension field, enter the file extension.
3. From the Map to Format drop-down list, choose the appropriate file format from the list of defined file formats. Selecting a file format directly assigns all files with the specified extension to the specific conversion that is linked to the file format.
4. Click **OK** to save the settings and return to the [File Formats Screen](#).

2.2.6.5 Editing File Extensions

To edit a file extension, including changing the file format to which it is mapped (and thus associate the file extension with a different conversion), complete the following steps:

1. In the File Extensions section, select the file extension and click **Edit**. The [Add/Edit File Extensions Screen](#) is displayed.
2. The Extension field cannot be changed.
3. From the Map to Format drop-down list, choose the appropriate file format from the list of defined file formats. Selecting a file format directly assigns all files with the specified extension to the specific conversion that is linked to the file format.
4. Click **OK** to save the settings and return to the [File Formats Screen](#).

2.2.7 Configuring the Content Server for PassThru Files

When a file format is linked to the conversion *PassThru*, all file extensions mapped to that file format are not sent for conversion. By default, the content server places a copy of the native file in the weblayout directory. However, the content server can be configured to place an HCST file that points to the native vault file in the weblayout directory instead. This can be useful if you have large files that are not being converted, and you do not want to copy the large files to the weblayout directory.

Please note the following important considerations:

- The contents of the HCST file are controlled by the contents of the `redirectionfile_template.htm` file.

- The `GET_FILE` service is used to deliver the file, so no PDF highlighting or byte serving is available. This can be resolved by overriding the template and reconfiguring the web server.
- A simple template is used; the browser's Back button might not be functional and layout differences might occur. This can be resolved by overriding the template and reconfiguring the web server.
- There is no reduction in the number of files because there is still an HCST file in the weblayout directory. However, there can be disk space savings if the native vault file is large.
- This setting has no affect on files that are sent to a refinery for conversion; that is, if a file is sent to a refinery for conversion, another content server setting controls whether web-viewable files or a copy of the native file are placed in the weblayout directory, and an HCST file cannot be used. For more information, see ["Configuring the Content Server Refinery Conversion Options"](#) on page 2-16.

To configure the content server to place an HCST file in the weblayout directory instead of a copy of the native file, complete the following steps:

1. Open the content server `config.cfg` file located in the `IntradocDir/config/` directory in a text editor.
2. Include the `IndexVaultFile` variable, and set the value to `true`:

```
IndexVaultFile=true
```
3. Save your changes to the `config.cfg` file.
4. Restart the content server.

2.2.8 Configuring the Content Server Refinery Conversion Options

You can configure several options that affect how a content server interacts with its refinery providers, including how the content server should handle pre and post-converted jobs. These settings are made using the Inbound Refinery Conversion Options page.

Important: The `InboundRefinerySupport` component must be installed and enabled on the content server and at least one Inbound Refinery provider enabled to make the Inbound Refinery Conversion Options page available.

To configure how the content server should handle pre and post-converted jobs, complete the following steps:

1. Log into the content server as an administrator.
2. Choose **Administration, Refinery Administration, Conversion Options**. The [Refinery Conversion Options Page](#) is displayed.
3. Enter the number of seconds between successive transfer attempts for pre-converted jobs. The default is 10 (seconds).
4. Enter the total number of minutes allowed to transfer a single job before action is taken. The default is 30 (minutes).
5. Enter the native file compression threshold size in MB. The default threshold size is 1024 MB (1 GB). Unless the native file exceeds the threshold size, it will be compressed before the content server transfers it to a refinery. This setting enables

you to avoid the overhead of compressing very large files (for example, large video files). If you do not want any native files to be compressed before transfer, set the native file compression threshold size to 0.

6. If you want the conversion to fail when the time for transferring a job expires, select the check box.
7. Determine how you want the content server to handle failed conversions. If a file is sent to a refinery and conversion fails, the content server can be configured to place a copy of the native file in the /weblayout directory ("Refinery Passthru"). To enable passthru, select the check box. To disable passthru, clear the check box.

Please note the following important considerations:

- When a file is sent to the refinery for conversion, an HCST file cannot be used instead of a copy of the native file. For more information on configuring how the content server handles files that are not sent to the refinery, see ["Configuring the Content Server for PassThru Files"](#) on page 2-15.
 - This setting can also be overridden manually using the `AllowPassthru` variable in the `config.cfg` file located in the `IntradocDir\config\` directory.
8. Click **Reset** if you want to revert to the last saved settings.
 9. Click **Update** to save your changes.
 10. Restart the content server.

For additional details about using content server and refinery settings to manage conversion queues, see ["Managing Refinery Conversion Queues"](#) on page 2-31.

2.2.9 Overriding Conversions at Check-In

Certain file extensions might be used in multiple ways in your environment. A good example is the ZIP file extension. For example, you might be checking in:

- Multiple TIFF files compressed into a single ZIP file that you want a refinery with Tiff Converter to convert to a single PDF file with OCR.
- Multiple file types compressed into a single ZIP file that you do not want sent to a refinery for conversion (the ZIP file should be passed through in its native format).

If you are using a file extension in multiple ways, you can configure the content server to enable the user to choose how a file will be converted when they check the file into the content server. This is referred to as *Allow override format on checkin*. To enable this content server functionality, complete the following steps:

1. Make sure you are logged into the content server as an administrator.
2. In the navigation menu, click **Administration**.
3. Click **Admin Server**. The Admin Server page is displayed.
4. Click the button for the content server instance you want to configure. The administration page for that content server instance is displayed.
5. In the navigation menu, click **General Configuration**.
6. Enable the **Allow override format on checkin** setting.
7. Click **Save**.
8. Using the Configuration Manager, map the file extension to the conversion that will be used most commonly; this will be the default conversion. For details on setting up file extensions, file formats, and conversions using the Configuration

Manager, see ["Using the Configuration Manager"](#) on page 2-14. Continuing the preceding example for the ZIP file extension, you might set up the following default conversion:

- Map the ZIP file extension to the application/x-zip-compressed file format, and the application/x-zip-compressed file format to the TiffConversion conversion. Thus, by default it would be assumed that ZIP files contain multiple tiff files and should be sent to a refinery with Tiff Converter for conversion to PDF with OCR.
9. Using the Configuration Manager, set up the alternate file formats and conversions that you want to be available for selection by the user at check-in. Continuing the preceding example for the ZIP file extension, you might set up the following alternate conversions:
 - Map the application/zip-passthru file format to the PassThru conversion. This option could then be selected at check-in for a ZIP file containing a variety of files that should not be sent to a refinery for conversion. The ZIP file would then be passed through in its native format.
 10. Restart the content server. When a user checks in a file, the user can override the default conversion by selecting any of the conversions you have set up.

Enabling users to override conversions at check-in is often used in conjunction with multiple, dedicated refineries and/or custom conversions. Continuing the preceding example for the ZIP file extension, you might have one refinery set up with Tiff Converter, which would be used to convert ZIP files containing multiple tiff files to PDF with OCR, and a second refinery set up to convert ZIP files containing Microsoft Office files to PDF.

2.2.9.1 Changing the Size of Thumbnails

By default, thumbnails are displayed as 80 x 80 pixels. If you require your thumbnails to display at a different size, complete the following steps (this updates the size of all of your thumbnails):

1. Open the *config.cfg* file located in the *IntradocDir/config/* directory in a text editor.
2. To change the thumbnail height and width:
 - To change the thumbnail height, substitute the pixel size in the following line:
ThumbnailHeight=xxx (where xxx is the value in pixels)
 - To change the thumbnail width, substitute the pixel size in the following line:
ThumbnailWidth=xxx (where xxx is the value in pixels)

Outside In Image Export performs scaling based on whichever setting is smaller (the height setting is used if the settings are equal), preserving the aspect ratio.

3. Save your changes to the *config.cfg* file.
4. Restart the content server.

For more information about the ThumbnailHeight and ThumbnailWidth variables, see the *Oracle Fusion Middleware Idoc Script Reference Guide*.

2.2.10 Refinery Conversion Job Status Page

Access this page by selecting **Refinery Administration, Conversion Options** in the content server Administration menu, or by clicking the Conversion Job Status tab on

the [IBR Provider Status Page](#). The Refinery Conversion Job Status page enables you to view information about jobs submitted for conversion, such as to which provider the job is submitted and where it is in the conversion process.

Important: The InboundRefinerySupport component must be installed and enabled on the content server to enable The InboundRefinerySupport component must be installed and enabled on the content server and at least one Inbound Refinery provider enabled to make the Inbound Refinery Conversion Options page available.

Element	Description
Refresh	Updates the status of the displayed jobs.
Force Job Queue Check	Forces Content Server to deliver jobs to refinery providers. This is particularly useful if a refinery has gone down, causing any pending jobs to fail. In this situation, pending jobs are periodically resubmitted to providers for conversion. This button forces the submission.
Conversion Job ID	A unique identifier assigned by Inbound Refinery to each submitted job.
Content ID	The unique Content Server identifier of the content item submitted for conversion.
Conversion Job State	Identifies where a job is in the conversion process.
Job Submitted to Provider	Identifies the provider to which a job is submitted.
Last Action At	Lists the date and time of the last change in job state.
Actions	Links to the Content Server content information page of the content item submitted for conversion.

2.2.11 IBR Provider Status Page

Access this page by selecting **Refinery Administration, IBR Provider Status** in the content server Administration menu, or by clicking the IBR Provider Status tab on the [Refinery Conversion Job Status Page](#). The IBR Provider Status page enables you to view information about all refinery providers to the content server, including availability, connection state, and number of jobs in each provider's queue.

Important: The InboundRefinerySupport component must be installed and enabled on the content server and at least one Inbound Refinery provider enabled to make the Inbound Refinery Conversion Options page available.

Element	Description
Force Status Update	Refreshes the status of the displayed providers.
Provider	The name of each provider.
Available	Identifies whether a provider is accepting content for conversion.
Read Only	Identifies if a provider is read only, meaning that it can no longer accept jobs for conversion. It can only return conversions to Content Server.

Element	Description
Jobs Queued	Identifies the number of jobs each provider has waiting for conversion.
Last Message	Displays the last status message delivered by the provider.
Connection State	Identifies whether the provider is connected to the Content Server or not.
Last Activity Date	Lists the date and time of the last provider activity.
Actions	Displays the Provider Information Page , listing information regarding the specific provider.

2.3 Configuring Refinery Conversion Settings

This section covers the following topics:

- ["About Conversion Settings"](#) on page 2-20
- ["About Thumbnails"](#) on page 2-21
- ["Calculating Timeouts"](#) on page 2-22
- ["Setting Accepted Conversions"](#) on page 2-22
- ["Setting Multi-Page TIFF Files as the Primary Web-Viewable Rendition"](#) on page 2-23
- ["Setting Up Thumbnails"](#) on page 2-24
- ["Configuring Rendering Options on UNIX"](#) on page 2-25
- ["Specifying the Font Path"](#) on page 2-26
- ["Configuring Third-Party Application Settings"](#) on page 2-26
- ["Configuring Timeout Settings for Graphics Conversions"](#) on page 2-26

2.3.1 About Conversion Settings

Before configuring refinery conversion settings, you should complete the following tasks:

- Start your refinery.
- Make sure your refinery has been set up as a provider to one or multiple content servers. For details, see ["Configuring Refinery Providers"](#) on page 2-5.
- Make sure the InboundRefinerySupport component is installed and enabled on each content server.
- Make sure each content server has been configured to send files to the refinery for conversion. For details, see ["Configuring Content Servers to Send Jobs to Refineries"](#) on page 2-9.

Refinery conversion settings control which conversions the refinery will accept and how the refinery processes each conversion. Inbound Refinery includes Outside In Image Export, which can be used for the following.

- To create thumbnails of files. Thumbnails are small preview images of content. For details, see ["About Thumbnails"](#) on page 2-21 and ["Setting Up Thumbnails"](#) on page 2-24.

- To convert files to multi-page TIFF files, enabling users to view the files through standard web browsers with a TIFF viewer plugin. For details, see "[Setting Multi-Page TIFF Files as the Primary Web-Viewable Rendition](#)" on page 2-23.

For more information about file formats that can be converted by Inbound Refinery using Outside In Image Export, see [Appendix B.1, "File Formats Converted by Outside In Technology"](#).

In addition, several conversion options are available for use with Inbound Refinery. When a conversion option is enabled, its conversion settings are added to the refinery.

2.3.2 About Thumbnails

Thumbnails are small preview images of content. They are used in Content Server on search results pages and typically link to the web-viewable file they represent. This means that users do not need to rely solely on text information such as the title to tell if a file is the one for which they are looking. A thumbnail provides consumers with a visual sample of a file without actually opening the file itself. This enables them to check a file before committing to downloading the larger, original file.

Inbound Refinery includes Outside In Image Export, which can be used to create thumbnails of files. Please note the following important considerations:

- For a list of file formats that can be converted to thumbnails by Outside In Image Export, see [Appendix B.1, "File Formats Converted by Outside In Technology"](#).
- The Outside In Image Export thumbnail engine cannot successfully create thumbnails of PDF files with Type 3 Fonts. This affects checked-in PDF files only. If a checked in PDF file contains Type 3 Fonts, the Outside In Image Export thumbnail engine will create a thumbnail with a blank page.
- Thumbnail files are stored as JPEG, GIF, or PNG files in content server's the weblayout directory. They can be recognized by the characters *@t* in their filenames. For example, the file *Report2001@t~2.jpg* is the thumbnail that belongs to *Report2001~2.pdf* (which is revision 2 of a file called *Report2001.xxx*).
- Thumbnails cannot be processed for any files that have been encrypted or are password-protected.
- Thumbnails can be created for EML files. If you are using Internet Explorer and have installed the April, 2003, Cumulative Patch for Outlook Express, you will receive an error if you click on the thumbnail to view an EML file. As clicking on a thumbnail opens the primary web-viewable file, this only applies if the primary web-viewable file is an EML file (a multi-page TIFF or a PDF version of the EML file was not generated by the refinery as the primary web-viewable file, and the native EML file was copied to the weblayout directory as the primary web-viewable file).
- Thumbnails of EML files do not exactly match the look-and-feel of the EML file as opened in Outlook Express. This is because the thumbnail is created based on a plain-text rendition, whereas Outlook Express opens the file in its own format.
- For details about changing the size of thumbnails displayed in the content server, see "[Changing the Size of Thumbnails](#)" on page 2-18.
- If you turn off thumbnailing in Inbound Refinery, any thumbnails that were already created will still be displayed on the content server search results pages. To prevent this from happening, you can remove `THUMBNAIL` from the `AllowableAdditionalRenditions` entry in the `config.cfg` file located in the `IntradocDir\config\` directory.

2.3.3 Calculating Timeouts

As content is processed by a refinery, it is allotted a certain amount of processing time based on the size of the file and the settings on the [Timeout Settings Page](#). The timeout value, in minutes, is calculated in the following manner:

$$\text{timeout value [in minutes]} = ([\text{file size in bytes}] \times \text{timeout factor}) / 60,000$$

In order to determine what file to use, Inbound Refinery first looks to see if the previous step produced a file, and if so that file is used in the timeout calculations. Otherwise, the native file is used. If the previous step outputted more than one file (for example, Excel to PostScript), the sum of the file sizes is used. The content item to be processed is allotted at least the number of minutes indicated in the Minimum column, but no more minutes than indicated in the Maximum column. If the calculated timeout value is lower than the minimum value, the minimum value applies. If the calculated timeout value is larger than the maximum value, the maximum value applies.

2.3.3.1 Timeout Calculations

The following examples show how timeouts are calculated:

- **Example 1**

File size = 10 MB (10485760 bytes or 10240 KB)
Minimum = 2
Maximum = 10
Factor = 3

$$\text{Calculated Timeout} = 10485760 * 3 / 60000 = 524.288 \text{ minutes} = 8.74 \text{ hours}$$

In this case, Inbound Refinery will wait only the maximum of 10 minutes.

- **Example 2**

File size = 200 KB (204800 bytes)
Minimum = 2
Maximum = 30
Factor = 2

$$\text{Calculated Timeout} = 204800 * 2 / 60000 = 6.83 \text{ minutes}$$

In this case, Inbound Refinery will wait only the calculated 6.83 minutes and not the Maximum of 30 minutes.

- **Example 3**

File size = 50 KB (51200 bytes)
Minimum = 2
Maximum = 30
Factor = 2

$$\text{Calculated Timeout} = 51200 * 2 / 60000 = 1.71 \text{ minutes}$$

In this case, Inbound Refinery will wait the minimum of 2 minutes and not the calculated timeout or the Maximum of 30 minutes

2.3.4 Setting Accepted Conversions

To set the conversions that the refinery will accept and queue maximums, complete the following steps:

1. Log into the refinery.
2. Select **Conversion Settings, Conversion Listing**. The [Conversion Listing Page](#) is displayed.
3. Set the total number of conversion jobs that are allowed to be queued by the refinery. The default is 0 (unlimited).
4. Enter the maximum number of conversions allowed to wait for pick up by a content server before Inbound Refinery will no longer accept conversion jobs from that content server. The default is 1000.
5. Enter the number of seconds that the refinery should be considered busy when the maximum number of conversions has been reached. The default is 120 (seconds). When the maximum number of conversion jobs for the refinery has been reached, content servers will wait this amount of time before attempting to communicate with the refinery again.
6. Enter the maximum number of conversions that the refinery should process at the same time. The default is 5.
7. Select the check box for each conversion that you want the refinery to accept.
 - By default, all conversions are selected and will be accepted.
 - To select all conversions, select the **Accept** check box in the column heading.
 - To clear all conversions, clear the **Accept** check box in the column heading.

Important: The Ichitaro and LegacyCustom conversions are not supported for this version of Inbound Refinery.

8. Set the maximum number of jobs (across all refinery queues) for each conversion type. The default is 0 (unlimited).
9. Click **Update** to save your changes.
10. Restart each content server that is an agent to the refinery to effect your changes in the content server's queuing immediately. Otherwise, the changes in refinery's accepted conversions will not be known to the content server until the next time it polls the refinery.

For additional details about using content server and refinery settings to manage conversion queues, see "[Managing Refinery Conversion Queues](#)" on page 2-31.

2.3.5 Setting Multi-Page TIFF Files as the Primary Web-Viewable Rendition

Inbound Refinery includes Outside In Image Export, which enables you to convert files to multi-page TIFF files as the primary web-viewable rendition. This enables users to view the files through standard web browsers with a TIFF viewer plugin.

Other conversion options, such as PDF Export, enable you to create other types of renditions as the primary web-viewable rendition. When conversion options that can generate a web-viewable rendition are enabled, additional options for the options are available.

To set multi-page TIFF files as the primary web-viewable rendition that the refinery will generate, complete the following steps:

1. Log into the refinery.

2. Select **Conversion Settings, Primary Web Rendition**. The [Primary Web-Viewable Rendition Page](#) is displayed.
3. Select **Convert to multi-page Tiff using Outside In** to convert files to multipage TIFF files as the primary web-viewable rendition.
4. Click **Update** to save your changes.

2.3.6 Setting Up Thumbnails

Inbound Refinery includes Outside In Image Export, which enables you to create thumbnails of files as an additional rendition. Thumbnails are the only additional rendition available in Inbound Refinery by default. Other conversion options and custom conversions enable you to create additional renditions.

To enable thumbnails and configure your thumbnail settings, complete the following steps:

1. Log into the refinery.
2. Select **Conversion Settings, Additional Renditions**. The [Additional Renditions Page](#) is displayed.
3. Select **Create Thumbnail Images using Outside In**.
4. Click **Update** to save your changes.
5. Click **Options**. The [Thumbnail Options Page](#) is displayed.
6. Select your thumbnail options. For a detailed description of the available options, see "[Thumbnail Options Page](#)" on page A-24.

Note: When using Inbound Refinery on a SPARC system running Solaris, or any system running Linux, by default Outside In Image Export uses its internal graphics code to render fonts and graphics. You can also choose to use the operating system's native graphics subsystem instead. For details, see "[Configuring Rendering Options on UNIX](#)" on page 2-25.

7. Click **Update** to save your changes.

Please note the following considerations:

- You must configure the file formats and conversions in each content server to send files to the refinery for thumbnailing. For details, see "[Configuring Content Servers to Send Jobs to Refineries](#)" on page 2-9.
- The refinery must be configured to accept the conversions. For details, see "[Setting Accepted Conversions](#)" on page 2-22.
- For details about changing the size of thumbnails displayed in the content server, see "[Changing the Size of Thumbnails](#)" on page 2-18.
- If you turn off thumbnailing in the refinery, any thumbnails that were already created will still be displayed on the content server search results pages. To prevent this from happening, you can remove THUMBNAIL from the AllowableAdditionalRenditions entry in the config.cfg file located in the *IntradocDir*\config\ directory.

For example, change `AllowableAdditionalRenditions=THUMBNAIL` to a blank value, as in this example:

```
AllowableAdditionalRenditions=
```

2.3.7 Configuring Rendering Options on UNIX

This section covers the following topics:

- ["Rendering Using Internal Graphics Code"](#) on page 2-25
- ["Rendering Using Native Graphics Subsystem"](#) on page 2-25

2.3.7.1 Rendering Using Internal Graphics Code

When running Inbound Refinery on Linux or Solaris SPARC and creating multi-page TIFF files or thumbnails, by default Outside In uses its internal graphics code to render fonts and graphics. Therefore, access to a running X Window System display server (X Server) and the presence of either Motif (Solaris) or LessTif (Linux) is not required. The system only needs to be able to locate usable fonts. Fonts are not provided with Outside In. For information about setting the path to usable fonts, see ["Specifying the Font Path"](#) on page 2-26.

2.3.7.2 Rendering Using Native Graphics Subsystem

To configure Inbound Refinery so that Image Export uses the operating system's native graphics subsystem to render fonts and graphics instead of its internal graphics code, complete the following steps:

1. Log into the Inbound Refinery computer as the Inbound Refinery user.
2. Make sure the Inbound Refinery computer has access to a running X Window System display server (X Server) and the presence of either Motif (Solaris) or LessTif (Linux).
3. Ensure that the DISPLAY variable in the Inbound Refinery startup script (.profile, .login, .bashrc, etc.) points to the running X server. For example:

```
DISPLAY=:0.0
export DISPLAY
```

4. Source the new .profile (for example, using /usr/bin/sh, run the command:


```
..profile
```
5. Give Outside In Image Export permission to use the running X Server with the following command:

```
xhost +localhost
```

6. Lock the console, leaving the Inbound Refinery user logged in.
7. Log into the refinery.
8. Select **Conversion Settings** then **Third-Party Application Settings**. The [Third-Party Application Settings Page](#) is displayed.
9. Click **Options** under the General OutsideIn Filter Options section.
10. Select **Use native operating system's native graphics subsystem**.
11. Click **Update**.

2.3.8 Specifying the Font Path

One either Windows or UNIX, a path to the font directory must be specified. To configure Inbound Refinery so that Outside In can locate usable fonts, complete the following steps:

1. Log into the Inbound Refinery computer as the Inbound Refinery user.
2. Under **Conversion Settings**, click **Third-Party Applications Settings**. The [Third-Party Application Settings Page](#) is displayed.
3. Click **Options** under the **General OutsideIn Filter Options** section.
4. Enter the path to the font directories to be used by Outside In in the text field. For example, on Linux:

```
/usr/lib/X11/fonts/TTF
```

or on Windows:

```
C:\WINDOWS\Fonts
```

If fonts are called for and cannot be found, Outside In will exit with an error. Only TrueType fonts (*.ttf or *.ttc files) are supported. Also note that when copying Windows fonts to a UNIX system, the font extension for the files (*.ttf or *.ttc) must be lowercase, or they will not be detected during the search for available fonts.

5. Click **Update**.

2.3.9 Configuring Third-Party Application Settings

The [Third-Party Application Settings Page](#) is used to configure settings for third-party applications that are used during conversions, such as OpenOffice or Microsoft Word. When conversion options that use third-party applications are installed and enabled, settings are available on this page.

2.3.10 Configuring Timeout Settings for Graphics Conversions

To configure timeout settings for graphics conversions, complete the following steps:

1. Log into the refinery.
2. Select **Conversion Settings, Timeout Settings**. The [Timeout Settings Page](#) is displayed.
3. Enter the **Minimum (in minutes)**, **Maximum (in minutes)**, and **Factor** for **Graphics** conversions. For details, see "[Calculating Timeouts](#)" on page 2-22.
4. Click **Update** to save your changes.

2.4 Monitoring Refinery Status

This section covers the following topics:

Concepts

- "[About Agents](#)" on page 2-27
- "[About Refinery Logs](#)" on page 2-27

Tasks

- "[Viewing Refinery Status](#)" on page 2-28

- ["Viewing Refinery Logs"](#) on page 2-28
- ["Viewing Console Output"](#) on page 2-28
- ["Viewing Agent Status"](#) on page 2-28
- ["Viewing Agent Queues"](#) on page 2-28
- ["Viewing Conversion History"](#) on page 2-29
- ["Viewing Agent Logs"](#) on page 2-29

2.4.1 About Agents

An agent is an entity, such as a content server, that sends conversion jobs to the refinery. The refinery separates conversion status information and logging by agent to make it easier to view the information and find details.

2.4.2 About Refinery Logs

There are two types of log files created for the refinery:

- **Refinery logs:** Refinery logs contain general information about refinery functionality that is not specific to conversions performed for agents (for example, startup information). One log file is generated for each day the refinery is running.
- **Refinery Agent logs:** Refinery agent logs contain information specific to conversions performed for agents sending conversion jobs to the refinery. One log file is generated for each agent, each day that the agent sends at least one conversion job to the refinery.

Log entries are listed by date and time. Entries are added to the appropriate log file throughout the day as events occur. The time stamp placed on a refinery log entry designates when the log entry was created, not necessarily when the action took place.

Refinery agent log entries list the conversion number at the beginning of each entry because each agent can have multiple concurrent conversions running at a given time. For example: *Log entry for conversion job '3513'*. The following types of log entries are generated:

Log Entry	Description
Info	Displays status information. For example, startup information or a description of a conversion engine action.
Error	Displays errors that occur.

You can enable verbose logging. When verbose logging is on, general agent status information, a detailed description of each conversion engine action (for example, when the conversion was started and file details, conversion step details, and conversion results), and errors are recorded in the refinery agent log. When verbose logging is off, only general agent status information and errors are recorded in the refinery agent log. For details, see ["Enabling Verbose Logging"](#) on page 2-33.

A log file might include Details links. Clicking the Details links expands and collapses log details. Typically, the log details are either a stack dump or a trace back to the code that generated the error.

2.4.3 Viewing Refinery Status

The refinery creates each agent when it sends its first conversion job to the refinery. Until then, information for the agent is not available in the refinery.

To view the current status of conversions for all refinery agents, complete the following steps:

1. Log into the refinery.
2. Click **Home** in the main menu, or select **Status, Refinery Status** from the navigation menu. The [Refinery Status Page](#) is displayed.

2.4.4 Viewing Refinery Logs

To view the refinery log files, complete the following steps:

1. Log into the refinery.
2. Click **Home** in the main menu and select the **Refinery Logs** tab, or select **Status, Refinery Status** from the navigation menu and select the **Refinery Logs** tab. The [Refinery Logs Page](#) is displayed.
3. Click a log link to display the refinery log. For more information about refinery logs, see "[About Refinery Logs](#)" on page 2-27.

2.4.5 Viewing Console Output

To view the refinery console output, complete the following steps:

1. Log into the refinery.
2. Click **Home** in the main menu and select the **Console Output** tab, or select **Status, Refinery Status** from the navigation menu and select the **Console Output** tab. The [Console Output Page](#) is displayed.
 - Click **Update** to refresh the console output.
 - Click **Clear** to clear the console output.

2.4.6 Viewing Agent Status

To view the current status of conversions for a specific refinery agent, complete the following steps:

1. Log into the refinery.
2. Navigate to the [Agent Status Page](#) in one of the following ways:
 - Click the agent name.
 - Select **Status** then *<agent_name>* from the navigation menu.
 - Select **View Detailed Status** from the Actions menu for the agent on the [Refinery Status Page](#).

The [Agent Status Page](#) is displayed.

2.4.7 Viewing Agent Queues

To view the items that are in the pre and post-converted queues for a specific refinery agent, complete the following steps:

1. Log into the refinery.

2. Select **Status**, *<agent_name>* from the navigation menu and select the **Items in Queue** tab, or select **View Items In Queue** from the Actions menu for the agent on the [Refinery Status Page](#). The [Items In Queue Page](#) is displayed.
3. Click **Refresh** to update the information on the page.

2.4.8 Viewing Conversion History

To view the last fifty conversions in the conversion history for a specific refinery agent, complete the following steps:

1. Log into the refinery.
2. Select **Status**, *<agent_name>* from the navigation menu and select the **Conversion History** tab, or select **View Conversion History** from the Actions menu for the agent on the [Refinery Status Page](#). The [Conversion History Page](#) is displayed.
3. Click a Content ID link to display the [Conversion Detail Page](#).

2.4.9 Viewing Agent Logs

To view the log files for a specific refinery agent, complete the following steps:

1. Log into the refinery.
2. Select **Status**, *<agent_name>* from the navigation menu and select the **Agent Logs** tab, or select **View Agent Logs** from the Actions menu for the agent on the [Refinery Status Page](#). The [Agent Logs Page](#) is displayed.
3. Click a log link to display the refinery agent log. For more information about refinery agent logs, see "[About Refinery Logs](#)" on page 2-27. You can enable verbose logging to record a detailed description of each conversion engine action in the refinery agent log. For details, see "[Enabling Verbose Logging](#)" on page 2-33.

2.5 Performing Refinery Administration

This section covers the following topics:

Concepts

- "[Managing Refinery Authentication and Users](#)" on page 2-30

Tasks

- "[Managing Refinery Conversion Queues](#)" on page 2-31
- "[Performing Agent Administration](#)" on page 2-33
- "[Viewing Refinery Configuration Information](#)" on page 2-34
- "[Viewing Refinery System Audit Information](#)" on page 2-34
- "[Managing Refinery Providers](#)" on page 2-35
- "[Configuring the Web Server Filter](#)" on page 2-35
- "[Using Admin Server](#)" on page 2-35
- "[Publishing Dynamic and Static Layout Files](#)" on page 2-36
- "[Using Administration Utilities](#)" on page 2-36
- "[Active Virus Scanning and Inbound Refinery](#)" on page 2-37
- "[Changing the Date Format](#)" on page 2-38

- ["Setting the Time Zone"](#) on page 2-38

2.5.1 Managing Refinery Authentication and Users

As a managed server running within an Oracle WebLogic Server domain, user and group access to Inbound Refinery is controlled by Oracle WebLogic Server. As such, system security configuration is handled through the WebLogic Server console. If additional services are required, such as Oracle Internet Directory or single sign on using Oracle Access Manager, these can be linked to the Oracle WebLogic Server domain managing Inbound Refinery using WebLogic Server controls.

When deployed, the Inbound Refinery role *refineryadmin* has permissions to administer Oracle Inbound Refinery. Any user needing administration rights to Inbound Refinery must be part of the corresponding *refineryadmin* group in Oracle WebLogic Server.

For additional information, see the following documentation:

Table 2–1 Additional System Security Documentation

Task	Where to Go For More Information
Administering Oracle WebLogic Server	<i>Oracle Application Server Administrator's Guide</i>
Administering Universal Content Management	<i>Oracle Fusion Middleware System Administrator's Guide for Universal Content Management</i>

2.5.1.1 Integration with Single Sign-On

Oracle Access Manager (OAM), part of Oracle's enterprise class suite of products for identity management and security, provides a wide range of identity administration and security functions, including several single sign-on options for Fusion Middleware and custom Fusion Middleware applications. OAM is the recommended single sign-on solution for Oracle Fusion Middleware 11g installations.

For smaller scale Oracle Fusion Middleware 11g installations, where you do not have an enterprise-class single sign-on infrastructure like Oracle Access Manager, you only need to provide a single sign-on capability within your specific Fusion Middleware application, you can configure a SAML-based SSO solution. If you need to provide single sign-on with other enterprise applications, this solution is not recommended.

If your enterprise uses Microsoft desktop logins that authenticate with a Microsoft domain controller with user accounts in Active Directory, then configuring SSO with Microsoft Clients may also be an option to consider.

The setup required for each of these SSO solutions is described in the following documents/sections:

Table 2–2 Single Sign-on Documentation

For Information On...	See The Following Guide...
Configuring OAM and OSSO	<i>Oracle Fusion Middleware Security Guide</i>
Using Windows Native Authentication for Single Sign-on	<i>Oracle WebLogic Server Admin Console Help: Configure Authentication and Identify Assertion Providers</i>
Using WebLogic SAML for Single Sign-on	<i>Oracle Fusion Middleware Securing Oracle WebLogic Server, Section 5.7: Configuring the SAML Authentication Provider</i>

2.5.2 Managing Refinery Conversion Queues

A refinery is set up as a provider to a content server. When a file is checked into the content server, a copy of the native file is stored in the /vault directory (the native file repository). The native file is the format in which the file was originally created (for example, Microsoft Word).

If the file format is set up to be converted, the content server creates a conversion job in its pre-converted queue. The content server then attempts to deliver the conversion job to one of its active refinery providers (a refinery that is configured to accept the conversion and is not busy). The content server sends the conversion parameters to an active refinery.

When the refinery receives conversion parameters, it returns the following data to the content server:

- **JobAcceptStatus:** The status can be one of the following:

Status	Description	Content Server Action
ERROR	There was an unexpected error in processing the request.	The content item is left in GenWWW status and removed from the content server's pre-converted queue.
NEVER_ACCEPT	The refinery is not configured to accept the conversion, and it will never accept the job.	The refinery provider is marked as unavailable until the conversion job is cleared from the pre-converted queue
ACCEPT	The refinery will take the conversion job.	The job is removed from the pre-converted queue, transferred to the refinery, and expected to be converted.
BUSY	The refinery could take the conversion job, but it has reached its total queue maximum or the maximum number of conversion jobs for a specific conversion.	The refinery provider is not used again until the RefineryBusyTimeSeconds it provides to the content server has elapsed.

- **JobAcceptStatusMsg:** A string that explains the refinery's status, to be logged by both the refinery and the content server.
- **JobCanAccept:** A boolean that indicates if the job was accepted.
- **RefineryBusyTimeSeconds:** The number of seconds the refinery wants to be left alone (note that this is just a hint; the refinery will not stop accepting requests).

If the refinery does not accept the job, the content server tries the next available refinery. The content server keeps attempting to transfer the job until a refinery accepts the job or the maximum transfer time is reached. If the maximum transfer time is reached, the job is removed from the content server's pre-converted queue and the content item remains in GenWWW status.

When a refinery accepts the job, the content server then uploads a ZIP file, containing the conversion data and the file to be converted, to the refinery. The content server also places an entry in its RefineryJobs table, which it uses to track the conversion job. The refinery places the conversion job in its pre-converted queue.

The refinery then attempts to perform the specified conversion, calling the appropriate conversion options as necessary. When the refinery finishes processing the conversion job, it places it in its post-converted queue. The content server polls the refinery

periodically to see if conversion jobs in its RefineryJobs table have been completed. When the refinery reports that it has finished processing a conversion job, the content server downloads any converted files (for example, a web-viewable thumbnail file and a PDF file) from the refinery, places the conversion job in its post-converted queue, and kicks off any post-conversion functionality as needed.

Refinery queue management settings can be configured both on the content server and on the refinery. The following content server pages contain settings that enable you to manage refinery queues:

- [Refinery Conversion Options Page](#): This page contains settings that affect how the content server interacts with all of its refinery providers.
 - **Seconds between successive transfer attempts**: You can set the number of seconds between successive transfer attempts for each conversion job. By default, the content server will wait 10 seconds between attempts to deliver a conversion job to one of its refinery providers.
 - **Minutes allowed to transfer a single job**: You can set the number of minutes allowed for the transfer of each conversion job. By default, the content server will attempt to transfer a conversion job to one of its refinery providers for 30 minutes.
 - **Native file compression threshold**: You can set the native file compression threshold size in MB. The default threshold size is 1024 MB (1 GB). Unless the native file exceeds the threshold size, it will be compressed before the content server transfers it to a refinery. This setting enables you to avoid the overhead of compressing very large files (for example, large video files). If you do not want any native files to be compressed before transfer, set the native file compression threshold size to 0.
 - **When the time for transferring a job expires, the conversion should fail**: When the maximum allowed time for transferring a conversion job is reached, the conversion job is removed from the content server's pre-converted queue and the content item remains in GenWWW status. You can specify whether or not the conversion job should fail if this occurs. If you specify that the conversion job should fail, the content item will remain in GenWWW status; however a conversion error will be displayed on the Content Information page, along with a Resubmit button. This enables the user to resubmit the content item for conversion.
 - **When a conversion sent to an Inbound Refinery fails, set the conversion to 'Refinery Passthru'**: You can specify how you want the content server to handle failed conversions. If a file is sent to a refinery and conversion fails, the content server can be configured to place a copy of the native file in the weblayout directory by enabling refinery passthru.

Note: When a file is sent to the refinery for conversion, an HCST file cannot be used instead of a copy of the native file. For more information on configuring how the content server handles files that are not sent to the refinery, see "[Configuring the Content Server for PassThru Files](#)" on page 2-15.

- [Add/Edit Outgoing Socket Provider Page](#): This page enables you to specify settings for an individual refinery provider.

- **Handles Inbound Refinery Conversion Jobs:** You can specify if the provider handles conversion jobs. If this option is not selected, the content server will not attempt to transfer any conversion jobs to or from the provider.
- **Inbound Refinery Read Only Mode:** You can use this option to prevent the content server from sending new conversion jobs to the refinery provider. However, the refinery provider will continue to return conversion jobs as the jobs are finished.

The following refinery pages contain information and settings that enable you to manage refinery queues:

- **Items In Queue Page:** This page enables you to view items in the pre and post-converted queues for a specific refinery agent (such as a content server).
- **Conversion Listing Page:** This page enables you to view items in the pre and post-converted queues for a specific refinery agent (such as a content server).
 - **Maximum number of conversions allowed to be queued:** You can set the total number of conversion jobs that are allowed to be queued by the refinery. The default is 0 (unlimited).
 - **Maximum number of conversions in post conversion queue:** You can specify the number of conversions allowed to be queued in the post conversion queue of a refinery. The default is 1000.
 - **Number of seconds the refinery should be considered busy:** You can specify the number of seconds that the refinery should be considered busy when the maximum number of conversions has been reached. The default is 30 (seconds). When the maximum number of conversion jobs for the refinery has been reached, content servers will wait this amount of time before attempting to communicate with the refinery again.
 - **Maximum conversions:** You can specify the maximum number of jobs the refinery can process at the same time. The default is 5.

2.5.3 Performing Agent Administration

This section covers the following topics:

- ["Enabling Verbose Logging"](#) on page 2-33
- ["Deleting Agents"](#) on page 2-34

2.5.3.1 Enabling Verbose Logging

You can enable verbose logging for each refinery agent. When verbose logging is on, general agent status information, a detailed description of each conversion engine action (for example, when the conversion was started and file details, conversion step details, and conversion results), and errors are recorded in the refinery agent log. When verbose logging is off, only general agent status information and errors are recorded in the refinery agent log.

To enable verbose logging for a refinery agent, complete the following steps:

1. Log into the refinery.
2. Select **Refinery Administration, Agent Management**. The [Agent Management Page](#) is displayed.
3. Select the **Enable Verbose Logging** check box for the refinery agent.
4. To revert to the last saved settings, click **Reset**.

5. Click **Update** to save your changes.

2.5.3.2 Deleting Agents

A refinery agent can be deleted only when there are no conversion jobs in the refinery agent's pre or post-converted queues. To delete a refinery agent, complete the following steps:

1. Log into the refinery.
2. Select **Refinery Administration, Agent Management**. The [Agent Management Page](#) is displayed.
3. Select **Delete Agent** from the Actions menu for the refinery agent. The [Delete Agent Page](#) is displayed.
4. Enable the **Confirm deletion of agent <agent_name>** check box to confirm that you want the agent deleted. Note that history, logs, and any jobs in the agent queue are also deleted.
5. Click **Delete Agent**.

2.5.4 Viewing Refinery Configuration Information

To view the configuration information for the refinery using the web-based Inbound Refinery interface, complete the following steps:

1. Log into the refinery.
2. Select **Refinery Administration, Configuration Information** from the navigation menu. The [Configuration Information Page](#) is displayed. This page provides an overview of the main system settings, including server parameters and options, installation directories, Internet properties, version information, Java properties, and content security options. In addition, it lists all installed server components or custom components that are currently enabled and disabled.

The Configuration Information page is for information purposes only. You cannot change anything on it. If you want to modify any of the settings, you need to do that elsewhere. See "[Using Admin Server](#)" on page 2-35 and "[Using the System Properties Utility](#)" on page 2-36 for more information.

2.5.5 Viewing Refinery System Audit Information

To view the system audit information for the refinery using the web-based Inbound Refinery interface, complete the following steps:

1. Log into the refinery.
2. Select **Refinery Administration, System Audit Information** from the navigation menu. The [System Audit Information Page](#) is displayed. This page displays system audit information for the refinery, which might be useful while troubleshooting a problem or tweaking a server's performance.

The General Information section of this page provides the following information:

- Information regarding whether the system is receiving too many requests.
- Information about the memory cache for the system, which is useful in troubleshooting any "out of memory" errors you may receive. This is important when running the refinery server with many users and a large quantity of data.

- Information about which Java threads are currently running. This is useful in determining the cause of an error.
- Listing of any audit messages.

Tracing in a refinery can be activated on a section-by-section basis. Tracing for active sections is displayed on the [Console Output Page](#). Section tracing is useful for determining which section of the server is causing trouble, or when you want to view the details of specific sections. Sections can be added by appending extra sections to create a comma separated list.

A listing of the sections available for tracing, with brief descriptions, is available by clicking the information icon next to the *Tracing Sections Information* heading. For example, activating *refinery* displays extended information about conversion status, activating *ref-config* traces changes to the current running environment, and activating *refsteplogic* traces the logic that determines what conversion steps are used. The wildcard character *** is supported so that *ref** will trace all sections that begin with the prefix *ref*, including *refinery*, *ref-config*, and *refsteplogic*.

Some tracing sections also support verbose output. Enable Full Verbose Tracing if you wish to see in-depth tracing for any active section that supports it.

Important: Any options set on this page will be lost when the refinery is restarted unless you enable **Save** and click **Update**.

2.5.6 Managing Refinery Providers

You should not need to configure any refinery providers. To view refinery provider information using the web-based Inbound Refinery interface, complete the following steps:

1. Log into the refinery.
2. Select **Refinery Administration, Providers** from the navigation menu. The [Providers Page](#) is displayed.

2.5.7 Configuring the Web Server Filter

To configure the web server filter for a refinery using the web-based Inbound Refinery interface, complete the following steps:

1. Log into the refinery.
2. Select **Refinery Administration, Filter Administration** from the navigation menu. The [Configure Web Server Filter Page](#) is displayed. This page is used to configure and troubleshoot the web server filter communication with the refinery.

2.5.8 Using Admin Server

Admin Server is an administration tool that enables you to review or edit a number of system settings, as well as manage components. Every refinery deployed has a corresponding Admin Server.

To access Admin Server, complete the following steps:

1. Log into the refinery.
2. Select **Refinery Administration, Admin Server** from the navigation menu. The [Admin Server Page](#) is displayed.

2.5.9 Publishing Dynamic and Static Layout Files

To publish dynamic and static layout files, complete the following steps:

1. Log into the refinery.
2. To publish your dynamic layout files, select **Administration, Admin Actions**, and click **publish dynamic layout files** under the Weblayout Publishing section. The PUBLISH_WEBLAYOUT_FILES service is executed. All dynamic refinery layout files (.css files and .js files) are published from the refinery *IntradocDir/shared/config/templates* directory to the weblayout directory. This service is used when customizing your refinery. The PUBLISH_WEBLAYOUT_FILES service is also executed each time your refinery is restarted.
3. To publish your static layout files, select **Administration, Admin Actions**, and click **publish static layout files** under the Weblayout Publishing section. The PUBLISH_STATIC_FILES service is executed. All static layout files (graphic files) are published from the refinery *IntradocDir/shared/publish* directory to the weblayout directory. This service is used when customizing your refinery. The PUBLISH_STATIC_FILES service is not executed each time your refinery is restarted, as it can be very time-consuming to execute. This service must be executed manually when customizing your refinery.

For more information about other publishing options available and for customizing the content and refinery servers, see the documentation provided with Content Server.

2.5.10 Using Administration Utilities

This section covers the following topics:

- ["Using the System Properties Utility"](#) on page 2-36
- ["Using the Component Wizard Utility"](#) on page 2-37

2.5.10.1 Using the System Properties Utility

The System Properties utility is a stand-alone application (not a Java applet) that must be run locally from the server:

- **Microsoft Windows: Start, Programs, Oracle Content Server, <refinery_instance>, Utilities, System Properties.**
- **UNIX:** Run the SystemProperties script, which is located in the bin subdirectory of the Inbound Refinery installation directory.

You can use the System Properties utility to review and edit the following application settings:

- Internet configuration settings (see important caution below!)
- Server configuration settings (for example, system locale and time zone)
- Localization settings (enabling, disabling, or editing locales)
- Paths to some important files and directories
- Install a PostScript printer and specify the distiller engine path. No PostScript printer or distiller engine is supplied with Oracle Digital Asset Management and Conversion. You must obtain and install the distiller engine and PostScript printer of your choice.

Please note the following important considerations:

- Some of the settings that you can change using System Properties are critical to proper system operation (most notably the options on the Internet tab). Use the utmost care when editing these system-critical settings. If you set them to incorrect values, the Inbound Refinery system might shut down entirely.
- Most of the options in System Properties can also be set using Admin Server.
- If you make any changes, you need to restart the refinery before they take effect.
- For more information about using the System Properties utility, see the documentation provided with Content Server.

2.5.10.2 Using the Component Wizard Utility

The Component Wizard utility is a development tool that automates the process of creating custom components. You can use Component Wizard to create new components, modify existing components, and package components for use on refineries or content servers. You can also use Component Wizard to install, uninstall, enable, and disable components on refineries or content servers.

For more information about using the Component Wizard utility and component development, see the *Oracle Fusion Middleware System Administrator's Guide for Universal Content Management*, *Oracle Fusion Middleware Developer's Guide for Universal Content Management*, and other Content Server documentation for developers.

2.5.11 Active Virus Scanning and Inbound Refinery

When running Inbound Refinery on Windows, active virus scanning of some Inbound Refinery and Content Server directories can cause conversions to fail.

Exclude the following Content Server directories from active virus scanning:

- the weblayout directory (*WeblayoutDir*)
- the vault directory (*VaultDir*)
- *IntradocDir*\data\
- *IntradocDir*\search\

Tip: The vault\~temp\ directory should not be excluded, as it is the most important directory to scan.

Exclude the following Inbound Refinery directories from active virus scanning:

- the vault directory (*VaultDir*)
- *VaultDir*\temp\
- the weblayout directory (*WeblayoutDir*)
- *IntradocDir*\data\

Tip: If you feel that any of these directories need to be scanned, it is recommended that you run physical disk scanning on the Content Server and Inbound Refinery computers during off-peak hours rather than actively scanning these directories. Also, for best results a local anti-virus program should be used to scan local drives.

2.5.12 Changing the Date Format

The default English-US locale uses two digits to represent the year ('yy'), where the year is interpreted to be between 1969 and 2068. In other words, 65 is considered to be 2065, not 1965. If you want years prior to 1969 to be interpreted correctly in the English-US locale, you need to change the default date format for that locale to use four digits to represent years ('yyyy').

This issue does not apply to the English-UK locale, which already uses four digits for the year.

To modify the default English-US date format, proceed as follows:

1. Start the System Properties utility:
 - **Microsoft Windows:** Start, Programs, Oracle Content Server, <refinery_instance>, Utilities, System Properties.
 - **UNIX:** Start the SystemProperties script, which is located in the /bin subdirectory of the refinery's installation directory.
2. Open the Localization tab.
3. Select the English-US entry in the list of locales, and click **Edit**.
The Configure Locale dialog is displayed.
4. Modify the date format to use four digits for the year ('yyyy') rather than two ('yy').
5. After you are done editing, click **OK** to close the Configure Locale dialog.
6. Click **OK** to apply the change and exit System Properties.
7. Stop and restart the refinery (otherwise the change will not take effect).

2.5.13 Setting the Time Zone

During the installation of Inbound Refinery, you might have indicated that you wanted to use the default time zone for the selected system locale. If that is the case, the installer attempted to automatically detect the time zone of the operating system and set the refinery time zone accordingly. In certain scenarios, the time zone of the operating system might not be recognized. The time zone will then be set to the UTC time zone (Universal Time Coordinated), which is the same as Greenwich Mean Time (GMT).

You then need to set the time zone manually:

1. Start the System Properties utility:
 - **Microsoft Windows:** Start, Programs, Oracle Content Server, <refinery_instance>, Utilities, System Properties.
 - **UNIX:** Start the SystemProperties script, which is located in the /bin subdirectory of the refinery's installation directory.
2. Open the Server tab.
3. From the System Timezone drop-down list, choose the time zone you want to use for the refinery.
4. Click **OK** to apply the change and exit System Properties.
5. Stop and restart the refinery (otherwise the change will not take effect).

Working with PDF Conversions

Inbound Refinery can convert native files to PDF by either exporting to PDF directly using Oracle Outside In PDF Export (included with Inbound Refinery) or by using third-party applications to output the native file to PostScript and then using a third-party PDF distiller engine to convert the PostScript file to PDF. PDF conversions require the following components to be installed and enabled on the Inbound Refinery server:

Component Name	Component Description	Enabled on Server
PDFExportConverter	Enables Inbound Refinery to use Oracle OutsideIn PDF Export to convert native formats directly to PDF on multiple platforms without the use of any 3rdParty tools.	Inbound Refinery Server
WinNativeConverter	Enables Inbound Refinery to convert native files to a PostScript file with either the native application or OutsideInX and convert the PostScript file to PDF using a third-party distiller engine on Windows platforms.	Inbound Refinery Server
OpenOfficeConversion	Enables Inbound Refinery to convert supported native files direct to PDF on multiple platforms using Open Office.	Inbound Refinery Server

This section describes how to work with PDF conversions. The section includes the following topics:

- ["Configuring PDF Conversion Settings"](#) on page 3-1
- ["Converting Microsoft Office Files to PDF"](#) on page 3-8
- ["Troubleshooting PDF Conversion Problems"](#) on page 3-15

3.1 Configuring PDF Conversion Settings

This section covers the following topics:

- ["Configuring Content Servers to Send Jobs to Inbound Refinery"](#) on page 3-2
- ["Setting Accepted Conversions"](#) on page 3-2
- ["Setting PDF Files as the Primary Web-Viewable Rendition"](#) on page 3-2

- ["Installing a Distiller Engine and PDF Printer"](#) on page 3-4
- ["Configuring Third-Party Application Settings"](#) on page 3-4
- ["Configuring Timeout Settings for PDF Conversions"](#) on page 3-5
- ["Setting Margins When Using Outside In"](#) on page 3-5
- ["Using OpenOffice Without Logging In to Host"](#) on page 3-6

3.1.1 Configuring Content Servers to Send Jobs to Inbound Refinery

File extensions, file formats, and conversions are used in Content Server to define how content items should be processed by Inbound Refinery and its conversion add-ons. You must configure each content server to send files to refineries for conversion. When a file extension is mapped to a file format and a conversion, files of that type will be sent for conversion when they are checked into the content server. You can configure your file extension, file format, and conversion mappings in your content servers using either the File Formats Wizard or the Configuration Manager.

All conversions required for Inbound Refinery are available by default in Content Server. For more information about configuring file extensions, file formats, and conversions in your content servers, refer to ["About MIME Types"](#) on page 2-12 and ["Using the File Formats Wizard"](#) on page 2-13.

3.1.2 Setting Accepted Conversions

Conversions available in the content server should match those available in the refinery. When a file format is mapped to a conversion in the content server, files of that format will be sent for conversion upon checkin. One or more refineries must be set up to accept that conversion. You set the conversions that the refinery will accept and queue maximums on the Conversion Listing page. All conversions required for Inbound Refinery are available by default in both Content Server and Inbound Refinery. For more information about setting accepted conversions, refer to ["Setting Accepted Conversions"](#) on page 2-22.

3.1.3 Setting PDF Files as the Primary Web-Viewable Rendition

To set PDF files as the primary web-viewable rendition, complete the following steps:

1. Log into the refinery.
2. Select **Conversion Settings**, then select **Primary Web Rendition**. The [Primary Web-Viewable Rendition Page](#) is displayed.
3. Select one or more of the following conversion methods. Note that for a conversion method to be available, the associated components must be installed and enabled:
 - **Convert to PDF using PDF Export:** when running on either Windows or UNIX, Inbound Refinery uses Outside In PDF Export to convert files directly to PDF without the use of third-party applications. PDFExportConverter must be enabled on the refinery server.
 - **Convert to PDF using third-party applications:** when running on Windows, Inbound Refinery can use several third-party applications to create PDF files of content items. In most cases, a third-party application that can open and print the file is used to print the file to PostScript, and then the PostScript file is converted to PDF using the configured PostScript distiller engine. In some cases, Inbound Refinery can use a third-party application to convert a file

directly to PDF. For more information about file formats that can be converted using this option, see ["Supported File Formats"](#) on page B-1. For this option to be available, WinNativeConverter must be enabled on the refinery server. In addition, when using this option, Inbound Refinery requires the following:

- A PostScript distiller engine.
 - A PostScript printer.
 - The third-party applications used during the conversion.
- **Convert to PDF using OpenOffice:** when running on either Windows or UNIX, Inbound Refinery can use OpenOffice to convert some file types directly to PDF. For more information about file formats that can be converted using this option, see ["File Formats Converted to PDF by Open Office"](#) on page B-13. For this option to be available, OpenOfficeConversion must be installed on the refinery server. When using this option, Inbound Refinery requires only OpenOffice.
 - **Convert to PDF using Outside In:** Inbound Refinery includes Outside In, which can be used with WinNativeConverter on Windows to create PDF files of some content items. Outside In is used to print the files to PostScript, and then the PostScript files are converted to PDF using the configured PostScript distiller engine. For more information about file formats that can be converted using this option, see ["File Formats Converted by Outside In Technology"](#) on page B-1. When using this option, Inbound Refinery requires only a PostScript distiller engine.

Inbound Refinery will attempt to convert each incoming file based on the conversion method assigned to the format by the Content Server. If the format is not supported for conversion by the first selected method, Inbound Refinery will check to see if the next selected method supports the format, and so on. Inbound Refinery will attempt to convert the file using the first selected method that supports the conversion of the format.

For example, consider that you select both the *Convert to PDF using third-party applications* option and the *Convert to PDF using Outside In* option. You then send a Microsoft Word file to the refinery for conversion. Since the Microsoft Word file format is supported for conversion to PDF using a third-party application (Microsoft Word), Inbound Refinery will attempt to use the *Convert to PDF using third-party applications* method to convert the file to PDF as the primary web-viewable rendition.

If this method fails, Inbound Refinery will not attempt the *Convert to PDF using Outside In* method. However, if you send a JustWrite file to the refinery for conversion, this file format is not supported for conversion to PDF using the *Convert to PDF using third-party applications* method, so Inbound Refinery will check to see if this format is supported by the *Convert to PDF using Outside In* method. Since this format is supported by Outside In, Inbound Refinery will attempt to convert the file to PDF using Outside In.

4. Click **Update** to save your changes.
5. When using the Convert to PDF using Third-Party Applications method or the Convert to PDF using Outside In method, click the corresponding **PDF Web-Viewable Options** button. The [PDF Options Page](#) is displayed.
6. Set your PDF options, and click **Update** to save your changes.

3.1.4 Installing a Distiller Engine and PDF Printer

When converting documents to PDF using WinNativeConverter, a distiller engine and PDF printer must be obtained, installed and configured. This is not necessary when converting to PDF using either Outside In PDF Export or OpenOffice to open and save documents to PDF.

WinNativeConverter can use several third-party applications to create PDF files of content items. In most cases, a third-party application that can open and print the file is used to print the file to PostScript, and then the PostScript file is converted to PDF using the configured PostScript distiller engine. In some cases, WinNativeConverter can use a third-party application to convert a file directly to PDF. For details on file formats that can be converted to PDF using third-party applications, see "[File Formats Converted to PDF Using Third-Party Applications](#)" on page B-9.

Note: A distiller engine is not provided with Inbound Refinery. You must obtain a distiller engine of your choice. The distiller engine you choose must be able to execute conversions via a command-line. The procedures in this section use AFPL Ghostscript as an example. This is a free, robust distiller engine that performs both PostScript to PDF conversion and optimization of PDF files during or after conversion.

To install the PDF printer, complete the following steps:

1. Obtain and install a distiller engine on the computer where Inbound Refinery has been deployed.
2. Start the System Properties utility:
 - **Microsoft Windows: Start, Programs, Oracle Content Server, <refinery_instance>, Utilities, System Properties.**
3. Open the Printer tab.
4. Click **Browse** next to the **Printer Information File** field and navigate to the printer information file installed with your distiller engine.
5. Enter a name for the printer in the **Printer Name** field.
6. Enter the name of the printer driver in the **Printer Driver Name** field. This name should match the name used in the printer driver information file.
7. Enter the port path in the **Printer File Port Path** field. For example, `c:\temp\idcout.ps`
8. Click **Install Printer** and follow the printer install instructions when prompted.

Note: Once a printer is installed, the fields on the System Properties Printer tab are disabled. If the installed printer is deleted, the Printer tab is enabled again and the printer must be reinstalled.

9. Click **OK** to apply the change and exit System Properties.

3.1.5 Configuring Third-Party Application Settings

To change third-party application settings, complete the following steps:

1. Log into the refinery.

2. Select **Conversion Settings**, then select **Third-Party Application Settings**. The Third-Party Application Settings page is displayed.
3. Click the **Options** button for the third-party application. The corresponding options page is displayed. The following third-party application options pages are specific to Inbound Refinery:
 - [Distiller Engine Options Page](#)
 - [Word Options Page](#)
 - [Excel Options Page](#)
 - [PowerPoint Options Page](#)
 - [Visio Options Page](#)
 - [InDesign Options Page](#)
 - [OpenOffice Options Page](#)
4. Change the third-party application options.
5. Click **Update** to save your changes.

3.1.6 Configuring Timeout Settings for PDF Conversions

To configure timeout settings for PDF file generation, complete the following steps:

1. Log into the refinery.
2. Select **Conversion Settings**, then select **Timeout Settings**. The Timeout Settings page is displayed.
3. Enter the **Minimum (in minutes)**, **Maximum (in minutes)**, and **Factor** for the following conversion operations:
 - **Native to PostScript:** the stage in which the original (native) file is converted to a PostScript (PS) file.
 - **PostScript to PDF:** the stage in which the PS file is converted to a Portable Document Format (PDF) file.
 - **FrameMaker to PostScript:** these values apply to the conversion of Adobe FrameMaker files to PS files.
 - **PDF to Post Production:** the stage in which any processing is performed after the file has been converted to PDF format.

For more information about how timeout settings are calculated and examples, refer to the *Inbound Refinery Administration Guide*.

4. Click **Update** to save your changes.

3.1.7 Setting Margins When Using Outside In

Inbound Refinery includes Outside In version 8.3.2. When using Outside In to convert graphics to PDF, you can set the margins for the generated PDF from 0–4.23 inches or 0–10.76 cm. By default, Inbound Refinery uses 1-inch margins on the top, bottom, right, and left.

To adjust these margins, complete the following steps:

1. Use a text editor to open the *intradoc.cfg* file located in the refinery *DomainDir/ucm/ibr/bin* directory.

2. Change the following settings:

```
OIXTopMargin=  
OIXBottomMargin=  
OIXLeftMargin=  
OIXRightMargin=
```

3. To change the margin units from inches to centimeters, set the following:

```
OIXMarginUnitInch=false
```

4. Save your changes to the *intradoc.cfg* file.
5. Restart the refinery.

3.1.8 Using OpenOffice Without Logging In to Host

This section covers the following topics:

- ["Overview"](#) on page 3-6
- ["Setting Up Headless Mode on a Windows Host"](#) on page 3-6
- ["Setting Up Headless Mode on a UNIX Host"](#) on page 3-7

3.1.8.1 Overview

Inbound Refinery can use OpenOffice to convert some file types directly to PDF. This is done by configuring the OpenOffice listener, which must be running in order for conversions to be successful. Typically, you must be logged in to the computer on which OpenOffice is installed in order for OpenOffice to be able to open and process any documents. However, the OpenOffice listener can be run in headless mode with no graphical user interface.

Note: Before setting up the OpenOffice listener to run in headless mode, confirm that documents can be converted to PDF using OpenOffice running in a non-headless mode. Also, turn off any extra screens that start up before OpenOffice can be used, such as startup dialogs, tip wizards, or update notices. These cause the refinery process to time out, because conversions will not proceed until these screens are cleared and they are not displayed in headless mode.

This section covers the following topics:

- ["Setting Up Headless Mode on a Windows Host"](#) on page 3-6
- ["Setting Up Headless Mode on a UNIX Host"](#) on page 3-7

3.1.8.2 Setting Up Headless Mode on a Windows Host

To convert documents to PDF using OpenOffice without being logged in to a Windows host, you must create a custom service to run the OpenOffice listener in headless mode. The Windows Resource Kits provide the INSTSRV.EXE and SRVANY.EXE utilities to create custom services.

To set up a custom OpenOffice service, perform these steps:

1. In the MS-DOS command prompt, type the following command:

```
<path>\INSTSRV.EXE <service_name> <path>\SRVANY.EXE
```


where *<path>* is the path to the Windows Resource Kit, and *<service_name>* is the name of your custom service. This name can be anything, but should be descriptive to identify the service. When done, a new service key is created in your Windows registry.

2. Open the Registry Editor by selecting **Start, then select Run**, entering **regedit**, and clicking **OK**. The Registry Editor is displayed.

Caution: Backup your registry before editing it.

3. Backup your registry by selecting **File, then select Export**, entering a name for the backup file, and clicking **Save**. Remember the location to which the backup file is saved should you need to restore the registry.
4. Navigate to the new registry key created in the first step and select the new service key. The new key is located at:
`HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\<service_name>`
5. With the new key selected, choose **Edit, then select New, then select Key**, and name it **Parameters**.
6. Right-click on the **Parameters** key, select **New, then select String Value**, and name the value **Application**.
7. Right-click on the **Application** string and select **Modify**.
8. Type in the full path to soffice.exe, appended with **-headless**. For example:
`C:\Program Files\OpenOffice2.0\program\soffice.exe -headless`
9. Close the Registry Editor and restart the computer.
10. Once the computer has successfully restarted, select **Start, then select Settings, then select Control Panel, then select Administrative Tools, then select Services** to open Windows Services. The Windows Services screen is displayed.
11. Right-click the service you just created, select **Properties**, and ensure that the service is set up to start automatically
12. Select the **Log On** tab and enable **This account**. This enables the service to run using a specific user account
13. Enter the same user credentials that the Inbound Refinery is using to run.

Note: The Inbound Refinery user will need to have the right to log on as a service on the Inbound Refinery computer.

14. Start the service, accept the changes and close Windows Services.

3.1.8.3 Setting Up Headless Mode on a UNIX Host

To convert documents to PDF using OpenOffice without being logged in to a UNIX host, the OpenOffice listener must run in headless mode with no graphical user interface, using a virtual buffer display (X server).

Important: Each UNIX environment is unique. This information is a general guideline for setting up the OpenOffice listener in headless mode on UNIX platforms. An example of the procedure for Red Hat EL4 is also included.

In general, to configure the OpenOffice listener to run in headless mode on UNIX platforms, you must perform the following steps:

Note: Before setting up OpenOffice to run in headless mode, ensure that Inbound Refinery is installed and configured correctly to successfully convert documents to PDF using OpenOffice in non-headless mode.

1. Create a startup script to run Inbound Refinery when the system boots up.
2. Configure a virtual X server and create a startup script to run it when the system boots up, to enable OpenOffice to run.
3. Create a startup script to run OpenOffice in headless mode when the system boots up.
4. Configure the system to run the startup scripts in the following order:
 - a. Start Inbound Refinery
 - b. Start the virtual X server
 - c. Start OpenOffice

Note: The virtual X server must be started prior to starting OpenOffice, or OpenOffice will not run. Additionally, remember to ensure that the web server is also configured to run when the system boots up.

3.2 Converting Microsoft Office Files to PDF

This section covers the following topics:

- ["About Converting Microsoft Office Files to PDF"](#) on page 3-8
- ["Converting Microsoft Word Files to PDF"](#) on page 3-9
- ["Converting Microsoft Excel Files to PDF"](#) on page 3-10
- ["Converting Microsoft PowerPoint Files to PDF"](#) on page 3-11
- ["Converting Microsoft Visio Files to PDF"](#) on page 3-12
- ["Using Relative versus Absolute Links in Office Documents"](#) on page 3-14

3.2.1 About Converting Microsoft Office Files to PDF

When running on Windows, Inbound Refinery can use Microsoft Office to convert Microsoft Office files to PDF files. The following Microsoft Office versions are supported:

- Microsoft Office 2003

- Microsoft Office 2007

Note: Support for Microsoft Office 2007 excludes support for Microsoft Project 2007.

Please note the following important general considerations:

- Microsoft Office is used to convert Microsoft Office files to PDF when the *Convert to PDF Using third-party applications* option is selected on the Primary Web-Viewable Rendition page.
- Inbound Refinery can convert a number of special features in Microsoft Office files into links in the generated PDF files. You set the conversion options for Microsoft Office files using the Third-Party Application Settings page.
- To keep a conversion of a Microsoft Office file from timing out, all functions requiring user input should be disabled. These include password protection, security notifications, such as disabling of macros, and online access requests to show online content or participate in user feedback programs. For details on how to disable these and other similar features, refer to the Microsoft documentation for each product.
- If a Microsoft Office file was converted to a PDF file successfully, but one or more links in the file could not be converted to links in the PDF file, the conversion status of that file is set to Incomplete. To prevent this from happening, you can set `AllowSkippedHyperlinkToCauseIncomplete=False` in the *intradoc.cfg* configuration file located in the refinery `DomainDir\ucm\ibr\bin\` directory.

3.2.2 Converting Microsoft Word Files to PDF

Consider the following when running Inbound Refinery on Windows and using Microsoft Word to convert Word files to PDF:

- Any information in a Word file that is outside of the document's print area will not be converted to PDF.
- Password-protected files will time out unless the need for a password is removed.
- On Word 2003, make sure that you turn off *Show content and links from Microsoft Online* on the **Tools, then select Options, then select General** tab under the Online category, and opt out of the Customer Experience Improvement Program on the **Tools, then select Options, then select General** tab under the Customer Feedback category. If you do not, these files might time out.
- Options for the conversion of Word links to PDF can be found on the [Word Options Page](#).
- The following types of links in Word files can be converted to PDF:
 - Absolute URL links (for example, *http://www.company.com*). You can also use links that specify targets on the page (for example *http://idom001/ibr/portal.htm#target*). Note that in order to be processed as an absolute URL link, Word must return the *http://* prefix as a part of the link. All supported versions of Microsoft Word automatically enforce this rule.
 - Relative URL links (for example, *.././../portal.htm*). Note that these links do not contain any server name or protocol prefix.
 - Mailto links (links to e-mail addresses; for example *mailto:support@company.com*). Note that in order to be processed as an e-mail

link, Word must return the *mailto:* prefix as a part of the link. All supported versions of Microsoft Word automatically enforce this rule.

- Table of Contents links (converted to bookmarks in the generated PDF file).
- Bookmarks (internal links to auto-generated or author-generated bookmarks).
- Standard heading styles (Heading 1, Heading 2, etc., which are converted to bookmarks in the generated PDF file).
- Links to footnotes and endnotes.
- UNC path links (for example, `\\server1\c\TestDocs\MSOfficeXP\word\target.doc`). This option is not currently available on the Word Options panel. To enable this functionality, you must set the `ProcessWordUncLinks=true` variable in the refinery connection's *intradoc.cfg* file (`DomainHome\ucm\ibr\bin\intradoc.cfg`). In general, UNC paths have no relevance in a web browser; a UNC path is not a URL. Therefore, the PDF *must be opened outside of the web browser* for UNC path links to be resolved correctly. If you are using UNC path links, you might want to configure the Reader on client computers to open PDF files outside the browser.
- Links in text boxes are not converted.
- Linked AutoShapes and objects (for example, pictures or WordArt objects) located in tables are not converted.
- You might notice in some generated PDF files that the "hotspot" for a link is sometimes slightly off from the actual text (within a character or two). To date there are no known problems related to this occurrence, and there is currently no solution.

3.2.3 Converting Microsoft Excel Files to PDF

Consider the following when running Inbound Refinery on Windows and using Microsoft Excel to convert Excel files to PDF:

- Any information in an Excel file that is outside of the document's print area will not be converted to PDF.
- Password-protected files will time out unless the need for a password is removed.
- On Excel 2003, make sure that you turn off *Show content and links from Microsoft Online* on the **Tools, then select Options, then select General** tab under the Online category, and opt out of the Customer Experience Improvement Program on the **Tools, then select Options, then select General** tab under the Customer Feedback category. If you do not, these files might time out.
- Options for the conversion of Excel links to PDF can be found on the [Excel Options Page](#).
- Only external links are converted to PDF links. This is because, in the current implementation, it is impossible (or extremely difficult) to know which page of the generated PDF file will contain the target of an internal link (bookmark).
- Only the following types of links in Excel files can be converted to PDF:
 - Absolute URL links (for example, `http://www.company.com`). You can also use links that specify targets on the page (for example `http://idvm001/ibr/portal.htm#target`). Note that in order to be processed as an absolute URL link, Excel must return the `http://` prefix as a part of the link. All supported versions of Microsoft Excel automatically enforce this rule.

- Relative URL links (for example, *.././../portal.htm*). Note that these links do not contain any server name or protocol prefix.
- Mailto links (links to e-mail addresses; for example *mailto:support@company.com*). Note that in order to be processed as an e-mail link, Excel must return the *mailto:* prefix as a part of the link. All supported versions of Microsoft Excel automatically enforce this rule.

Note: The Excel Options panel does not have separate settings for absolute URL links and relative URL links. If the *Process Excel URL Links* option is selected, absolute URL links and relative URL links are all converted to PDF.

- UNC path links (for example, *\\server1\c\TestDocs\MSOfficeXP\word\target.doc*). This option is not currently available on the Excel Options panel. To enable this functionality, you must set the `ProcessExcelUncLinks=true` variable in the refinery connection's *intradoc.cfg* file (*DomainHome\ucm\ibr\bin\intradoc.cfg*). In general, UNC paths have no relevance in a web browser; a UNC path is not a URL. Therefore, the PDF *must be opened outside of the web browser* for UNC path links to be resolved correctly. If you are using UNC path links, you might want to configure the Reader on client computers to open PDF files outside the browser.
- Links are only converted if they are located in cells. Links in text boxes, WordArt objects, and so forth are not converted. In the generated PDF file, the hotspot for the link is the cell that contains the link.
- The Scaling on the Page Setup for the worksheet must be set to *Adjust to: ### % normal size* (and not 'Fit to Page'). Further, the closer to 100% the scale is set, the better your results will be.

3.2.4 Converting Microsoft PowerPoint Files to PDF

Consider the following when running Inbound Refinery on Windows and using Microsoft PowerPoint to convert PowerPoint files to PDF:

- Any information in a PowerPoint file that is outside of the document's print area will not be converted to PDF.
- Password-protected files will time out unless the need for a password is removed.
- On PowerPoint 2003, make sure that you turn off *Show content and links from Microsoft Online* on the **Tools, then select Options, then select General** tab under the Online category, and opt out of the Customer Experience Improvement Program on the **Tools, then select Options, then select General** tab under the Customer Feedback category. If you do not, these files might time out.
- Options for the conversion of PowerPoint links to PDF can be found on the [PowerPoint Options Page](#).
- PowerPoint has two types of links: *Hyperlinks*, which behave the same in all Office applications, and *Action Settings*. The MSOfficeConverter.exe supports the following Action Settings: Hyperlink to: Next Slide, Previous Slide, and URL. All other links should be inserted as hyperlinks.
- The following types of hyperlinks in PowerPoint files can be converted to PDF:

- Absolute URL links (for example, *http://www.company.com*). You can also use links that specify targets on the page (for example *http://idom001/ibr/portal.htm#target*). Note that in order to be processed as an absolute URL link, PowerPoint must return the *http://* prefix as a part of the link. All supported versions of Microsoft PowerPoint automatically enforce this rule.
- Relative URL links (for example, *../..../portal.htm*). Note that these links do not contain any server name or protocol prefix.
- Mailto links (links to e-mail addresses; for example *mailto:support@company.com*). Note that in order to be processed as an e-mail link, PowerPoint must return the *mailto:* prefix as a part of the link. All supported versions of Microsoft PowerPoint automatically enforce this rule.
- Bookmarks (internal links to auto-generated or author-generated bookmarks).

Note: The PowerPoint Options panel does not have separate settings for absolute URL links and relative URL links. If the *Process PowerPoint Hyperlinks* option is selected, absolute and relative URL link are all converted to PDF.

- UNC path links (for example, `\\server1\c\TestDocs\MSOfficeXP\word\target.doc`). This option is not currently available on the PowerPoint Options panel. To enable this functionality, you must set the `ProcessPowerPointUncLinks=true` variable in the refinery connection's *intradoc.cfg* file (`DomainHome\ucm\ibr\bin\intradoc.cfg`). In general, UNC paths have no relevance in a web browser; a UNC path is not a URL. Therefore, the PDF **must be opened outside of the web browser** for UNC path links to be resolved correctly. If you are using UNC path links, you might want to configure the Reader on client computers to open PDF files outside the browser.
- PowerPoint hyperlinks can only be processed if PowerPoint presentations are converted in the Slides format.
- It is technically possible to have a link on an object (for example, a text box) over a link on an individual line of text. Because of the way the PDF is assembled, only the link on the object will be active in the generated PDF file. Logically, any given spot in a PDF can only be assigned one action; so the top action is performed.

3.2.5 Converting Microsoft Visio Files to PDF

Consider the following when running Inbound Refinery on Windows and using Microsoft Visio to convert Visio files to PDF:

- Any information in a Visio file that is outside of the document's print area will not be converted to PDF.
- Visio files created using the Cross-Functional Flowchart template might cause a pop-up dialog to appear when Visio attempts to open the file, and thus the refinery process will time out unless this dialog is cleared manually on the refinery computer. To prevent this from happening, do not base files on the Cross-Functional Flowchart template. You can use Outside In to convert Visio files based on the Cross-Functional Flowchart template. However, please note that Visio links are not converted by Outside In.
- Password-protected files will time out unless the need for a password is removed.

- On Visio 2003, make sure that you turn off *Show content and links from Microsoft Online* on the **Tools, then select Options, then select General** tab under the Online category, and opt out of the Customer Experience Improvement Program on the **Tools, then select Options, then select General** tab under the Customer Feedback category. If you do not, these files might time out.
- Options for the conversion of Visio links to PDF can be found on the [Visio Options Page](#).
- The following types of links in Visio files can be converted to PDF:
 - Absolute URL links (for example, *http://www.company.com*). You can also use links that specify targets on the page (for example *http://idom001/ibr/portal.htm#target*). Visio does not enforce some of the link rules that are enforced by other Office applications. Therefore, the author of the Visio document must use the *http://* prefix as a part of the link. If the prefix is not found, the link will be converted as a relative URL link; this will likely not produce the link in the PDF as desired. Without the author applying this prefix, there is no way for the conversion engine to distinguish the link from relative and mailto links.
 - Relative URL links (for example, *../..../portal.htm*). Note that these links do not contain any server name or protocol prefix.
 - Mailto links (links to e-mail addresses; for example *mailto:support@company.com*). Visio does not enforce some of the link rules that are enforced by other Office applications. Therefore, the author of the Visio document must use the *mailto:* prefix as a part of the link. If the prefix is not found, the link will be converted as a relative URL link; this will likely not produce the link in the PDF as desired. Without the author applying this prefix, there is no way for the conversion engine to distinguish the link from absolute and relative links.
 - Bookmarks (internal links to auto-generated or author-generated bookmarks). When *Process internal Visio links* is selected on the Visio Options panel, all internal document links to other sheets are included in the generated PDF.

Important: For proper conversion of internal links in Visio 2003, you must clear the address field when creating the link. By default, the address field is populated with the file name of the file in which the link occurs. If this is not cleared, the link is converted as a link to the original file and prompts the user to download the original file when the link is clicked.

- UNC path links (for example, *\\server1\c\TestDocs\MSOfficeXP\word\target.doc*). This option is not currently available on the Visio Options panel. To enable this functionality, you must set the `ProcessVisioUncLinks=true` variable in the refinery connection's *intradoc.cfg* file (*DomainHome\ucm\ibr\bin\intradoc.cfg*). In general, UNC paths have no relevance in a web browser; a UNC path is not a URL. Therefore, the PDF **must be opened outside of the web browser** for UNC path links to be resolved correctly. If you are using UNC path links, you might want to configure the Reader on client computers to open PDF files outside the browser.
- All Microsoft Visio files should be set up so that the printer paper size and orientation matches the drawing page size and orientation. Otherwise, links will

not be converted correctly (they will be placed in the wrong location). For example, if the printer paper is set to Letter/Landscape, the drawing page should also be set to Letter/Landscape.

- In the generated PDF file, the hotspot for a Visio link is a square that encompasses the shape; even if the shape itself is not a square.

3.2.6 Using Relative versus Absolute Links in Office Documents

Both relative and absolute links can be converted to PDF in Word, Excel, PowerPoint, and Visio files.

- **Example absolute link:**

`http://machine/ucm/groups/public/documents/addacct/000123.pdf`

- **Example relative link:**

`..\addacct\000123.pdf`

When creating links, absolute and relative links each have advantages and disadvantages. Absolute links are easy to copy and paste, however, relative links can eliminate issues if the content server is migrated to a new machine or if the IP address and DNS names change; relative links will always be relative to the location of the web viewable file for the document you are checking in.

Important: The following procedure applies to Inbound Refinery with Microsoft Office installed, using the *Convert to PDF using third-party applications* option. This procedure does not apply to configurations using Inbound Refinery on UNIX.

To use relative links in Word, Excel, PowerPoint, and Visio documents, complete the following steps:

1. Log into the refinery.
2. Select **Conversion Settings**, then select **Third-Party Application Settings**. The Third-Party Application Settings page is displayed.
3. Click the **Options** button for the third-party application. The corresponding options page is displayed.
4. Click **Update** to save your changes.
5. Use relative links, instead of absolute links, when authoring documents. It is important to understand that these links will be relative to the location of the web viewable file for the document you are checking in:

- **Example 1: Relative linking with the same document type and security**

Let's say you wanted to create a link to document 000123. If the document was checked into security group "public" and document type "adacct", this document has a web viewable URL of:

`http://machine/ucm/groups/public/documents/adacct/000123.pdf`

Now if you check document 000456 into the same security group and document type, its web viewable URL would be:

`http://machine/ucm/groups/public/documents/adacct/000456.pdf`

Since the URL path is identical to 000123, your relative URL link in the document for 000456 would only need to be:

000123.pdf

- **Example 2: Relative linking to a different document type**

Using the same document names, if you checked document 000456 into the same security group but a different document type, its web viewable URL would look like:

`http://machine/ucm/groups/public/documents/adcorp/000456.pdf`

This means that your relative URL link needs to go up one directory and then into "adacct" to find 000123.pdf. So the relative URL link would be:

`..\adacct\000123.pdf`

- **Example 3: Relative linking to a different document security**

Now if you also change the security group of document 000456, its web viewable URL would look like:

`http://machine/ucm/groups/secure/documents/adcorp/000456.pdf`

This means that the relative URL link will need to go up three directories and then back down to 000123.pdf. So the relative URL link would be:

`..\..\..\public\adacct\000123.pdf`

6. Check the documents into the content server. When converting the documents to PDF, the refinery will create links relative to the location of the web viewable file for each document you are checking in.

3.3 Troubleshooting PDF Conversion Problems

This section covers the following topics:

- ["Troubleshooting Process for PDF Conversion Issues"](#) on page 3-15
- ["Common Conversion Issues"](#) on page 3-16
- ["Inbound Refinery Setup and Run Issues"](#) on page 3-17
- ["PDF Display Issues"](#) on page 3-21

3.3.1 Troubleshooting Process for PDF Conversion Issues

The vast majority of PDF conversion issues fall into one of the following categories:

- When a file is checked into the content server, a PDF is not generated.
- A PDF is generated, but there are problems with the output.

When troubleshooting PDF conversion issues, you should first try to identify if the issue is related to just one specific file, all files of that type, or all files. For example, if you are having problems converting a Microsoft Excel document to PDF, try checking in other Microsoft Excel documents; preferably files that are smaller and less complex. If the problem is specific to a single file, the problem is most likely related to something within the file itself, such as file corruption, file setup and formatting, and so forth.

PDF not generated:

If a PDF is not generated when a file is checked into the content server, complete the following basic troubleshooting steps:

1. Look at the Inbound Refinery and agent logs and identify which step of the conversion process failed (printing to PostScript, PostScript to PDF conversion, etc.). For more information about viewing Inbound Refinery and agent logs and enabling verbose logging for agents, refer to the *Inbound Refinery Administration Guide*.
2. If the file is timing out during conversion, first try checking in another, smaller, less complex file of the same type. If multiple files are timing out, adjust your timeout values and re-submit the files for conversion. For more information about configuring timeout values, refer to the *Inbound Refinery Administration Guide*.
3. If the file is failing to print to PostScript, try printing the file to PostScript manually. Most failure to print to PostScript issues are related to the following possible causes:
 - The IDC PDF Converter PostScript printer is not installed.
 - The IDC PDF Converter PostScript printer is not named or set up properly.
4. If the file is printing to PostScript successfully but failing to convert to PDF, again first try checking in another, smaller, less complex file of the same type. If the problem is not specific to a single file, or you cannot identify a problem within the files that is causing the conversion to fail, the problem is most likely related to the distiller engine that you are using.

3.3.2 Common Conversion Issues

Content items are often converted incorrectly, or not at all, for the following reasons:

- **Information within the document is outside of the document's print area:** Depending on the native application used to create the document and how your system is set up, a document is sometimes printed to a PostScript file, and the PostScript file is then converted to PDF. Therefore, any information in the document that is outside of the document's print area will not be included in the generated PDF.
- **Inbound Refinery is trying to convert a file that is not appropriate for the conversion engine:** For example, if a file from an application other than Microsoft Word has the extension *doc*, the document is opened in Microsoft Word, which is not correct. The conversion will then fail.
- **The third-party application that is used for conversion starts up with items that require user interaction, such as startup dialogs, tip wizards, or update notices:** This prevents Inbound Refinery from processing and converting the files correctly, and the conversion will time out. Always make sure that you turn off all such features before using a third-party application for conversion purposes.
- **The Inbound Refinery's Java Virtual Machine (JVM) is frozen:** This is usually associated with failed attempts to convert invalid file formats. Restarting Inbound Refinery will usually fix this problem.
- **Inbound Refinery did not have enough time to process the file:** You can detect this by filtering for the conversion status *PassThru* in Repository Manager. You can also look at the Inbound Refinery and agent log files. Prevent future occurrences of this problem by increasing the appropriate conversion factor on the Timeout Settings page in the Inbound Refinery administration interface.

- **The content item was converted correctly but you cannot view the generated PDF file in Adobe Acrobat or Acrobat Reader.** You might be using an old Acrobat version. In order to ensure that you can view all generated PDF files correctly, you should always use the latest version of Adobe Acrobat or Adobe Acrobat Reader.
- **A Microsoft Office file and a link within that file does not convert correctly.** It is possible that the link is not formatted correctly or is not supported by Inbound Refinery. For details, see "[Converting Microsoft Office Files to PDF](#)" on page 3-8.

3.3.3 Inbound Refinery Setup and Run Issues

The following are symptoms of Inbound Refinery setup and run issues:

- [Inbound Refinery Won't Process Any Files](#)
- [Missing IDC PDF Converter Printer](#)
- Error: 'Unable to convert. The printer is not installed'
- Error: 'Unable to convert. Not printing to 'c:/temp/idcoutput.ps''
- [Conversions Keep Timing Out](#)
- [Microsoft Word Files Won't Convert](#)
- [Microsoft Excel Files Won't Convert](#)
- [Microsoft PowerPoint Files Won't Convert](#)
- [Microsoft Visio Files Won't Convert](#)
- [FrameMaker Files Won't Convert](#)
- [WordPerfect Files Won't Convert](#)

3.3.3.1 Inbound Refinery Won't Process Any Files

Inbound Refinery has been installed, but no files are being converted.

Possible Causes	Solutions
File formats and conversion methods not set up for file type in the content server.	Use the File Formats Wizard or Configuration Manager in the content server to set up the file formats and conversion methods for PDF conversion. For more information, refer to the <i>Inbound Refinery Administration Guide</i> .

3.3.3.2 Missing IDC PDF Converter Printer

The IDC PDF Converter Printer is missing from the list of local printers and documents are stuck in GENWWW. Rebooting the server did not resolve the issue.

Possible Causes	Solutions
The Print Spooler service might not be running.	<p>This service ensures that all installed printers are available, including the IDC PDF Converter printer. Check in the Windows services console (accessible by selecting Control Panel, then selecting Administrative Tools, then selecting Services) to make sure this service is running and set to start automatically.</p> <p>If the service is not running, the Inbound Refinery will not be able to locate and use the IDC PDF Converter printer and documents will be stuck in GENWWW. With the startup type of the Printer Spooler service set to Automatic, this service will start every time the computer boots.</p> <p>After starting the Print Spooler service, you can use Repository Manager to resubmit the documents stuck in GENWWW. Assuming that there are no other conversion issues, the system should now be able to convert documents to PDF successfully.</p>

3.3.3.3 Error: 'Unable to convert. The printer is not installed'

Inbound Refinery is not converting any files to PDF, and the following error message appears in the Inbound Refinery log:

Unable to convert. The printer 'IDC PDF Converter Printer' is not installed.

Possible Causes	Solutions
The IDC PDF Converter printer is not installed.	Install the IDC PDF Converter printer.

3.3.3.3.1 Error: 'Unable to convert. Not printing to 'c:/temp/idcoutput.ps'.' Inbound Refinery is not converting any files to PDF, and the following error appears in the Inbound Refinery log:

Step MSOfficeToPostscript forced conversion failure passthru by conversion engine with error: "Unable to convert. The printer 'IDC PDF Converter' is not printing to 'c:/temp/idcoutput.ps'."

Possible Causes	Solutions
The IDC PDF Converter printer is not printing to the correct port.	<p>Make sure the IDC PDF Converter printer is set to print to the correct port. The default port is <i>c:\temp\idcoutput.ps</i>.</p> <p>The default port can be changed by adding the <code>PrinterPortPath</code> variable to the <i>intradoc.cfg</i> file located in the refinery <i>IntradocDir\bin\</i> directory and specifying the port path. In this case, the IDC PDF Converter printer should be set to print to the port specified in the <i>intradoc.cfg</i> file.</p>

3.3.3.4 Conversions Keep Timing Out

Inbound Refinery conversions keep timing out.

Possible Causes	Solutions
Files are password protected.	Password-protected files will bring up a dialog window during conversion, which will cause the conversion to time out if the dialog is not cleared manually. Remove password protection from files before checking them in.
Your timeout settings are not sufficient.	Adjust your timeout settings. For more information about configuring timeout values, refer to the <i>Inbound Refinery Administration Guide</i> .

3.3.3.5 Microsoft Word Files Won't Convert

Microsoft Word files fail to convert.

Possible Causes	Solutions
Automatic spell checking and grammar checking are causing the conversions to time out.	Make sure that you turn off the Excel options to perform spell checking and grammar checking automatically.
You are using Word and your security level is too high and is causing the conversions to time out.	Make sure that you set the Word security level to <i>low</i> . This means that Word will not prompt you to enable/disable macros when you open a file that contains macros.
You are using Word 2003 and the Customer Experience Improvement Program is causing the conversions to time out.	Make sure that you turn off <i>Show content and links from Microsoft Online</i> on the Tools, Options, General tab under the Online category, and opt out of the Customer Experience Improvement Program on the Tools, Options, General tab under the Customer Feedback category.

Note: For more information about converting Microsoft Word files, see "[Converting Microsoft Word Files to PDF](#)" on page 3-9.

3.3.3.6 Microsoft Excel Files Won't Convert

Microsoft Excel files fail to convert.

Possible Causes	Solutions
Automatic calculations are causing the conversions to time out.	Make sure that you turn off the Excel option to perform calculations automatically.
Automatic spell checking and grammar checking are causing the conversions to time out.	Make sure that you turn off the Excel options to perform spell checking and grammar checking automatically.
You are using Excel and your security level is too high and is causing the conversions to time out.	Make sure that you set the Excel security level to <i>low</i> . This means that Excel will not prompt you to enable/disable macros when you open a file that contains macros.
You are using Excel and the Customer Experience Improvement Program is causing the conversions to time out.	Make sure that you turn off <i>Show content and links from Microsoft Online</i> on the Tools, Options, General tab under the Online category, and opt out of the Customer Experience Improvement Program on the Tools, Options, General tab under the Customer Feedback category.

Note: For more information about converting Microsoft Excel files, see "[Converting Microsoft Excel Files to PDF](#)" on page 3-10.

3.3.3.7 Microsoft PowerPoint Files Won't Convert

Microsoft PowerPoint files fail to convert.

Possible Causes	Solutions
Automatic spell checking and grammar checking are causing the conversions to time out.	Make sure that you turn off the PowerPoint options to perform spell checking and grammar checking automatically.
You are using PowerPoint and your security level is too high and is causing the conversions to time out.	Make sure that you set the PowerPoint security level to <i>low</i> . This means that PowerPoint will not prompt you to enable/disable macros when you open a file that contains macros.
You are using PowerPoint and the Customer Experience Improvement Program is causing the conversions to time out.	Make sure that you turn off <i>Show content and links from Microsoft Online</i> on the Tools, Options, General tab under the Online category, and opt out of the Customer Experience Improvement Program on the Tools, Options, General tab under the Customer Feedback category.

Note: For more information about converting Microsoft PowerPoint files, see "[Converting Microsoft PowerPoint Files to PDF](#)" on page 3-11.

3.3.3.8 Microsoft Visio Files Won't Convert

Microsoft Visio files fail to convert.

Possible Causes	Solutions
You are using Visio and the Customer Experience Improvement Program is causing the conversions to time out.	Make sure that you turn off <i>Show content and links from Microsoft Online</i> on the Tools, Options, General tab under the Online category, and opt out of the Customer Experience Improvement Program on the Tools, Options, General tab under the Customer Feedback category.

Note: For more information about converting Microsoft Visio files, see "[Converting Microsoft Visio Files to PDF](#)" on page 3-12.

3.3.3.9 FrameMaker Files Won't Convert

FrameMaker files fail to convert.

Possible Causes	Solutions
The files are structured FrameMaker files.	Structured FrameMaker files will most likely fail to convert. A dialog box is displayed when a structured FrameMaker file is opened, which will cause the conversion to time out unless the dialog box is cleared manually.

3.3.3.10 WordPerfect Files Won't Convert

WordPerfect files fail to convert.

Possible Causes	Solutions
The files are old WordPerfect files.	WordPerfect files created in versions prior to version 6 might not be processed effectively. Convert these files to a more recent version of WordPerfect before checking them in.

3.3.4 PDF Display Issues

The following are symptoms of display issues for PDF files generated by Inbound Refinery:

- [Blank PDF files in Internet Explorer](#)
- [Error: 'File does not begin with '%PDF-''](#)
- [PDF Files Don't Open Within Browser Window](#)
- [Problems Printing PDFs Using Adobe Acrobat 6.0](#)
- [Internal Thumbnails Not Displayed Properly When Viewing PDF Files Using Adobe Acrobat Reader](#)

3.3.4.1 Blank PDF files in Internet Explorer

When attempting to open PDF files in Microsoft Internet Explorer, a blank PDF file is displayed.

Possible Causes	Solutions (refer to:)
An old version of Adobe Acrobat Reader is being used that does not support in-place activation.	http://support.microsoft.com/default.aspx?scid=http://support.microsoft.com:80/support/kb/articles/q177/3/21.asp&NoWebContent=1
You have a slow connection, the server has a high load, or the PDF file is very large.	http://support.microsoft.com/default.aspx?scid=http://support.microsoft.com:80/support/kb/articles/q177/3/21.asp&NoWebContent=1
The ActiveX control is corrupt. For Adobe Acrobat Reader 4 to use in place activation with Internet Explorer, the Pdf.ocx and Pdf.tlb files must be present in the <acrobat_install_dir>\Program Files\Adobe\Acrobat 4.0\Acrobat\ActiveX\ directory.	http://www.adobe.com/support/

3.3.4.2 Error: 'File does not begin with '%PDF-''

When attempting to open a PDF file in a web browser, you receive the following error message:

"...File does not begin with '%PDF-'"

Possible Causes	Solutions (refer to:)
The PDF file has an .mme file extension rather than a .pdf file extension.	http://www.adobe.com/support/

Possible Causes	Solutions (refer to:)
The PDF file has an .mme file extension rather than a .pdf file extension.	http://www.planetpdf.com/mainpage.asp?WebPageID=304

3.3.4.3 PDF Files Don't Open Within Browser Window

When viewing PDF files generated by Inbound Refinery through a web browser, the PDF files do not open within the browser window.

Possible Causes	Solutions
Settings in Adobe Acrobat Reader or Acrobat.	In Acrobat Reader or Acrobat, make sure the Preferences are set for <i>Web Browser Integration/Display PDF in Browser</i> . The exact setting depends of version of Acrobat Reader or Acrobat that you are using.

3.3.4.4 Problems Printing PDFs Using Adobe Acrobat 6.0

When you try to print a PDF, the document will not print and the following message is displayed: *Could not start print job*.

Possible Causes	Solutions
You have Adobe Acrobat 6.0 installed. Adobe Acrobat 6.0 is unable to print a PDF when a filename and URL has more than 256 characters. URLs in workflow and subscription email notifications can easily exceed 256 characters.	Adobe has fixed this problem in Adobe Acrobat 6.0.1. Download and install Adobe Acrobat 6.0.1 or higher to solve this problem.

3.3.4.5 Internal Thumbnails Not Displayed Properly When Viewing PDF Files Using Adobe Acrobat Reader

When you view a PDF file, internal thumbnails (thumbnails of the pages within the PDF file) do not display properly. They might display with poor quality, display as grey rectangles, or not display at all.

Possible Causes	Solutions
<p>You are using Adobe Acrobat Reader 5 or 6, and the PDF file is being byte served from the web server.</p> <p>As of Acrobat 5, internal thumbnails can be embedded in the PDF by the creating application, or the viewing application can attempt to create thumbnails dynamically from the rendered pages.</p> <p>If the thumbnail is being generated in Acrobat Reader dynamically, the PDF is being byte served from the web server, and the internal thumbnails are not embedded in the PDF, certain versions of Reader might not be able to render the internal thumbnails properly. This is because the full image data for a given page is on the web server and not available on the client to render the thumbnail image.</p> <p>It is also possible that certain versions of Acrobat Reader might not display internal thumbnails for any PDF that are byte served from the web server.</p>	<p>Possible solutions include:</p> <p>Use Acrobat Reader 7 or higher. This issue appears to be fixed in Acrobat Reader 7.</p> <p>Configure the application that is creating your PDFs (your PostScript to PDF distiller engine or other third-party application) to embed internal thumbnails.</p> <p>Disable byte serving of PDF files on the web server.</p>

Working With Image and Video Conversions

Digital Asset Manager enables you to define and provide images, videos, and audio files in specified formats and sizes for download by the people in your organization who need them. This helps your organization maintain consistent standards for branding and digital content use.

For Digital Asset Manager to work, the following components must be installed and enabled on the correct server as noted:

Component Name	Component Description	Enabled on Server
DAMConverter	Enables Inbound Refinery to convert digital assets into multiple renditions.	Inbound Refinery Server
DamConverterSupport	Enables the content server to support digit asset management features. This component is highly dependent on the ZipRenditionManagement Component.	Content Server
DigitalAssetManager	Enables the user interface for digital asset management in tight integration with components used to create and manage renditions and zip file archives. This component is highly dependent on the ContentBasket Component.	Content Server
ContentBasket	Enables users to select renditions of content items and place them in a personal storage space called the Content Basket.	Content Server
ZipRenditionManagement	Enables Content Server access to digital asset renditions created and compressed into a ZIP file by Inbound Refinery.	Content Server

This section covers the following topics:

- [Section 4.1, "Digital Asset Manager Overview"](#)
- [Section 4.2, "Configuring Digital Asset Manager"](#)
- [Section 4.3, "Configuring For Image Conversion"](#)
- [Section 4.4, "Configuring For Video Conversion"](#)

4.1 Digital Asset Manager Overview

Digital Asset Manager creates multiple formats of digital assets automatically when an image or video is checked into Content Server, and lists the formats under one content ID. This ensures that the asset, such as a corporate logo or promotional video, maintains a standard size and quality in the multiple formats required by your organization, while providing the content management features of Content Server. For people in your organization who need to find and use digital assets, Digital Asset Manager gives them the confidence that they are using the approved asset and format for their needs. For example, one person can bundle and download images of the logo for use on a web-site, and another can download and bundle images of the same logo for use in office presentations or print collateral, all from a single digital asset checked into Content Server.

Digital assets are valuable electronic images and videos to be made available within your organization in multiple output formats. Each output format is called a rendition. The quantity and type of renditions are defined by the system administrator in rendition sets. A user selects a rendition set used to create renditions of a digital asset at the time the asset is checked into Content Server. Once checked in, a digital asset is routed to Inbound Refinery and converted using the specified conversion application.

4.1.1 Supported Conversion Applications

By default, Inbound Refinery supplies rendition sets for use with Oracle Outside In Image Export to convert images. For additional image conversion options, a stand-alone graphics conversion application can be installed. Oracle does not supply or support any specific third-party conversion engine, allowing you to choose the engine that is right for you. Sample configurations for additional image conversion engines can be accessed from the Universal Content Management Oracle Technology Network pages.

To convert videos, a stand-alone video conversion application must be installed. Digital Asset Manager is currently configured to work with Telestream's Flip Factory version 6.1. FlipFactory version 6.1 must be obtained separately from Digital Asset Manager. FlipFactory is developed by Telestream and is available from their web site (www.telestream.net).

Digital Asset Manager is designed and tested on fully functioning implementations of third-party conversion applications. Demonstration versions of conversion applications are not recommended or supported.

4.1.2 Supported Streaming Servers

For streaming digital video, Digital Asset Manager currently supports the following streaming servers:

- Windows Streaming Media—versions for supported Windows operating systems
- QuickTime Streaming Media—Darwin and QuickTime Streaming Server version 10.4
- RealMedia—Helix DNA Server version 11

4.1.3 Supported Input Formats

Supported input formats are determined by the graphic or video conversion application being used. Digital Asset Manager now has the ability to use several graphic conversion engines. Only Oracle Outside In Image Export is included with Inbound Refinery. Formats supported by Oracle Outside In Image Export can be

found on Oracle's web site at <http://www.oracle.com/technology/products/content-management/oit/imageexport.html>.

Third-party conversion engines may offer additional support to graphics format. Third-party conversion engines must be obtained independently of Inbound Refinery and are not officially supported by Oracle.

The graphics formats supported by compatible conversion engines include the following:

- JPG/JPEG (Joint Photographic Expert Group)
- GIF (Graphics Interchange Format)
- BMP (Bitmap)
- PNG (Portable Network Graphics)
- TIFF (Tag Image File Format)
- PSD (PhotoShop)
- AI (Adobe Illustrator)
- PDF (Portable Document Format)

For a comprehensive listing of formats supported, view the documentation that came with your chosen graphic conversion engine.

Video formats supported by FlipFactory include the following:

- Flash Media Format
- MP3 Audio Format
- MPEG Layer 3 and 4 Elementary Stream Media Format
- PacketVideo MPEG4 Format
- QuickTime Media Format
- QuickTime Streaming Format
- Windows Media Format
- AVI Media Format
- DVD Stream Media Format
- MPEG1 System Stream Media Format
- MPEG2 Program Stream Media Format
- MPEG2 Transport Stream Format
- MPEG4 Media Format
- Pinnacle MediaStream Media Format

See the FlipFactory documentation from Telestream for a comprehensive listing of formats supported by FlipFactory.

4.1.4 Supported Output Formats

Output formats are determined by the conversion application. Formats supported by Oracle Outside In Image Export can be found on Oracle's web site at <http://www.oracle.com/technology/products/content-management/oit/imageexport.html>.

Viewing of renditions in your browser is limited to what can be displayed effectively in your browser. For images, only formats supported by your web browser can be displayed. For video, only formats that have browser plug-ins are available for viewing in your web browser, such as output formats supported by Windows Media Player, Real Player, QuickTime Player, and Flash. Any image or video assets rendered in a format not supported for viewing in a browser will still be managed by Content Server, but will be available only for download.

Video Manager currently supports the following output formats:

- MPEG Layers 1, 2, and 4 (.mpg, .mpeg, .mp2, .mp4)
- MPEG Layer 3 Audio (.mp3)
- Adobe Flash (.flv)
- QuickTime (.mov)
- Audio Video Interleave (.avi)

Due to the extensive number of formats supported by Telestream's FlipFactory, Windows Media Player, Real Player, QuickTime Player, and Adobe Flash, and the difficulty in configuring all the possible combinations, Video Manager officially supports a limited subset of these formats. You can configure Digital Asset Manager to accept additional formats and test them as your needs require.

4.2 Configuring Digital Asset Manager

You must take additional steps to configure Digital Asset Manager for image and video conversion, including modifying the following configuration files:

- Content Server config.cfg, located in the <IntradocDir>/config/ directory
- Inbound Refinery intradoc.cfg file, located in the refinery *IntradocDir/bin/* directory

This section details the necessary configuration steps.

- ["Configuring For Image Conversion"](#) on page 4-4
- ["Modifying the Content Server Configuration File"](#) on page 4-5
- ["Associating File Formats and Mapping File Extensions"](#) on page 4-6
- ["Associating a File Format"](#) on page 4-7
- ["Mapping File Extensions"](#) on page 4-8

4.2.1 Configuring For Image Conversion

Digital Asset Manager requires a conversion application to create renditions of an image. Default rendition sets for use with Oracle Outside In Image Export are provided and no configuration is necessary.

Default Rendition Sets

Default rendition sets are defined in the damconverter_basedefinitions.hda file, which is located in the refinery *IdcHomeDir/components/DAMConverter/resources/* directory and should never be altered. Upgrades to the component would overwrite any changes. For information on defining and using rendition sets other than the default sets included in the damconverter_basedefinitions.hda, see ["Defining Image Rendition Sets"](#) on page 4-10.

The following default rendition sets are included in the damconverter_
basedefinitions.hda file installed with Digital Asset Manager:

Rendition Set Name	Description
ThumbnailOnly	Creates one 72 dpi PNG rendition exactly 80 pixels high
BasicRenditions	Creates the following renditions: <ul style="list-style-type: none"> ■ Web: A 72 dpi JPEG rendition no bigger than 800 x 600 pixels ■ Thumbnail: A 72 dpi PNG rendition exactly 80 pixels high ■ Preview: A 72 dpi GIF rendition exactly 250 pixels wide
MultipleFormats	Creates the following renditions: <ul style="list-style-type: none"> ■ Web:A 72 dpi JPEG rendition no bigger than 800 x 600 pixels ■ Thumbnail: A 72 dpi PNG rendition exactly 80 pixels high ■ Preview: A 72 dpi GIF rendition exactly 250 pixels wide ■ Jpeg2000:A 72 dpi Jpeg 2000 rendition no bigger than 800 x 600 pixels wide ■ Tiff: A TIFF rendition with no parameters specified. When no parameters are specified, the dpi and pixel size of the original file is maintained. ■ Bitmap: A BMP rendition with no parameters specified

Alternate Conversion Applications

If you would like to use an alternate conversion application, Digital Asset Manager allows you the flexibility to choose one that best meets your needs. To use a conversion application other than Oracle Outside In Image Export, you must obtain and install the application and define rendition sets suitable for the application you choose.

Note: For best performance rendering images, install the image conversion application on the same server as the Inbound Refinery instance being used for Digital Asset Manager. For best performance rendering videos, refer to the recommendations of the video conversion application. For example, Flip Factory documentation recommends that it be installed on its own server-class machine.

Additional rendition sets should be defined in a new file called extraRendition_
definitions.hda which must be created in the <IntradocDir>/data/configuration/dam/
directory. For information on creating additional rendition sets, see "[Defining Image Rendition Sets](#)" on page 4-10.

4.2.2 Modifying the Content Server Configuration File

To avoid an error in case a video rendition set is not selected at time of check in, a default value must be set for the VideoRenditions metadata field.

To modify the configuration file, do these steps:

1. Open the following directory of your Content Server instance:
`<IntradocDir>/config/`
2. Open the config.cfg file in a standard text editor.
3. Under the #Additional Variables section, add DefaultVideoConversionSet and set it equal to the factory you want as the default rendition set. The default must match a rendition set in the choice list of the VideoConversions metadata field, defined using the Configuration Manager applet.
4. Save changes to the config.cfg file and close the file.
5. Restart Content Server

Digital Asset Manager allows a user to bundle and download assets to a local or shared file system. You can specify the maximum allowable size of a download, either in megabytes or number of files in the Additional Variables section of the config.cfg file by setting the following variables:

- MaxRenditionBundleInMegabytes=Maximum size of bundle in megabytes.
- MaxRenditionFileEntries=Maximum number of files in the bundle, expressed numerically.

Note: The DefaultVideoConversionSet identifies the rendition set to be used if a user does not specify a Video Rendition Set when checking in a video. It must be set in the config.cfg file, and not in the Default Value field of the Content Manager applet.

4.2.3 Associating File Formats and Mapping File Extensions

Content Server identifies content items as digital assets based on the extension of the file checked in. The following file formats must be associated with Digital Asset Manager and the file extensions mapped to the correct format.

4.2.3.1 Image Formats

- JPEG (.jpeg; .jpg)
- GIF (.gif)
- AI (.ai)
- PSD (.psd)
- BMP (.bmp)
- PNG (.png)
- TIFF (.tiff; .tif)

4.2.3.2 Video Formats

- MPEG Layers 1, 2, and 4 (.mpg, .mpeg, .mp2, .mp4)
- QuickTime (.mov)
- Audio Video Interleave (.avi)
- Flash Video (.flv)

Remember, the conversion engine passes rendition information to the third-party conversion application, so any additional format you associate must be supported by the third-party conversion application used by your organization.

Note: If you are only converting one type of digital asset, images or videos, then you should only associate the formats for that type of asset.

4.2.4 Associating a File Format

To associate a format with the Digital Asset Manager conversion engine, do these steps:

1. Log in to Content Server. You must have administration rights.
2. Click Admin Applets on the Administration tray. The Administration page is displayed
3. Click Configuration Manager. The Configuration Manager applet opens.
4. Select Options—File Formats. The File Formats screen is displayed.
5. Associate the format with the Digital Asset Manager conversion engine by performing one of these steps:

If the format is listed in the File Formats (upper) section of the File Formats screen:

- a. Select the format from the list. For example select, image/jpeg for images or video/mpeg for videos.
- b. Click Edit. The Edit File Format screen is displayed.
- c. Select Digital Media Graphics for image formats and Digital Media Video for video formats from the Conversion choice list. Digital Media Graphics and Digital Media Video are the names of the Digital Asset Manager conversion engines.
- d. Modify the description in the Description field if desired. This description is displayed in the Configuration Manager, and is not displayed in the Content Server interface.
- e. Click OK. The Edit File Format screen is closed.

If the format is not listed in the File Formats (upper) section of the File Formats screen:

- a. Click Add. The Add New File Formats screen is displayed.
- b. Enter the type of format in the Format field. The type can be anything, and is displayed on the Content Information and Rendition Information pages of Content Server. Choose something descriptive, for example, application/PaintShop.
- c. Select Digital Media Graphics for images or Digital Media Video for videos from the Conversion choice list. Digital Media Graphics and Digital Media Video are the names of the Digital Asset Manager conversion engines.
- d. Optionally, enter a description in the Description field. This description is displayed in the Configuration Manager, and is not typically displayed in the Content Server interface. The description can be displayed in the user interface if the configuration variable *IsOverrideFormat* is set equal to *true* in the Content Server configuration file. Setting *IsOverrideFormat=true* in the Content

Server configuration file enables a choice list on the check in page that allows a user to select a conversion format for a specific file, bypassing the assigned format.

- e. Click **OK**. The Add New File Formats screen is closed.

4.2.5 Mapping File Extensions

After a format is associated with the appropriate Digital Media conversion engine, you must ensure that all appropriate file extensions are mapped to the file format in Configuration Manager. All files with a file extension mapped to the format will be passed to the Digital Asset Manager conversion engine.

To map a file extension to a file format associated with the Digital Asset Manager conversion engine, perform these steps:

1. Log in to Content Server. You must have administration rights.
2. Click Admin Applets under the Administration tray. The Administration page is displayed.
3. Click Configuration Manager. The Configuration Manager applet opens.
4. Select Options—File Formats. The File Formats screen is displayed.
5. Map the extensions to the appropriate format by performing one of these steps:
If the extension is listed in the File Extensions (lower) section of the File Formats screen:
 - a. Select the extension from the list. For example select, *psp*.
 - b. Click **Edit**. The Edit File Extension screen is displayed.
 - c. Select the appropriate format from the **Map to Format** choice list. For example, *application/PaintShop* or *video/mpeg*.
 - d. Click **OK**. The Edit File Extension screen is closed.

If the format is not listed in the File Formats (upper) section of the File Formats screen:

- a. Click **Add**. The Add File Extensions screen is displayed.
- b. Enter the file extension in the **Extension** field. For example, *psp*. Do not enter the dot of the file extension.
- c. Select the appropriate format from the **Map to Format** choice list. For example, *application/PaintShop* or *video/mpeg*.
- d. Repeat steps a through c for each extension to be associated with the format. For example, *pspimage* could also be associated with *application/PaintShop*.
- e. Click **OK**. The Add File Extensions screen is closed.
- f. Click **Close**. The File Formats screen is closed.
- g. Close Configuration Manager.

After associating a format to the appropriate Digital Asset Manager conversion engine (Digital Media Graphics or Digital Media Video), and mapping the appropriate file extensions to the format, all files with those extensions checked into Content Server are passed to Inbound Refinery for processing through the conversion application. Remember, the conversion engine passes rendition information to the third-party conversion application, so any additional format

you associate must be supported by the third-party conversion application used by your organization.

4.3 Configuring For Image Conversion

This section covers the following topics:

- "Understanding Image Rendition Sets" on page 4-9
- "Defining Image Rendition Sets" on page 4-10
- "Creating and Configuring Image Rendition Sets" on page 4-10
- "Working with XMP and EXIF Data" on page 4-14

4.3.1 Understanding Image Rendition Sets

When a digital asset is checked in to Content Server, Digital Asset Manager creates multiple renditions of that asset. For images, the criteria for each rendition is defined in one of two files. The default renditions set is defined in the `damconverter_basedefinitions.hda` file and should not be modified. Custom rendition sets can be added to a component resource file called `extraRendition_definitions.hda`. This file can be created with a standard text editor and must be located in a new directory named *dam* in the refinery `IntradocDir/data/configuration/` directory. The full file path should be:

```
IntradocDir/data/configuration/dam/extraRendition_definitions.hda
```

For videos, the criteria is defined in your video conversion application. By default, Digital Asset Manager was designed to work with FlipFactory, and so the criteria for rendering digital video assets is defined when a factory is created.

Image Asset Rendition Definition

The criteria defining the default rendition sets at installation are in the `damconverter_basedefinitions.hda` file located in the content server `IdcHomeDir/components/DAMConverter/resources/` directory. This file should not be edited.

The definitions are grouped into rendition sets which correspond to rendition sets available to contributors on the content check in form when a image asset is checked in. It includes the following predefined rendition sets:

- ThumbnailOnly
- BasicRenditions
- MultipleFormats

The included rendition sets are examples that work with Outside In Image Export. If they do not meet your organization's unique needs, you should remove them from the option list on the check in page using the Configuration Manager to suppress their functionality. You should not edit the resource file to remove the sets. Any changes made will be lost when a component is updated.

Additional rendition sets can be added to a file called `extraRendition_definitions.hda`. This file can be created with a standard text editor and must be located in a new directory named *dam* in the refinery `IntradocDir/data/configuration/` directory. Digital Asset Manager merges `damconverter_basedefinitions.hda` and `extraRendition_definitions.hda` when running, with the second file you created taking precedence over the resource file. For example, if you create a new rendition in your file with the same

name as one in the resource file but with different parameters, the new parameters will be used.

4.3.2 Defining Image Rendition Sets

When a contributor checks a digital asset into Content Server, they select a rendition set on the check in form. For image files, that rendition set matches a rendition set defined in the `extraRendition_definitions.hda` file. Depending on the needs of your organization, the system administrator may need to modify, delete, or add renditions or rendition sets. For example, higher resolution may be required for print material than is specified in the default Print rendition set, or a new rendition set to handle CAD files from an engineering company.

For images, image rendition sets defined in the `extraRendition_definitions.hda` files contain the options for converting digital assets into the image renditions specified in the set, and for displaying and accessing the renditions from within Content Server. The default renditions sets are in the component resource file, which should not be changed. Any additional rendition sets should be added to the `extraRendition_definitions.hda` file you created during installation. In that file, the top properties section contains the file path to a third-party conversion application. The bottom section contains the rendition set options, organized into sets, called rendition result sets.

When a file is checked into Content Server, the format of the file determines whether or not it is a digital asset. If it is an image file, Content Server passes the file to Inbound Refinery, which calls rendition options from the `extraRenditions.hda` and pass them to the image conversion application. The resulting renditions are then passed back through Inbound Refinery to Content Server or other specified location, where they are managed under a single content ID and made available to your organization.

For image assets, the names of the rendition sets defined for the choice list in the `PackagedConversions` metadata field in the Configuration Manager applet must match exactly with the names of the rendition sets defined in the `extraRendition_definitions.hda` file.

When modifying or adding renditions, it is important to remember that a contributor will only see the name of the rendition set when they check in a digital asset. The rendition set name should be descriptive. Rendition names and descriptions are displayed on the content information and rendition information pages.

Spaces and other characters reserved for Idoc Script tags or are illegal for use in URLs, such as spaces, cannot be used in rendition names.

4.3.3 Creating and Configuring Image Rendition Sets

To add, modify, or delete image renditions and rendition sets, you must edit the `extraRendition_definitions.hda` file, located in the refinery `IntradocDir/data/configuration/dam/` directory. To successfully modify the `extraRendition_definitions.hda` file, you should be aware of basic HDA file structure. For more detailed information, see *Oracle Fusion Middleware Developer's Guide for Universal Content Management*.

This section covers the following topics:

- ["extraRendition_definitions.hda File Structure"](#) on page 4-11
- ["Adding a Rendition Set"](#) on page 4-12
- ["Enabling a Rendition Set"](#) on page 4-14

4.3.3.1 extraRendition_definitions.hda File Structure

When defining additional rendition sets, the extraRendition_definitions.hda file should contain a header line and two section types.

Section Types

The extraRendition_definitions.hda file has two section types using the following format:

```
@section_type section_name
Section data
@end
```

The two section types are:

- Properties Section
- ResultSet Section

In the extraRendition_definitions.hda file, there is one properties section and multiple result set sections. All rendition sets are organized in result sets.

Comments are not allowed within a section of an HDA file. However, you can place comments in the HDA file before the first section, between sections, or after the last section.

Blank lines within a section of an HDA file are interpreted as a NULL value. Blank lines before the first section, between sections, or after the last section are ignored.

Properties Section

The properties section of the extraRendition_definitions.hda file defines the path to an external conversion application. In the default file, it also declares the values of Idoc Script variables defining conversion options used by the default rendition result sets.

Default Idoc Script variables in the properties section are used by the default rendition sets. They are not required for any additional rendition sets you define and are not discussed in this guide. Conversion options can be specified directly within the result sets. For more information on working with IdocScript, see the Idoc Script Reference Guide.

Result Set Sections

There are two types of result sets in the extraRendition_definitions.hda file, listed here in order of display in the file:

- Rendition Result Sets
- ExtensionFormatMap

Rendition result sets organize rendition sets and contain information about creating renditions. There can be many rendition result sets, in any order. They can be added, modified, or deleted, but each name must be unique.

The ExtensionFormatMap is an optional result set lists file extension/format pairs, so that Inbound Refinery can return the correct file format to Content Server for use internally. This is not a required set, as Inbound Refinery uses a different system to map extensions to mime types, but if this result set is defined, the mapping specified in it takes precedence.

4.3.3.2 Adding a Rendition Set

The simplest way to add a rendition set to the `extraRendition_definitions.hda` file is to copy an existing rendition result set and modify it. To successfully modify an existing set, you should be aware of basic set structure.

Modifications made to a component resource such as `damconverter_basedefinitions.hda` will be over-written if Digital Asset Manager is updated to a newer version. Additional rendition sets should be added to the `extraRendition_definitions.hda` file created in the `IntradocDir/data/configuration/dam`. Digital Asset Manager uses both files when running.

Rendition Result Set Structure

HDA files are ordered using simple name/value pairs, representing tabular data in an ASCII text format. The first line of a ResultSet section declares the set with the command `@ResultSet`, and then specifies the name of the set. The second line specifies the number of columns a table has, and the following lines name and populate the columns based on their order in the result set. Finally, the last line closes the result set with the command `@end`.

The first line of the rendition result set declares it as a result set by starting with `@ResultSet`, and the last line closes the set, with `@end`. The first line also gives the set a name. In this case, the name is `ThumbnailOnly`.

The name used should be descriptive, but spaces and other characters reserved for Idoc Script tags or illegal for use in URLs, such as spaces, cannot be used in rendition names.

The second line identifies how many columns are in the result set. In rendition result sets for Digital Asset Manager, there are 6 columns.

Each column has the following name and description:

Column Name	Column Description
<code>extRenditionName</code>	The name of the rendition displayed on the Rendition Information page. Make sure that you do not use Primary or Alternate for rendition names. These terms are reserved for internal use by Content Server.
<code>extEngine</code>	The path to the conversion engine used. By default, this is expressed as an Idoc Script variable declared in the properties section of the <code>extraRendition_definitions.hda</code> file.
<code>extType</code>	How the rendition is being used. <ul style="list-style-type: none"> ■ Thumbnail: Used on the Thumbnail view of a search results page. ■ Preview: Used on the Rendition Information page. ■ Web: The web-viewable version of a content item. Displayed in the main content area when accessed by clicking the content ID or thumbnail from a search results page, or when clicking the web-viewable link on a content information page. Displayed in a new browser window when accessed by clicking the Preview image on a Rendition Information page. If no web rendition is defined the native file is used by Content Server as the web-viewable file. ■ Extra: Any rendition not defined as Thumbnail, Preview, or Web. Rendition types may be combined. For example, by listing the type as <code>web, preview</code> , the rendition is used both as the web file and as the preview file.

Column Name	Column Description
extSourceFile	The file path to the asset checked into for conversion expressed as Idoc Script.
extParameters	<p>The options passed to the conversion engine defining how the source file is rendered. By default, this is expressed as Idoc Script variables declared in the properties section of the extraRendition_definitions.hda file, but it can be expressed as a literal string.</p> <ul style="list-style-type: none"> ▪ <\$infile\$>: The name of the source file used to generate the rendition, expressed as Idoc Script. ▪ <\$outfile\$>: The name of the rendered file. This is a required parameter, expressed as Idoc Script. ▪ <\$parameter_variable\$>: The options used for rendering by the conversion application. In the provided rendition sets, these are expressed as Idoc Script variables, which are declared in the properties section of the extraRendition_definitions.hda file. They can also be expressed as a literal string of options used by your conversion application. For example, the literal string used in the damconverter_basedefinitions for the Web rendition is: <pre>outputid=FI_GIF, graphicoutputdpi=72, graphicwidthlimit=250, graphicheightlimit=0</pre> but it could also be expressed as the following variable: <pre><\$ImageExport_BasicRenditions_Web\$></pre>
extDescription	The description for the rendition displayed on the Rendition Information page.

For more information on working with .hda files, see the *Working With Components* guide.

To add a new rendition result set, perform these steps:

1. Open the extraRendition_definitions.hda in a standard text editor.
2. Copy and paste an existing rendition result set.
 - a. Select a rendition result set to copy, starting at the @ResultSet line and ending at the @end line, and copy it.
 - b. Position the cursor between any two existing rendition result sets in the extraRendition_definitions.hda file.
 - c. Paste the rendition result set into the file.

Blank lines between result set sections are ignored. To help visually organize the extraRendition_definitions.hda file, you may want to insert a blank line before and after the new rendition result set.

3. Change the name of the new rendition result set, listed next to @ResultSet. For example, @ResultSet NewName.

The name used should be descriptive, but spaces and other characters reserved for Idoc Script tags or illegal for use in URLs, such as spaces, cannot be used in rendition names.

4. Change rendition information for each rendition you want to keep in the result set.
 - a. Change the name of the rendition, listed in the extRenditionName column. Rendition names may have spaces.
 - b. Change the type of the rendition, listed in the extType column. Each rendition can multiple types, for example, preview, web.

- c. Change the conversion options for rendering, listed in the extParameters column. Conversion options are dependent on which third-party conversion application being used.
 - d. Change the description of the rendition, listed in the extDescription column. The description can be anything, and is displayed on the Rendition Information page.

Do not change the <\${InFilePath}> variable used in the extSouceFile column. This is required by .
5. Delete any extraneous renditions in the result set.
 6. Save the extraRendition_definitions.hda file.

4.3.3.3 Enabling a Rendition Set

After a rendition set is added to the extraRendition_definitions.hda file, it must be made available as an option in the Image Rendition Set field on the Content Check In Form, using Configuration Manager.

To add the name of the rendition set as an option in Configuration Manager, perform these steps:

1. Log in to Content Server. You must have administration rights.
2. Click **Admin Applets** on the **Administration** tray. The Administration page is displayed
3. Click **Configuration Manager**. The Configuration Manager applet opens.
4. Verify the Information Fields tab is active, select the **PackagedConversions** information field and click **Edit**. The Edit Custom Info screen is displayed.
5. Click **Configure**. The Configure Option List screen is displayed.
6. Click **Edit**. The Option List screen is displayed.
7. Add the name of the new result set as it is listed in the extraRendition_definitions.hda file's packedConversion result set. Rendition sets can be listed in any order.

The name used in the extraRendition_definitions.hda file and the PackagedConversions option list must match. Spaces and other characters reserved for Idoc Script tags or illegal for use in URLs cannot be used.
8. Click **OK** to close the Option List screen.
9. Click **OK** to close the Configure Option List screen.
10. Click **OK** to close the Edit Custom Info screen.

4.3.4 Working with XMP and EXIF Data

Most digital images have data associated with them by the hardware or software used to create them. For example, digital photographs have the date they were created and the camera used to create them associated with them, among other things. Digital files such as those created with Adobe Photoshop have a greater set of metadata associated with them. The metadata associated with digital photographs is called EXIF data, which stands for Exchangeable Image File Format. It is a subset of the type of data created by computer applications such as Adobe Photoshop. The application metadata is called XMP data, which stands for EXtensible Metadata Platform.

By default, Inbound Refinery is now configured to send EXIF and XMP data to Content Server, where it is indexed and available for searching as text.

4.3.4.1 Searching XMP and EXIF Data in Content Server

By default, XMP schema and EXIF data are extracted by Inbound Refinery and passed to Content Server. Content Server then displays the data on the Image Data tab of a digital asset. If OracleTextSearch is installed and enabled, the data is indexed and available for searching through a full-text search. To enable searching on a specific criteria in the XMP or EXIF metadata, a placeholder field must be enabled on the Content Server user interface and the search collection must be rebuilt. Once done, users can search for content using the specific criteria in the data.

To enable an XMP or EXIF data field on the user interface and make the specific criteria available for searching, do these steps:

1. On the Content Server, expand the Administration tray and click **DAM Administration**. The DAM Search Fields Administration page is displayed.
2. Expand the section under the XMP Schema Categories that has the data field to enable on the user interface. For example, to search for digital images based on the date and time the image was taken, expand the EXIF category.
3. Find and enable the placeholder field to be used for searching. For example, in the EXIF category, scroll to the XMP Date Time Original and enable it.
4. Click **Update**.
5. Rebuild the search index. For information on rebuilding the search index, see the content server documentation.

Note: Enabling a field in the user interface creates a placeholder field in content server and allows the information to be indexed and searched against. It does not modify database tables or allow information to be entered or modified in the field for storage in the database.

4.3.4.2 Applying XMP and EXIF Data as Text Overlay to a Rendition

Once a placeholder field has been created and the metadata indexed, XMP and EXIF metadata can be used as a text overlay in a custom rendition.

4.4 Configuring For Video Conversion

Digital Asset Manager requires a third-party conversion application to render video assets checked in to Content Server. Currently, Digital Asset Manager is designed to work with Telestream's FlipFactory version 6.0 and 6.1 (<http://www.telestream.net/products/flipfactory.htm>).

This section has the following topics:

- ["Installing FlipFactory"](#) on page 4-16
- ["Installing Digital Asset Manager Video Plug-ins"](#) on page 4-16
- ["Ensuring the JDOM Library is Installed for FlipFactory 6.0"](#) on page 4-17
- ["Sharing Directories with FlipFactory"](#) on page 4-17
- ["Setting the Conversion Engine Shared Directory Path"](#) on page 4-18

- ["Setting the Default Media Location"](#) on page 4-20
- ["Defining Video Rendition Sets"](#) on page 4-24
- ["Creating and Configuring Factories in FlipFactory"](#) on page 4-24
- ["Managing Video Conversion"](#) on page 4-27
- ["Enabling Plug-in Debugging Logs"](#) on page 4-29

4.4.1 Installing FlipFactory

If you do not already have an instance of FlipFactory installed, follow the instructions included with FlipFactory to install and set up the application to meet your requirements. FlipFactory must be installed on a Windows server.

Cautions: FlipFactory installation will fail if installing on a computer with an instance of Microsoft SQL Server 2000 or lower. Ensure that SQL Server 2000 or lower is not installed on the computer on which you are installing FlipFactory.

FlipFactory requires QuickTime to be installed for QuickTime renditions to be made. Review the FlipFactory documentation for information regarding obtaining and integrating the proper QuickTime version for use with the specific version of FlipFactory you are using, either 6.0 or 6.1. Also, visit Telestream's site at <http://www.telestream.net/> for the latest information relating to FlipFactory.

Due to the demand on computer resources required for rendering video assets, it is recommended that FlipFactory and Inbound Refinery be installed on separate server-class machines. For ease of access, it is also recommended that both servers have a duplicate user list of administrators.

4.4.2 Installing Digital Asset Manager Video Plug-ins

The monitor, transport, and notification plug-ins that Inbound Refinery uses to communicate with FlipFactory to convert videos are distributed in the `idcFlipFactoryPlugin.zip` file installed by the DAMConverter component. The `idcFlipFactoryPlugin.zip` file is located in the refinery `IdcHomeDir/components/DAMConverter/VideoManagerFlipFactoryPlugin/` directory.

To install and configure the Digital Asset Manager plug-ins for FlipFactory, perform these steps:

1. Open Services on the Windows server on which FlipFactory is installed.
2. Select the Flip Engine service and then select **Actions, Stop**.
3. Select the `idcFlipFactoryPlugin.zip` located in the refinery `IdcHomeDir/components/DAMConverter/VideoManagerFlipFactoryPlugin/` directory, and extract the file to the FlipFactory installation directory. For example: `C:/Telestream/FlipFactory/`. Two directories are extracted to the following locations:
 - `<FlipFactory_install_dir>/idcTools/`
 - `<FlipFactory_install_dir>/Plugins/`

Caution: To ensure that all files are extracted to the correct place, keep the directory structure when extracting the `idcFlipFactoryPlugin.zip` file to the FlipFactory installation directory. The full directory structures are:

- `/<FlipFactory_install_dir>/idcTools/jars/`
 - `/<FlipFactory_install_dir>/Plugins/com/stellent/refinery/ff/impl`
-
-

4.4.3 Ensuring the JDOM Library is Installed for FlipFactory 6.0

FlipFactory 6.0 requires the JDOM library `jdom.jar` to be installed in the `/<FlipFactory_install_dir>/Jars/` directory. After installing the Digital Asset Manager Video plug-ins, navigate to the `/<FlipFactory_install_dir>/Jars/` directory and ensure that the `jdom.jar` file is there. If it is not there, download the latest API from <http://www.jdom.org/> and copy only the `jdom.jar` file to the `/<FlipFactory_install_dir>/Jars/` directory and restart FlipFactory.

This is not necessary for FlipFactory 6.1.

4.4.4 Sharing Directories with FlipFactory

To convert videos, each implementation of Digital Asset Manager must have a staging directory and a watched directory on a file system shared with FlipFactory. The staging and watched directory can be the same directory. For Digital Asset Manager to work properly, a subdirectory in each watched directory must have the same name as the rendition set in Digital Asset Manager, which in turn must have the same name as the factory created in FlipFactory.

Additionally, there must be an “in” directory and an “out” directory within each subdirectory of the watched folder.

Cautions: If multiple factories point to the same “in” directory, the input file will be rendered by whichever factory receives notification first. As different factories may have different parameters, unexpected results may occur. For conversion to work properly and provide the expected results for each rendition, each factory created in FlipFactory should point to its own unique “in” directory.

The path to the shared directories must not contain spaces.

To create the required directories, perform these steps:

1. Establish a shared file system that can be accessed by both FlipFactory and Inbound Refinery. For best results, set up the shared directories on the system that has FlipFactory installed.
2. Create a staging directory. It can be named anything. For example, `Video_Staging`.
3. Create a watched directory. It can be named anything. For example, `Video_Watch`. A single shared directory can be used for both the watched and staging directory.
4. Open the watched directory and create a directory for each rendition set defined in Digital Asset Manager. The name of the directory must equal the name of the rendition set as defined by editing the `VideoRenditions` custom metadata field in Configuration Manager.

Caution: For conversion to work properly, the names of the watched subdirectories, the Digital Asset Manager rendition sets, and the FlipFactory factories must be the same. Paths to the shared directories should not contain spaces.

5. Open each directory in the watched directory and create two subdirectories, one named in, the other out. For example:

```
<Video_Watch_dir>/MediumBandwidth/in  
<Video_Watch_dir>/MediumBandwidth/out
```

4.4.5 Setting the Conversion Engine Shared Directory Path

Once the staging and watched directories are created, both Inbound Refinery and FlipFactory must know where to find them. Inbound Refinery must be able to place a copy of the asset in the staging directory and retrieve the renditions from the watched directory when rendering is complete. Inbound Refinery must also post an XML file requesting the file be rendered in the watched directory, telling FlipFactory where to find the asset and where to return the renditions, in a syntax that FlipFactory can understand. For best results, set up the shared directories on the system that has FlipFactory installed.

Setting the Shared Directory Path In Inbound Refinery

To set the shared directory path in Inbound Refinery, perform these steps:

1. Open the `intradoc.cfg` file for each Inbound Refinery connection accessing the shared directories in a standard text editor. The `intradoc.cfg` file is located in the connection directory of an Inbound Refinery installation. For example:

```
DomainDir/ucm/ibr/bin/intradoc.cfg
```

2. Add the variable `VideoStagingDir` and set it equal to the path of the staging directory shared with FlipFactory. For example:

```
VideoStagingDir=\\\\\\NetworkIdentity/Video_Staging/
```

The path can be a local, mapped, or a Universal Naming Convention (UNC) path. The backslash is an escape character in Java, so any path using a backslash must be escaped using two backslashes. For example, the path `\\\\NetworkIdentity/Video_Staging` becomes `\\\\\\NetworkIdentity/Video_Staging`.

Caution: The path to the shared directories must not contain spaces.

3. Add the variable `RefineryFlipFactoryWatchRootDir` and set it equal to the path to the watched directory shared with FlipFactory. For example:

```
RefineryFlipFactoryWatchRootDir=\\\\\\NetworkIdentity/Video_Watch.
```

4. Save changes and close the `intradoc.cfg` file.

Directory Configuration

When both applications are running on a Windows platform, the `VideoStagingDir` and `RefineryFlipFactoryWatchRootDir` can have the same value, because the syntax for

accessing the directories and posting the directory locations in the XML request can be identical.

If Inbound Refinery is running on a UNIX platform, however, the paths to the shared directory may require a different syntax for accessing the directory than for posting the directory location in the XML request in a way that FlipFactory, running on a Windows platform, can understand.

The following additional variables are added to the Inbound Refinery connection `intradoc.cfg` file to provide context for Inbound Refinery to accurately post a file path that FlipFactory can understand.

- `VideoStagingDirFactoryContext`
- `RefineryFlipFactoryWatchRootDirFactoryContext`

For example, if a staging directory is created on a FlipFactory instance at `\\\\\\NetworkIdentity/Video_Staging/`, and mounted on the UNIX Inbound Refinery machine as `/mnt/Video_Staging`, then the following would be true:

- `VideoStagingDir=/mnt/Video_Staging`
- `VideoStagingDirFactoryContext=\\\\\\NetworkIdentity/Video_Staging/`

To add the additional multi-platform support variables to the `intradoc.cfg` file, perform these steps:

1. Open the `intradoc.cfg` file for each Inbound Refinery connection accessing the shared directories in a standard text editor. The `intradoc.cfg` file is located in the connection directory of an Inbound Refinery installation. For example:

```
DomainDir/ucm/ibr/bin/intradoc.cfg
```

2. Add the variable `VideoStagingDirFactoryContext` and set it equal to the path of the staging directory from the FlipFactory context. For example:

```
VideoStagingDirFactoryContext=\\\\\\NetworkIdentity/Video_Staging/
```

3. Add the variable `RefineryFlipFactoryWatchRootDirFactoryContext` and set it equal to the path to the watched directory from the FlipFactory context. For example:

```
RefineryFlipFactoryWatchRootDirFactoryContext=
\\\\\\NetworkIdentity/Video_Watch
```

4. Save changes and close the `intradoc.cfg` file.

Setting the Shared Directory Path in FlipFactory

The watched directory is defined in FlipFactory using the Oracle IBR monitor plug-in each time a factory is created. See the section "[Installing Digital Asset Manager Video Plug-ins](#)" on page 4-16 for more information.

The staging directory does not need to be explicitly defined in FlipFactory.

Note: For FlipFactory to access a shared directory on a UNIX platform, you may need to configure the Flip Engine service on the FlipFactory server to be run by particular user. For more information, see the documentation that came with FlipFactory.

4.4.6 Setting the Default Media Location

So that both Inbound Refinery and Content Server knows what to do with video renditions once they are returned from FlipFactory, you must configure where you want video renditions placed. Video renditions can be placed in a variety of locations, depending on your business need. For example, they can be returned to the Content Server web layout directory, placed on a file system for access outside of Content Server, or sent to a streaming server.

Note: If you are planning to stream rendered videos, you must install and properly configure a supported media server based on the instructions that came with your media server, and set your conversion application to deliver the correct streaming format. Currently Digital Asset Manager supports Darwin Streaming Server (QuickTime), Helix Streaming Server (HelixMedia), and Windows Media Server

This section covers the following topics:

- ["Configuring Default File Placement Locations"](#) on page 20
- ["Configuring Specific File Placement Locations"](#) on page 22

4.4.6.1 Configuring Default File Placement Locations

For Digital Asset Manager to work, Inbound Refinery must know what to do with a submitted asset and its renditions, and Content Server must know how to access them. A default location for assets must be set in the configuration files of both Inbound Refinery and Content Server. Additionally, a default URL root must be set in the configuration file for Content Server.

Note: Both Content Server and Inbound Refinery must have physical access to the placement locations.

To set the default file placement locations, do the following steps:

1. Open the `intradoc.cfg` file for each Inbound Refinery connection accessing the shared directories in a standard text editor. The `intradoc.cfg` file is located in the connection directory of an Inbound Refinery installation. For example:

```
DomainDir/ucm/ibr/bin/intradoc.cfg
```

2. Add the variable `DefaultMediaPhysicalRoot` equal to the default location you want video renditions placed. Because Inbound Refinery may be converting for several Content Servers, the agent name of the Content Server must be appended to the variable. For example:

```
DefaultMediaPhysicalRoot-AgentName=\\\\NetworkIdentity/contentserver/weblayout/
```

Note: This is a root directory only. The media file will actually exist in a subdirectory that mirrors the typical Content Server /weblayout/ directory. For example, a file named *movie.ra* might be located in

```
\\NetworkIdentity/contentserver/weblayout/media/groups/public/
documents/adacct/movie.ra
```

The path can be a local, mapped, or a Universal Naming Convention (UNC) path. The backslash is an escape character in Java, so any path using a backslash must be escaped using two backslashes.

3. Open the `intradoc.cfg` file for each Content Server connection accessing the shared directories in a standard text editor. The `intradoc.cfg` file is located in the connection directory of a Content Server installation. For example:

```
DomainDir/ucm/cs/bin/intradoc.cfg
```

Note: Depending on how your network is set up, this path may or may not be identical to the path set in the Inbound Refinery `intradoc.cfg` file, but the two paths must resolve to the same location.

4. You must also add the variable `DefaultMediaPhysicalRoot` to each Content Server and set it equal to the default location video renditions are placed by the refinery server. For example:

```
DefaultMediaPhysicalRoot=\\NetworkIdentity/contentserver/weblayout/
```

5. Set `DefaultMediaUrlRoot` equal to the default location of the URL root path, including the protocol, to where the file can be accessed. For example:

```
DefaultMediaUrlRoot=http://NetworkIdentity/contentserver/
```

Note: The `DefaultMediaPhysicalRoot` variables for each Content Server agent using Inbound Refinery must resolve to the same location as the respective `DefaultMediaPhysicalRoot-AgentName` variables for the refinery. Additionally, each `DefaultMediaUrlRoot` variable in Content Server must resolve to the same location as the Content Server `DefaultMediaPhysicalRoot` for that server.

6. Save changes and close the `intradoc.cfg` file.
7. Restart your managed servers.

If all rendered video assets are to go to the default locations, then setting the default variables in the configuration files are all you need to do. If you want to send some media formats to other locations, for example all `.ra` files to a streaming server or all `.mpgs` to an external storage system, then you must also configure where to place those specific formats.

4.4.6.2 Configuring Specific File Placement Locations

You can specify different locations for differing video renditions based on the media format. Three media categories are available to define physical and URL roots for different formats:

- WinMedia
- DarwinMedia
- HelixMedia

These category names serve as labels only, and any format can be grouped under any category label.

In order to specify different locations for different formats, you must edit the `intradoc.cfg` files for both Inbound Refinery and Content Server to:

- enable a category
- specify the formats handled by the category
- set the physical root specific to the category

For Content Server only:

- set the URL root specific to the category

Note: Both Content Server and Inbound Refinery must have physical access to the placement locations.

To set a different location for a specific format, do the following steps:

1. Open the `intradoc.cfg` file for each Inbound Refinery connection accessing the shared directories in a standard text editor. The `intradoc.cfg` file is located in the connection directory of an Inbound Refinery installation. For example:

```
DomainDir/ucm/ibr/bin/intradoc.cfg
```

2. Enable a category by setting the appropriate variable equal to true. For example, the following variable may be set:

```
WinMediaSupportEnabled=true  
DarwinMediaSupportEnabled=true  
HelixMediaSupportEnabled=true
```

3. Set the format of the media handled by the category by setting the appropriate variable equal to the format extension. For example:

```
WinMediaFormats=wm*|asf|asx
```

Note that each format is separated by a pipe (`|`), and that an asterisk (`*`) can be used as a wildcard.

The following variables may be set, and must match the enabled category or categories:

- WinMediaFormats
 - DarwinMediaServerFormats
 - HelixMediaServerFormats
4. Set the physical root for the media handled by the category by setting the appropriate variable equal to the physical path. For example:

```
HelixMediaPhysicalRoot=\\.\NetworkIdentity/RealMedia/
```

The following variables may be set, and must match the enabled category or categories:

- WinMediaPhysicalRoot
- DarwinMediaPhysicalRoot
- HelixMediaPhysicalRoot

Note: This is a root directory only. The media file will actually exist in a subdirectory that mirrors the typical Content Server /weblayout/ directory. For example, a file named *movie.ra* might be located in

```
\\NetworkIdentity/contentserver/weblayout/media/groups/public/
documents/adacct/movie.ra
```

The path can be a local, mapped, or a Universal Naming Convention (UNC) path. The backslash is an escape character in Java, so any path using a backslash must be escaped using two backslashes.

5. Open the `intradoc.cfg` file for each Content Server connection accessing the shared directories in a standard text editor. The `intradoc.cfg` file is located in the connection directory of a Content Server installation. For example:

```
DomainDir/ucm/cs/bin/intradoc.cfg
```

6. Repeat steps 2 through 4 in the Content Server `intradoc.cfg` file.
7. Also in the Content Server `intradoc.cfg` file, add one of the following variables based on the formats being rendered, and set it to the URL root path, including the protocol, where the file can be accessed. For example:

```
HelixMediaUrlRoot=rtsp://NetworkIdentity:554/
```

The following variables may be set, and must match the enabled category or categories:

- WinMediaUrlRoot
 - DarwinMediaUrlRoot
 - HelixMediaUrlRoot
8. Save changes and close the `intradoc.cfg` file.
 9. Restart your managed servers.

4.4.7 Using Streaming Servers

Depending on how you set your media conversions, categories, and URL root variables, renditions can be served out of a web server or streaming media server. If you are planning to stream rendered videos, you must:

- install and properly configure a supported media server based on the instructions that came with your media server
- set your conversion application to deliver the correct streaming format
- configure a category to deliver the rendition to the correct place

- configure the web URL root with the proper protocol and syntax for the streaming server

Currently Digital Asset Manager supports Darwin Streaming Server (QuickTime), Helix Streaming Server (RealMedia), and Windows Media Server. For information about protocols used with streaming media, see the documentation that came with your media server.

4.4.8 Defining Video Rendition Sets

For video, factories defined in FlipFactory contain the options for converting digital assets into video renditions specified in the factory. A corresponding directory on a file system shared by FlipFactory and Inbound Refinery has an "in" subdirectory that is watched by FlipFactory for a request posted there by Inbound Refinery in the form of an XML file. Once a factory creates the requested renditions, the files are placed in an "out" subdirectory of the watched factory directory, along with an XML file. Inbound Refinery monitors the "out" directory for the XML file, and uses it to locate the finished renditions and return them to Content Server or place them at another configured location. See "[Configuring For Video Conversion](#)" on page 4-15 for more information on video renditions.

When a file is checked into Content Server, the format of the file determines whether or not it is a digital asset. If it is a video file, Content Server passes the file to Inbound Refinery, which notifies the video conversion application that there is a file to convert. The resulting renditions are then passed back through Inbound Refinery to Content Server or other specified location, where they are managed under a single content ID and made available to your organization.

For video assets, the names of the rendition sets defined for the choice list of the VideoRenditions metadata field in the Configuration Manager applet must match exactly with the names of factories set up in FlipFactory and the factory directories monitored in the watched directory.

When modifying or adding factories, it is important to remember that a contributor will only see the name of the rendition set when they check in a digital asset. The rendition set name should be descriptive. Factory names and descriptions are displayed on the content information and rendition information pages.

Spaces and other characters reserved for Idoc Script tags or are illegal for use in URLs, such as spaces, cannot be used in rendition names.

4.4.9 Creating and Configuring Factories in FlipFactory

Factories created in FlipFactory must have the same names as rendition sets defined in Content Server, and must be configured to access the appropriate watched directory.

Creating Factories

To create a factory in FlipFactory, perform these steps:

1. After installing the Digital Asset Manager plug-ins, open Services and verify the Flip Engine service is started. For more information on installing the Digital Asset Manager plug-ins, see "[Installing Digital Asset Manager Video Plug-ins](#)" on page 4-16.
2. Start and log in to FlipFactory.
3. Click **Manage Factories**. The Manage Factories page is displayed.

4. Right-click on the **Factories** folder, and select **New Factory** from the contextual menu. An untitled folder is created in the Factories folder.
5. Select the new untitled folder. The Factory Editor panel is displayed on the right of the page.
6. Enter a name in the Name field that corresponds to the name of a rendition set in Digital Asset Manager. The names must be identical. For example, if your rendition set is named MixedBandwidth, the new factory must be named MixedBandwidth. A factory description is optional.

Configuring Plug-ins

Once a factory is created that corresponds to a rendition set in Digital Asset Manager, the appropriate plug-ins must be configured to communicate between FlipFactory and Inbound Refinery.

Setting the Watch Directory Path

The directory watched by Inbound Refinery must also be watched by the factory. To set the path to the watched directory for a factory, perform these steps:

1. Open the folder of the new factory. Four subfolders are displayed:
 - Monitors
 - Process/Analyze
 - Products
 - Notifications
2. Select the **Monitors** folder. A panel is displayed to the right, showing multiple tabs.
3. Select the **Refinery Monitor** tab and click **Add**. The Refinery Monitor item is displayed in the Monitors folder.
4. Select **Refinery Monitor** in the Monitors folder. The Refinery Monitor panel is displayed on the right side of the page.
5. Verify that the **Enable** check box is checked.
6. Click **Browse** under the Watch Folder section. The Watch Folder dialog box is displayed.
7. Using the dialog box, locate the watched folder created for this implementation and continue to browse within it to the "in" subfolder of the directory whose name is identical to the factory name. For example, if this factory is named MixedBandwidth, you would browse to <Video_Watch>/MixedBandwidth/in. If you have not created the subfolders of the watched directory, see ["Sharing Directories with FlipFactory"](#) on page 4-17.
8. Click **Select**. The Watch Folder dialog box closes.

Enabling Keyframe Extraction

You must tell FlipFactory to create key frames of the video asset for use in the story board section of the Rendition Information page. To enable keyframe extraction, perform these steps:

1. With the new factory folder still open, select **Process/Analyze** and select **Video Analysis**.
2. Check **Enabled**. Video Analysis is displayed in the Process/Analyze folder.

3. Select **Video Analysis** in the Process/Analyze folder. A tabbed panel is displayed on the right side of the page.
4. Verify that the **KeyFrame Extraction** tab is selected and the **Enabled** checkbox is checked.
5. Configure the key frame parameters to meet your needs. For more information on the parameter options, see the FlipFactory documentation.

Note: Failure to enable keyframe extraction may result in broken image links for the rendition on a search result page in Content Server, and disables the story board functionality for that rendition on the Rendition Information page.

Enabling Notification

You must tell the factory to notify Inbound Refinery when a request has been completed. To enable notification, perform these steps:

1. With the new factory folder still open, select Notifications. A tabbed panel is displayed to the right of the page.
2. Select the Refinery Notify tab and click **Add**. The Refinery Notify item is enabled and added to the Notification folder. There are no settings in the Refinery Notify item than can be configured by a user.

Adding Products and Setting Rendition Destinations

Each product in a factory corresponds to a rendition in a rendition set, and the destination of each product corresponds to the rendition name that is displayed on a Rendition Information page. To add a product and set the destination, perform these steps:

1. With the new factory folder still open, right-click on Products and select **New Product** from the contextual menu. A product folder is created and the Product panel is displayed on the right side of the page.

Notes: The Product panel is used to specify the conversion format. By default, Duplicate Original is enabled. Note that you may not have all format options available to you, depending on your license agreement with FlipFactory. Note that available options may not be supported by Digital Asset Manager.

To properly render to the correct output format, the correct codec to play the input format must be installed on the same server on which FlipFactory is installed. Popular web formats, such as .avi and others, may use different codecs even within the same format. If you experience problems rendering, verify that the original input file will play on the FlipFactory machine. If it does not, you may need to obtain the proper codec. For more information, refer to the FlipFactory documentation.

2. Open the **Product** folder. The Destination folder is displayed.
3. Select the **Destination** folder. A tabbed panel is displayed on the right side of the page.

4. Select the **Refinery Transport** tab and click **Add**. The Refinery Transport item is created in the Destinations folder.
5. Select the **Refinery Transport** item in the Destinations folder. The Refinery Transport panel is displayed on the right side of the page.
6. Enter the name of the rendition in the **Rendition Name** field. It can be anything. This is the name that is displayed on the Rendition Information page in Content Server.

Caution: You must enter a rendition name. If you do not, rendering of the asset will fail. If rendering fails, the content item must be removed from Content Server using Repository Manager, and Inbound Refinery must be restarted.

4.4.10 Managing Video Conversion

Content Server identifies content items as digital assets based on the extension of the file checked in. At installation, Digital Asset Manager checks to see if the following common file formats exist in the Content Server Configuration Manager applet.

This section covers the following topics:

- ["Editing the Video File Type Configuration Table"](#) on page 4-27
- ["Setting the Default Video Format Preferences"](#) on page 4-28

4.4.10.1 Editing the Video File Type Configuration Table

If you add a file format and map the extension to the Digital Media Video conversion engine, and would like that format to play in an embedded player (such as on the Rendition Information page), the extension must exist in the Video File Type configuration table of the `dam_cfg_tables.htm` file. The `dam_cfg_tables.htm` file is located in this directory:

`IdcHomeDir/components/DAMConverter/resources/`

The format must exist in the Video File Type configuration table only for the file to play in an embedded player. If the format is not in the table, the rendition can still be opened and played in a stand alone player that supports the rendered format.

To verify that the added format exists in the Video File Type configuration table, open the `dam_cfg_tables.htm` file in a standard browser and review the file extensions listed. If the file extension does not exist, you must write a custom component listing the extension and additional necessary information and merge the tables. Information on custom components can be found in the *Oracle Fusion Middleware Developer's Guide for Universal Content Management*.

<@table VideoFileTypes@>			
fileExtension	formatName	player	metafileExtension
rm	Real	real	ram
ra	Real	real	ram
wmv	WindowsMedia	wmplayer	asx

The following table lists the columns of the Video File Type configuration table and their function:

Column Name	Definition
fileExtension	The extension of the file formats to be supported played in the embedded players.
formatName	The name of the format associated with the extension. This value corresponds to the values in the Video Format Prefs table, which is configurable, and is displayed in the choice lists of the embedded players.
player	The player that supports the added format extension. The values are case-sensitive. Currently only three values are allowable: <ul style="list-style-type: none"> ▪ real ▪ quicktime ▪ wmpplayer
metafileExtension	The metafile extension associated with the format extension, used to determine what embedded player will play a streaming version of the format. There must be a value in this field if the format is streamed.

4.4.10.2 Setting the Default Video Format Preferences

Embedded players are displayed on the Rendition Information page or when a web-viewable link is clicked. The format chosen to play in the embedded player is based on a table of user preferences regarding available rendition format options, set on the Video Preferences page. Prior to user input, default preferences are based on values set in the Video Format Preferences table of the dam_cfg_tables.htm file. The dam_cfg_tables.htm file is located in the resources directory:

IdcHomeDir/components/DigitalAssetManager/

```
<@table VideoFormatPrefs@>
```

format	pickOrder_win	pickOrder_mac	pickOrder_other
Real	3	3	3
WindowsMedia	1	4	4
Quicktime	4	1	2
MPEG	2	2	1

```
<@end@>
```

To add new settings or modify default preferences, create a custom component containing the new or modified settings and merge the custom data table into the corresponding default data table. Information on creating custom components can be found in the *Oracle Fusion Middleware Developer's Guide for Universal Content Management*.

Note: Do not edit a standard Content Server component resource directly. Always create a custom component to merge changes into Content Server or Inbound Refinery.

Modifications made to a component resource will be over-written if Digital Asset Manager is updated to a newer version.

The following table lists the columns of the Video Format Preferences table and their function:

Column Name	Definition
format	Configurable name displayed in the choice list of an embedded player.
pickOrder_win	Determines the order a format is selected on a Windows operating system.
pickOrder_mac	Determines the order a format is selected on a Macintosh operating system.
pickOrder_other	Determines the order a format is selected on an operating system other than Windows or Macintosh.

4.4.11 Enabling Plug-in Debugging Logs

The standard log outputs from FlipFactory are found in the stdout.log file located in the FlipFactory installation directory. Additional logging detail can be found by enabling the plug-in logging. To enable FlipFactory plug-in debugging, perform these steps:

1. Stop the Flip Engine service.
2. Open the **log4j.properties** file located in the *<FlipFactory_install_dir>* in a standard text editor.
3. Delete the # symbol in front of the following entries in the log4j.properties file:
 - log4j.logger.com.stellent.refinery.ff=DEBUG
 - log4j.rootLogger=ERROR, IBRPlugin
4. Save the log4j.properties file and restart the Flip Engine service.

Information regarding plug-in output is now logged to */<FlipFactory_install_dir>/stdout.log*.

Working with XML Conversions

Inbound Refinery can convert native files to either FlexionDoc or SearchML-styled XML, as well as process XSL transformation using Xalan XSL transformer. XML conversions require the following components to be installed and enabled on the specified server:

Component Name	Component Description	Enabled on Server
XMLConverter	Enables Inbound Refinery to produce FlexionDoc and SearchML-styled XML as the primary web-viewable file or as independent renditions, and can use the Xalan XSL transformer to process XSL transformations.	Inbound Refinery Server
XMLConverterSupport	Enables Content Server to support XML conversions and XSL transformations.	Content Server

This section discusses how to work with XML conversions and how to troubleshoot the conversion process. The section contains the following sections:

- ["Configuring XML Converter Conversion Settings"](#) on page 5-1
- ["Troubleshooting XML Converter Problems"](#) on page 5-6

5.1 Configuring XML Converter Conversion Settings

This section covers the following topics:

- ["Configuring Content Servers to Send Jobs to Inbound Refinery"](#) on page 5-1
- ["Setting Accepted Conversions"](#) on page 5-2
- ["Setting XML Files as the Primary Web-Viewable Rendition"](#) on page 5-2
- ["Setting XML Files as an Additional Rendition"](#) on page 5-3
- ["Setting Up XSL Transformation"](#) on page 5-4

5.1.1 Configuring Content Servers to Send Jobs to Inbound Refinery

File extensions, file formats, and conversions are used in Content Server to define how content items should be processed by Inbound Refinery and its conversion add-ons. You must configure each content server to send files to refineries for conversion. When a file extension is mapped to a file format and a conversion, files of that type will be sent for conversion when they are checked into the content server. You can configure

your file extension, file format, and conversion mappings in your content servers using either the File Formats Wizard or the Configuration Manager.

Most conversions required for Inbound Refinery are available by default in Content Server. In addition to the default conversions that can be used to send file formats to a refinery for XML conversion, the following conversions are added to the content server when the XMLConverterSupport component is installed:

Conversion	Description
FlexionXML	This conversion can be used to convert files to XML using the FlexionDoc schema. It applies to file types other than the standard file types included in the list of conversions (for example, Word, PowerPoint, and so on). If you want these standard file types to be sent to a refinery for conversion to XML using FlexionDoc, you do not need to re-map their file formats to the FlexionXML conversion. This conversion is not available on the File Formats Wizard. It must be mapped using the Configuration Manager.
SearchML	This conversion can be used to convert files to XML using the SearchML schema. It applies to file types other than the standard file types included in the list of conversions (for example, Word, PowerPoint, and so on). If you want these standard file types to be sent to a refinery for conversion to XML using the SearchML, you do not need to re-map their file formats to the SearchML conversion. This conversion is not available on the File Formats Wizard. It must be mapped using the Configuration Manager.
XML-XSLT Transformation	After XML Converter converts documents to the FlexionDoc schema, the XML-XSLT conversion allows the resultant XML to be transformed into other XML schema specified by a developer.

5.1.2 Setting Accepted Conversions

Conversions available in the content server should match those available in the refinery. When a file format is mapped to a conversion in the content server, files of that format will be sent for conversion upon checkin. One or more refineries must be set up to accept that conversion.

You set the conversions that the refinery will accept and queue maximums on the Conversion Listing page. Most conversions required for Inbound Refinery are available by default in Inbound Refinery. In addition to the default conversions that can be accepted by a refinery, the FlexionXML and SearchML conversions are added to the refinery when the XMLConverter component is installed. The FlexionXML and SearchML conversions are accepted by default. For more information about setting accepted conversions, refer to the *Inbound Refinery Administration Guide*.

5.1.3 Setting XML Files as the Primary Web-Viewable Rendition

To set XML files as the primary web-viewable rendition, complete the following steps:

1. Log into the refinery.
2. From **Conversion Settings**, select **Primary Web Rendition**. The Primary Web-Viewable Rendition page is displayed.
3. Select the **Convert to XML** option.
4. Typically you will want to clear all other conversion options. Inbound Refinery will attempt to convert each incoming file based on the native file format. If the format is not supported for conversion by the first selected method, Inbound Refinery will check to see if the next selected method supports the format, and so

on. Inbound Refinery will attempt to convert the file using the first selected method that supports the conversion of the format.

For example, consider that you select both the **Convert to PDF using third-party applications** option and the **Convert to XML** option. The refinery will attempt to convert any supported formats to PDF using the **Convert to PDF using third-party applications** method. Whether or not this method fails, Inbound Refinery will not attempt another conversion method for these formats. Therefore, you should typically select only the **Convert to XML** option if you want to create XML files as the primary web-viewable rendition.

5. Click **Update** to save your changes.
6. Click the **XML Options** button. The [XML Options Page](#) is displayed.
7. Set your XML options, and click **Update** to save your changes.
8. Note the following important considerations:
 - If you want to adjust the default settings for the Flexiondoc and SearchML options, you can specify option settings in the *intradoc.cfg* file located in the refinery *DomainDir/ucm/ibr/bin* directory. For a complete description of available Flexiondoc and SearchML options, refer to the *xx.cfg* file located in the refinery *IdcHomeDir/components/XMLConverter/resources* directory. You must restart your refinery after making changes to the *intradoc.cfg* file.
 - FlexionDoc and SearchML schema code and documentation files are installed with the XMLConverter component into the refinery *IdcHomeDir/components/XMLConverter* directory.

5.1.4 Setting XML Files as an Additional Rendition

To set XML files as an additional rendition, complete the following steps:

1. Log into the refinery.
2. From **Conversion Settings**, select **Additional Renditions**. The Additional Renditions page is displayed.
3. Select the **Create XML renditions for all supported formats** option. Inbound Refinery will generate an XML file in addition to other renditions such as PDF files.

When the generated XML files are delivered back to a content server, the XML files are included in the full-text index. However, if other web-viewable files are generated in addition to the XML file, the XML file is not used as the primary web-viewable rendition. For example, if Inbound Refinery generates both a PDF file and an XML file, the PDF file would be used as the primary web-viewable rendition. XML renditions stored in the content server *weblayout* directory can be recognized by the characters *@x* in their filenames. For example, the file *Report2001@x~2.xml* would be an XML rendition.

4. Click **Update** to save your changes.
5. Click the **XML Options** button. The [XML Options Page](#) is displayed.
6. Set your XML options, and click **Update** to save your changes.
7. Note the following important considerations:
 - If you want to adjust the default settings for the Flexiondoc and SearchML options, you can specify option settings in the *intradoc.cfg* file located in the refinery *DomainDir/ucm/ibr/bin* directory. For a complete description of

available Flexiondoc and SearchML options, refer to the *xx.cfg* file located in the refinery *IdcHomeDir/components/XMLConverter/resources* directory. You must restart your refinery after making changes to the *intradoc.cfg* file.

- FlexionDoc and SearchML schema code and documentation files are installed with the XMLConverter component into the refinery *IdcHomeDir/components/XMLConverter* directory.

5.1.5 Setting Up XSL Transformation

Inbound Refinery uses the Xalan XSLT processor and the SAX validator built into the Java virtual machine running Inbound Refinery. To enable transformation, the XMLConverter component must be installed and enabled on the refinery server and the XMLConverterSupport must be installed and enabled on the content server.

To turn on XSL Transformation do the following:

1. Log into the refinery server.
2. Do one of the following:
 - If the XML rendition is to be the primary web-viewable file, click **Conversion Settings** then **Primary Web Rendition**. Enable **Convert to XML** on the [Primary Web-Viewable Rendition Page](#) when it is displayed.
 - If the XML is to be an additional rendition, click **Conversion Settings** then **Additional Renditions**. Enable **Create XML renditions for all supported formats** on the [Additional Renditions Page](#) when it is displayed.
3. Click **XML Options**. The [XML Options Page](#) is displayed.
4. Enable **Process XSLT Transformation** and select the XML schema to use from the following options:
 - Produce FlexionDoc XML
 - Produce SearchML
5. Click **Update** to save your changes or **Reset** to revert to the last saved settings.

In order to preform XSL transformations Inbound Refinery must have an XSL template to apply during the transformation checked into Oracle Content Server. To check in an XSL template to Oracle Content Server, do the following:

1. Create an XSL file. The XSL file specifies how an XML file with a specific Content Type will be transformed to a new XML file. You can specify a DTD or schema for validation, but you do not have to. You can store DTD or schema in the content server, but you do not have to.

Note: It is critical that the DTDs and schemas used for XSL transformation are accessible without a login (they cannot require authentication for read access). For example, if a DTD file is stored in Oracle Content Server, it must be in a Security Group that gives read access to anonymous users.

The XSL file and Native file must both reside in the same Security Group for XSL transformation to be successful.

2. Check the XSL file into the content server; associating it to a Content Type.

a. In the Content Check In Form, select the **Content Type** from the Type drop-down list.

b. Enter the Content ID according to the following convention:

```
<Content Type>.xsl.
```

For example, if the Content Type is ADACCT, you would enter adacct.xsl.

c. Enter your XSL file as the Primary File.

d. Make sure the Security Group matches any DTD/schema files in the content server associated with your XSL file and the native files that will be checked into the content server.

e. Click **Check In**.

Now, when files are checked in with this Content Type, and a FlexionDoc/SearchML XML file is generated by XML Converter or the checked-in file is XML, this XSL file will be used for XSL transformation to a new XML document.

3. Repeat steps 1 and 2 for each Content Type that you want to post-process to XML.

5.1.5.1 XSLT Errors

When a validation fails, Inbound Refinery collects the errors from the SAX Validation engine, creates an hcsp error page and attempts to check in the page to Oracle Content Server. In order for the refinery to be able to check in an error page you must manually setup in outgoing providers on Inbound Refinery to the content server. The name of Inbound Refinery provide must match the agent name. For example if Inbound Refinery is named *production_ibr* and it is converting files for a content server named *production_cs*, then an outgoing provider named *production_cs* must be created on the *production_ibr* Inbound Refinery.

If you want to be notified when there are XSL transformation failures, it is recommended that you complete the following steps to set up a criteria workflow in the content server:

1. Access the **Workflow Admin** applet for the content server.
2. Add a criteria workflow for notification of XSLT transformation failures.
3. Add a workflow step with the following properties:
 - **Users:** specify the users that should be notified.
 - **Exit Conditions:** select At least this many reviewers, and set the value to 0.
 - **Events:** For the Entry event, add the following Custom Script Expression:

```
<$if dDocTitle like "*XSLT Error">
<$else$>
<$wfSet("wfJumpEntryNotifyOff", "1")$>
<$wfExit(0,0)$>
<$endif$>
```

5.1.5.2 Support for Unmanaged Files

When a document containing graphics are submitted for XML transformation, the graphics are ignored by default. If you want to have submitted graphics exported, you must manually turn this on by setting *xx-graphictype* to one of the following values:

- **gif:** to export all graphics to GIF format

- **jpeg**: to export all graphics to JPEG format
- **png**: to export all graphics to PNG format

When *xx-graphicstyp*e is set, Inbound Refinery can copy the graphics to a specified directory. By default the Inbound Refinery will ignore the extra files. To use the graphics, do the following:

1. In the Inbound Refinery intradoc.cfg file, set the following variables, where the value for *xx_graphicstyp*e is the desired format:

```
xx_graphicstyp=e=jpeg
AllowXmlConverterCopyUnmanagedFiles=true
```

2. Also in the Inbound Refinery intradoc.cfg file, set *XmlUnmanagedPhysicalDir-<AgentName>* to the directory you want the unmanaged files copied for each agent. Typically, this will be the weblayout directory of the content server.

For example, if the refinery server has an agent named *production_cs* and the weblayout directory is located at *c:/oracle/production_cs/weblayout*, you would specify the following in the refinery intradoc.cfg file:

```
XmlUnmanagedPhysicalDir-production_cs=c:/oracle/production_cs/weblayout
```

Inbound Refinery appends the following to the path when computing the complete location of the unmanaged files:

```
groups/<dSecurityGroup>/documents/<dDocType>/
```

The file name of the unmanaged files are of the form:

```
<dDocName>.<increasingNumber>.jpg
```

An example of the complete path to an unmanaged file then would be:

```
c:/oracle/production_cs/weblayout/groups/public/documents/adacct/001166.2.jpg
```

5.2 Troubleshooting XML Converter Problems

This section covers the following topics:

- ["Inbound Refinery Installation Issues"](#) on page 5-6
- ["Inbound Refinery Setup and Run Issues"](#) on page 5-7

5.2.1 Inbound Refinery Installation Issues

The following are symptoms of Inbound Refinery installation issues:

- ["A refinery or content will not start or does not function properly"](#) on page 5-6

5.2.1.1 A refinery or content will not start or does not function properly

After installing Inbound Refinery, a content server or refinery will not start or is not functioning properly.

Possible Causes	Solutions
The XMLConverter component has been installed on a content server, or the XMLConverterSupport component has been installed on a refinery.	<p>The XMLConverter component must be installed on refineries, and the XMLConverterSupport component must be installed on content servers.</p> <p>If you install the wrong component, complete the following:</p> <ul style="list-style-type: none"> ■ Uninstall the component from the content server or refinery using the Component Manager or the Component Wizard. ■ Install and enable the correct component.

5.2.2 Inbound Refinery Setup and Run Issues

The following are symptoms of Inbound Refinery setup and run issues:

- ["XML Converter Won't Process Any Files"](#) on page 5-7

5.2.2.1 XML Converter Won't Process Any Files

XML Converter has been installed, but no files are being converted.

Possible Causes	Solutions
File formats and conversion methods not set up for file type in the content server.	Use the File Formats Wizard or Configuration Manager in the content server to set up the file formats and conversion methods for XML conversion. For details, see "Configuring Content Servers to Send Jobs to Inbound Refinery" on page 5-1.
The refinery has not been configured to accept the conversion.	Configure the refinery to accept the conversion. For details, see "Setting Accepted Conversions" on page 5-2.
The refinery has not been configured to create XML files as the primary web-viewable rendition or an additional rendition.	For details, see "Setting XML Files as the Primary Web-Viewable Rendition" on page 5-2 and "Setting XML Files as an Additional Rendition" on page 5-3.

Working with TIFF Conversions

Inbound Refinery can convert TIFF files to PDF, consolidating multiple documents into one and allowing for optical character recognition to index text within the TIFF files during the conversion process to allow searching on text. TIFF conversions require the following components to be installed and enabled on the specified server:

Component Name	Component Description	Enabled on Server
TiffConverter	Enables Inbound Refinery to convert single or multipage TIFF files to PDF complete with searchable text.	Inbound Refinery Server
TiffConverterSupport	Enables Content Server to support TIFF to PDF conversion.	Content Server

This section provides an overview of Tiff converters and troubleshooting the conversion problems. The section contains the following sections:

- ["About Tiff Conversion"](#) on page 6-1
- ["Configuring Tiff Conversion Settings"](#) on page 6-2
- ["Troubleshooting Tiff Converter Problems"](#) on page 6-10

6.1 About Tiff Conversion

Tiff conversion enables the following functionality specific to TIFF (Tagged Image File Format) files:

- Creation of a managed PDF file from a single or multiple-page TIFF file.
- Creation of a managed PDF file from multiple TIFF files that have been compressed into a single ZIP file.
- OCR (Optical Character Recognition) during TIFF-to-PDF conversion. This enables indexing of the text within checked-in TIFF files, so that users can perform full-text searches of these files.

Tiff Converter is supported on Windows only. For information on file formats and languages that can be converted by PdfCompressor, refer to the documentation provided by CVISION.

Important: Tiff Converter requires CVISION CVista PdfCompressor to perform TIFF-to-PDF conversion with OCR. PdfCompressor is not provided with Tiff Converter. You must obtain PdfCompressor from CVISION.

6.1.1 Tiff Conversion Process Overview

Tiff conversion can process the following types of files:

- Single or multiple-page TIFF files (TIF or TIFF file extensions)
- Multiple TIFF files that have been compressed into a single zip file (TIFZ, TIZ, or ZIP file extensions)

When a TIFF file is checked into a content server, it is stored in the vault directory in its native format. If the file format is set up to be converted by an Inbound Refinery conversion filter (such as TIFF Converter), the content server checks for an active refinery (one that is not busy and is configured to accept the conversion). When the refinery accepts the job, the content server sends the conversion data and the file to be converted to the refinery. Inbound Refinery then calls the TIFF Converter option filter, which performs the actual conversion.

Inbound Refinery is designed to use CVISION CVista PdfCompressor to convert the single-page TIFF file, multiple-page TIFF file, or zip file containing multiple TIFF files to a single Portable Document Format (PDF) file. During TIFF-to-PDF conversion, Optical Character Recognition (OCR), if configured and selected, is performed. This enables indexing of the text within checked-in TIFF files, so that Content Server users can perform full-text searches of these files.

The converted PDF files are stored in the content server's weblayout directory, which is the web-viewable file repository. The PDF files are then used as the primary web-viewable files for the content items in the content server.

Tip: When viewing PDF files generated by Tiff Converter, use Adobe Acrobat Reader 6.0.1 or higher for the best results.

The exact conversion process depends on the configuration of the content server, the refinery, Inbound Refinery, and CVista PdfCompressor. For more information about configuring Inbound Refinery after installation, see "[Configuring Tiff Conversion Settings](#)" on page 6-2.

6.2 Configuring Tiff Conversion Settings

This section covers the following topics:

- "[Configuring Content Servers to Send Jobs for Tiff Conversion](#)" on page 6-2
- "[Setting Accepted Conversions](#)" on page 6-6
- "[Changing Timeout Settings](#)" on page 6-6
- "[Configuring CVista PdfCompressor](#)" on page 6-6

6.2.1 Configuring Content Servers to Send Jobs for Tiff Conversion

File formats and conversion methods are used in Content Server to define how content items should be handled by Inbound Refinery and the conversion options. Installing

and enabling the TiffConverterSupport component on a content server adds three TIFFConversion options on the File Formats Wizard page.

For a content item to be processed by Inbound Refinery, its file extension (e.g., TIF or TIFF) must be mapped to a format name that is associated with the TIFFConversion conversion method. The added conversion options for Tiff Converter are not automatically mapped: they must be mapped manually. Information on setting these mappings is covered in the following sections:

- ["Using the File Formats Wizard"](#) on page 6-3
- ["Using the Configuration Manager"](#) on page 6-4
- ["Tips for Processing Zip Files"](#) on page 6-5

6.2.1.1 Using the File Formats Wizard

File formats and conversion methods for Inbound Refinery can be managed in Content Server using the File Formats Wizard. To make changes, complete the following steps:

1. Make sure you are logged into Content Server as an administrator.
2. In the navigation menu, select **Administration, Refinery Administration** and **File Formats Wizard**.

The File Formats Wizard for <server name> page is displayed.

3. Select or clear the Tiff to PDF (tif, tiff), Compressed Tiff to PDF (tifz, tiz), and Compressed Tiff to PDF (zip) check boxes as desired.

Tip: The tif and tiff file extensions are included in several places depending on configuration. For example, they can be set for mapping to ImageThumbnail and for mapping to TIFFConversion. This can cause contention between the check boxes for "Create thumbnail only for selected graphics" and the check boxes for Tiff Converter. For example, if you have selected "Tiff to PDF" and then select "Create thumbnail only..." and click Update, "Tiff to PDF" will be disabled and tif/tiff will be re-mapped to ImageThumbnail.

In this case you must reselect "Tiff to PDF" to remap tif/tiff to TIFFConversion (all the other graphics formats are left mapped to ImageThumbnail). If you experience any problems using the File Formats Wizard to map file extensions for Tiff Converter, use the Configuration Manager to manually view and edit all your mappings exactly. For details, see ["Using the Configuration Manager"](#) on page 6-4.

- **Tiff to PDF (tif, tiff)**-Selecting this check box maps the TIF and TIFF file extensions to the graphic/tiff file format and associates the graphic/tiff file format with the TIFFConversion conversion method. Thus, when TIF or TIFF files are checked into the content server, they will be processed by the refinery using Tiff Converter and converted to PDF with OCR. Clearing this check box sets the graphic/tiff file format to PASSTHRU, so that TIF and TIFF files are not processed by Inbound Refinery.
- **Compressed Tiff to PDF (tifz, tiz)**-Selecting this check box maps the TIFZ and TIZ file extensions to the graphic/tiff-x-compressed file format and associates the graphic/tiff-x-compressed file format with the TIFFConversion conversion method. Thus, when TIFZ or TIZ files are checked into the content server, they

will be processed by the refinery using Tiff Converter and converted to PDF with OCR. Clearing this check box sets the graphic/tiff-x-compressed file format to PASSTHRU, so that TIFZ and TIZ files are not processed by Inbound Refinery.

- **Compressed Tiff to PDF (zip)**-Selecting this check box maps the ZIP file extension to the application/x-zip-compressed file format and associates the application/x-zip-compressed file format with the TIFFConversion conversion method. Thus, when ZIP files are checked into the content server, they will be processed by the refinery using Tiff Converter and converted to PDF with OCR. Clearing this check box sets the application/x-zip-compressed file format to PASSTHRU, so that ZIP files are not processed by Inbound Refinery.

4. Click **Update** to save your changes.

6.2.1.2 Using the Configuration Manager

File formats and conversion methods for Inbound Refinery can be managed in Content Server using the Configuration Manager. To make changes, complete the following steps:

1. Make sure you are logged into Content Server as an administrator.
2. In the navigation menu, select **Administration, Admin Applets**.
The Administration Applets for <server name> page is displayed.
3. Click **Configuration Manager**.
The Configuration Manager applet is started.
4. Select **File Formats** from the **Options** menu.
5. If you want single, unzipped TIFF files (TIF and TIFF) to be processed by Inbound Refinery, complete the following steps:

- a. In the File Formats section, make sure the **graphic/tiff** file format has been added and associated with the **TIFFConversion** conversion method.

Important: The TIFFConversion conversion method is only available when the TiffConverterSupport component has been installed and enabled, and the content server has been restarted.

- b. In the File Extensions section, make sure the **tif** and **tiff** file extensions have been added and mapped to the **graphic/tiff** file format.
6. If you want TIFF files that have been compressed into a single TIFZ or TIZ file to be processed by Inbound Refinery, complete the following steps:
 - a. In the File Formats section, make sure the **graphic/tiff-x-compressed** file format has been added and associated with the **TIFFConversion** conversion method.
 - b. In the File Extensions section, make sure the **tifz** and **tiz** file extensions have been added and mapped to the **graphic/tiff-x-compressed** file format.
7. If you want TIFF files that have been compressed into a single ZIP file to be processed by Inbound Refinery, complete the following steps:
 - a. In the File Formats section, make sure the **application/x-zip-compressed** file format has been added and associated with the **TIFFConversion** conversion method.

- b. In the File Extensions section, make sure the **zip** file extension has been added and mapped to the **application/x-zip-compressed** file format.

Tip: Use care when setting up the zip file extension, as it might be used in multiple ways in your environment. For more information, see ["Tips for Processing Zip Files"](#) on page 6-5.

6.2.1.3 Tips for Processing Zip Files

The ZIP file extension might be used in multiple ways in your environment. For example, you might be checking in:

- Multiple TIFF files compressed into a single ZIP file that you want Inbound Refinery to convert to a single PDF file with OCR.
- Multiple file types compressed into a single ZIP file that you do not want to process (the ZIP file should be passed through in its native format).

If you are using the ZIP file extension in multiple ways, Oracle recommends configuring the content server to allow the user to choose how ZIP files are processed at check in (also referred to as Allow override format on checkin). To enable this content server functionality, complete the following steps:

1. Using the Admin Server General Configuration page, enable the **Allow override format on checkin** setting and click **Save**.
2. Restart the content server.
3. Using the Configuration Manager, set up your file formats:
 - Map the **application/x-zip-compressed** file format to the **TIFFConversion** conversion method. This option can then be selected to send ZIP files containing TIFF files to Inbound Refinery. For a description, enter Zipped Tiff to PDF.
 - Set up an alternate file format, for example called **application/zip-passthru**, mapped to **PassThru** for zipped files that should not be converted. For a description, enter Zip Passthru.

Note: The Content Check In Form page lists file formats by their description.

4. Map the **ZIP** file extension to the file format that will be used most commonly. This will be the default conversion method for ZIP files.
5. When a user checks in a ZIP file, the user can override the default conversion method by selecting any of the conversion methods you have set up.

Important: If you are using the upload applet to check in multiple files, the files are compressed into a single ZIP file before being checked in. In this case Oracle also recommends enabling Allow override format on checkin so that the user can choose how the ZIP file is processed when uploading multiple TIFFs.

Tip: When CVista PdfCompressor merges multiple TIFF files from a compressed ZIP file, the input files are added in lexicographic order according to the standard ASCII character set.

6.2.2 Setting Accepted Conversions

When installed on the refinery, the TiffConverter component adds the TIFFConversion option to the Conversion Listing page. This conversion option must be enabled for the refinery to perform conversions on items submitted by the content server.

6.2.3 Changing Timeout Settings

The timeout settings you use should reflect the processing time required for the size of TIFF files that you commonly check into the content server. This is highly variable depending on CPU power and TIFF complexity. To determine the appropriate timeout values for TIFF files, perform these tasks:

- Run and time several representative Inbound Refinery jobs using CVista PdfCompressor alone (without the Inbound Refinery).
- Examine the document history information and evaluate the required processing time.
- Change your Inbound Refinery timeout settings accordingly.

Note: Information about Tiff Converter timeouts is recorded in the Inbound Refinery and agent logs.

To configure timeout settings for Tiff to PDF file generation, complete the following steps:

1. Log into the refinery.
2. Select **Coverision Settings, Timeout Settings**. The Timeout Settings page is displayed.
3. Enter the **Minimum (in minutes)**, **Maximum (in minutes)**, and **Factor** for the following conversion operations:

Tiff to PDF Conversion-the stage in which the original (native) TIFF file is converted to a Portable Document Format (PDF) file.

For more information about how timeout settings are calculated and examples, refer to the *Inbound Refinery Administration Guide*.

4. Click **Update** to save your changes.

6.2.4 Configuring CVista PdfCompressor

This section covers the following topics:

- ["Changing PdfCompressor Settings"](#) on page 6-6
- ["Configuring CVista PdfCompressor OCR Languages"](#) on page 6-7

6.2.4.1 Changing PdfCompressor Settings

These options are specific to CVista PdfCompressor. If the TiffConverter component is not installed, the CVista PdfCompressor Options are not available.

A parameter string to modify the PdfCompressor converter settings is entered by selecting **Conversion Settings, Third-Party Applications Settings** and setting the path to the location of the CVista PdfCompressor executable and entering parameter values in the parameters options text box.

To change the PdfCompressor settings, complete the following steps:

1. Login to the refinery.
2. Select **Conversion Settings, Third-Party Applications Settings**.
The Third-Party Application Settings page is displayed.
3. Select the **Options** button for CVista PdfCompressor. The [CVista PdfCompressor Options Page](#) is displayed.
4. Set the path to the location of the CVista PdfCompressor executable in the appropriate text box.
5. Enter the string of parameter values in the parameters option text box. A default option string is set upon installation of the TiffConverter component. See ["Recommended CVista PdfCompressor Options"](#) on page 6-7 for more information.
6. Click **Update** to save the settings.

6.2.4.1.1 Recommended CVista PdfCompressor Options These recommended parameter strings should produce optimal results for each given scenario. If these settings do not produce the results that you desire, you will need to modify these strings by removing or appending settings. For more information on these and other available settings, refer to the online help provided with CVista PdfCompressor (especially Appendix A: Command-Line Flags for Compression).

Default CVista PdfCompressor Parameters - OCR Enabled

A default string is set when the TiffConverter component is installed; unless a string already exists (the string was set using a previous version of Tiff Converter). The default string has been optimized for typical PdfCompressor usage with OCR enabled:

```
-m -c ON -colorcomptype 2 -mrcquality 5 -mrcColorCompType 0 -linearize -o -ocrmode
1 -ot 120 -qualityc 75 -qualityg 75 -rscdwndpi 300 -rsgdwndpi 300 -rsbdwndpi 300
-cconc -ccong
```

CVista PdfCompressor Parameters- Horizontal and Vertical OCR Enabled

The following string can be used for typical usage with OCR and support OCR processing of both vertical and horizontal text in the same image (add -ocrtwod):

```
-m -c ON -colorcomptype 2 -mrcquality 5 -mrcColorCompType 0 -linearize -o -ocrmode
1 -ot 120 -ocrtwod -lsize 25 -qualityc 75 -qualityg 75 -rscdwndpi 300 -rsgdwndpi
300 -rsbdwndpi 300 -cconc -ccong
```

CVista PdfCompressor Parameters - No OCR

The following string can be used for simple conversion (without OCR):

```
-m -c ON -colorcomptype 2 -mrcquality 5 -mrcColorCompType 0 -linearize -qualityc
75 -qualityg 75 -rscdwndpi 300 -rsgdwndpi 300 -rsbdwndpi 300 -cconc -ccong
```

6.2.4.2 Configuring CVista PdfCompressor OCR Languages

By default, CVista PdfCompressor uses an English OCR dictionary when performing OCR on TIFF files. However, CVista PdfCompressor can perform OCR on several other languages.

To set up multiple OCR languages and enable the user to choose the OCR language at check in, complete the following steps:

Important: Changes made in the CVista PdfCompressor user interface will not affect how CVista PdfCompressor functions when called by Tiff Converter.

Note: If the following method is used, language parameters should not be specified or passed to the refinery via the [CVista PdfCompressor Options Page](#).

1. Obtain the appropriate current language files by contacting CVISION:
 - A *lng* file is required for each language.
 - Czech, Polish, and Hungarian also require the *latin2.shp* file.
 - Russian also requires the *cyrillic.shp* file.
 - Greek also requires the *greek.shp* file.
 - Turkish also requires the *turkish.shp* file.
2. Place the CVISION language files in your CVista installation directory. The default location is *C:\Program Files\CVision\PdfCompressor x.x* (where *x.x* stands for the version number of PdfCompressor).
3. Make sure you are logged into content server as an administrator.
4. In the navigation menu, select **Administration, Admin Applets**.
The Administration Applets for *<server name>* page is displayed.
5. Click **Configuration Manager**.
The Configuration Manager applet is started.
6. Open the **Information Fields** tab.
7. If the OCRLang information field has been added, skip to Step 8. If it has not been added, complete the following steps:
 - a. In the Field Info section, click **Add**.
The Add Custom Info screen is displayed.
 - b. In the Field Name field, enter **OCRLang**. This will be a new information field for CVista language conversion options.

Important: You must enter this field name *exactly*.

- c. Click **OK**.
- d. The Add Custom Info Field 'OCRLang' screen is displayed.
- e. In the Field Caption field, enter the descriptive caption you want displayed on the Content Check In Form page. For example, **OCR Language**.
- f. From the Field Type list, choose **Text**.
- g. Select the Enable Option List check box.

- h. From the Option List Type list, choose **Select List Validated**.
- i. In the Use option list field, enter **xOCRLangList**.
- j. Next to the Use Option List field, click **Edit**.
- k. The Option List for 'xOCRLangList' screen is displayed.
- l. Enter the CVista OCR languages that you want to present as options. The following language names are valid options:

Important: You can use either the English language name or the native equivalent (if listed). However, you must enter the language options *exactly* as they appear in the following table.

English	Native	English	Native
Czech	-	Italian	Italiano
Danish	Dansk	Norwegian	Norsk
Dutch	Nederlands	Polish	Polski
English	-	Portuguese	Português
Finnish	Suomi	Russian	-
French	Français	Spanish	Español
German	Deutsch	Swedish	Svenska
Greek	-	Turkish	-
Hungarian	Magyar	-	-

- m. Select the Ignore Case check box.
 - n. Click **OK**.
 - o. In the Default Value field, enter the default OCR language option.
 - p. Click **OK** to save the settings and return to the Information Fields tab.
 - q. Click **Update Database Design**.
8. If the OCRLang Information field has been added, but you want to make changes to the languages option list and/or the default language, complete the following steps:
- a. In the Field Info section, select OCRLang and click **Edit**.
The Add Custom Info screen is displayed.
 - b. Next to the Use Option List field, click **Edit**.
The Option List for 'xOCRLangList' screen is displayed.
 - c. Delete any CVista OCR languages that you are not using.
 - d. Click **OK**.
 - e. In the Default Value field, enter the default OCR language option.
 - f. Click **OK** to save the settings and return to the Information Fields tab.

9. Close the Configuration Manager applet. When a user checks in a TIFF file, the user can override the default OCR language by selecting any of the OCR languages you have set up.

6.3 Troubleshooting Tiff Converter Problems

This section covers the following topics:

- ["Installation Problems"](#) on page 6-10
- ["General Conversion Problems"](#) on page 6-10
- ["CVista PdfCompressor Conversion Problems"](#) on page 6-11
- ["PDF Thumbnailing and Viewing Problems"](#) on page 6-11

6.3.1 Installation Problems

The following table lists common problems with installing Inbound Refinery, possible causes, and solutions.

Problem	Possible Causes	Solutions
Refinery or content server would not start after Tiff Converter components are installed	Wrong component installed on content server/refinery.	Uninstall the components and reinstall the components on the correct location.

6.3.2 General Conversion Problems

The following table lists general Inbound Refinery conversion problems, possible causes, and solutions.

Problem	Possible Causes	Solutions
TIFF files are not being converted (they are being passed through in their native format).	File formats and conversion methods for Inbound Refinery have not been set up properly in Content Server.	Set up file formats and conversion methods for Inbound Refinery. For details, see "Configuring Content Servers to Send Jobs for Tiff Conversion" on page 6-2.
TIFF files are not being converted (they are being passed through in their native format).	The conversions are taking too long, and Inbound Refinery is timing out.	Change your Inbound Refinery timeout settings. For details, see "Changing Timeout Settings" on page 6-6.
TIFF files are not being converted (they are being passed through in their native format).	Inbound Refinery is failing to launch CVista PdfCompressor.	Ensure that the PdfCompressor path is correct. For details, see "Configuring CVista PdfCompressor" on page 6-6.
Zippped TIFF files are not being processed by Inbound Refinery when they are checked in.	File formats and conversion methods for Inbound Refinery have not been set up properly in Content Server.	Change how zip files are processed. For details, see "Changing Timeout Settings" on page 6-6.

Problem	Possible Causes	Solutions
The TIFF Conversion conversion method is not available in the Content Server Configuration Manager.	The TiffConverterSupport component has not been uploaded and enabled.	Upload and enable the TiffConverterSupport component using either the Component Wizard or the Component Manager. This component is included on the Inbound Refinery distribution media.
The TIFF Conversion conversion method is not available in the Content Server Configuration Manager.	The TiffConverterSupport component is enabled, but Content Server has not been restarted.	Restart Content Server.

6.3.3 CVista PdfCompressor Conversion Problems

The following table lists common conversion problems when using CVISION CVista PdfCompressor, possible causes, and solutions.

Problem	Possible Causes	Solutions
Inbound Refinery is failing to launch CVista PdfCompressor.	The path to the CVista PdfCompress.exe is incorrect.	Ensure that the PdfCompressor path is correct. For details, see "Configuring CVista PdfCompressor" on page 6-6.
I have used the CVista PdfCompressor user interface to change conversion settings, but this has had no effect on how TIFF files are being processed.	Changes made in the CVista PdfCompressor user interface will not affect how CVista PdfCompressor functions when called by Inbound Refinery.	Change the CVista PdfCompressor configuration settings using the Inbound Refinery user interface. For details, see "Configuring CVista PdfCompressor" on page 6-6.
CVista PdfCompressor is only performing OCR on English text.	By default, CVista PdfCompressor uses only an English OCR dictionary. Other OCR languages must be set up.	Set up multiple OCR languages for CVista PdfCompressor. For details, see "Configuring CVista PdfCompressor OCR Languages" on page 6-7.

6.3.4 PDF Thumbnailing and Viewing Problems

The following table lists common problems with creating thumbnails for and viewing the PDF files that are generated by Inbound Refinery, possible causes, and solutions.

Problem	Possible Causes	Solutions
No thumbnails are being created for PDF files generated by Inbound Refinery.	Thumbnailing is not enabled in Inbound Refinery.	Enable thumbnailing in Inbound Refinery. For details, refer to the <i>Inbound Refinery Administration Guide</i> .
When viewing PDF files generated by Inbound Refinery in Adobe Acrobat Reader, there are lines or other artifacts on the screen.	Acrobat Reader 4 is being used to view the files.	When viewing PDF files generated by Inbound Refinery, use Adobe Acrobat Reader 6.0.1 or higher for the best results.

Converting Microsoft Office Files to HTML

Inbound Refinery can convert native Microsoft Office files to HTML by using the native Microsoft Office applications installed on a Windows system. Content Server can be installed on either a Windows or UNIX platform, but for Microsoft Office to HTML conversions to work, Inbound Refinery must be configured on the Windows system where the Microsoft Office native applications are installed. Microsoft Office to HTML conversions require the following components to be installed and enabled on the specified server:

Component Name	Component Description	Enabled on Server
HtmlConverter	Enables Inbound Refinery to convert native Microsoft Office files created with Word, Excel, Powerpoint and Visio to HTML using the native Office application.	Inbound Refinery Server
MSOfficeHtmlConverterSupport	Enables Content Server to support HTML conversions of native Microsoft Office files converted by Inbound Refinery and returned to Content Server in a ZIP file. Requires that ZipRenditionManagement component be installed on the Content Server.	Content Server
ZipRenditionManagement	Enables Content Server access to HTML renditions created and compressed into a ZIP file by Inbound Refinery.	Content Server

This section discusses how to work with Microsoft Office to HTML conversions and how to troubleshoot the conversion process. The section contains the following sections:

- ["About HTML Converter"](#) on page 7-2
- ["Configuring HTML Converter Settings"](#) on page 7-2

7.1 About HTML Converter

HTML conversion automates opening Microsoft office files in their native application, saves them out as HTML pages, then collects the HTML output into a compressed ZIP file that gets returned to Content Server.

HTML conversion can process the following types of files:

- Microsoft Word 2002 through 2007
- Microsoft Excel 2002 through 2007
- Microsoft Powerpoint 2002 through 2007
- Microsoft Visio 2007

Because Microsoft applications are Windows only, the Inbound Refinery used for HTML conversion must be installed on a Windows system. The Content Server connecting to the Inbound Refinery provider can be installed on either Windows or UNIX.

7.1.1 HTML Converter Process Overview

When HTML Converter is enabled to work with Inbound Refinery, native Microsoft Office files checked into Content Server are sent to Inbound Refinery for conversion. Inbound Refinery automates the process of converting the files to HTML using the native Microsoft Office applications. If a single HTML page is returned to Content Server, it is used as the web-viewable file. If conversion results in multiple HTML pages, the following files are returned to Content Server:

- An HCSP page as the primary web-viewable rendition
- A ZIP file that includes the HTML output from the Office application
- Optionally, a thumbnail rendition of the native Microsoft Office file

When a user clicks on the web-viewable link in Content Server of a document converted to multiple HTML pages by Inbound Refinery, the HCSP page redirects the server to the Content Server DISPLAY_HTML_PACKAGE service. This service extracts the HTML page of the ZIP file to

`<WeblayoutDir>/groups/<dSecurityGroup>/documents/<dDocType>/~extract/<dDocName>~<dRevLabel>~cachedrendition/<dDocName>~<dRevLabel>.htm`, and displays it in the browser.

7.2 Configuring HTML Converter Settings

This section covers the following topics:

- ["Configuring Content Servers to Send Jobs for HTML Conversion"](#) on page 7-2
- ["Setting Accepted Conversions"](#) on page 7-4

7.2.1 Configuring Content Servers to Send Jobs for HTML Conversion

File formats and conversion methods are used in Content Server to define how content items should be handled by Inbound Refinery and the conversion options. Installing and enabling the MOfficeHtmlConverterSupport component on a content server adds four HTML conversion options on the File Formats Wizard page:

- Word HTML
- PowerPoint HTML

- Excel HTML
- Visio HTML

For a Microsoft Office document to be processed by Inbound Refinery, its file extension must be mapped to a format name that is associated with the HTML Conversion method. The added conversion options for HTML Conversion are not automatically mapped: they must be mapped manually. They can be set either using the File Formats Wizard or the Configuration Manager applet. The Configuration Manager applet gives you greater control over which file extensions are mapped to which conversion options. Information on setting these mappings is covered in the following sections:

- ["Using the File Formats Wizard"](#) on page 7-3
- ["Using the Configuration Manager"](#) on page 7-3

7.2.1.1 Using the File Formats Wizard

File formats and conversion methods for Inbound Refinery can be managed in Content Server using the File Formats Wizard. To make changes, complete the following steps:

1. Make sure you are logged into Content Server as an administrator.
2. In the navigation menu, select **Administration, Refinery Administration** and **File Formats Wizard**. The File Formats Wizard for `<server name>` page is displayed.
3. Select the Microsoft Office document file types you want to convert to HTML. The Conversion column lists the appropriate conversion option according to the file type. For example:
 - Word for doc, docx, dot, dotx
 - PowerPoint for ppt, pptx
 - Excel for xls, xlsx
 - Visio for vsd
4. Click **Update** to save your changes.
5. Make sure you are logged into the Inbound Refinery as an administrator.
6. In the navigation menu, select **Conversion Settings** and then **Primary Web Rendition**. The Primary Web Rendition page is displayed.
7. Enable **Convert selected MS Office formats to MS HTML**.
8. Click **Update**.

7.2.1.2 Using the Configuration Manager

File formats and conversion methods for Inbound Refinery can be managed in Content Server using the Configuration Manager. To make changes, complete the following steps:

1. Make sure you are logged into Content Server as an administrator.
2. In the navigation menu, select **Administration, Admin Applets**. The Administration Applets for `<server name>` page is displayed.
3. Click **Configuration Manager**. The Configuration Manager applet is started.
4. Select **File Formats** from the **Options** menu.

5. Select the application format for the Office document type you want to convert from the **Format** column. For example, for Microsoft Word, you would select **application/msword**.
6. Click **Edit**. The Edit File Format dialog box is displayed.
7. Select the HTML conversion option from the **Conversion** list appropriate to the Office document format you selected. For example, for **application/msword**, you would select the conversion option **Word HTML**.
8. Click **OK**.
9. Repeat steps 5 through 8 for all Microsoft Office formats you want to convert to HTML.
10. When finished, click **Close** to close the File Formats page and then close the Configuration Manager.
11. Restart Content Server and Inbound Refinery.

7.2.2 Setting Accepted Conversions

When installed on the refinery, the HTML Converter adds the Word HTML, PowerPoint HTML, Excel HTML, and Visio HTML option to the Conversion Listing page. This conversion option must be enabled for the refinery to perform conversions on items submitted by the content server.

User Interface

This section contains information about the interface used with Inbound Refinery and enabled conversion options.

The following screens are shown in this section:

- ["Providers Page"](#) on page 2
- ["Add/Edit Outgoing Socket Provider Page"](#) on page 3
- ["Provider Information Page"](#) on page 7
- ["File Formats Wizard Page"](#) on page 7
- ["File Formats Screen"](#) on page 8
- ["Add New/Edit File Formats Screen"](#) on page 10
- ["Add/Edit File Extensions Screen"](#) on page 10
- ["Refinery Conversion Options Page"](#) on page 11
- ["DAM Search Fields Administration Page"](#) on page 12
- ["Conversion Listing Page"](#) on page 13
- ["Primary Web-Viewable Rendition Page"](#) on page 15
- ["PDF Export Options Page"](#) on page 17
- ["PDF Options Page"](#) on page 21
- ["XML Options Page"](#) on page 22
- ["Additional Renditions Page"](#) on page 23
- ["Thumbnail Options Page"](#) on page 24
- ["Third-Party Application Settings Page"](#) on page 26
- ["General OutsideIn Filter Options Page"](#) on page 27
- ["Distiller Engine Options Page"](#) on page 29
- ["CVista PdfCompressor Options Page"](#) on page 31
- ["OpenOffice Options Page"](#) on page 32
- ["Word Options Page"](#) on page 33
- ["Excel Options Page"](#) on page 35
- ["PowerPoint Options Page"](#) on page 36
- ["Visio Options Page"](#) on page 37

- ["InDesign Options Page"](#) on page 38
- ["Timeout Settings Page"](#) on page 39
- ["Refinery Status Page"](#) on page 40
- ["Refinery Logs Page"](#) on page 41
- ["Console Output Page"](#) on page 42
- ["Conversion Job Status Page"](#) on page 42
- ["IBR Provider Status Page"](#) on page 43
- ["Agent Status Page"](#) on page 44
- ["Items In Queue Page"](#) on page 44
- ["Conversion History Page"](#) on page 45
- ["Conversion Detail Page"](#) on page 46
- ["Agent Logs Page"](#) on page 46
- ["User Profile Page"](#) on page 47
- ["Agent Management Page"](#) on page 48
- ["Delete Agent Page"](#) on page 49
- ["Configuration Information Page"](#) on page 49
- ["System Audit Information Page"](#) on page 50
- ["Configure Web Server Filter Page"](#) on page 52
- ["Admin Server Page"](#) on page 54
- ["Inbound Refinery Administration Page"](#) on page 55

A.1 Providers Page

Access this Content Server page by selecting **Providers** in the content server Administration menu. The Providers page enables you to view, add, and edit providers for the content server. For more information about Providers, see the *Oracle Fusion Middleware System Administrator's Guide for Universal Content Management*.

Providers					
Provider	Description	Type	Connection State	Last Activity Date	Action
SystemDatabase	System Database	database	15 out of 15 connections	3/10/07 4:24 PM	Info Test
SystemServerSocket	System Server Socket	incoming	good	3/10/07 4:24 PM	Info Test
ref1	Connection to Inbound Refinery	outgoing	good	3/10/07 4:24 PM	Info Test
DefaultFileStore	Default File Store Provider	FileStore	good		Test

Create a New Provider		
Provider Type	Description	Action
outgoing	Configuring an outgoing provider.	Add
database	Configuring a database provider.	Add
incoming	Configuring an incoming provider.	Add
preview	Configuring a preview provider.	Add
ldapuser	Configuring an LDAP user provider.	Add

Providers Table	Description
Provider column	The name of the provider that establishes connection to outside entities.
Description column	A description of the provider.
Type column	The type of provider.
Connection State column	Possible states are: <ul style="list-style-type: none"> ■ misconfigured ■ good ■ down ■ requires restart
Last Activity Date column	The last date and time that the provider was active.
Actions column	The Info link displays the Provider Information Page for the provider. The Test link refreshes the Connection State and Last Activity Date columns for the provider.

Create a New Provider Table	Description
Provider Type column	The type of provider.
Description column	A description of the provider type.
Action column	Clicking the Add link for the outgoing provider type displays the Add/Edit Outgoing Socket Provider Page .

A.2 Add/Edit Outgoing Socket Provider Page

Access this Content Server page using one of the following methods:

- By clicking **Add** in the Action column for the *outgoing* provider type on the Providers page.
- By clicking **Info** in the Actions column for a refinery provider on the Providers page, and then clicking **Edit** on the Provider Information page.

The Add/Edit Outgoing Provider page enables you to add a refinery as a provider to a content server or edit information for an existing refinery provider.

Edit Outgoing Socket Provider

* Provider Name

* Provider Description

* Provider Class

Connection Class

Configuration Class

* Server Host Name

HTTP Server Address

* Server Port

* Instance Name

* Relative Web Root

The target server may impose the requirement of a password in order to connect. The target server can allow connection through either a global proxy password or it may provide "named" password connections. The name can either be a blank value (which will select the global password) or a specific name to choose one of the target's "proxied connections".

Use Connection Password

Connection Password Name

Connection Password

The possible client IP addresses who can use this connection to the target must be entered here. When the target receives the request it will check the IP address and if it matches this entry then it allows the request. The wild card symbols ** = match 0 or many* and */ = match either or* can be used to match more then one potential client. Whatever entry entered here will be used to message digest (one way hash) the password before it is persistently stored by the client.

Client IP Filter

Handles Inbound Refinery Conversion Jobs
Use this option *only* if this provider is an Inbound Refinery.

Inbound Refinery Read Only Mode
Use this option to prevent this Content Server from sending new conversion jobs to this Inbound Refinery. Note that this Inbound Refinery will continue to return conversion jobs as the jobs are finished.

Conversion Options

Enter the number of jobs allowed in the pre-converted queue.

Element	Description
Provider Name field (required)	A name for the provider, which will become a subdirectory in the <i>IntradocDir/data/providers</i> directory.

Element	Description
Provider Description field (required)	A user-friendly description for the provider.
Provider Class field (required)	The name of the Java class for the provider. The default is the <i>intradoc.provider.SocketOutgoingProvider</i> class.
Connection Class field	Not required.
Configuration Class field	Not required.
Server Host Name field (required)	The host name of the server on which the refinery is installed.
HTTP Server Address field	The HTTP server address for the refinery. Not required when the refinery is on the same computer as the content server.
Server Port field (required)	The port on which the refinery provider will communicate. The default refinery port is 5555.
Instance Name field (required)	The instance name of the refinery. For example, <i>ref2</i> .
Relative Web Root field (required)	The relative web root of the refinery. When installed under WebLogic Server, the relative web root is <i>/ibr/</i> .
Use Connection Password check box (optional)	The target server may impose the requirement of a password in order to connect. The target server can allow connection through either a global proxy password or it may provide named password connections. The name can either be a blank value to select the global password or a specific name to choose one of the target's proxied connections.
Connection Password Name	The password required to connect to the target server. Leave blank to use the global password or specify the named connection.
Connection Password	The password necessary to connect to the target server or named proxy connection.
Client IP Filter	Enter the possible client IP addresses that can use the connection to the target server. When the target receives the request it will check the IP address. If it matches the IP address entered here then it allows the request. The wild card symbols * = <i>match 0 or many</i> and = <i>match either or can</i> be used to match more than one potential client. The IP address entered here is used to message digest (one way hash) the password before it is persistently stored by the client.
Handles Inbound Refinery Conversion Jobs check box	Select this check box when creating a refinery provider for a content server.
Inbound Refinery Read Only Mode check box	Select this check box only when you do not want the content server to send new conversion jobs to the refinery. By default, this check box should be cleared.
Number of jobs allowed in the pre-converted queue field	If necessary, change the maximum number of jobs allowed in the content server's pre-converted queue. The default is 1000 jobs.
Add button	Adds a new refinery provider.
Update button	Saves your changes when updating a refinery provider.
Reset button	Resets the Add/Edit Outgoing Provider page to the last saved settings.

A.3 Provider Information Page

Access this Content Server page by clicking **Info** in the Actions column for a refinery provider on the [Providers Page](#) page of the Content Server, or by clicking **Info** in the Actions column of the [IBR Provider Status Page](#).

Outgoing Provider Information for ref2

Provider Name: ref2
Provider Description: Connection to Inbound Refinery 'ref2'.
Connection State: good
Last Activity Date: 12/5/06 12:29 PM

Provider Type: outgoing
Provider Class: intradoc.provider.SocketOutgoingProvider
Provider Connection:

Instance Name: ref2
Server Host Name: jmarshalpc
HTTP Server Address:
Server Port: 5555
Relative Web Root: /ibr/
Notified Subjects
Last Request Date:

Conversion Options: Handles Inbound Refinery Conversion Jobs
Refinery read-only mode: FALSE
Maximum Jobs to Queue: 100

Element	Description
Information fields	Display information about the provider. See " Add/Edit Outgoing Socket Provider Page " on page 3 for a description of each field.
Edit button	Displays the Add/Edit Outgoing Socket Provider Page .
Disable/Enable button	Disables or enables the provider. The content server must be restarted after a provider is disabled or enabled.
Delete button	Deletes the provider.

A.4 File Formats Wizard Page

Access this Content Server page by selecting **Administration**, then **Refinery Administration**, then **File Formats Wizard** on the Content Server. The File Formats Wizard page enables you to select types of files that should be sent to a refinery for

conversion. The corresponding default file extensions, file formats, and conversions are mapped automatically.

Important: The InboundRefinerySupport component must be installed and enabled on the content server to enable the File Formats Wizard page and at least one Inbound Refinery provider must be enabled. Also, conversion option components might add file types to the File Formats Wizard page.

File Formats Wizard for cs1

Select each file format to be converted to web-viewable format. Configure additional file extensions and formats using the Configuration Manager applet. This wizard overwrites any existing configuration of the extensions listed.

Select File Types

<input type="checkbox"/>	File Type	Extensions	Conversion
<input checked="" type="checkbox"/>	Corel WordPerfect Document	wpd	WordPerfect
<input checked="" type="checkbox"/>	FrameMaker Document	fm	FrameMaker
<input checked="" type="checkbox"/>	FrameMaker Book	bk, book	FrameMaker
<input checked="" type="checkbox"/>	FrameMaker Interchange Format	mif	FrameMaker

You can also make file format configuration changes manually using the Configuration Manager applet. For details, see "[File Formats Screen](#)" on page -8. The File Formats Wizard page can be used to configure conversions for most common file types, however it does not replicate all of the Configuration Manager applet features.

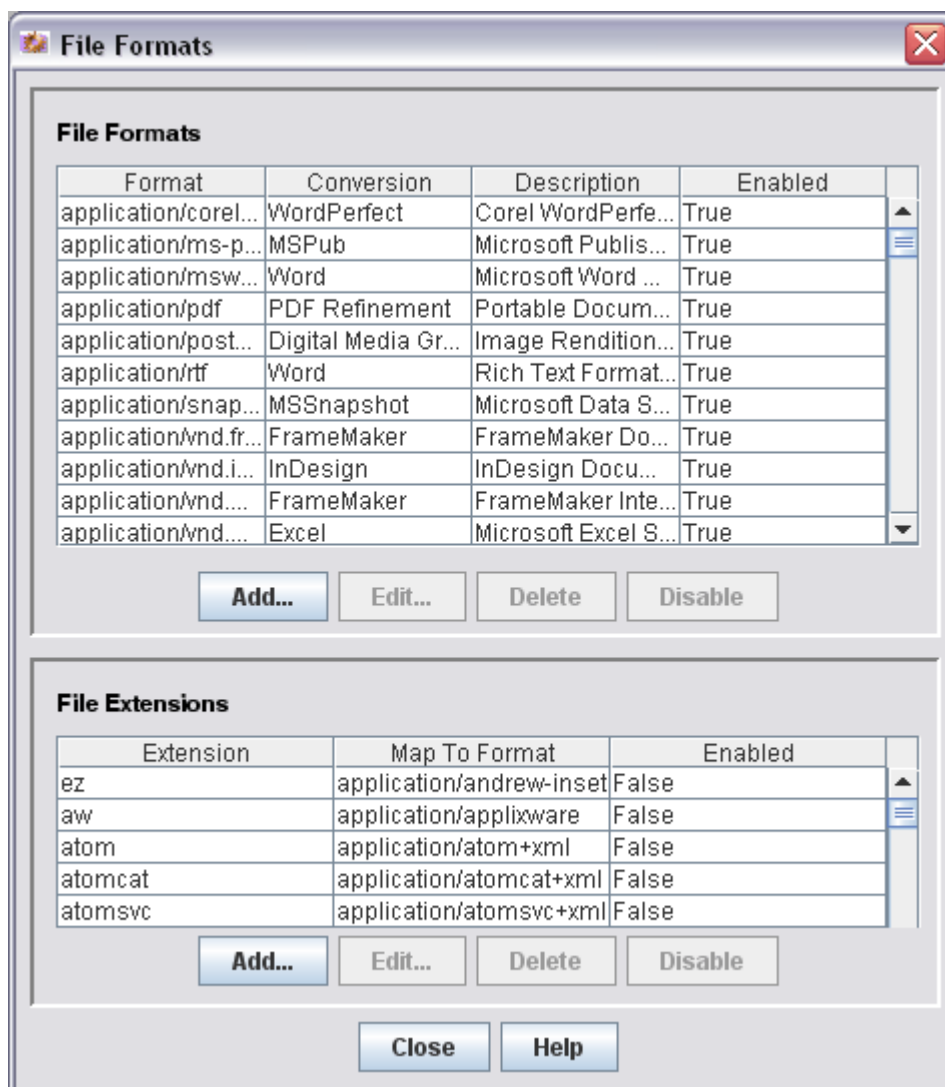
Important: The Ichitaro conversion is not supported for this version of Inbound Refinery.

Element	Description
Select File Types check boxes	Select each file type to be sent to a refinery for conversion. To select or clear all check boxes, select or clear the check box in the heading row.
Update button	Saves your changes.
Reset button	Resets the File Formats Wizard page to the last saved settings.

A.5 File Formats Screen

Access this Content Server screen by clicking **Admin Applets** under the Administration tray on the Content Server, clicking **Configuration Manager** to open the applet, then selecting **Options** and **File Formats** from the Configuration Manager applet. Use it to set up the file extensions, file formats, and conversions for the content

server. The File Formats Wizard can be used to configure default conversions for most common file types. For details, see "[File Formats Wizard Page](#)" on page -7. You should only need to use the File Formats screen to change default conversions and set up conversions for uncommon file types.



Field	Description
Format	The name of the file format. Any name can be used, but Oracle recommends that you use the MIME type associated with the corresponding file extension(s).
Conversion	The conversion that is linked to the file format.
Description	The description for the file format.
Enabled	Specifies if the format or extension is enabled.
Extension	The file extension that is mapped to a file format.
Map to Format	The file format to which you want to map the file extension.

A.5.1 Add New/Edit File Formats Screen

Access the Add New File Formats screen from Content Server by selecting **Options**, then **File Formats** from the Configuration Manager applet and then clicking the **Add** button in the File Formats section.

Access the Edit File Format screen by selecting **Options**, then **File Formats** from the Configuration Manager applet, selecting an existing file format in the File Formats section, and then clicking the **Edit** button in the File Formats section.

Field	Description
Format	This is generally the MIME type associated with the corresponding file extension(s).
Conversion	The conversion that will be used for all file extensions that are mapped to the file format.
Description	The description for the file format.

A.5.2 Add/Edit File Extensions Screen

Access the Add File Extensions screen from Content Server by selecting **Options**, then **File Formats** from the Configuration Manager applet and then clicking the **Add** button in the File Extensions section.

Access the Edit File Extension screen by selecting **Options**, **File Formats** from the Configuration Manager applet, selecting an existing file extension in the File Extensions section, and then clicking the **Edit** button in the File Extensions section.

Field	Description
Extension	The file extension (for example, <i>doc</i> for Microsoft Word, <i>xls</i> for Microsoft Excel, <i>vsd</i> for Microsoft Visio, and so forth).
Map to Format	The file format to which you want to map the file extension.

A.6 Refinery Conversion Options Page

Access this Content Server page by selecting **Administration**, then **Refinery Administration**, then **Conversion Options** in the content server. The Inbound Refinery Conversion Options page enables you to configure several options that affect how the content server interacts with its refinery providers, including how the content server should handle pre and post-converted jobs.

Inbound Refinery Conversion Options [quick help](#)

Options that affect how the Content Server interacts with Inbound Refinery providers.

Pre-Conversion Options

These options tell the Content Server how to handle jobs prior to conversion.

Enter the number of seconds between successive transfer attempts.

Enter the native file compression threshold in MB; when exceeded the file will be transferred uncompressed.

When the time for transferring a job expires, the conversion should fail.

Post-Conversion Options

These options tell the Content Server how to handle jobs after conversion.

When a conversion sent to an Inbound Refinery fails, set the conversion to 'Refinery Passthru'.

Important: The InboundRefinerySupport component must be installed and enabled on the content server and at least one Inbound Refinery provider must be configured to enable the Inbound Refinery Conversion Options page.

Element	Description
Number of seconds between successive transfer attempts field	Enter the number of seconds that the content server should wait between transfer attempts for pre-converted jobs. The default is 10 (seconds).

Element	Description
Native file compression threshold field	Enter the native file compression threshold size in MB. The default threshold size is 1024 MB (1 GB). Unless the native file exceeds the threshold size, it will be compressed before the content server transfers it to a refinery. This setting enables you to avoid the overhead of compressing very large files (for example, large video files). If you do not want any native files to be compressed before transfer, set the native file compression threshold size to 0.
When job transfer time expires, conversion should fail check box	Select this check box to fail the conversion if the total job transfer time expires.
When conversion sent to a refinery fails, set the conversion to 'Refinery Passthru' check box	Specifies whether a copy of the native document should be used as the primary web-viewable rendition when a conversion fails. If this option is selected, when a conversion fails (a web-viewable rendition cannot be produced) a copy of the native file is placed in the weblayout directory. When this option is cleared, the native file is not copied to the weblayout directory.
Update button	Saves your changes.
Reset button	Resets the Inbound Refinery Conversion Options page to the last saved settings.

A.7 DAM Search Fields Administration Page

By default, XMP schema are extracted from digital images by Inbound Refinery and passed to Content Server. Content Server then displays the data on the Image Data tab of a digital asset. If OracleTextSearch is installed and enabled, the data is indexed and available for searching through a full-text search.

Note: XMP data is only searchable as text. Any date or number values extracted from XMP data are indexed and made available for searching only as text.

To allow searching on specific criteria in the XMP metadata, a placeholder field must be enabled on the Content Server user interface using the DAM Search Fields Administration page and the index rebuilt. Once done, users can search for content using the specific criteria in the XMP data.

The DAM Search Fields Administration page lists the primary XMP schema from the XMP specification as categories, and lists the available Content Server placeholder field names, labels and XMP-related descriptions within each category. Expand the category to find the specific XMP-related description to be indexed and enable the placeholder field. Once enabled, Click **Update** on the page and rebuild your search index.

To access this Content Server page, expand the Content Server Administration tray and click **DAM Administration**.

DAM Search Fields Administration for cs_0310

Select which XMP-related fields are indexed by the content server. When a field is selected the Wizard creates a placeholder field that can be searched against. Enabling new fields may require the index to be rebuilt.

XMP Schema Categories:

- Camera Raw Settings
- Dublin Core
- EXIF
- PDF
- Photoshop
- TIFF
- XMP Basic
- Basic Job Ticket
- Media Management
- Rights Management
- Paged Text

A.8 Conversion Listing Page

The Conversion Listing page in the Inbound Refinery enables you to set accepted conversions and queue maximums. Access this Inbound Refinery page by selecting **Conversion Settings**, then **Conversion Listing** from the Refinery.

Important: The Ichitaro and LegacyCustom conversions are not supported for this version of Inbound Refinery.

Conversion Listing [quick help](#)

Configure the conversion queue size and type of conversions that **ref1** should accept and attempt to convert. On this page, 0 means there is no limit to the number of jobs accepted.

General Queue Settings

Enter the maximum number of conversions allowed to be queued by ibr11g.

Enter the maximum number of conversion allowed to wait in an agent's post converter queue. When too many jobs are waiting to be picked up from the agent, no more jobs will be accepted from the agent.

Enter the number seconds that ibr11g should be considered busy when the maximum number of conversions are in the queue(s).

Enter the maximum number of conversion that ibr11g should process at the same time.

Conversions

<input type="checkbox"/> Accept	Maximum	Conversion	Conversion Description
<input checked="" type="checkbox"/>	<input type="text" value="0"/>	Word	MS Word Conversion
<input checked="" type="checkbox"/>	<input type="text" value="0"/>	Excel	MS Excel Conversion
<input checked="" type="checkbox"/>	<input type="text" value="0"/>	PowerPoint	MS PowerPoint Conversion
<input checked="" type="checkbox"/>	<input type="text" value="0"/>	MSProject	MS Project Conversion
<input checked="" type="checkbox"/>	<input type="text" value="0"/>	Distiller	Distill PostScript into PDF
<input checked="" type="checkbox"/>	<input type="text" value="0"/>	MS Publisher	MS Publisher Conversion

Element	Description
Maximum number of conversions allowed to be queued field	Set the total number of conversion jobs that are allowed to be queued by the refinery. The default is 0 (unlimited).
Maximum number of conversions allowed in post converter queue field	Enter the number of conversions allowed to wait in a post converter queue before an agent no longer accepts jobs. The default is 1000. Enter zero (0) to allow unlimited jobs. However, allowing unlimited jobs can slow the system and cause problems by consuming available storage space.
Number of seconds the refinery should be considered busy field	Enter the number of seconds that the refinery should be considered busy when the maximum number of conversions has been reached. The default is 30 (seconds). When the maximum number of conversion jobs for the refinery has been reached, content servers will wait this amount of time before attempting to communicate with the refinery again.

Element	Description
Maximum number of concurrent conversions field	Enter the number of conversions the refinery is allowed to run at the same time. Concurrent conversions are possible provided multiple instances of the conversion application can run at the same time. For example, multiple instances of Outside In PDF Export can run at the same time and convert multiple documents concurrently, but only one instance of Adobe Photoshop can run on a computer, allowing for only one conversion of a Photoshop document.
Accept conversions check boxes	Select a check box to accept conversion jobs of that type sent by a content server. Clear a check box to prevent the refinery from accepting that type of conversion. To select or deselect all check boxes, check or clear the check box next to the column heading. By default, all conversions are accepted.
Maximum conversions column	Specify the maximum number of jobs (across all refinery queues) for each conversion type. The default is 0 (unlimited).
Conversion column	The name of each conversion enabled in the refinery. This should match the names of the conversions enabled in the content server.
Conversion Description column	A description of each conversion.
Update button	Saves changes to settings. Important: Content Server must be made aware of the updated status of each refinery where conversion changes are made. This happens when the content server polls the refinery, but can be forced using the Force Status Update button on the IBR Provider Status Page to effect your changes in the content server's queuing immediately. Alternately, restart each content server that is an agent to the refinery.
Reset button	Reverts to the last saved settings.

A.9 Primary Web-Viewable Rendition Page

The Primary Web-Viewable Rendition page enables you to select the conversion methods that Inbound Refinery can use to attempt to create a primary-webviewable rendition. Conversion methods are added to this page as the associated components are installed and enabled on Inbound Refinery. Access this Inbound Refinery page by selecting **Conversion Settings**, then **Primary Web Rendition**.

Primary Web-Viewable Rendition [quick help](#)

Inbound Refinery will attempt to convert each incoming file using the first selected method that supports conversion of the native file format.

- Convert selected MS Office formats to MS HTML
- Convert to PDF using PDF Export PDF Export Options...
- Convert to PDF using third-party applications PDF Web-Viewable Options...
- Convert to PDF using Outside In PDF Web-Viewable Options...
- Convert to PDF using OpenOffice
- Convert to multi-page Tiff using Outside In

- Convert to XML XML Options...

Update
Reset

Inbound Refinery includes Outside In Image Export, which enables you to convert files to multi-page TIFF files as the primary web-viewable rendition. This enables users to view the files through standard web browsers with a TIFF viewer plugin. When no conversion options are installed, the only available conversion method is to use Outside In to convert the native file format to multi-page TIFF files as the primary web-viewable rendition. When conversion components are enabled, other conversion methods might be available on this page. For example, when the PDFExportConverter component is enabled, options are available to convert the native file to PDF using PDF Export.

Inbound Refinery will attempt to convert each incoming file based on the native file format. If the format is not supported for conversion by the first selected method, Inbound Refinery will check to see if the next selected method supports the format, and so on. Inbound Refinery will attempt to convert the file using the first selected method that supports the conversion of the format.

For example, consider that you have enabled the PDF conversion components and select both the **Convert to PDF using third-party applications** option and the **Convert to PDF using Outside In** option. You then send a Microsoft Word file to the refinery for conversion. Since the Microsoft Word file format is supported for conversion to PDF using a third-party application (Microsoft Word), Inbound Refinery will attempt to use the **Convert to PDF using third-party applications** method to convert the file to PDF as the primary web-viewable rendition. If this method fails, Inbound Refinery will not attempt the **Convert to PDF using Outside In** method. However, if you send a JustWrite file to the refinery for conversion, this file format is not supported for conversion to PDF using the **Convert to PDF using third-party applications** method, so Inbound Refinery will check to see if this format is supported by the **Convert to PDF using Outside In** method. Since this format is supported by Outside In, Inbound Refinery will attempt to convert the file to PDF using Outside In.

Element	Description
Convert selected MS Office formats to MS HTML	Enable to convert native Microsoft Office files directly to HTML with the native Microsoft Office application. This method is available with HtmlConverter installed and enabled and is compatible with Windows only.
Convert to PDF using PDF Export	Enable to use Outside In PDF Export to convert supported files directly to PDF without any other third-party applications. This offers cross-platform compatibility and is available when PDFExportConverter is installed and enabled.
Convert to PDF using third-party applications	Enable to use native applications to convert files first to PostScript and then to PDF. This is available on Windows platforms only when WinNativeConverter is installed and enabled.
Convert to PDF using Outside In	Enable to use Outside In to convert supported files first to PostScript and then to PDF. When using this option, only a PostScript distiller engine is required.
Convert to PDF using OpenOffice	Enable to use OpenOffice to convert supported files to PostScript and then to PDF. This offers cross-platform compatibility and is available when OpenOfficeConversion is installed and enabled.
Convert to multi-page Tiff using Outside In	<p>When no conversion options are installed, this is the only available conversion option. When this option is selected, the refinery will attempt to convert all native file formats supported for conversion by Outside In to multi-page TIFF files as the primary web-viewable rendition using Outside In Image Export.</p> <p>This conversion method will be attempted only if it is the first selected method that supports the native file format.</p>
Convert to XML	Enable to convert supported files to XML files using Outside In XML Export, Search Export, and either the FlexionDoc or SearchML schema. In addition, the XSLT feature can post-process the resulting XML document, transforming it to a different XML document based on your XSL file and validated against your DTD or schema. XML Converter is supported on both Windows and UNIX. This method is available when XMLConverter is installed and enabled.
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.

A.10 PDF Export Options Page

The PDF Export Options page of the Inbound Refinery allows you to configure the options used when using Outside In PDF Export to convert directly to PDF without any third-party applications. Access this Inbound Refinery page by selecting **Conversion Settings**, then **Primary Web Rendition**, enabling **Convert to PDF using PDF Export**, then clicking the **PDF Export Options** button.

PDF Export Options

These options tell the refinery how to export native formats to PDF.

- Produce PDF
- Produce PDF/A
- Produce linearized (or optimized) PDF
- Embed fonts in the PDF file. (Note that for complete PDF/A-1a compliance, this option must be checked).
- Compress PDF output
- Use native format page size

Default page layout settings. Used when layout data is not available from native format.

Default page height in inches

Default page width in inches

Default margins in TWIPS (1440 twips is equal to 1 inch). Used when margin data is not available from native format.

Top margin

Bottom margin

Left margin

Right margin

Spreadsheet Export Options

- Show gridlines in PDF
- Show headings in PDF
- Export spreadsheet across and down
- Export spreadsheet down and across

Database Export Options

- Show gridlines in PDF
- Show headings in PDF

Refinery Export Options Section

Element	Description
Produce PDF	Select to output a PDF document.
Produce PDF/A	Select to output a PDF/A document. PDF/A is an ISO standard sub-set of PDF designed for long term archiving. It includes metadata information specific to PDF/A and cannot rely on content from external sources. A PDF/A document must be self-contained so that all information necessary for accurate and consistent display of the document must be embedded in the document. Such information includes fonts, color profiles, vector and raster images, text, and any other information necessary.

Element	Description
Produce linearized (or optimized) PDF	Enable to output a PDF document that is linearized, which optimizes PDF files for web delivery. Linearized PDF files structure the file in such a way as to deliver the PDF over a network and allow the PDF to display before the entire file is downloaded. This assists in rapid deployment for web browsing.
Embed fonts in the PDF file	Enable to embed font information into each individual PDF file. This ensures proper display of text in the PDF, but results in a larger PDF file. Note that for full PDF/A compliance, where the PDF file must be self-contained, this option must be enabled.
Compress PDF output	Enable to compress the PDF file using zlib compression to reduce output file size. Compressing the PDF strips the PDF of any duplicate font or layout information, unnecessary metadata, scripts, or other objects, and compresses any embedded image files.
Use native format page size	Enable to use the page margins, paper size, scaling, and orientation specified in the input file. Enabling also ensures that any page size and page breaks specified in a spreadsheet file are maintained. If this option is disabled, then the default page size, margin, and orientation is used as specified in the Default Page Layout Section and Default Margins Section of the PDF Export Options Page .

Default Page Layout Section

Element	Description
Default page height in inches	Specifies the default page height of the PDF output file in inches. The default setting is used when the <i>Use native format page size</i> setting is disabled or if it is enabled and no page size setting is specified in the native file.
Default page width in inches	Specifies the default page width of the PDF output file in inches. The default setting is used when the <i>Use native format page size</i> setting is disabled or if it is enabled and no page size setting is specified in the native file.

Default Margins Section

Element	Description
Top margin	<p>Specifies the default top page margin of the PDF output file in twentieth of an inch points (TWIPS). A twip is a typographical measurement. There are 1440 twips per inch.</p> <p>The default top margin setting is used when the <i>Use native format page size</i> setting is disabled or if it is enabled and no top page margin setting is specified in the native file.</p>
Bottom margin	<p>Specifies the default bottom page margin of the PDF output file in twentieth of an inch points (TWIPS). A twip is a typographical measurement. There are 1440 twips per inch.</p> <p>The default bottom margin setting is used when the <i>Use native format page size</i> setting is disabled or if it is enabled and no bottom page margin setting is specified in the native file.</p>

Element	Description
Left margin	<p>Specifies the default left page margin of the PDF output file in twentieth of an inch points (TWIPS). A twip is a typographical measurement. There are 1440 twips per inch.</p> <p>The default left margin setting is used when the <i>Use native format page size</i> setting is disabled or if it is enabled and no left page margin setting is specified in the native file.</p>
Right margin	<p>Specifies the default right page margin of the PDF output file in twentieth of an inch points (TWIPS). A twip is a typographical measurement. There are 1440 twips per inch.</p> <p>The default right margin setting is used when the <i>Use native format page size</i> setting is disabled or if it is enabled and no right page margin setting is specified in the native file.</p>

Spreadsheet Export Options Section

Element	Description
Show gridlines in PDF	Enable to display gridlines between cells in the PDF output of spreadsheet files.
Show headings in PDF	Enable to display row heading in the PDF output of spreadsheet files.
Export spreadsheet across and down	<p>When enabled, pagination happens horizontally across rows and then down the column. Long horizontal rows are split first, with the next cell in the row or rows beginning the next page until all cells in the row are used, then the page would move down to the next cell in the first column.</p> <p>For example, if a page can fit 10 columns and 10 rows per page and a spreadsheet file has 30 rows and 20 columns, pagination would happen as follows:</p> <ul style="list-style-type: none"> ■ Page 1: Column A row 1 to Column J row 10 ■ Page 2: Column K row 1 to Column T row 10 ■ Page 3: Column A row 11 to Column J row 20 ■ Page 4: Column K row 11 to Column T row 20 ■ Page 5: Column A row 21 to Column J row 30 ■ Page 6: Column K row 21 to Column T row 30

Element	Description
Export spreadsheet down and across	<p>When enabled, pagination happens vertically down columns and then across the row. Long vertical columns are split first, with the next cell in the column or columns beginning the next page until all cells in the column are used, then the page would move across to the next cell in the first row.</p> <p>For example, if a page can fit 10 columns and 10 rows per page and a spreadsheet file has 30 rows and 20 columns, pagination would happen as follows:</p> <ul style="list-style-type: none"> ▪ Page 1: Column A row 1 to Column J row 10 ▪ Page 2: Column A row 11 to Column J row 20 ▪ Page 3: Column A row 21 to Column J row 30 ▪ Page 4: Column K row 1 to Column T row 10 ▪ Page 5: Column K row 11 to Column T row 20 ▪ Page 6: Column K row 21 to Column T row 30

Database Export Options Section

Element	Description
Show gridlines in PDF	Enable to display gridlines between cells in the PDF output of database files.
Show headings in PDF	Enable to display row heading in the PDF output of database files.

A.11 PDF Options Page

The PDF Options page enables you to set options for converting files to PDF when using a third-party application to convert PostScript files to PDF. Access this Inbound Refinery page by selecting **Conversion Settings**, then selecting **Primary Web Rendition**, enabling either the **Convert to PDF using Third-Party Applications** method or the **Convert to PDF using Outside In** method, and clicking the corresponding **PDF Web-Viewable Options** button.

PDF Options [quick help](#)

Enable Secondary Conversion to PDF

Use Information From MS Office Documents When Available

Element	Description
Enable Secondary Conversion to PDF check box	Specifies whether Inbound Refinery can use an alternate conversion if it is defined. This enables conversion of most documents even if the third-party application is misbehaving or missing. For example, if this is checked and the PDFExportConverter component is enabled, then Outside In PDF Export is used as the secondary conversion. If PDFExportConverter component is not enabled, <i>Convert to PDF using Outside In</i> is used. If the PDFExportConverter component is enabled but you want <i>Convert to PDF Using Outside In</i> to be used as the secondary conversion, you can override the default behavior by setting <code>SecondaryConversionStepName=OIXConverter</code> as a configuration variable in the refinery.
Use Information From MS Office Documents When Available check box	For Microsoft Office files only, specifies whether the document content information should be obtained from the native Microsoft Office file, or from the content server information fields.
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.

A.12 XML Options Page

The XML Options page enables you to set options for converting files to XML. Access this Inbound Refinery page using one of the following methods:

- From **Conversion Settings**, select **Primary Web Rendition**. Then select the **Convert to XML** option, and click the **XML Options** button.
- From **Conversion Settings**, select **Additional Renditions**. Then select the **Create XML renditions for all supported formats** option, and click the **XML Options** button.
- From **Conversion Settings**, select **Third-Party Application Settings**. Locate the XML Options section and click the **XML Options** button.

XML Options

Process XSLT Transformation
 Produce FlexionDoc XML
 Produce SearchML

Resource Type

None
 DTD Reference
 Schema Reference

Element	Description
Process XSLT Transformation	The XSLT (eXtensible Style Language Transformation) feature can post-process the resulting XML document, transforming it to a different XML document based on your XSL (eXtensible File Language) file and validated against your DTD (Document Type Definition) or schema.
Produce FlexionDoc XML	Specifies the use of FlexionDoc XML schema when converting documents to XML.
Produce SearchML	Specifies the use of SearchML schema when converting documents to XML.
None radio button	A DTD or schema will not be referenced when converting documents to XML.
DTD Reference radio button	The FlexionDoc or SearchML DTD will be referenced when converting documents to XML.
Schema Reference radio button	The FlexionDoc or SearchML schema will be referenced when converting documents to XML.
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.

Please note the following important considerations:

- If you want to adjust the default settings for the FlexionDoc and SearchML options, you can specify option settings in the *intradoc.cfg* file located in the refinery *DomainHome/ucm/ibr/bin* directory. For a complete description of available FlexionDoc and SearchML options, refer to the *xx.cfg* file located in the refinery *IntradocDir/components/XMLConverter/resources* directory. You must restart your refinery after making changes to the *intradoc.cfg* file.
- FlexionDoc and SearchML schema code and documentation files are installed with the XMLConverter component into the refinery *IdcHomeDir/components/XMLConverter* directory.

A.13 Additional Renditions Page

The Additional Renditions page enables you to select the additional renditions that Inbound Refinery should attempt to create. Access this Inbound Refinery page by selecting **Conversion Settings**, then **Additional Renditions**.

Additional Renditions [quick help](#)

Inbound Refinery will attempt to create the additional renditions that are selected.

Create Thumbnail Images using Outside In Options...

Create XML renditions for all supported formats XML Options...

Update Reset

When no conversion options are installed, the only available conversion method is to use Outside In to create thumbnails of files as additional renditions. When conversion options are installed, other conversion methods might be available on this page. For example, when XML Converter is installed, an option is available to create XML files as additional renditions.

Element	Description
Create Thumbnail Images using Outside In check box	When this option is selected, the refinery will use Outside In Image Export to create thumbnails for all files that the refinery processes.
Options button	Displays the Thumbnail Options Page , enabling you to set your thumbnail options.
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.

A.14 Thumbnail Options Page

The Thumbnail Options page enables you to configure your thumbnail settings (for thumbnailing using Outside In Image Export, which is provided with Inbound Refinery). Access this Inbound Refinery page by selecting **Conversion Settings**, then **Additional Renditions** and then clicking **Options** for *Create Thumbnail Images using Outside In*.

Thumbnail Options [quick help](#)

Create Thumbnail Image from the Native Vault File

Page Number of Native Vault File to Use to Create Thumbnail Image

Show Gridlines in Thumbnail Image of Databases

Show Headings in Thumbnail Image of Databases

Show Gridlines in Thumbnail Image of Spreadsheets

Show Headings in Thumbnail Image of Spreadsheets

Use quick sizing

Use smooth sizing

Smooth sizing for grayscale graphics

Produce jpg thumbnails

Produce gif thumbnails

Produce png thumbnails

Element	Description
Create Thumbnail Image from the Native Vault File check box	Specifies whether the thumbnail image will be created from the native file or the primary web-viewable file.
Page Number of Native Vault File to Use to Create Thumbnail Image field	Specifies which page of the native file will be used to create the thumbnail image. The default setting is 1, meaning that the first page of the native file will be used to create the thumbnail image.
Thumbnail Quality (1-100) field	Specifies the image quality of the thumbnails. You can use any number on a scale from 1 to 100, where 1 is a lowest quality, and 100 the best quality. The higher the quality, the less the compression and the bigger the thumbnail file. The default setting is 100.
Show Gridlines in Thumbnail Image of Databases check box	Specifies whether gridlines should be included in thumbnail images of databases. When this option is selected, the gridlines are included.
Show Headings in Thumbnail Image of Databases check box	Specifies whether headings should be included in thumbnail images of databases. When this option is selected, the headings are included.
Show Gridlines in Thumbnail Image of Spreadsheets check box	Specifies whether gridlines should be included in thumbnail images of spreadsheets. When this option is selected, the gridlines are included.
Show Headings in Thumbnail Image of Spreadsheets check box	Specifies whether headings should be included in thumbnail images of spreadsheets. When this option is selected, the headings are included.

Element	Description
Use quick sizing radio button	Selecting this option results in the fastest conversion of color graphics; however, the quality of the converted graphic will be somewhat degraded.
Use smooth sizing radio button	Selecting this option results in a more accurate representation of the original graphic, but requires a more complex process which will slow down the conversion speed slightly. This is the default setting.
Smooth sizing for grayscale graphics radio button	Selecting this option uses the smooth sizing option for grayscale graphics and the quick sizing option for any color graphics.
Produce jpg thumbnails radio button	Specifies that all thumbnails will be created as JPG files. This is the default thumbnail file type setting.
Produce gif thumbnails radio button	Specifies that all thumbnails will be created as GIF files.
Produce png thumbnails radio button	Specifies that all thumbnails will be created as PNG files.
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.

A.15 Third-Party Application Settings Page

The Third-Party Application Settings page enables you to configure settings for third-party applications that are used during conversions. Access this Inbound Refinery page by selecting **Conversion Settings**, then **Third-Party Application Settings**.

Third-Party Application Settings [quick help](#)

The configuration options listed below allow you to change settings that affect how external, third-party applications perform conversion operations.

OpenOffice

Configuration options that affect communication with the OpenOffice application.

Conversion Name: OpenOfficeToPDF Options...

CVista PdfCompressor

Configuration options that affect the conversion of TIFF files to PDF files with the PdfCompressor application.

Conversion Name: TIFFConversion Options...

Distiller Engine

Configuration options that affect the engine used for PostScript to PDF conversion and PDF optimization.

Conversion Name: *Multiple*
Conversions Options...

Microsoft Word

Configuration options that affect the conversion of Word documents with the Word application.

Conversion Name: Word Options...

Two options are always available on this page both affecting *Multiple Conversions*:

- General OutsideIn Filter Options
- Distiller Engine

When additional conversion options that use third-party applications are installed, entries are added to this page. Each entry includes an Options button that displays a page with configuration options for the application. Most of the third-party application options are related to the WinNativeConverter and Tiff Converter add-ons. However, additional options can be added as necessary to control conversions using other third-party applications.

A.16 General OutsideIn Filter Options Page

The General OutsideIn Filter Options page enables you to set options for converting files to PDF with Outside In Technology. These options are required for conversion and must be set before Inbound Refinery can function.

Access this Inbound Refinery page by selecting **Conversion Settings**, then selecting **Third-Party Application Settings**, and clicking **Options** under the General OutsideIn Filter Options section.

General OutsideIn Filter Options [quick help](#)

Path to fonts, used when OI Filters need to generate font images. (Required to create thumbnails and direct conversions to PDF).

When creating thumbnails and direct conversions to PDF time fields in the native file can be adjusted. The time zone offset for the date and time must be in the range from -96 to 96, each representing a 15 minute offset from GMT time.

Use the native operating system's time offset.

Manually set the 15 minute offset from GMT

UNIX Rendering Options

Use native operating system's native graphics subsystem

Use internal graphics rendering

Element	Description
Font Path	Specify the path to fonts used when Outside In filters need to generate font images. This is required to create thumbnails and direct conversions to PDF.
Use the native operating system's time offset	Time fields in native documents can be used when Inbound Refinery creates thumbnails and direct conversions to PDF. Enable this check box to automatically reflect the time offset of the refinery server making the conversion. Enabling this check box deactivates the Manually set the 15 minute offset from GMT field.
Manually set the 15 minute offset from GMT	Manually set the offset from Greenwich Mean Time (GMT) in 15 minute increments. Manual offsets can range from -96 to 96, with each single whole number representing a 15 minute segment. For example, -6 would represent an hour and 30 minutes earlier than Greenwich Mean Time. Use the native operating system's time offset must be disabled to activate this option.
Use native operating system's native graphics subsystem (available only when running on UNIX)	<p>Selecting this UNIX rendering option specifies that Outside In Image Export will render fonts and graphics using the operating system's native graphics subsystem (X11 on UNIX platforms).</p> <p>This option works only when at least one of the appropriate output solutions is present. For example, if the UNIX \$DISPLAY variable does not point to a valid X Server, but the OSGD and/or WV_GD modules required for Image Export exist, Image Export will default to the Image Export rendering code.</p>

Element	Description
Use internal graphics rendering (available only when running on UNIX)	Selecting this UNIX rendering option specifies that Outside In Image Export will attempt to use its internal graphics code to render fonts and graphics. This is the default option.

A.17 Distiller Engine Options Page

Access this Inbound Refinery page by selecting **Conversion Settings**, then selecting **Third-Party Application Settings** and clicking the **Options** button for the Distiller Engine.

Distiller Engine Options [quick help](#)

Win32 Ghostscript Settings

Compute the process environment for Ghostscript (Supported on Windows only)

Path to Ghostscript installation directory. (Supported on Windows only)

PostScript to PDF Conversion Settings

Path to PostScript to PDF engine.

Parameters to pass to PostScript to PDF engine.

PDF Optimization Settings

Path to PDF optimization engine.

Parameters to pass to PDF optimization engine.

Postscript and PDF Conversion Options

Enable Fast Web View (Optimize) for PDF Files

Include Document Content Information in PDF

Element	Description
Compute the process environment for Ghostscript (win32 only) check box	For Ghostscript to work correctly on a win32 system, the process environment must be set properly. On a win32 platform, enable this check box to use Ghostscript as your distiller engine and to have Inbound Refinery correctly compute the process environment. Clear this check box if you want to use a different distiller engine.
Path to Ghostscript installation directory (win32 only)	This field is active only when the Use Ghostscript check box is selected. Specify the path to the main Ghostscript installation directory. For example: <i>c:/3rdParty-Bin/gs/gpl/gs8.64</i>
Path to PostScript to PDF engine	This field is active only when the Compute the process environment for Ghostscript (win32 only) check box is cleared. Enter the path to the executable or script file of the PostScript to PDF distiller engine. For example: <i>c:/gs/gs8.54/lib/ps2pdf14.bat</i>
Parameters to pass to PostScript to PDF engine	This field is active only when the Compute the process environment for Ghostscript (win32 only) check box is cleared. Enter the parameters to be passed to the PostScript to PDF distiller engine. This field is Idoc Script enabled. For example, if the path to the distiller engine is <i>c:\utils\PostScript\distll.exe</i> and the distiller engine takes the parameters <i>[options <psPath> [<pdfPath>]</i> , at a command prompt you would enter <pre>c:\utils\PostScript\distll.exe c:\temp\mypsFile.ps -optimize -1.3 -crop c:\temp\file.pdf</pre> <p>To achieve this result through PDF Converter, you would set the following:</p> <p>Path to generic PostScript to PDF engine: <i>c:/utils/PostScript/distll.exe</i></p> <p>Parameters to pass to generic PostScript to PDF engine: <i><\$postscriptFile\$> -optimize -1.3 -crop <\$pdfFile\$></i></p> <p>To achieve maximum flexibility, this entry uses the tokens <i><\$postscriptFile\$></i> for the PostScript file path and <i><\$pdfFile\$></i> for the output file. Consider these tokens as place holders and not actual path references.</p>
Path to PDF optimization engine	This field is active only when the Compute the process environment for Ghostscript (win32 only) check box is cleared. Enter the path to the executable or script file capable of optimizing PDF files. For example: <i>c:/gs/gs8.54/lib/pdfopt.bat</i>

Element	Description
Parameters to pass to PDF optimization engine	<p>This field is active only when the Compute the process environment for Ghostscript (win32 only) check box is cleared. Enter the parameters to be passed to the distiller engine during PDF optimization. This field is Idoc Script enabled.</p> <p>For example, if the path to the distiller engine is <i>c:\utils\PostScript\opt.exe</i> and the distiller engine takes the parameters <i>[options <psPath> [<pdfPath>]</i>, at a command prompt you would enter <i>c:\utils\PostScript\opt.exe c:\temp\myPDF.pdf c:\temp\file.pdf</i></p> <p>To achieve this result through PDF Converter, you would set the following:</p> <p>Path to generic PDF optimization engine: <i>c:/utils/PostScript/opt.exe</i></p> <p>Parameters to pass to generic PDF optimization engine: <\$pdfFile\$> <\$optimizedPdfFile\$></p> <p>To achieve maximum flexibility, this entry uses the tokens <\$pdfFile\$> for the PostScript file path and <\$optimizedPdfFile\$> for the output file. Consider these tokens as place holders and not actual path references.</p>
Enable Fast Web View (Optimize) for PDF Files check box	<p>Specifies whether PDF files should be optimized for fast web viewing. Optimization removes graphics and text that appear multiple times in the content, and replaces them with pointers to the first instance. Optimization allows you to begin viewing the first pages of a PDF before the entire PDF is downloaded.</p> <p>When this check box is selected, Inbound Refinery attempts to optimize all PDF files, including all generated and checked-in PDF files. To do so, you must integrate Inbound Refinery with a distiller engine capable of optimizing PDF files such as AFPL Ghostscript.</p>
Include Document Content Information in PDF check box	<p>Specifies whether document content information (information about the document) should be included in the PDF. The document content information can be obtained using two methods:</p> <p>From the content information provided at check-in (from the content server information fields). This includes the Title (dDocTitle), Subject (dDocName; the Content ID), Author, (dDocAuthor), and Keywords. This is the default method for all file types except Microsoft Office files.</p> <p>For Microsoft Office Documents, from the native Microsoft Office file. This includes the Title, Subject, Author, and Keywords. This is the default for Microsoft Office files only.</p>

A.18 CVista PdfCompressor Options Page

Access this Inbound Refinery page by selecting **Conversion Settings, Third-Party Application Settings** and clicking the **Options** button for CVista PdfCompressor.

CVista PdfCompressor Options [quick help](#)

Path to CVista PdfCompressor executable file.

Parameters to pass to CVista PdfCompressor.

When the Tiff Converter is merging formats contained in a zip file, select the formats allowed to be merged together. Any unselected format will not be included in the PDF webviewable.

Merge tiff files.

Merge PDF files.

Merge jpeg files.

Merge bmp files.

Element	Description
Path to CVista PdfCompressor executable file.	The full path name to the CVista PdfCompressor executable.
Parameters to pass to CVista PdfCompressor	Parameters to configure CVista PdfCompressor for Tiff-to-PDF conversion. See the documentation provided with the CVista PdfCompressor for information regarding parameter usage/values.
Merge options	When the Tiff Converter is merging formats contained in a zip file, select the formats allowed to be merged together. Any unselected format will not be included in the PDF webviewable. The following options are available: <ul style="list-style-type: none"> ▪ Merge tiff files ▪ Merge PDF files ▪ Merge jpeg files ▪ Merge bmp files
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.

A.19 OpenOffice Options Page

Access this Inbound Refinery page by selecting **Conversion Settings**, then selecting **Third-Party Application Settings** and clicking the **Options** button for OpenOffice.

OpenOffice Options [quick help](#)

Address to Connect to the OpenOffice Listener

Port to Connect to the OpenOffice Listener

Element	Description
Address to Connect to the OpenOffice Listener field	<p>The server address to connect to the OpenOffice Quickstarter Listener.</p> <p>If you want to override the default address to connect to the OpenOffice Quickstarter Listener, specify the address in this field. The default address is localhost.</p>
Port to Connect to the OpenOffice Listener field	<p>.The port to connect to the OpenOffice Quickstarter Listener.</p> <p>If you want to override the default port to connect to the OpenOffice Quickstarter Listener, specify the port in this field. This port must match the port being used by OpenOffice Quickstarter Listener. The default port is 8100.</p>
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.

A.20 Word Options Page

Access this Inbound Refinery page by selecting **Conversion Settings**, then selecting **Third-Party Application Settings** and clicking the **Options** button for Microsoft Word.

Word Options [quick help](#)

- Process Word URL Links
- Process Word mailto Links
- Process Document Bookmarks
- Process Table of Contents to PDF Bookmarks
- Process Heading Styles to PDF Bookmarks
- Use Unicode Signatures to Create PDF Bookmarks (required for double-byte characters)
- Process Document Links to Footnotes and Endnotes
- Process Document Comments to PDF Notes
- Process Word UNC Links
- Print Document with Word Markup (requires Word XP or later)

Element	Description
Process Word URL Links check box	Specifies whether links to absolute URLs (for example, <i>http://www.company.com</i>) in Microsoft Word documents should be converted to the corresponding links in the generated PDF files.
Process Word mailto Links check box	Specifies whether links to e-mail addresses (for example, <i>mailto:support@company.com</i>) in Microsoft Word documents should be converted to the corresponding links in the generated PDF files.
Process Document Bookmarks check box	Specifies whether bookmarks in Microsoft Word documents should be converted to the corresponding links in the generated PDF files.
Process Table of Contents to PDF Bookmarks check box	<p>Specifies whether tables of contents in Microsoft Word documents should be converted to bookmarks (navigation tree) in the generated PDF files.</p> <p>The Process Table of Contents to PDF bookmarks option is only available if the Process Heading Styles to PDF Bookmarks option is not selected. Otherwise it is grayed out. In Microsoft Word documents, either the table of contents or all headings can be processed and converted to PDF bookmarks, but not both.</p>
Process Heading Styles to PDF Bookmarks check box	<p>Specifies whether the standard heading styles in Microsoft Word documents (Heading 1, Heading 2, and so forth) should be converted to bookmarks (navigation tree) in the generated PDF files.</p> <p>The Process heading styles to PDF bookmarks option is only available if the Process Table of Contents to PDF Bookmarks option is not selected. Otherwise it is grayed out. In Microsoft Word documents, either all headings or the table of contents can be processed and converted to PDF bookmarks, but not both.</p>

Element	Description
Use Unicode Signatures to Create PDF Bookmarks (required for double-byte characters) check box	Specifies whether the Unicode character coding format should be used when creating PDF Bookmarks. Unicode uses 16 bits, which means that non-ASCII characters can be used in the PDF Bookmarks. This is required for Microsoft Word documents that use double-byte characters in Word Headings. If cleared, PDF Bookmarks are created with ASCII characters.
Process Document Links to Footnotes and Endnotes check box	Specifies whether links to footnotes and endnotes in Microsoft Word documents should be converted to links in the generated PDF files.
Process Document Comments to PDF Notes check box	Specifies whether comments added to Microsoft Word documents should be converted to notes in the generated PDF files.
Process Word UNC Links check box	Specifies whether links to both absolute URL links (for example, <i>http://www.company.com</i>) and relative URL links (for example, <i>../../../../portal.htm</i>) in Microsoft Word documents should be converted to corresponding links in the generated PDF files.
Print Document with Word Markup check box	Specifies whether markups in Microsoft Word documents should be included in the generated PDF files (requires Word XP or later).
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.

A.21 Excel Options Page

Access this Inbound Refinery page by selecting **Conversion Settings**, then selecting **Third-Party Application Settings** and clicking the **Options** button for Microsoft Excel.

Excel Options [quick help](#)

Process Excel URL Links

Process Excel mailto Links

Process Excel UNC Links

Element	Description
Process Excel URL Links check box	Specifies whether links to external URLs (for example, <i>http://www.company.com</i>) in Microsoft Excel spreadsheets should be converted to links in the generated PDF files.
Process Excel mailto Links check box	Specifies whether links to e-mail addresses (for example, <i>mailto:support@company.com</i>) in Microsoft Excel documents should be converted to the corresponding links in the generated PDF files.
Process Excel UNC Links check box	Specifies whether links to both absolute URL links (for example, <i>http://www.company.com</i>) and relative URL links (for example, <i>../../../../portal.htm</i>) in Microsoft Excel documents should be converted to corresponding links in the generated PDF files.

Element	Description
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.

A.22 PowerPoint Options Page

Access this Inbound Refinery page by selecting **Conversion Settings**, then selecting **Third-Party Application Settings** and clicking the **Options** button for Microsoft PowerPoint.

Powerpoint Options [quick help](#)

Process PowerPoint Hyperlinks

Process PowerPoint mailto Links

Process PowerPoint Links to Internal Slides

Process PowerPoint UNC Links

Advanced PowerPoint Format Options

Convert in PowerPoint "Slides" format

Convert in PowerPoint "Notes" format

Convert in PowerPoint "Hand-out" format

Element	Description
Process PowerPoint Hyperlinks check box	Specifies whether hyperlinks in PowerPoint presentations should be converted to hyperlinks in the generated PDF files.
Process PowerPoint mailto Links check box	Specifies whether links to e-mail addresses (for example, <i>mailto:support@company.com</i>) in PowerPoint documents should be converted to the corresponding links in the generated PDF files.
Process PowerPoint Links to Internal Slides check box	Specifies whether links to other slides within the same PowerPoint presentation should be converted to hyperlinks in the generated PDF files.
Process PowerPoint UNC Links check box	Specifies whether UNC links in PowerPoint documents should be converted to corresponding links in the generated PDF files. Note: PowerPoint links can only be processed if PowerPoint presentations are converted in the Slides format.
Convert in PowerPoint "Slides" format radio button	Specifies that PowerPoint presentations should be converted to the Slides format, which means that each page contains one slide (without any associated notes).

Element	Description
Convert in PowerPoint "Notes" format radio button	Specifies that PowerPoint presentations should be converted to the Notes format, which means that each page contains one slide with any associated notes. This option can only be selected if none of the options for converting PowerPoint links are selected.
Convert in PowerPoint "Hand-out" format radio button	Specifies that PowerPoint presentations should be converted to the Hand-out format, which means that each page contains multiple slides. (They only show the slides; they do not include any associated notes.) This option can only be selected if none of the options for converting PowerPoint links are selected.
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.

A.23 Visio Options Page

Access this Inbound Refinery page by selecting **Conversion Settings**, then selecting **Third-Party Application Settings** and clicking the **Options** button for Microsoft Visio.

Visio Options [quick help](#)

Process Visio URL links

Process Visio mailto Links

Process internal Visio links

Process Visio UNC Links

Process Visio by Printing with Fit to Page

Element	Description
Process Visio URL links check box	Specifies whether links to both absolute URL links (for example, <i>http://www.company.com</i>) and relative URL links (for example, <i>../.././portal.htm</i>) in Microsoft Visio drawings should be converted to links in the generated PDF files.
Process Visio mailto Links check box	Specifies whether links to e-mail addresses (for example, <i>mailto:support@company.com</i>) in Microsoft Visio documents should be converted to the corresponding links in the generated PDF files.
Process internal Visio links check box	Specifies whether links within a Visio drawing should be converted to links in the generated PDF files.

Element	Description
Process Visio UNC Links check box	Specifies whether UNC links in Microsoft Visio documents should be converted to corresponding links in the generated PDF files.
Process Visio by Printing with Fit to Page check box	Specifies whether a Visio drawing should be scaled to fit on the printer's page size or allowed to print using the drawing's actual size (which can cause some of the drawing to be printed off the page and therefore not included in the PDF).
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.

Important: Microsoft Visio does not store links in the same manner as other Microsoft Office documents. It is therefore important to make sure that all URL and mailto links are created in Visio with the full prefix: http:// for URL links and mailto: for mailto links. Failure to use the appropriate prefix may result in the link failing to convert properly.

A.24 InDesign Options Page

Access this Inbound Refinery page by selecting **Conversion Settings**, then selecting **Third-Party Application Settings** and clicking the **Options** button for Adobe InDesign.

InDesign Options [quick help](#)

- Update Links to External Files Before Converting InDesign (external paths must be accessible)
- Create a 1.4 version PDF from InDesign
- Create a PDF with Internal Thumbnails from InDesign
- Process Internal InDesign Bookmarks to PDF Bookmarks
- Process InDesign URL Links

Element	Description
Update Links to External Files Before Converting InDesign check box	Specifies whether links to external files are updated before the InDesign document is converted to PDF (external paths must be accessible).
Create a 1.4 version PDF from InDesign check box	Specifies whether InDesign should set the PDF version to 1.4.

Element	Description
Create a PDF with Internal Thumbnails from InDesign check box	Specifies whether InDesign should create page thumbnails within the PDF for each document.
Process Internal InDesign Bookmarks to PDF Bookmarks check box	Specifies whether bookmarks in InDesign documents should be converted to bookmarks (navigation tree) in the generated PDF files.
Process InDesign URL Links check box	Specifies whether links to external URLs (for example, Internet websites) should be converted to links in the generated PDFs.
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.

A.25 Timeout Settings Page

The Timeout Settings page enables you to configure your timeout settings. Access this Inbound Refinery page by selecting **Conversion Settings**, then **Timeout Settings**.

Timeout Settings [quick help](#)

Timeout values for different conversion operations can be adjusted using the settings below. For details on how these settings are used to calculate the timeout value, click Quick Help.

	Minimum (minutes)	Maximum (minutes)	Factor
PostScript to PDF	<input type="text" value="2"/>	<input type="text" value="20"/>	<input type="text" value="4"/>
PDF Post Production	<input type="text" value="1"/>	<input type="text" value="10"/>	<input type="text" value="1"/>
Graphics	<input type="text" value="5"/>	<input type="text" value="60"/>	<input type="text" value="3"/>
FlipFactory Processing	<input type="text" value="15"/>	<input type="text" value="60"/>	<input type="text" value="3"/>
Native to PDF	<input type="text" value="2"/>	<input type="text" value="5"/>	<input type="text" value="2"/>

Only timeout settings for graphics conversions are applicable to Inbound Refinery. When conversion options that require additional timeout configurations are installed, settings are added to this page.

Element	Description
Minimum, Maximum, and Factor timeout fields	Specify the time that Inbound Refinery waits for the conversion process to complete. The timeout value, in minutes, is calculated in the following manner: $\text{timeout value [in minutes]} = (\text{file size in bytes} \times \text{timeout factor}) / 60,000$ <p>For example, if a 100,000-byte file is to be converted and the timeout factor is set to 1, the system will wait no more than 1:40 minutes (100,000 × 1 divided by 60,000 = 10/6) for the conversion process to complete. The content item to be processed is allotted at least the number of minutes indicated in the Minimum column, but no more minutes than indicated in the Maximum column. If the calculated timeout value is lower than the minimum value, the minimum value applies. If the calculated timeout value is larger than the maximum value, the maximum value applies.</p>
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.

A.26 Refinery Status Page

The Refinery Status page enables you to view the status of conversions for all refinery agents. Access this Inbound Refinery page by selecting **Refinery Status** from the **Status** tray in the refinery.

Refinery Status | Refinery Logs | Console Output | [quick help](#)

Refinery Name: ref1

Queue Monitor Status: Conversion queues are being monitored normally.

Installed Add-ons: OpenOfficeConversion | TIFF Converter | DAM Converter | PDF Converter

Active Agents

Agent Name	Current Status	Actions
cs1	Converting Word..	

Element	Description
Agent Name column	The name of an agent that has sent at least one conversion job to the refinery.
Current Status column	The current status of the agent.

Element	Description
Actions menu	<p>Select one of the following actions:</p> <ul style="list-style-type: none"> ▪ View Detailed Status: Displays the Agent Status Page for the refinery agent. ▪ View Items In Queue: Displays the Items In Queue Page for the refinery agent. ▪ View Conversion History: Displays the Conversion History Page for the refinery agent. ▪ View Agent Logs: Displays the Agent Logs Page for the refinery agent.

Important: The refinery creates each agent when it sends its first conversion job to the refinery. Until then, information for the agent is not available in the refinery.

A.27 Refinery Logs Page

The Refinery Logs page enables you to view the refinery logs. Access this Inbound Refinery page using one of the following methods:

- Select the **Refinery Logs** tab on the main refinery page.
- Select **Status**, then **Refinery Status** from the navigation menu, and select the **Refinery Logs** tab.
- Select **Logs**, then **Refinery Logs** from the navigation menu.

Refinery Status **Refinery Logs** Console Output [quick help](#)

Refinery Name: ref1

Log Files for Inbound Refinery

[Log 3/11/07 12:27 PM](#)
[Log 3/10/07 1:42 PM](#)
[Log 3/9/07 9:48 AM](#)
[Log 3/8/07 1:39 PM](#)
[Log 3/7/07 12:28 PM](#)
[Log 3/5/07 12:45 PM](#)
[Log 3/4/07 8:50 PM](#)
[Log 3/3/07 12:10 PM](#)

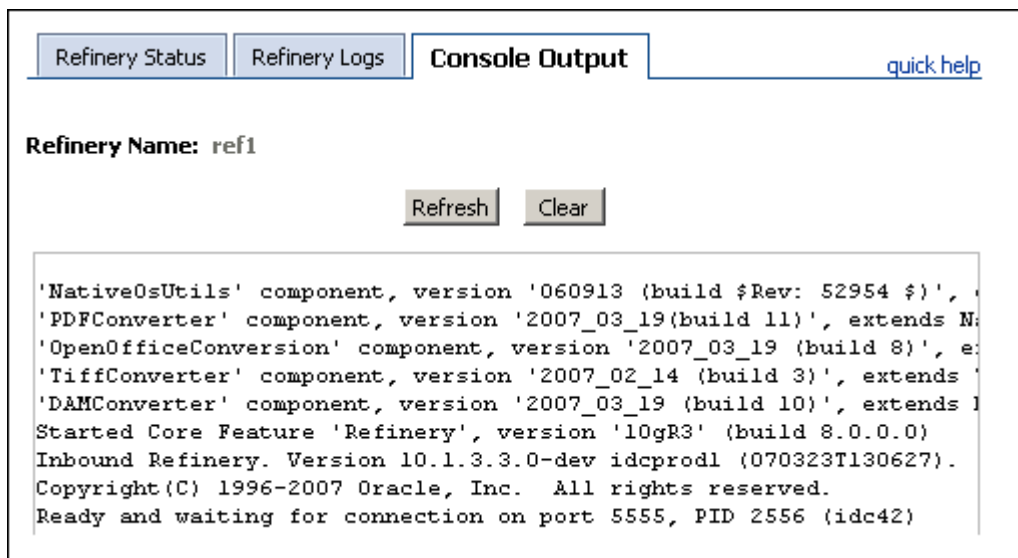
Element	Description
Refinery log links	Click a link to display the refinery log.

Element	Description
Details links	When a refinery log is displayed, click the Details links to expand and collapse log details. Typically, the log details are either a stack dump or a trace back to the code that generated the error.

A.28 Console Output Page

The Console Output page enables you to view the refinery console output. Access this Inbound Refinery page using one of the following methods:

- Click **Home** in the main menu and select the **Console Output** tab.
- Select **Status**, then **Refinery Status** from the navigation menu, and select the **Console Output** tab.



Element	Description
Refresh button	Updates the console output.
Clear button	Clears the console output.

A.29 Conversion Job Status Page

The Conversion Job Status page is added to the Content Server Administration tray when Inbound Refinery is configured to work with a Content Server. To access this Content Server page, open the **Administration** tray of the Content Server, click **Refinery Administration**, and then click **Conversion Job Status**.



Element	Description
Action Menu	When jobs are listed, each job has an Actions menu with the following options: <ul style="list-style-type: none"> ▪ Content Info: Select to display the content information page for the item being converted ▪ Expire Job: Select to cancel a job request if it has not yet been submitted to a refinery, or to refuse acceptance of a conversion returning from the refinery.
Refresh Page	Click to refresh the page content for current information.
Force Job Queue Check	Click to check job queues of all active refineries.

A.30 IBR Provider Status Page

The IBR Provider Status page is added to the Content Server Administration tray when Inbound Refinery is configured to work with a Content Server. To access this Content Server page, open the **Administration** tray of the Content Server, click **Refinery Administration**, and then click **IBR Provider Status**.

Provider	Available	Read Only	Jobs Queued	Last Message	Connection	Last Activity	Actions
ibr11g	True	False	0	Success	good	3/22/10 6:4	Info Test
ibr_0310	True	False	0	Success	good	3/22/10 6:4	Info Test

Element	Description
Force Status Update	Click to receive current information.
Provider	The name of the Inbound Refinery provider.
Available	Tells if the refinery is available to the Content Server: <ul style="list-style-type: none"> ▪ True: the refinery is available ▪ False: the refinery is unavailable and the time of the next update attempt is displayed. For example: <i>False</i> <i>Next update at: 3/26/ 5:01 AM</i>
Read Only	Tells if the refinery is no longer accepting jobs.
Jobs Queued	Lists the number of jobs currently in the refinery queue.
Last Message	Displays the last message received from the refinery.
Connection	Lists the connections status.
Last Activity	Details the date and time of the last communication with the refinery.

Element	Description
Actions	Lists the following options: <ul style="list-style-type: none"> ▪ Info: Click to display the Provider Information Page ▪ Test: Click to test the provider connection.

A.31 Agent Status Page

The Agent Status page enables you to view the status of current conversions for a specific agent. Access this Inbound Refinery page using one of the following methods:

- Select **Status**, *<agent_name>* **Agent Status** from the navigation menu.
- Click the agent name or select **View Detailed Status** from the Actions menu for the agent on the [Refinery Status Page](#).

Agent Status
Items In Queue
Conversion History
Agent Logs
[quick help](#)

Agent Name: cs1

Queue Monitor Status: Conversion queues are being monitored normally.

Current Status: Converting Word..

Currently Converting:

Content ID	Conversion Job ID	Title	Native File	Content Type
ref1_000025	43	doc222	c:/ucm/ref1/vaultj	ADACCT
ref1_000027	44	doc244	c:/ucm/ref1/vaultj	ADACCT

Element	Description
Agent Name	The name of an agent (for example, a content server) that has sent at least one conversion job to the refinery.
Current Status	The current status of the agent.
Content ID column	The content ID of the content item that the refinery is converting for the agent currently.
Conversion Job ID column	The conversion job ID of the content item.
Title column	The title of the content item.
Native File column	The name of the native file.
Type column	The conversion type assigned to convert the content item.

A.32 Items In Queue Page

The Items In Queue page enables you to view items in the pre and post-converted queues for the agent. Access this Inbound Refinery page using one of the following methods:

- Select **Status**, then *<agent_name>* **Items in Queue** from the navigation menu.
- Select **View Items In Queue** from the Actions menu for the agent on the [Refinery Status Page](#).

Agent Status
Items In Queue
Conversion History
Agent Logs
[quick help](#)

Agent Name: cs1

Pre-Converted Queue: 2 items

Conversion J	Content ID	Title	Content Type	Security Gro	Account	Conversion
49	ref1_000031	video2	ADACCT	Public		Digital Media
50	ref1_000032	ppt1	ADACCT	Public		PowerPoint

Post-Converted Queue: 1 item

Conversion J	Content ID	Title	Content Type	Security Gro	Account	Conversion
48	ref1_000030	doc1	ADACCT	Public		Word

Element	Description
Agent Name	The name of an agent (for example, a content server) that has sent at least one conversion job to the refinery.
Pre-Converted Queue	Lists the items that are in the agent's pre-converted queue and awaiting conversion by the refinery.
Post-Converted Queue	Lists the items that are in the agent's post-converted queue, which have been converted by the refinery and are waiting for transfer back to the agent.
Refresh button	Updates the queue status on the page.

A.33 Conversion History Page

The Conversion History page enables you to view the last 50 conversions for a specific agent. Access this Inbound Refinery page using one of the following methods:

- Select **Status**, then **<agent_name> Conversion History** from the navigation menu.
- Select **View Conversion History** from the Actions menu for the agent on the [Refinery Status Page](#).

Agent Status
Items In Queue
Conversion History
Agent Logs
[quick help](#)

Agent Name: cs1

Conversions:

Content ID	Conversion Job ID	Title	Conversion Type	Conversion Status
refinery1	1	refinery1	Word	Success
ref2	2	ref2	Excel	Success
0005	3	0005	Word	Success
0006	4	0006	ImageThumbnail	Success
0007	5	0007	ImageThumbnail	Success

Element	Description
Agent Name	The name of an agent (for example, a content server) that sent the conversion jobs to the refinery.
Content ID column	The content ID of the content item that was converted. Clicking a Content ID displays the Conversion Detail Page .
Conversion Job ID column	The conversion job ID of the content item that was converted.
Title column	The title of the content item that was converted.
Conversion Type column	The conversion type used to convert the content item.
Conversion Status column	The status of the conversion.

A.33.1 Conversion Detail Page

The Conversion Detail page enables you to view the details of a specific conversion. Access this Inbound Refinery page using one of the following methods:

- Select **Status**, then *<agent_name>* **Conversion History** from the navigation menu and click the **Content ID**.
- Select **View Conversion History** from the Actions menu for the agent on the [Refinery Status Page](#), and click the **Content ID** on the [Conversion History Page](#).

Conversion Detail

Content ID: ref1_000031

Conversion Job ID: 49

Title: video2

Content Type: ADACCT

Revision Label: 1

Security Group: Public

Account:

Conversion: Digital Media Video

Message: Success

Release Date: March 23, 2007 6:13 PM

Time Converted: March 23, 2007 6:18 PM

Extra Conversion Parameters:

A.34 Agent Logs Page

The Agent Logs page enables you to view the logs for a specific refinery agent. Access this Inbound Refinery page using one of the following methods:

- Select **Status**, then *<agent_name>* **Agent Logs** from the navigation menu.
- Select **View Agent Logs** from the Actions menu for the agent on the [Refinery Status Page](#).

Agent Status
Items In Queue
Conversion History
Agent Logs
[quick help](#)

Agent Name: cs1

Log Files for Inbound Refinery for Agent 'cs1'

[Log 3/11/07 12:27 PM](#)

[Log 3/10/07 1:42 PM](#)

[Log 3/9/07 9:48 AM](#)

[Log 3/8/07 1:39 PM](#)

Element	Description
Refinery agent log links	Click a link to display the refinery agent log.
Details links	When a refinery agent log is displayed, click the Details links to expand and collapse log details. Typically, the log details are either a stack dump or a trace back to the code that generated the error.

A.35 User Profile Page

The User Profile page enables you to change settings for the administration user. Access this Inbound Refinery page by clicking the name of the user in the main navigation bar.

User Profile

User Name: qa

Roles: admin,sysmanager,refineryadmin,rmaadmin,pcmadmin,ermadmin

User Locale: English-US ▼

Layout: Trays ▼

Skin: Oracle ▼

Element	Description
Roles	Identifies the roles assigned to the user.
User Locale	Select to choose the language locale used for the Inbound Refinery user interface.
Layout drop-down menu	Select the layout view. The default view is Trays.

Element	Description
Skin drop-down menu	Select the layout skin. The default skin is Oracle.
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.


A.36 Agent Management Page

The Agent Management page enables you to view the status of each agent for the refinery (something that has sent at least one conversion job to the refinery), enable verbose logging for the agent, and delete agents). Access this Inbound Refinery page by selecting **Administration**, then **Agent Management** from the navigation menu.

Agent Management [quick help](#)

Refinery Name: ref1

Agent Management

Agent Name	Current Status	Agent Options	Actions
cs1	Idle. Waiting For Content...	<input checked="" type="checkbox"/> Enable Verbose Logging	

Element	Description
Agent Name column	The name of an agent that has sent at least one conversion job to the refinery.
Current Status column	The current status of the agent.
Agent Options column	Select the Enable Verbose Logging check box to enable verbose logging in the corresponding agent logs.
Actions menu	Select one of the following actions: <ul style="list-style-type: none"> ■ View Detailed Status: Displays the Agent Status Page for the refinery agent. ■ View Conversion History: Displays the Conversion History Page for the refinery agent. ■ View Agent Logs: Displays the Agent Logs Page for the refinery agent. ■ Delete Agent: Displays the Delete Agent Page, which enables you to delete the agent.
Update button	Saves changes to settings.
Reset button	Reverts to the last saved settings.

A.37 Delete Agent Page

The Delete Agent page enables you to delete an agent for the refinery. Access this Inbound Refinery page by selecting **Delete Agent** from the Actions menu for the agent on the [Agent Management Page](#).


Delete Agent
[quick help](#)

Agent Name: cs1

Queue Monitor Status: Conversion queues are being monitored normally.

Delete Status: The agent devTrunk cannot be deleted unless confirmed by checking the checkbox below.

Confirm the deletion of agent cs1

 Deleting this agent will **delete** the following directories from the 'ConversionServer' file system. Note that if the Content Server/agent 'devTrunk' submits new jobs, this agent will be recreated.

Log Directory: C:/idc-Dev/dev/refinery/ref-server/weblayout/groups/secure/logs/cs1/

History Directory: C:/idc-Dev/dev/refinery/ref-server/data/agents/cs1/

Queue Directory: C:/idc-Dev/dev/refinery/ref-server/queue/conversion/cs1/

Pre-Converted Queue: 2 items

Conversion J	Content ID	Title	Content Type	Security Gro	Account	Conversion
49	ref1_000031	video2	ADACCT	Public		Digital Media
50	ref1_000032	ppt1	ADACCT	Public		PowerPoint

Post-Converted Queue: 0 items

No items to display.

Element	Description
Confirm the deletion of agent	Enable to confirm that you want the agent deleted. Note that history, logs, and any jobs in the agent queue are also deleted.
Agent information	Provides information about the current status of the agent.
Delete Agent button	Deletes the agent.

A.38 Configuration Information Page

The Configuration Information page provides an overview of the main system settings, including server parameters and options, installation directories, Internet properties, classpath information, version information, Java properties, and content security options. In addition, it lists all installed server components or custom components that are currently enabled and disabled. Access this Inbound Refinery page by selecting **Administration**, then **Configuration for <refinery_name>** from the navigation menu.

Configuration Information for `ibr_adc2110708_s17`

[Administration](#) --> Configuration Info

System Configuration

Server Name: `ibr_adc2110708_s17` [Server Configurations](#)
Version: `11gR1-11.1.1.3.0-
idcprod1-100320T001531 (Build:7.3.0.180)`

ClassLoader: `IdcClassLoader` [Show Classpath
Details](#)

Instance Directory: `/scratch/jneely
/ucm/s17/ibr/` [Directory Details](#)

Features And Components

Number of Installed Features: `31` [Feature Details](#)
Number of Enabled Components: `25` [Enabled Component
Details](#)
Number of Disabled Components: `5` [Disabled Component
Details](#)

Options And Others

Auto Number Prefix: [Server Options](#)
Use Accounts: `False`
Ntlm Security Enabled: `False`

Allow get copy for user with read privilege: [Content Security
Details](#)
`False`
**Allow only original contributor to check
out:** `False`

Java Version: `1.6.0_17` [Java Properties](#)

The Configuration Information page is for information purposes only.

A.39 System Audit Information Page

The System Audit Information page enables you to view the system audit information for the refinery. Access this Inbound Refinery page by selecting **Administration**, then **System Audit Information** from the navigation menu. This page displays system audit information for the refinery, which might be useful while troubleshooting a problem or tweaking a server's performance.

System Audit Information

[View Server Output](#) [View Event Output](#) [Check Schema Cache](#) [Localization Auditing](#)

Administration --> System Audit Information

General Information

Server has been up for 3 day(s) 6 hour(s) 29 minute(s)
The server has serviced the requests. Number of requests: 28,519.
Server has not had too many request threads.

Total JVM Memory: 512MB [Memory Details](#)
Total JVM Available Memory: 139MB
Total Threads: 65 [Thread Details](#)

Localization Information

String key count is 24,569.
Localization system is not using a string index.
Localization test run time is 10 ms.
Localization test 92,902 lookups per second.

Tracing Sections Information i

Full Verbose Tracing **Save**

Active Sections:
 ▼

Event Trap Text: **Add Thread**
Dump

Cache Information

Permanently loaded 155 pages and 30 resource files.
Temporary cache capped at 10 million double-byte characters.
No temporary items loaded.

Total 18 items stored in schema cache [Schema Cache Details](#)
18,196 bytes used out of 10,485,760 permitted.
0% used.

Buffer Cache Summary [Buffer Pool Details](#)

Configuration Entry Information

Number of environment keys: 202 [Show](#)
Number of overwritten config values: 7 [Show](#)
Number of ignored settings: 0 [Show](#)
Number of removed settings: 3 [Show](#)

Component Report

[BrowserUrlPath](#)
[CheckSCSHealth](#)
[ContentAccess-aix](#)
[ContentAccess-hpux](#)

The General Information section of this page provides the following information:

- Information regarding whether the system is receiving too many requests.

- Information about the memory cache for the system, and is useful in troubleshooting any "out of memory" errors you may receive.
- Information about which Java threads are currently running. This is useful in determining the cause of an error.
- Listing of any audit messages.

Tracing in a refinery can be activated on a section-by-section basis. Tracing for active sections is displayed on the [Console Output Page](#). Section tracing is useful for determining which section of the server is causing trouble, or when you want to view the details of specific sections. Sections can be added by appending extra sections to create a comma separated list. A listing of the sections available for tracing, with brief descriptions, is available by clicking the information icon next to the *Tracing Sections Information* heading. The wildcard character * is supported so that *schema** will trace all sections that begin with the prefix *schema*.

Some tracing sections also support verbose output. Enable Full Verbose Tracing if you wish to see in-depth tracing for any active section that supports it.

Important: Any options set on this page will be lost when the refinery is restarted unless you enable **Save** and click **Update**.

A.40 Configure Web Server Filter Page

The Configure Web Server Filter page enables you to configure and troubleshoot the web server filter communication with the refinery. Access this page by selecting **Administration**, then **Filter Administration** from the navigation menu.

Configure Web Server Filter

Except for the GZIP setting and any outgoing links, all other configuration information on this page is not directly relevant because this server is running inside a Java application server. The settings can still be modified and will be relevant if a separate web server is used as an access point for this server.

General Options

Cache Timeout

This value specifies the number of minutes the web server filter will cache user data.

Default Authentication

This value specifies the default authentication method to apply to users who have never visited the Content Server before. The two valid choices are 'NTLM' and 'Basic'. 'NTLM' will use the Microsoft Login method to login users while 'Basic' will attempt to log users into the Content Server.

Disable GZIP Compression

By default, the content server compresses the HTML response pages for performance reasons. You may wish to disable it if CGI_RECEIVE_DUMP or CGI_DEBUG is enabled.

Logging Options

CGI_DEBUG

Log summary of data and headers sent between the web server filter and the Content Server.

CGI_SEND_DUMP

Log data and headers sent from the web server filter to the Content Server.

CGI_RECEIVE_DUMP

Log data and headers sent from the Content Server to the web server filter.

FILTER_DEBUG

Log events inside the web server filter.

PLUGIN_DEBUG

Log events inside the plugin filters. This will only work for plugin filters that understand the PLUGIN_DEBUG flag.

Element	Description
Cache Timeout	Sets the number of minutes the web server filter will cache user data.

Element	Description
Default Authentication	Specifies how users new to the Inbound Refinery server are authenticated by default. The options are: <ul style="list-style-type: none"> Basic: Uses the same credential store used for access to the Inbound Refinery server. This could be through LDAP, OID, or some other authentication method configured for access to Inbound Refinery. NTLM: Uses the Microsoft Login method for connecting to the Inbound Refinery server. For information on the Microsoft Login method, see <i>Oracle Fusion Middleware System Administrator's Guide for Universal Content Management</i>.
Disable GZIP Compression	To aid performance the Inbound Refinery server uses GZIP compression to compress the HTML response pages by default. If enabling either CGI_DEBUG or CGI_RECEIVE_DUMP, set this to TRUE to disable GZIP compression and facilitate debugging or logging data.
CGI_DEBUG	Enable log a summary of data and headers sent between the web server filter and the Inbound Refinery server. If enabled, set Disable GZIP Compression to TRUE.
CGI_SEND_DUMP	Enable to log data and headers sent from the web server filter to the Inbound Refinery server.
CGI_RECEIVE_DUMP	Enable to log data and headers sent to the web server filter from the Inbound Refinery server.
FILTER_DEBUG	Enable to log events inside the web server filter.
PLUGIN_DEBUG	Enable to log events inside any plugin filters that understand the PLUGIN_DEBUG flag.

A.41 Admin Server Page

Admin Server is an administration tool used to start, stop, and restart a refinery or content server. In addition, it enables you to review or edit a number of system settings, as well as manage components. Access this page by selecting **Administration**, then **Admin Server** from the navigation menu.


The screenshot displays the Oracle Content Admin Server interface. The top header includes the Oracle logo and the text "Content Admin Server" with "Logout Help" links. The main content area is divided into two sections. On the left, a sidebar titled "Options for ibr_0310" lists navigation options: "» Server Status", "Component Manager", "General Configuration", "View Admin Output", "View Providers", and "System Audit Information". The right section, titled "Server", shows the "Current Status:" as "Running" in red text. Below this, a message states: "To restart the UCM server, the containing managed server process needs to be restarted." At the bottom of this section, under "Common Links:", there are two buttons: "Home Page" and "Administration".

A.42 Inbound Refinery Administration Page


The Inbound Refinery Administration page offers an alternate way to access the links also found in the Administration tray of the navigation pane. The Administration page for a refinery is accessed by clicking Administration on the [Admin Server Page](#).


Administration


Administration Log Files for ibr_0310


 **Inbound Refinery Logs**


Configuration Pages for ibr_0310

 **Primary Web-Viewable Rendition**


 **Additional Renditions**


 **Conversion Options**


 **Conversion Timeout Values for ibr_0310**


 **Conversions Accepted by ibr_0310**


Administration Pages for ibr_0310

 **Configuration for ibr_0310**

 **System Audit Information**

 **Providers**

 **Filter Administration**

 **Admin Server**

Element	Description
Inbound Refinery Logs	Displays the Refinery Logs Page .
Primary Web-Viewable Rendition	Displays the Primary Web-Viewable Rendition Page .
Additional Renditions	Displays the Additional Renditions Page .
Conversion Options	Displays the Third-Party Application Settings Page .

Element	Description
Conversion Timeout Values for <refinery_name>	Displays the Timeout Settings Page .
Conversions Accepted by <refinery_name>	Displays the Conversion Listing Page .
Configuration for <refinery_name>	Displays the Configuration Information Page .
System Audit Information	Displays the System Audit Information Page .
Providers	Displays the Providers Page .
Filter Administration	Displays the Configure Web Server Filter Page .
Admin Server	Displays the Admin Server Page .

Supported File Formats

Digital Asset Mananager and Conversion products support a variety of file formats and conversion options, based on the type of file being converted and the method used for the conversion. This section covers these topics:

This section covers these topics:

- [Section B.1, "File Formats Converted by Outside In Technology"](#)
- [Section B.2, "File Formats Converted to PDF Using Third-Party Applications"](#)
- [Section B.3, "File Formats Converted to PDF by Open Office"](#)

B.1 File Formats Converted by Outside In Technology

Outside In Technology is used by Inbound Refinery, PDF Export, and XML Converter.

B.1.1 Inbound Refinery

Inbound Refinery includes Outside In Image Export 8.3.2, which can be used for the following:

- To create thumbnails of files. Thumbnails are small preview images of content.
- To convert files to multi-page TIFF files, enabling users to view the files through standard web browsers with a TIFF viewer plugin.

B.1.2 PDF Conversion

PDF conversion includes Outside In, which can be used with WinNativeConverter on Windows to create PDF files of some content items. Using the native applicaton, Outside In is used to print the files to PostScript, and then the PostScript files are converted to PDF using the configured PostScript distiller engine.

The *Convert to PDF using Outside In* option is selected on the Primary Web-Viewable Rendition page. For details, see "[Setting PDF Files as the Primary Web-Viewable Rendition](#)" on page 3-2. When using this option, PDF conversion requires only a PostScript distiller engine.

B.1.2.1 PDF Export

PDF Export uses Outside In to export files directly to PDF without needing to first print to PostScript. By exporting to PDF directly, the use of a third-party distiller engine is not necessary.

B.1.3 XML Converter

Inbound Refinery includes Outside In XML Export and Search Export 8.1.9, which can be used to convert files to XML. This includes support for the following versions of the FlexionDoc and SearchML schemas:

- FlexionDoc 5.1
- SearchML 3.1

B.1.4 Outside In Technology

This section lists the file formats that can be converted using Outside In Technology for PDF, XML, and Inbound Refinery on either Windows or UNIX. The file formats are organized into the following categories:

- ["Word Processing Formats"](#) on page B-2
- ["Desktop Publishing Formats"](#) on page B-4
- ["Database Formats"](#) on page B-4
- ["Spreadsheet Formats"](#) on page B-5
- ["Presentation Formats"](#) on page B-5
- ["Graphic Formats"](#) on page B-6
- ["Compressed Formats"](#) on page B-8
- ["E-mail Formats"](#) on page B-8
- ["Other Formats"](#) on page B-9

B.1.4.1 Word Processing Formats

The following word processing file formats can be converted:

File formats	Versions
ANSI Text	7 & 8 bit
ASCII Text	7 & 8 bit
DEC WPS Plus (DX)	Versions through 3.1
DEC WPS Plus (WPL)	Versions through 4.1
DisplayWrite 2 & 3 (TXT)	All versions
DisplayWrite 4 & 5	Versions through 2.0
DOS character set	All versions
EBCDIC	All versions
Enable	Versions 3.0, 4.0, and 4.5
First Choice	Versions through 3.0
Framework	Version 3.0
Hangul	Versions 97 and 2002
IBM FFT	All versions
IBM Revisable Form Text	All versions
IBM Writing Assistant	Version 1.01

File formats	Versions
JustSystems Ichitaro	Versions 4.x–6.x, 8.x–13.x, and 2004
JustWrite	Versions through 3.0
Legacy	Versions through 1.1
Lotus AMI/AMI Professional	Versions through 3.1
Lotus Manuscript	Version 2.0
Lotus Word Pro (non-Windows)	Versions SmartSuite 97, Millennium, and Millennium 9.6 (text only)
Lotus Word Pro (Windows)	Versions SmartSuite 96 and 97, Millennium, and Millennium 9.6
MacWrite II	Version 1.1
MASS11	Versions through 8.0
Microsoft Rich Text Format (RTF)	All versions
Microsoft Word (DOS)	Versions through 6.0
Microsoft Word (Mac)	Versions 4.0–2004
Microsoft Word (Windows)	Versions through 2007
Microsoft WordPad	All versions
Microsoft Works (DOS)	Versions through 2.0
Microsoft Works (Mac)	Versions through 2.0
Microsoft Works (Windows)	Versions through 4.0
Microsoft Windows Write	Versions through 3.0
MultiMate	Versions through 4.0
Navy DIF	All versions
Nota Bene	Version 3.0
Novell Perfect Works	Version 2.0
Novell/Corel WordPerfect (DOS)	Versions through 6.1
Novell/Corel WordPerfect (Mac)	Versions 1.02 through 3.0
Novell/Corel WordPerfect (Windows)	Versions through 12.0
Office Writer	Versions 4.0–6.0
OpenOffice Writer (Windows & UNIX)	OpenOffice versions 1.1 and 2.0
PC-File Letter	Versions through 5.0
PC-File+ Letter	Versions through 3.0
PFS:Write	Versions A, B, and C
Professional Write (DOS)	Versions through 2.1
Professional Write Plus (Windows)	Version 1.0
Q&A (DOS)	Version 2.0
Q&A Write (Windows)	Version 3.0
Samna Word	Versions through Samna Word IV+
Signature	Version 1.0
SmartWare II	Version 1.02

File formats	Versions
Sprint	Versions through 1.0
StarOffice Writer	Versions 5.2 (text only) and 6.x-8.x
Total Word	Version 1.2
Unicode Text	All versions
UTF-8	All versions
Volkswriter 3 & 4	Versions through 1.0
Wang PC (IWP)	Versions through 2.6
WordMARC	Versions through Composer Plus
WordStar (DOS)	Versions through 7.0
WordStar (Windows)	Version 1.0
WordStar 2000 (DOS)	Versions through 3.0
XyWrite	Versions through III Plus

B.1.4.2 Desktop Publishing Formats

The following desktop publishing file formats can be converted:

File formats	Versions
Adobe FrameMaker (MIF)	Versions 3.0, 4.0, 5.0, 5.5, and 6.0 and Japanese 3.0, 4.0, 5.0, and 6.0 (text only)

B.1.4.3 Database Formats

The following database file formats can be converted:

File formats	Versions
Access	Versions through 2.0
dBASE	Versions through 5.0
DataEase	Version 4.x
dBXL	Version 1.3
Enable	Versions 3.0, 4.0, and 4.5
First Choice	Versions through 3.0
FoxBase	Version 2.1
Framework	Version 3.0
Microsoft Works (Windows)	Versions through 4.0
Microsoft Works (DOS)	Versions through 2.0
Microsoft Works (Mac)	Versions through 2.0
Paradox (DOS)	Versions through 4.0
Paradox (Windows)	Versions through 1.0
Personal R:BASE	Version 1.0
R:BASE 5000	Versions through 3.1

File formats	Versions
R:BASE System V	Version 1.0
Reflex	Version 2.0
Q & A	Versions through 2.0
SmartWare II	Version 1.02

B.1.4.4 Spreadsheet Formats

The following spreadsheet file formats can be converted:

File formats	Versions
Enable	Versions 3.0, 4.0, and 4.5
First Choice	Versions through 3.0
Framework	Version 3.0
Lotus 1-2-3 (DOS & Windows)	Versions through 5.0
Lotus 1-2-3 (OS/2)	Versions through 2.0
Lotus 1-2-3 Charts (DOS & Windows)	Versions through 5.0
Lotus 1-2-3 for SmartSuite	Versions 97–Millennium 9.6
Lotus Symphony	Versions 1.0, 1.1, and 2.0
Mac Works	Version 2.0
Microsoft Excel Charts	Versions 2.x–7.0
Microsoft Excel (Mac)	Versions 3.0–4.0, 98, 2001, 2002, 2004, and v.X
Microsoft Excel (Windows)	Versions 2.2 through 2007
Microsoft Multiplan	Version 4.0
Microsoft Works (Windows)	Versions through 4.0
Microsoft Works (DOS)	Versions through 2.0
Microsoft Works (Mac)	Versions through 2.0
Mosaic Twin	Version 2.5
Novell Perfect Works	Version 2.0
PFS:Professional Plan	Version 1.0
Quattro Pro (DOS)	Versions through 5.0 (text only)
Quattro Pro (Windows)	Versions through 12.0 (text only)
SmartWare II	Version 1.02
StarOffice/OpenOffice Calc (Windows and UNIX)	StarOffice versions 5.2–8.x and OpenOffice versions 1.1 and 2.0 (text only)
SuperCalc 5	Version 4.0
VP Planner 3D	Version 1.0

B.1.4.5 Presentation Formats

The following presentation file formats can be converted:

File formats	Versions
Corel/Novell Presentations	Versions through 12.0
Harvard Graphics (DOS)	Versions 2.x and 3.x
Harvard Graphics (Windows)	Windows versions
Freelance (Windows)	Versions through Millennium 9.6
Freelance (OS/2)	Versions through 2.0
Microsoft PowerPoint (Windows)	Versions 3.0–2007
Microsoft PowerPoint (Mac)	Versions 4.0–v.X
StarOffice/OpenOffice Impress (Windows and UNIX)	StarOffice versions 5.2 (text only) and 6.x–8.x (full support) and OpenOffice versions 1.1 and 2.0 (text only)

B.1.4.6 Graphic Formats

The following graphic file formats can be converted:

File formats	Versions
Adobe Photoshop (PSD)	All versions
Adobe Illustrator	Versions 7.0 and 9.0
Adobe FrameMaker graphics (FMV)	Vector/raster through 5.0
Adobe Acrobat (PDF)	Versions 1.0, 2.1, 3.0, 4.0, 5.0, 6.0, and 7.0 (including Japanese PDF)
Ami Draw (SDW)	Ami Draw
AutoCAD Interchange and Native Drawing formats (DXF and DWG)	AutoCAD Drawing Versions 2.5–2.6, 9.0–14.0, 2000i, and 2002
AutoCAD Drawing	Versions 2.5–2.6, 9.0–14.0, 2000i and 2002
AutoShade Rendering (RND)	Version 2.0
Binary Group 3 Fax	All versions
Bitmap (BMP, RLE, ICO, CUR, OS/2 DIB & WARP)	All versions
CALS Raster (GP4)	Type I and Type II
Corel Clipart format (CMX)	Versions 5–6
Corel Draw (CDR)	Versions 3.x–8.x
Corel Draw (CDR with TIFF header)	Versions 2.x–9.x
Computer Graphics Metafile (CGM)	ANSI, CALS NIST version 3.0
Encapsulated PostScript (EPS)	TIFF header only
GEM Paint (IMG)	All versions
Graphics Environment Mgr (GEM)	Bitmap and vector
Graphics Interchange Format (GIF)	All versions
Hewlett Packard Graphics Language (HPGL)	Version 2
IBM Graphics Data Format (GDF)	Version 1.0
IBM Picture Interchange Format (PIF)	Version 1.0

File formats	Versions
Initial Graphics Exchange Spec (IGES)	Version 5.1
JBIG2	JBIG2 graphic embeddings in PDF files
JFIF (JPEG not in TIFF format)	All versions
JPEG (including EXIF)	All versions
Kodak Flash Pix (FPX)	All versions
Kodak Photo CD (PCD)	Version 1.0
Lotus PIC	All versions
Lotus Snapshot	All versions
Macintosh PICT1 & PICT2	Bitmap only
MacPaint (PNTG)	All versions
Micrografx Draw (DRW)	Versions through 4.0
Micrografx Designer (DRW)	Versions through 3.1
Micrografx Designer (DSF)	Windows 95, version 6.0
Novell PerfectWorks (Draw)	Version 2.0
OS/2 PM Metafile (MET)	Version 3.0
Paint Shop Pro 6 (PSP)	Windows only, versions 5.0–6.0
PC Paintbrush (PCX and DCX)	All versions
Portable Bitmap (PBM)	All versions
Portable Graymap (PGM)	No specific version
Portable Network Graphics (PNG)	Version 1.0
Portable Pixmap (PPM)	No specific version
Postscript (PS)	Levels 1–2
Progressive JPEG	No specific version
Sun Raster (SRS)	No specific version
StarOffice/OpenOffice Draw (Windows and UNIX)	StarOffice versions 5.2–8.x and OpenOffice versions 1.1 and 2.0 (text only)
TIFF	Versions through 6
TIFF CCITT Group 3 & 4	Versions through 6
Truevision TGA (TARGA)	Version 2
Visio (preview)	Version 4
Visio	Versions 5, 2000, 2002, and 2003
WBMP	No specific version
Windows Enhanced Metafile (EMF)	No specific version
Windows Metafile (WMF)	No specific version
WordPerfect Graphics (WPG & WPG2)	Versions through 2.0
X-Windows Bitmap (XBM)	x10 compatible
X-Windows Dump (XWD)	x10 compatible
X-Windows Pixmap (XPM)	x10 compatible

B.1.4.7 Compressed Formats

The following compressed file formats can be converted:

File formats	Versions
GZIP	
LZA Self Extracting Compress	
LZH Compress	
Microsoft Binder	Versions 7.0–97 (conversion of files contained in the Binder file is supported only on Windows)
UUEncode	
UNIX Compress	
UNIX TAR	
ZIP	PKWARE versions through 2.04g

B.1.4.8 E-mail Formats

The following e-mail file formats can be converted:

File formats	Versions
Microsoft Outlook Folder (PST)	Microsoft Outlook Folder and Microsoft Outlook Offline Folder files versions 97, 98, 2000, 2002, and 2003
Microsoft Outlook Message (MSG)	Microsoft Outlook Message and Microsoft Outlook Form Template versions 97, 98, 2000, 2002, and 2003
MIME	MIME-encoded mail messages. For details, see the section "MIME Support Notes."

MIME Support Notes

The following is detailed information about support for MIME-encoded mail message formats:

- MIME formats, including:
 - EML
 - MHT (Web Archive)
 - NWS (Newsgroup single-part and multi-part)
 - Simple Text Mail (defined in RFC 2822)
- TNEF Format
- MIME encodings, including:
 - base64 (defined in RFC 1521)
 - binary (defined in RFC 1521)
 - binhex (defined in RFC 1741)
 - btoa
 - quoted-printable (defined in RFC 1521)
 - utf-7 (defined in RFC 2152)

- uue
- xxe
- yenc

Additionally, the body of a message can be encoded several ways. The following encodings are supported:

- Text
- HTML
- RTF
- TNEF
- Text/enriched (defined in RFC1523)
- Text/richtext (defined in RFC1341)
- Embedded mail message (defined in RFC 822). This is handled as a link to a new message.

The attachments of a MIME message can be stored in many formats. All supported attachment types are processed.

B.1.4.9 Other Formats

The following other file formats can be converted:

File formats	Versions
Executable (EXE, DLL)	
HTML	Versions through 3.0 (with some limitations)
Macromedia Flash	Macromedia Flash 6.x, Macromedia Flash 7.x, and Macromedia Flash Lite (text only)
Microsoft Project	Versions 98–2003 (text only)
MP3	ID3 information
vCard, vCalendar	Version 2.1
Windows Executable	
WML	Version 5.2
XML	Text only
Yahoo! Instant Messenger	Versions 6.x and 7.x

B.2 File Formats Converted to PDF Using Third-Party Applications

When running on Windows, Inbound Refinery can use several third-party applications to create PDF files of content items. In most cases, a third-party application that can open and print the file is used to print the file to PostScript, and then the PostScript file is converted to PDF using the configured PostScript distiller engine. In some cases, Inbound Refinery can use a third-party application to convert a file directly to PDF.

The *Convert to PDF using third-party applications* option is selected on the Primary Web-Viewable Rendition page. For details, see "[Setting PDF Files as the Primary Web-Viewable Rendition](#)" on page 3-2. When using this option, Inbound Refinery requires the following:

- A PostScript distiller engine.
- A PostScript printer.
- The third-party applications used during the conversion.
- WinNativeConverter component installed and enabled on the refinery server.

The following table lists the common file formats that can be converted to PDF using third-party applications on Windows. Please note the following important considerations:

- Third-party applications used in conversions, a PostScript distiller engine, and a PostScript printer are not provided with Inbound Refinery. You must obtain all third-party applications required for the conversions you want to perform, as well as a PostScript distiller engine and a PostScript printer of your choice.
- All third-party applications necessary to convert a file must be installed on the Inbound Refinery computer.
- Only the listed common file formats are supported for conversion. Conversion of additional file formats might be possible, however, the results cannot be guaranteed.
- Only the listed versions of each third-party application are supported for use with Inbound Refinery. Conversion using other versions of the third-party applications might be possible, however, the results cannot be guaranteed.
- Only conversion of listed file formats using the listed third-party applications is supported. Conversion of some file formats using an alternate third-party application might be possible (for example, conversion of Corel WordPerfect files using Microsoft Word), however, the results cannot be guaranteed.
- All listed file formats are supported for conversion to PDF, however, Outside In Image Export cannot create thumbnails from all of these native file formats. If you want to ensure that thumbnails will be created for all file formats, clear the *Create Thumbnail Image from the Native Vault File* check box on the Inbound Refinery Thumbnail Options screen. When files are converted by Inbound Refinery and this check box is cleared, Outside In Image Export will create thumbnails from the generated web-viewable PDF files (instead of the native files), and therefore should be able to produce thumbnails for all files.

Common file formats that can be converted to PDF	Supported 3rd-party applications for conversion
Adobe FrameMaker (<i>see * below</i>) .fm .mif .book	Adobe FrameMaker 7.0
Adobe InDesign .indd .indt	Adobe InDesign CS2
Adobe PageMaker .pm# .pt# .p65	Adobe InDesign CS2

Common file formats that can be converted to PDF	Supported 3rd-party applications for conversion
Adobe Photoshop .psd .eps	Adobe Photoshop CS2 (<i>see ** below</i>)
Corel WordPerfect .wp .wp# .wpd	Corel WordPerfect 11
Microsoft Excel .xls .xlt .xlw .xlsx	Microsoft Excel (Office) 2000, 2002, 2003, 2007
Microsoft Powerpoint .ppt .pot .pps .ppa .pptx	Microsoft Powerpoint (Office) 2000, 2002, 2003, 2007
Microsoft Project .mpp	Microsoft Project (Office) 2000, 2002, 2003
Microsoft Publisher .pub	Microsoft Publisher (Office) 2000, 2002, 2003, 2007
Microsoft Snapshot .snp	Microsoft Snapshot (Office) 2000, 2002, 2003, 2007
Microsoft Visio .vsd .vst .vdx .vtx	Microsoft Visio (Office) 2000, 2002, 2003, 2007
Microsoft Word .doc .dot .docx .dotx	Microsoft Word (Office) 2000, 2002, 2003, 2007
Microsoft Write .wri	Microsoft Word (Office) 2000, 2002, 2003, 2007
OpenOffice Calc .sxc .stc	OpenOffice 3.0

Common file formats that can be converted to PDF	Supported 3rd-party applications for conversion
OpenOffice Draw .sxd .std	OpenOffice 3.0
OpenOffice Impress .sxi .sti	OpenOffice 3.0
OpenOffice Math .sxm	OpenOffice 3.0
OpenOffice Writer/Writer Global .sxw .stx	OpenOffice 3.0
QuarkXPress .qxd .qxt	Adobe InDesign CS2
Rich Text Format .rtf	Microsoft Word (Office) 2000, 2002, 2003, 2007
StarOffice Calc .sxc .stc .sdc	OpenOffice 3.0
StarOfficeDraw .sxd .std .sda .sdd	OpenOffice 3.0
StarOfficeImpress .sxi .sti .sdd	OpenOffice 3.0
StarOffice Math .sxm .smf	OpenOffice 3.0
StarOffice Writer/Writer Global .sxw .stx .sdw .vor	OpenOffice 3.0
Text .txt	Microsoft Word (Office) 2000, 2002, 2003, 2007

* Adobe FrameMaker+SGML is not supported.

** Adobe Photoshop CS2 requires manual configuration.

Important: For important installation tips and recommended settings related to these third-party applications.

B.3 File Formats Converted to PDF by Open Office

When running on either Windows or UNIX, Inbound Refinery can use OpenOffice to convert some file types directly to PDF. The *Convert to PDF using OpenOffice* option is selected on the Primary Web-Viewable Rendition page. For details, see "[Setting PDF Files as the Primary Web-Viewable Rendition](#)" on page 3-2.

When using this option, Inbound Refinery requires only OpenOffice and not a third-party distiller engine.

The following table lists the common file formats that can be converted to PDF using OpenOffice on either Windows or UNIX. Please note the following important considerations:

- OpenOffice is not provided with Inbound Refinery. You must obtain OpenOffice.
- OpenOffice must be installed on the Inbound Refinery computer.
- Only the listed common file formats are supported for conversion. Conversion of additional file formats might be possible, however, the results cannot be guaranteed.
- Only the listed versions of OpenOffice are supported for use with Inbound Refinery. Conversion using other versions of OpenOffice might be possible, however, the results cannot be guaranteed.
- Only conversion of listed file formats using OpenOffice is supported. Other conversions might be possible, however, the results cannot be guaranteed.
- Inbound Refinery 11gR1 is supported only on English operating systems, and only an English administration interface is provided. Non-English files can be converted by Inbound Refinery as long as the language is supported by OpenOffice and OpenOffice is installed and configured on an English operating system to open and display the non-English file properly. Other operating system language combinations are possible, however, the results of these conversions cannot be guaranteed.
- All listed file formats are supported for conversion to PDF, however, Outside In Image Export cannot create thumbnails from all of these native file formats. If you want to ensure that thumbnails will be created for all file formats, clear the *Create Thumbnail Image from the Native Vault File* check box on the Inbound Refinery Thumbnail Options screen. When files are converted by Inbound Refinery and this check box is cleared, Outside In Image Export will create thumbnails from the generated web-viewable PDF files (instead of the native files), and therefore should be able to produce thumbnails for all files.

Common file formats that can be converted to PDF

Supported 3rd-party applications for conversion

Adobe Photoshop

OpenOffice 3.0

.psd

.eps

Common file formats that can be converted to PDF	Supported 3rd-party applications for conversion
Microsoft Excel .xls .xlt .xlw	OpenOffice 3.0
Microsoft Powerpoint .ppt .pot .pps .ppa	OpenOffice 3.0
Microsoft Word .doc .dot	OpenOffice 3.0
OpenOffice Calc .sxc .stc	OpenOffice 3.0
OpenOffice Draw .sxd .std	OpenOffice 3.0
OpenOffice Impress .sxi .sti	OpenOffice 3.0
OpenOffice Math .sxm	OpenOffice 3.0
OpenOffice Writer/Writer Global .sxw .stx	OpenOffice 3.0
Rich Text Format .rtf	OpenOffice 3.0
StarOffice Calc .sxc .stc .sdc	OpenOffice 3.0
StarOffice Draw .sxd .std .sda .sdd	OpenOffice 3.0
StarOffice Impress .sxi .sti .sdd	OpenOffice 3.0

Common file formats that can be converted to PDF	Supported 3rd-party applications for conversion
StarOffice Math <i>.sxm</i> <i>.smf</i>	OpenOffice 3.0
StarOffice Writer/Writer Global <i>.sxw</i> <i>.stx</i> <i>.sdw</i> <i>.vor</i>	OpenOffice 3.0
Text <i>.txt</i>	OpenOffice 3.0

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