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Chapter 1

INTRODUCTION

OVERVIEW

This section contains the following topics:

- About This Guide (page 1-1)
- Conventions (page 1-2)
- Inbound Refinery Documentation (page 1-3)

ABOUT THIS GUIDE

This administration guide provides all information required to set up and administer Inbound Refinery version 10gR3 on a computer running either Microsoft Windows or UNIX. For more information on supported operating systems and installing Inbound Refinery, refer to the *Inbound Refinery Installation Guide*.

**Important:** 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.
**CONVENTIONS**

The following conventions are used throughout this guide:

- Forward slashes (/) are used to separate parts of an Internet address. For example, `http://www.google.com/maps`. A forward slash might or might not appear at the end of an Internet address.

- Backward slashes (\) are used to separate the levels in a path to a Windows server, directory, or file. For example, `C:\ibr\refinery\`. A backward slash will always appear after the end of a Windows server, directory, or file path.

- Forward slashes (/) are also used to separate the levels in a path to a UNIX server, directory, or file. For example, `/usr/ibr/refinery`.

- File names and file paths within text are indicated by the following convention: `<filename>` file in the `<path_to_directory>` directory.

- The notation `<refinery_install_dir>` is used to refer to the location of the main Inbound Refinery installation directory.

- The notation `<content_server_install_dir>` is used to refer to the location of the main Content Server installation directory.

- Notes, technical tips, important notices, and cautions use these conventions:

<table>
<thead>
<tr>
<th>Symbols</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td><img src="image" alt="Note" /></td>
<td>This is a note. It is used to bring special attention to information.</td>
</tr>
<tr>
<td><img src="image" alt="Technical Tip" /></td>
<td>This is a technical tip. It is used to identify information that can be used to make your tasks easier.</td>
</tr>
<tr>
<td><img src="image" alt="Important Notice" /></td>
<td>This is an important notice. It is used to identify a required step or required information.</td>
</tr>
<tr>
<td><img src="image" alt="Caution" /></td>
<td>This is a caution. It is used to identify information that might cause loss of data or serious system problems.</td>
</tr>
</tbody>
</table>
Inbound Refinery comes with a comprehensive online Help system and a full set of PDF documentation.

**On-Line Help System**

Inbound Refinery Help can be accessed from the Inbound Refinery administration interface or from the file system on the refinery computer:

- To view Help from the Inbound Refinery administration interface, click on a Help link.
- To start the Refinery Products Help system from the refinery computer file system, open the `wh_start.htm` file located in the following directory:
  - **Windows**—`<refinery_install_dir>/weblayout/help`
  - **UNIX**—`<refinery_install_dir>/weblayout/help`

**Note:** The Welcome link in the online Help system table of contents provides useful information on using the Help system.

**PDF Documentation**

The Inbound Refinery documentation is also available as a set of PDF files. All of the PDF files are included with the Inbound Refinery software installation files. PDF files of guides are also installed along with the Inbound Refinery software:

- To view the PDF version of a guide from the Refinery Products Help system, click the PDF icon in the upper right-hand corner of any help page.
- To view the PDF files from the refinery computer file system, go to the following directory:
  - **Windows**—`<refinery_install_dir>/weblayout/help/documentation`
  - **UNIX**—`<refinery_install_dir>/weblayout/help/documentation`
Chapter 2

WHAT’S NEW

OVERVIEW

This section covers the following topics:

- Product Enhancements (page 2-1)
- Documentation Enhancements (page 2-2)

PRODUCT ENHANCEMENTS

The following product enhancements have been made for Inbound Refinery version 10gR3:

- **Inbound Refinery Now Based on Content Server**
  Inbound Refinery has been redeveloped for version 10gR3. Inbound Refinery has the same basic functionality as in previous releases, however it is now based on Content Server. Amongst many other advantages, this enables the use of components for easier, faster patching and the development of conversion add-ons.

- **New Administration Interface**
  Inbound Refinery has a new, web-based administration interface. The new interface leverages all Content Server interface features.

- **Refineries Now Providers to Content Servers**
  Refineries can now be outgoing providers to one or multiple content servers.
New Queuing Features
Inbound Refinery has new and improved queue management features. The refinery and the content server no longer read off the same queue, so there is now little possibility for queue contention. The content server now manages all transfer of jobs, which is the exact opposite of the previous architecture. One significant difference between the old and new architecture is that documents remaining in GENWWW will not stop all conversions. For example, if a large Digital Media Video conversion is required but no refinery is free to take that job, the Word conversions in the queue can still get transferred to a refinery.

New Version of Outside In Image Export
Inbound Refinery includes Outside In Image Export 8.1.9, which is used for thumbnailing and conversion to multi-page TIFF files.

DOCUMENTATION ENHANCEMENTS

The following documentation enhancements have been made for Inbound Refinery version 10gR3:

Reorganized Documentation Set
The Inbound Refinery documentation set has been reorganized and now contains the following documents:

• Inbound Refinery Installation Guide—provides all information required to install Inbound Refinery version 10gR3 on a computer running either Microsoft Windows or UNIX.

• Inbound Refinery Administration Guide (this guide)—provides all information required to set up and administer Inbound Refinery version 10gR3 on a computer running either Microsoft Windows or UNIX.

• DAM and Conversion Products Release Notes—provides the most current considerations for installing and administering all version 10gR3 Digital Asset Management (DAM) and conversion products, including Inbound Refinery.

Documentation Updated for Redeveloped Refinery and New Interface
The Inbound Refinery documentation set has been updated to cover the redeveloped refinery and the new administration interface.
Inbound Refinery Overview

Overview

This section covers the following topics:

- About Inbound Refinery (page 3-1)
- Overview of Inbound Refinery Installation and Setup (page 3-4)
- Inbound Refinery Process Overview (page 3-5)

About Inbound Refinery

Inbound Refinery version 10gR3 is a conversion server that manages file conversions and provides thumbnailing functionality. 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 set up custom conversions and create custom conversion engines.

Note: For more information about file formats that can be converted by Inbound Refinery using OutSide In Image Export, see Appendix A (File Formats Converted by Outside In Image Export).
In addition, the following conversion add-ons are available for use with Inbound Refinery:

- **PDF Converter**—Converts 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). There are three options for converting files to PDF:
  - *Convert to PDF using third-party applications*—When running on Windows, PDF Converter 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, PDF Converter can use a third-party application to convert a file directly to PDF. When using this option, PDF Converter 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, PDF Converter can use OpenOffice to convert some file types directly to PDF. When using this option, PDF Converter requires only OpenOffice.
  - *Convert to PDF using Outside In*—PDF Converter includes Outside In X, which can be used on Windows to create PDF files of some content items. Outside In X 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, PDF Converter requires only a PostScript distiller engine.

**Important:** Third-party applications used in conversions, a PostScript distiller engine, and a PostScript printer are not provided with PDF Converter. 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.

**Note:** For more information about file formats that can be converted by PDF Converter, refer to the *PDF Converter Installation and Administration Guide*.

- **Tiff Converter**—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.

**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. For more information, refer to the *Tiff Converter Installation and Administration Guide*.

- **XML Converter**—Converts files to XML (eXtensible Markup Language) files using Outside In XML Export, Search Export, and either the FlexionDoc or SearchML schema.

**Note:** For more information about file formats that can be converted by XML Converter, refer to the *XML Converter Installation and Administration Guide*.

- **Digital Asset Manager**—Enables you to define and provide images and videos 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.

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 and workflow 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.

**Note:** For more information about file formats that can be converted by Digital Asset Manager, refer to the *Digital Asset Manager Installation and Administration Guide*. 
OVERVIEW OF INBOUND REFINERY INSTALLATION AND SETUP

The following is an overview of the basic steps required to install a 10gR3 refinery and begin converting files for a content server:

1. Install a refinery. For more information, refer to the Inbound Refinery Installation Guide.
   - During installation you can choose to add the refinery as a provider to a content server on the same computer, with that content server managing the refinery’s authentication.
   - You can also add the refinery as a provider to content servers on the same or separate computers after installation. For details, see Configuring Refinery Providers (page 5-9).
   - During installation you can install an Admin Server for the refinery, or you can add the refinery to an existing Admin Server on the same computer.
   - You can also add the refinery to an existing Admin Server after installation. For details, see Adding Refineries to an Admin Server (page 4-10).

2. Check the installation log file. For more information, refer to the Inbound Refinery Installation Guide.

3. Install the InboundRefinerySupport component on each content server for which the refinery will be a provider. For more information, refer to the Inbound Refinery Installation Guide.

4. Depending on the web server and installation choices selected during the refinery installation, you might need to perform a number of tasks to set up and configure the web server for use with a refinery. For more information, refer to the Inbound Refinery Installation Guide.

5. Periodically, you might need or want to update an existing 10gR3 refinery to a newer version 10gR3 build. For more information, refer to the Inbound Refinery Installation Guide.

6. After installing a refinery, you need to configure each content server to send conversion jobs to the refinery. For details, see Chapter 6 (Configuring Content Servers to Send Jobs to Refineries).

7. After installing a refinery, you need to configure the refinery to accept conversion jobs and configure your conversion settings. For details, see Chapter 7 (Configuring Refinery Conversion Settings).
Inbound Refinery Process Overview

Inbound Refinery is a conversion server that manages file conversions and provides thumbnailing functionality. Inbound Refinery can serve as a provider to Content Server.

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 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 weblayout directory (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 (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, calling the appropriate conversion add-ons 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.

If a conversion is successful, the converted files (for example, a web-viewable thumbnail file and a PDF file) are available to the content server’s users through their web browser. If a conversion fails, 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.
STARTING AND STOPPING REFINERIES

OVERVIEW

This section covers the following topics:

- Starting, Stopping, and Restarting Refineries as Windows Services (page 4-2)
- Starting and Stopping Refineries as Windows Applications (page 4-4)
- Starting and Stopping Refineries on UNIX (page 4-5)
- Logging On to Refineries (page 4-6)
- Starting and Stopping Refineries Using Admin Server (page 4-7)
STARTING, STOPPING, AND RESTARTING REFINERIES AS WINDOWS SERVICES

When you install a refinery on Windows, you have the option of installing a service to run the refinery. The service can be configured to start automatically or manually, to run as a specific user, and to depend on another service. To start, stop, and restart the refinery using this Windows service, complete the following steps:

**Note:** A refinery cannot be started as a Windows service if it is already running as a Windows application.

1. Launch the Windows Services control panel.
2. To start the refinery service (for example, *IDC Refinery Service ref1*), do one of the following:
   - Click the **Start Service** button.
   - Right-click the service and choose **Start** from the popup menu.
3. To configure the refinery service to start automatically at system startup, complete the following steps:
   a. Right-click the service and choose **Properties** from the popup menu.
   b. Select **Automatic** from the Startup type drop-down menu.
   c. Click **OK** to save your change.
4. To restart the refinery service, do one of the following:
   - Click the **Restart Service** button.
   - Right-click the service and choose **Restart** from the popup menu.
5. To stop the refinery service, do one of the following:
   - Click the **Stop Service** button.
   - Right-click the service and choose **Stop** from the popup menu.
6. It is recommended that you configure the refinery service to run as the same user that is used to install the refinery, all conversion add-ons, and all required third-party applications. To configure the refinery service to run as a specific user, complete the following steps:
   a. Right-click the service and choose **Properties** from the popup menu.
   b. Select the **Log On** tab.
c. Enter the user account and password. Make sure that you use the proper syntax for the user account. Domain user syntax is: `username: [domain]\[username]`. Local user syntax is: `username=.\[username]`

d. Click **OK** to save your change.

e. Restart the refinery service.

**Important:** There are some important restrictions when using PDF Converter and running Inbound Refinery as a service. Not all third-party applications supported by PDF Converter are capable of being launched by a service. Also, some third-party applications require you to always log in to Windows, even when running Inbound Refinery as a service. Before you determine whether to run Inbound Refinery as an application or a service, you need to identify the third-party applications that you want to use with PDF Converter. For a list of third-party applications supported by PDF Converter and information about using third-party applications when Inbound Refinery is running as a service, refer to the *PDF Converter Installation and Administration Guide.*
STARTING AND STOPPING REFINERIES AS WINDOWS APPLICATIONS

To start a refinery as an application, use one of the following methods:

Note: A refinery cannot be started as a Windows application if it is already running as a Windows service.

- To start a refinery as an application from the Windows Start Menu, select Start—Programs—Stellent Content Server—[Refinery_Instance_Name]—Inbound Refinery. A console window is opened and shows status information.

- To start a refinery as an application from the Windows command line, complete the following steps:
  a. Open a command-line window (console), and go the following directory:
     <refinery_install_dir>\bin\
  b. Start the following executable file to start the refinery:
     IdcRefinery.exe

     The refinery will start. The console window remains open and shows status information.

Tech Tip: If you want debug information to be displayed in the console, start the refinery with the following executable flags (parameters): IdcRefinery.exe -console -debug

To stop a refinery that is running as an application, close the refinery console window.
Starting and Stopping Refineries on UNIX

The following UNIX commands enable you to start, stop, and restart refineries without logging into the system:

- **idcserver_query**
  This command checks the status of a refinery to determine if it is running. It is available from the `/etc` subdirectory of the refinery installation directory.

- **idcserver_start**
  This command starts a refinery in the background. It is available from the `/etc` subdirectory of the refinery installation directory.

- **idcserver_ctrl**
  This is a script file suitable for use as an rc file, which contains startup instructions for launching a refinery automatically each time the system starts up. It is available from the `/etc` subdirectory of the refinery installation directory.

- **idcserver_stop**
  This command stops a refinery that was started with `idcserver_start`. It is available from the `/etc` subdirectory of the refinery installation directory.

- **idcserver_restart**
  This command stops a refinery that was started with `idcserver_start` and starts it again. It is available from the `/etc` subdirectory of the refinery installation directory.
LOGGING ON TO REFINERIES

To log on to a refinery once it is running, complete the following steps:

**Important:** If you chose to configure the refinery as a provider to an existing local content server during installation, the InboundRefinerySupport component must be installed on the content server before you will be able to log into the refinery successfully.

1. Start your web browser.
2. Go to the Inbound Refinery homepage (“portal page”). By default, the address is `http://[host_name]/[web_root]`, for example `http://server123/ref1/`.
3. Click **Login**.
4. Enter your user name and password, and click **OK**. The defaults are as follows:

   **Refinery managing its own authentication:**
   - User name: refadmin
   - Password: idc

   **Content server managing the refinery’s authentication:**
   - User name: sysadmin
   - Password: idc

**Note:** For more information on administering Inbound Refinery users, see Performing User Administration (page 9-2)
Starting and Stopping Refineries Using Admin Server

This section covers the following topics:

- Starting, Stopping, and Restarting Admin Server as a Service on Windows (page 4-7)
- Starting and Stopping Admin Server as an Application on Windows (page 4-8)
- Starting and Stopping Admin Server on UNIX (page 4-9)
- Starting, Stopping, and Restarting Refineries Using Admin Server (page 4-9)
- Adding Refineries to an Admin Server (page 4-10)

Starting, Stopping, and Restarting Admin Server as a Service on Windows

An Admin Server enables remote, HTML-based administration of refineries using the web-based Content Server or Inbound Refinery interface. When you install a refinery on Windows, you have the option of installing an Admin Server to manage the refinery. You can also install a service to run this refinery Admin Server, and you can configure the service to start automatically or manually.

During installation, you can choose instead to add the refinery to an existing Admin Server on the same computer. You can also add the refinery to an existing Admin Server after installation. For details, see Adding Refineries to an Admin Server (page 4-10).

To start, stop, and restart an Admin Server using the Windows service, complete the following steps:

1. Launch the Windows Services control panel.
2. To start the Admin Server service (for example, *IDC Content Admin Service ref1_admin*), do one of the following:
   - Click the Start Service button.
   - Right-click the service and choose Start from the popup menu.
3. To configure the Admin Server service to start automatically at system startup, complete the following steps:
   a. Right-click the service and choose Properties from the popup menu.
   b. Select Automatic from the Startup type drop-down menu.
   c. Click OK to save your change.
4. To restart the Admin Server service, do one of the following:
   • Click the **Restart Service** button.
   • Right-click the service and choose **Restart** from the popup menu.

5. To stop the Admin Server service, do one of the following:
   • Click the **Stop Service** button.
   • Right-click the service and choose **Stop** from the popup menu.

6. It is recommended that you configure the refinery Admin Server service to run as the same user that is used to install the refinery, all conversion add-ons, and all required third-party applications. To configure the refinery service to run as a specific user, complete the following steps:
   a. Right-click the service and choose **Properties** from the popup menu.
   b. Select the **Log On** tab.
   c. Enter the user account and password. Make sure that you use the proper syntax for the user account. Domain user syntax is: `username: [domain]/[username]`. Local user syntax is: `username=../[username]`
   d. Click **OK** to save your change.
   e. Restart the service.

---

### Starting and Stopping Admin Server as an Application on Windows

To start an Admin Server as an application from the Windows command line, complete the following steps:

1. Open a command-line window (console), and go the following directory:
   
   `<content_server_or_refinery_install_dir>/admin/bin`

2. Start the following executable file to start the Admin Server:

   `IdcAdmin.exe`

   The Admin Server will start. The console window remains open and shows status information.

**Tech Tip:** If you want debug information to be displayed in the console, start the Admin Server with the following executable flags (parameters): `IdcAdmin.exe -console -debug`

To stop an Admin Server that is running as an application, close the Admin Server console window.
Starting and Stopping Admin Server on UNIX

The following UNIX commands enable you to start, stop, and restart an Admin Server without logging into the system:

- **idcadmin_query**
  This command checks the status of an Admin Server to determine if it is running. It is available from the `admin/etc` subdirectory of the content server or refinery installation directory.

- **idcadmin_start**
  This command starts an Admin Server, which then enables remote, HTML-based administration of refineries on that system. It is available from the `admin/etc` subdirectory of the content server or refinery installation directory.

- **idcadmin_ctrl**
  This is a script file suitable for use as an rc file, which contains startup instructions for launching an Admin Server automatically each time the system starts up. It is available from the `admin/etc` subdirectory of the content server or refinery installation directory.

- **idcadmin_stop**
  This command stops an Admin Server that was started with `idcadmin_start`. It is available from the `admin/etc` subdirectory of the content server or refinery installation directory.

- **idcadmin_restart**
  This command stops an Admin Server that was started with `idcadmin_start` and starts it again. It is available from the `admin/etc` subdirectory of the content server or refinery installation directory.

Starting, Stopping, and Restarting Refineries Using Admin Server

To use an Admin Server to start, stop, and restart refineries remotely using the web-based interface, complete the following steps:

1. Make sure the Admin Server is running. For details, see:
   - Starting, Stopping, and Restarting Admin Server as a Service on Windows (page 4-7)
   - Starting and Stopping Admin Server as an Application on Windows (page 4-8)
   - Starting and Stopping Admin Server on UNIX (page 4-9).
2. Make sure you are logged on to the content server or refinery with which the Admin Server was installed, with sufficient administrator privileges. For details, see Logging On to Refineries (page 4-6).

3. Go to the Administration page and click Admin Server.

4. All available refineries are listed.
   - To start a refinery, click its start button.
   - To restart a refinery, click its restart button.
   - To stop a refinery, click its stop button.

**Note:** You need to have the ‘sysmanager’ role to access a refinery through Admin Server.

### Adding Refineries to an Admin Server

During installation you can install an Admin Server for a refinery, or you can add the refinery to an existing Admin Server on the same computer. To add a refinery to an existing Admin Server after installation, complete the following steps:

1. Make sure that the installation directory for the refinery to be added is accessible to the local file system.

2. Launch the existing Admin Server.

3. Click Add Existing Server.

4. Select Other Server (Refinery or Other Agent).

5. Click Submit.

6. Enter the full path to the installation directory for the refinery you want to add.

7. Make sure the file encoding is correct.

8. Click Next.

9. Modify the refinery configuration as necessary. Typically, you do not need to change any settings except for the Description and possibly the Allowed Actions.

10. Click Finish. A button for the refinery is displayed on the Admin Server home page.
Chapter 5

CONFIGURING CONTENT SERVER AND REFINERY COMMUNICATION

OVERVIEW

This section covers the following topics:

- Content Server and Refinery Configuration Scenarios (page 5-2)
- Configuring Refinery Providers (page 5-9)
- Editing the Content Server IP Security Filter (page 5-18)
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.

During installation you can choose to add the refinery as a provider to a content server on the same computer, with that content server managing the refinery’s authentication. You can also add the refinery as a provider to content servers on the same or separate computers after installation. For details, see Configuring Refinery Providers (page 5-9).

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 files 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:

**Note:** There are other possible refinery configurations 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** (page 5-4)
  One content server and one refinery on the same computer

- **Scenario B** (page 5-5)
  Multiple content servers and one refinery on the same computer

- **Scenario C** (page 5-6)
  Multiple content servers and one refinery on separate computers

- **Scenario D** (page 5-7)
  One refinery per content server on separate computers

- **Scenario E** (page 5-8)
  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.
Scenario A

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

Benefits

- Least expensive and easiest to configure.
- Only one copy of third-party applications required for refinery conversions must be purchased.

Considerations

- Number and speed of conversions is limited.
- Not as powerful as scenarios where refineries are not installed on the content server computer, because refinery processing on the content server computer can slow searches and access to the website, 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 during installation of the refinery:
  - The refinery should be configured as a provider to the content server, with the content server managing the refinery’s authentication.
  - The refinery should be added to the content server’s Admin Server.
## Scenario B

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

### Benefits

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

### Considerations

- Number and speed of conversions is limited.
- Not as powerful as scenarios where refineries are not installed on the content server computer, because refinery processing on the content server computer can slow searches and access to the website, 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 during installation of the refinery:
  - The refinery should be configured as a provider to one of the content servers, with that content server managing the refinery’s authentication. After installation, the refinery will need to be added as a provider to the other content servers. For details, see Configuring Refinery Providers (page 5-9).
  - The refinery should be added to an existing Admin Server on the same computer.
Scenario C

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

Benefits

- Only one copy of third-party applications required for refinery conversions must be purchased.
- Faster processing than when the refinery is installed 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.

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 during installation of the refinery:
  - The refinery should not be configured as a provider during installation. After installation, the refinery will need to be added as a provider to each content server. For details, see Configuring Refinery Providers (page 5-9).
  - The refinery should be installed with its own Admin Server.
Scenario D

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

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.

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 during installation of the refineries:
  - The refineries should not be configured as providers during installation. After installation, each refinery will need to be added as a provider to each content server. For details, see Configuring Refinery Providers (page 5-9).
  - Each refinery should be installed with its own Admin Server.
Scenario E

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

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.

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 during installation of the refineries:
  - The refineries should not be configured as providers during installation. After installation, each refinery will need to be added as a provider to each content server. For details, see Configuring Refinery Providers (page 5-9).
  - Each refinery should be installed with its own Admin Server.
CONFIGURING REFINERY PROVIDERS

This section covers the following topics:

Concepts
- About Content Server and Refinery Providers

Tasks
- Adding Refinery Providers
- Editing Refinery Providers
- Disabling/Enabling Refinery Providers
- Deleting Refinery Providers

Interface
- Providers Page
- Add/Edit Outgoing Provider Page
- Provider Information Page

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 (page 5-2).

During the installation of a refinery, you can choose to add the refinery as a provider to a content server on the same computer, with that content server managing the refinery’s authentication. You can also add the refinery as a provider to content servers on the same or separate computers after installation.
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. Click the Add in the Action column for the outgoing provider type. The Add/Edit Outgoing Provider Page is displayed.

4. Complete the following fields:
   - **Provider Name** (required)—a name for the refinery provider, which will become a subdirectory in the `<content_server_install_dir>/data/providers` directory.
   - **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 (IDC_Name) of the refinery.
   - **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. 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. For example, `/ref2/`.

5. Select the **Proxied** check box if you want the content server to manage authentication for the refinery (the refinery will share the content server’s user base). For details, see Managing Refinery Authentication and Users (page 9-3).

6. Select the **Handles Inbound Refinery Conversion Jobs** check box.

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 100 jobs.

9. Click **Add**. The Providers Page is displayed, with the new refinery provider added to the Providers table.

10. Restart the content server.
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 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.

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.

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**.
Providers Page

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providers table</td>
<td>The name of the provider that establishes connection to outside entities.</td>
</tr>
<tr>
<td>Description column</td>
<td>A description of the provider.</td>
</tr>
<tr>
<td>Type column</td>
<td>The type of provider.</td>
</tr>
<tr>
<td>Connection State column</td>
<td>Possible states are:</td>
</tr>
<tr>
<td></td>
<td>• misconfigured</td>
</tr>
<tr>
<td></td>
<td>• good</td>
</tr>
<tr>
<td></td>
<td>• down</td>
</tr>
<tr>
<td></td>
<td>• requires restart</td>
</tr>
</tbody>
</table>

Access this 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.
### Configuring Content Server and Refinery Communication

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last Activity Date column</td>
<td>The last date and time that the provider was active.</td>
</tr>
<tr>
<td>Actions column</td>
<td>The Info link displays the <a href="#">Provider Information Page</a> for the provider. The Test link refreshes the Connection State and Last Activity Date columns for the provider.</td>
</tr>
</tbody>
</table>

**Create a New Provider table**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider Type column</td>
<td>The type of provider.</td>
</tr>
<tr>
<td>Description column</td>
<td>A description of the provider type.</td>
</tr>
<tr>
<td>Action column</td>
<td>Clicking the Add link for the outgoing provider type displays the <a href="#">Add/Edit Outgoing Provider Page</a>.</td>
</tr>
</tbody>
</table>
### Add/Edit Outgoing Provider Page

<table>
<thead>
<tr>
<th><strong>Edit Outgoing Provider</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Provider Name</strong></td>
</tr>
<tr>
<td><strong>Provider Description</strong></td>
</tr>
<tr>
<td><strong>Provider Class</strong></td>
</tr>
<tr>
<td><strong>Connection Class</strong></td>
</tr>
<tr>
<td><strong>Configuration Class</strong></td>
</tr>
<tr>
<td><strong>Server Host Name</strong></td>
</tr>
<tr>
<td><strong>HTTP Server Address</strong></td>
</tr>
<tr>
<td><strong>Server Port</strong></td>
</tr>
<tr>
<td><strong>Instance Name</strong></td>
</tr>
<tr>
<td><strong>Relative Web Root</strong></td>
</tr>
</tbody>
</table>

**Server Options:**

- **Proxied**
  - Web access and security of a remote server is controlled by this server. Only enable this option if you are the master server in a master and proxied server relationship. Do not enable this option if you only wish to transfer archives.

- **Notify Target**
  - Use this option if you are the proxied server in a master and proxied server relationship. The server's web server access to the security configuration of the server and guarantees that its copy is kept up to date. It should be checked if you wish static content on the proxied server to be directly available through the master server's web server. The **Released Documents** subject should be checked if you wish to perform an enterprise search from the master server which includes this proxied server.

**Search Options:**

- **Enterprise Searchable**

**Required Roles:**

**Account Filter:**

**Conversion Options:**

- **Handles Inbound Refinery Conversion Jobs**
  - Use this option only if this provider is an Inbound Refinery.

- **Inbound Refinery Read Only Node**
  - Use this option to prevent this Content Server from send new conversion jobs to this Inbound Refinery. Note that this Inbound Refinery will continue to return conversion jobs as the jobs are finished.

Enter the number of jobs allowed in the pre-converted queue: 100

[Update] [Reset]
Access this 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.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider Name field (required)</td>
<td>A name for the provider, which will become a subdirectory in the <code>&lt;install_dir&gt;/data/providers</code> directory.</td>
</tr>
<tr>
<td>Provider Description field (required)</td>
<td>A user-friendly description for the provider.</td>
</tr>
<tr>
<td>Provider Class field (required)</td>
<td>The name of the Java class for the provider. The default is the <code>intradoc.provider.SocketOutgoingProvider</code> class.</td>
</tr>
<tr>
<td>Connection Class field</td>
<td>Not required.</td>
</tr>
<tr>
<td>Configuration Class field</td>
<td>Not required.</td>
</tr>
<tr>
<td>Server Host Name field (required)</td>
<td>The host name (IDC_Name) of the refinery.</td>
</tr>
<tr>
<td>HTTP Server Address field</td>
<td>The HTTP server address for the refinery. Not required when the refinery is on the same computer as the content server.</td>
</tr>
<tr>
<td>Server Port field (required)</td>
<td>The port on which the refinery provider will communicate. The default refinery port is 5555.</td>
</tr>
<tr>
<td>Instance Name field (required)</td>
<td>The instance name of the refinery. For example, <code>ref2</code>.</td>
</tr>
<tr>
<td>Relative Web Root field (required)</td>
<td>The relative web root of the refinery. For example, <code>/ref2/</code>.</td>
</tr>
</tbody>
</table>
### Configuring Content Server and Refinery Communication

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proxied check box (optional)</td>
<td>Select this box if you want the content server to manage authentication for the refinery (the refinery will share the content server’s user base). For details, see [Managing Refinery Authentication and Users](page 9-3).</td>
</tr>
<tr>
<td>Notify Target check box</td>
<td>Clear; not used for a refinery provider.</td>
</tr>
<tr>
<td>Users check box</td>
<td>Clear; not used for a refinery provider.</td>
</tr>
<tr>
<td>Released Documents check box</td>
<td>Clear; not used for a refinery provider.</td>
</tr>
<tr>
<td>Search Options check box</td>
<td>Clear; not used for a refinery provider.</td>
</tr>
<tr>
<td>Required Roles field</td>
<td>Clear; not used for a refinery provider.</td>
</tr>
<tr>
<td>Account Filter field</td>
<td>Clear; not used for a refinery provider.</td>
</tr>
<tr>
<td>Handles Inbound Refinery Conversion Jobs check box</td>
<td>Select this check box when creating a refinery provider for a content server.</td>
</tr>
<tr>
<td>Inbound Refinery Read Only Mode check box</td>
<td>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.</td>
</tr>
<tr>
<td>Number of jobs allowed in the pre-converted queue field</td>
<td>If necessary, change the maximum number of jobs allowed in the content server’s pre-converted queue. The default is 100 jobs.</td>
</tr>
<tr>
<td>Add button</td>
<td>Adds a new refinery provider.</td>
</tr>
<tr>
<td>Update button</td>
<td>Saves your changes when updating a refinery provider.</td>
</tr>
<tr>
<td>Reset button</td>
<td>Resets the Add/Edit Outgoing Provider page to the last saved settings.</td>
</tr>
</tbody>
</table>
## Provider Information Page

### Outgoing Provider Information for ref2

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider Name</td>
<td>ref2</td>
</tr>
<tr>
<td>Provider Description</td>
<td>Connection to Inbound Refinery 'ref2'.</td>
</tr>
<tr>
<td>Connection State</td>
<td>good</td>
</tr>
<tr>
<td>Last Activity Date</td>
<td>12/5/06 12:29 PM</td>
</tr>
<tr>
<td>Provider Type</td>
<td>outgoing</td>
</tr>
<tr>
<td>Provider Class</td>
<td>intradoc.provider.SocketOutgoingProvider</td>
</tr>
<tr>
<td>Provider Connection</td>
<td></td>
</tr>
<tr>
<td>Instance Name</td>
<td>ref2</td>
</tr>
<tr>
<td>Server Options</td>
<td>Proxyed Server</td>
</tr>
<tr>
<td>Server Host Name</td>
<td>jmarshalpc</td>
</tr>
<tr>
<td>HTTP Server Address</td>
<td></td>
</tr>
<tr>
<td>Server Port</td>
<td>5555</td>
</tr>
<tr>
<td>Relative Web Root</td>
<td>/ref2/</td>
</tr>
<tr>
<td>Notified Subjects</td>
<td></td>
</tr>
<tr>
<td>Last Request Date</td>
<td></td>
</tr>
<tr>
<td>Conversion Options</td>
<td>Handles Inbound Refinery Conversion Jobs</td>
</tr>
<tr>
<td>Refinery read-only mode</td>
<td>FALSE</td>
</tr>
<tr>
<td>Maximum Jobs to Queue</td>
<td>100</td>
</tr>
</tbody>
</table>

Access this page by clicking **Info** in the Actions column for a refinery provider on the Providers 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.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information fields</td>
<td>Display information about the provider. See Add/Edit Outgoing Provider Page for a description of each field.</td>
</tr>
</tbody>
</table>
Configuring Content Server and Refinery Communication

EDITING THE CONTENT SERVER IP SECURITY FILTER

An IP security filter is used to restrict access to a content server. Only hosts with IP addresses matching the specified criteria are granted access. By default, the IP security filter is 127.0.0.1, which means the content server will only listen to communication from localhost. To ensure that a content server can communicate with all of its refineries, the IP address of each refinery computer should be added to the content server’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 content server, complete the following steps:

1. Access the content server computer.

2. Start the System Properties application:
   - **Windows:** choose Start—Programs—Stellent Content Server/Inbound Refinery—<instance_name>—Utilities—System Properties
   - **UNIX:** run the System_Properties script, which is located in the /bin subdirectory of the content server/refinery installation directory

3. Select the Server tab.

4. Make sure the IP Address Filter field includes the IP address of each refinery computer (even if this is the same physical computer that is also running the content server). The default value of this field is 127.0.0.1 (localhost), but you can add any number of valid IP 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|10.10.1.10|62.43.163.*|62.43.161.12?

**Important:** Make sure that you always include the localhost IP address (127.0.0.1).
5. Click **OK** when you are done, and restart the content server.

**Tech Tip:** Alternately, you can add IP addresses to the IP security filter directly in the `config.cfg` file located in the `<content_server_install_dir>/<instance_name>/config` directory. Add the IP address to the `SocketHostAddressSecurityFilter` variable. For example: `SocketHostAddressSecurityFilter=127.0.0.1|10.10.1.10|62.43.163.*`
Chapter 6

CONFIGURING CONTENT SERVERS TO SEND JOBS TO REFINERIES

OVERVIEW

This section covers the following topics:

**Concepts**
- Overview (page 6-2)
- About Conversions (page 6-4)
- Passing Content Items Through the Refinery and Failed Conversions (page 6-7)
- About MIME Types (page 6-7)
- About Conversions (page 6-4)

**Tasks**
- Using the File Formats Wizard (page 6-8)
- Using the Configuration Manager (page 6-9)
  - Launching Configuration Manager (page 6-9)
  - Adding File Formats (page 6-10)
  - Adding File Formats (page 6-10)
  - Editing File Formats (page 6-10)
  - Adding File Extensions (page 6-11)
  - Editing File Extensions (page 6-11)
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. For details, see Chapter 7 (Configuring Refinery Conversion Settings).

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.
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 (page 5-9).
- The refinery(s) need to be configured to accept the conversion. For details, see Setting Accepted Conversions (page 7-6).
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 and Using the Configuration Manager.

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 (page 7-6).

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

<table>
<thead>
<tr>
<th>Conversion</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PassThru</td>
<td>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.</td>
</tr>
<tr>
<td>Word</td>
<td>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.</td>
</tr>
<tr>
<td>Excel</td>
<td>Used to send Microsoft Excel files for conversion. The files will be converted according to the conversion settings for the refinery.</td>
</tr>
<tr>
<td>PowerPoint</td>
<td>Used to send Microsoft PowerPoint files for conversion. The files will be converted according to the conversion settings for the refinery.</td>
</tr>
<tr>
<td>MSProject</td>
<td>Used to send Microsoft Project files for conversion. The files will be converted according to the conversion settings for the refinery.</td>
</tr>
<tr>
<td>Distiller</td>
<td>Used to send PostScript files for conversion. The files will be converted to PDF using the specified PostScript distiller engine.</td>
</tr>
</tbody>
</table>
### Conversion

<table>
<thead>
<tr>
<th>Conversion</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSPub</td>
<td>Used to send Microsoft Publisher files for conversion. The files will be converted according to the conversion settings for the refinery.</td>
</tr>
<tr>
<td>FrameMaker</td>
<td>Used to send Adobe FrameMaker files for conversion. The files will be converted according to the conversion settings for the refinery.</td>
</tr>
<tr>
<td>Visio</td>
<td>Used to send Microsoft Visio files for conversion. The files will be converted according to the conversion settings for the refinery.</td>
</tr>
<tr>
<td>WordPerfect</td>
<td>Used to send Corel WordPerfect files for conversion. The files will be converted according to the conversion settings for the refinery.</td>
</tr>
<tr>
<td>PhotoShop</td>
<td>Used to send Adobe Photoshop files for conversion. The files will be converted according to the conversion settings for the refinery.</td>
</tr>
<tr>
<td>InDesign</td>
<td>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.</td>
</tr>
<tr>
<td>MSSnapshot</td>
<td>Used to send Microsoft Snapshot files for conversion. The files will be converted according to the conversion settings for the refinery.</td>
</tr>
<tr>
<td>PDF Refinement</td>
<td>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.</td>
</tr>
<tr>
<td>Ichitaro</td>
<td><strong>Important:</strong> The Ichitaro conversion is not supported for this version of Inbound Refinery.</td>
</tr>
<tr>
<td>OpenOffice</td>
<td>Used to send OpenOffice and StarOffice files for conversion. The files will be converted according to the conversion settings for the refinery.</td>
</tr>
<tr>
<td>ImageThumbnail</td>
<td>Used to send select graphics formats for creation of thumbnails only. When Digital Asset Manager is installed, the Digital Media Graphics format is available. The Digital Media Graphics conversion can be used instead of the ImageThumbnail conversion to send graphics formats for conversion, including the creation of image renditions and thumbnails.</td>
</tr>
</tbody>
</table>
Configuring Content Servers to Send Jobs to Refineries

<table>
<thead>
<tr>
<th>Conversion</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NativeThumbnail</td>
<td>Used to send select file formats for creation of thumbnails only. Typically, this conversion is used to create thumbnails of text files (TXT) and Microsoft Outlook e-mail files (EML and MSG).</td>
</tr>
<tr>
<td>MultipageTiff</td>
<td>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.</td>
</tr>
<tr>
<td>OutsideIn Technology</td>
<td>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.</td>
</tr>
<tr>
<td>LegacyCustom</td>
<td><strong>Important:</strong> The LegacyCustom conversion is not supported for this version of Inbound Refinery.</td>
</tr>
</tbody>
</table>
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 (page 6-12).

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 (page 6-13).

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).

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

- http://filext.com/
**USING THE FILE FORMATS WIZARD**

When the InboundRefinerySupport component has been installed and 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 to enable the File Formats Wizard page. Also, conversion add-on components might add file types to the File Formats Wizard page.

For more information about installing the InboundRefinerySupport component, refer to the *Inbound Refinery Installation Guide*.

You can also make file format configuration changes manually using the Configuration Manager applet. For details, see **Using the Configuration Manager** (page 6-9). 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.
**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* (page 6-8). 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** (page 6-9)
- **Adding File Formats** (page 6-10)
- **Editing File Formats** (page 6-10)
- **Adding File Extensions** (page 6-11)
- **Editing File Extensions** (page 6-11)

**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.
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 (page 6-7).
3. From the Conversion drop-down list, choose the appropriate conversion. For details, see About Conversions (page 6-4).

**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.

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 (page 6-4).
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.
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.

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.
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 webserver.
- 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 webserver.
- 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 (page 6-13).

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 <content_server_install_dir>/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.
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 to enable the Inbound Refinery Conversion Options page.

For more information on installing the InboundRefinerySupport component, refer to the *Inbound Refinery Installation Guide.*

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 *Inbound 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 (page 6-12).

- This setting can also be overridden manually using the AllowPassthru variable in the config.cfg file located in the
  \<content_server_install_dir>\<instance_name>\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.

Note: For additional details about using content server and refinery settings to manage conversion queues, see Managing Refinery Conversion Queues (page 9-5).

**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 Microsoft Office files with linked objects compressed into a single ZIP file that you want a refinery with PDF Converter to convert to a single PDF file.
- 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 (page 6-9). 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 file format to the ZipFile conversion. This option could then be selected at check-in to send a ZIP file containing Microsoft Office files to a refinery with PDF Converter for conversion to PDF.
   - 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.

**Note:** 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 with PDF Converter, which would be used to convert ZIP files containing Microsoft Office files to PDF.
Figure 6-2  Content Check In Form with Allow override format on checkin

Note: The Content Check In Form lists file formats by their description.
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 `<content_server_install_dir>/<instance_name>/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.

**Note:** For more information about the ThumbnailHeight and ThumbnailWidth variables, refer to the *Idoc Script Reference Guide*. 
Configuring Content Servers to Send Jobs to Refineries

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.

<table>
<thead>
<tr>
<th>Select</th>
<th>File Type</th>
<th>Extensions</th>
<th>Conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Corel WordPerfect Document</td>
<td>wpd</td>
<td>WordPerfect</td>
</tr>
<tr>
<td></td>
<td>FrameMaker Document</td>
<td>fn</td>
<td>FrameMaker</td>
</tr>
<tr>
<td></td>
<td>FrameMaker Book</td>
<td>bk, book</td>
<td>FrameMaker</td>
</tr>
<tr>
<td></td>
<td>FrameMaker Interchange Format</td>
<td>mf</td>
<td>FrameMaker</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Access this 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 to enable the File Formats Wizard page. Also, conversion add-on components might add file types to the File Formats Wizard page. For more information about installing the InboundRefinerySupport component, refer to the *Inbound Refinery Installation Guide*.

You can also make file format configuration changes manually using the Configuration Manager applet. For details, see File Formats Screen (page 6-20). 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.
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select File Types</td>
<td>Select each file type to be sent to a refinery for conversion. To select or</td>
</tr>
<tr>
<td>check boxes</td>
<td>clear all check boxes, select or clear the check box in the heading row.</td>
</tr>
<tr>
<td>Update button</td>
<td>Saves your changes.</td>
</tr>
<tr>
<td>Reset button</td>
<td>Resets the File Formats Wizard page to the last saved settings.</td>
</tr>
</tbody>
</table>

⚠️ **Important:** The Ichitaro conversion is not supported for this version of Inbound Refinery.
**FILE FORMATS SCREEN**

Access this screen by selecting **Options—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** (page 6-18). You should only need to use the File Formats screen to change default conversions and set up conversions for uncommon file types.
Add New/Edit File Formats Screen

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format</td>
<td>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 (page 6-7).</td>
</tr>
<tr>
<td>Conversion</td>
<td>The conversion that is linked to the file format. For details, see About Conversions (page 6-4).</td>
</tr>
<tr>
<td>Description</td>
<td>The description for the file format.</td>
</tr>
<tr>
<td>Extension</td>
<td>The file extension that is mapped to a file format.</td>
</tr>
<tr>
<td>Map to Format</td>
<td>The file format to which you want to map the file extension.</td>
</tr>
</tbody>
</table>

Access the Add New File Formats screen by selecting Options—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—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.
Configuring Content Servers to Send Jobs to Refineries

Add/Edit File Extensions Screen

Access the Add File Extensions screen by selecting Options—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.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format</td>
<td>This is generally the MIME type associated with the corresponding file extension(s). For details, see About MIME Types (page 6-7).</td>
</tr>
<tr>
<td>Conversion</td>
<td>The conversion that will be used for all file extensions that are mapped to the file format.</td>
</tr>
<tr>
<td>Description</td>
<td>The description for the file format.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension</td>
<td>The file extension (for example, doc for Microsoft Word, xls for Microsoft Excel, vsd for Microsoft Visio, and so forth).</td>
</tr>
<tr>
<td>Map to Format</td>
<td>The file format to which you want to map the file extension.</td>
</tr>
</tbody>
</table>
INBOUND REFINERY CONVERSION OPTIONS PAGE

<table>
<thead>
<tr>
<th><strong>Inbound Refinery Conversion Options</strong></th>
<th>quick help</th>
</tr>
</thead>
<tbody>
<tr>
<td>Options that affect how the Content Server interacts with Inbound Refinery providers.</td>
<td></td>
</tr>
</tbody>
</table>

**Pre-Conversion Options**

- **Enter the number of seconds between successive transfer attempts.**
  - **10**

- **Enter the total number of minutes allowed to transfer a single job before action is taken.**
  - **30**

- **Enter the native file compression threshold in MB; when exceeded the file will be transferred uncompressed.**
  - **1024**

- **When the time for transferring a job expires, the conversion should fail.**

**Post-Conversion Options**

- **When a conversion sent to an Inbound Refinery fails, set the conversion to 'Refinery Passthru'.**

Access this page by selecting **Refinery Administration—Conversion Options** in the content server Administration menu. 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.

**Important:** The InboundRefinerySupport component must be installed and enabled on the content server to enable the Inbound Refinery Conversion Options page.

For more information on installing the InboundRefinerySupport component, refer to the *Inbound Refinery Installation Guide*. 
### Configuring Content Servers to Send Jobs to Refineries

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of seconds between successive transfer attempts field</td>
<td>Enter the number of seconds that the content server should wait between transfer attempts for pre-converted jobs. The default is 10 (seconds).</td>
</tr>
<tr>
<td>Total number of minutes allowed to transfer a single job field</td>
<td>Enter the total number of minutes allowed to transfer a single job before action is taken. The default is 30 (minutes).</td>
</tr>
<tr>
<td>Native file compression threshold field</td>
<td>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.</td>
</tr>
<tr>
<td>When job transfer time expires, conversion should fail check box</td>
<td>Select this check box to fail the conversion if the total job transfer time expires.</td>
</tr>
<tr>
<td>When conversion sent to a refinery fails, set the conversion to ‘Refinery Passthru’ check box</td>
<td>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 <code>weblayout</code> directory. When this option is cleared, the native file is not copied to the <code>weblayout</code> directory.</td>
</tr>
<tr>
<td>Update button</td>
<td>Saves your changes.</td>
</tr>
<tr>
<td>Reset button</td>
<td>Resets the Inbound Refinery Conversion Options page to the last saved settings.</td>
</tr>
</tbody>
</table>

**Note:** For additional details about using content server and refinery settings to manage conversion queues, see *Managing Refinery Conversion Queues* (page 9-5).
Chapter 7

CONFIGURING REFINERY CONVERSION SETTINGS

OVERVIEW

This section covers the following topics:

**Concepts**
- About Conversion Settings (page 7-2)
- About Thumbnails (page 7-3)
- Calculating Timeouts (page 7-5)

**Tasks**
- Setting Accepted Conversions (page 7-6)
- Setting Multi-Page TIFF Files as the Primary Web-Viewable Rendition (page 7-7)
- Setting Up Thumbnails (page 7-7)
- Configuring Rendering Options on UNIX (page 7-9)
- Configuring Third-Party Application Settings (page 7-11)
- Configuring Timeout Settings for Graphics Conversions (page 7-11)

**Interface**
- Conversion Listing Page (page 7-12)
ABOUT CONVERSION SETTINGS

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

- Start your refinery. For details, see Chapter 4 (*Starting and Stopping Refineries*).
- Make sure your refinery has been set up as a provider to one or multiple content servers. For details, see Configuring Refinery Providers (page 5-9).
- Make sure the InboundRefinerySupport component is installed and enabled on each content server. For more information on installing the InboundRefinerySupport component, refer to the *Inbound Refinery Installation Guide*.
- Make sure each content server has been configured to send files to the refinery for conversion. For details, see Chapter 6 (*Configuring Content Servers to Send Jobs to Refineries*).

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 (page 7-3) and Setting Up Thumbnails (page 7-7).
- 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 (page 7-7).

**Note:** For more information about file formats that can be converted by Inbound Refinery using Outside In Image Export, see Appendix A (*File Formats Converted by Outside In Image Export*).

In addition, several conversion add-ons are available for use with Inbound Refinery. When a conversion add-on is installed, its conversion settings are added to the refinery. For more information about configuring conversion settings for a specific conversion add-on, refer to the documentation provided with the conversion add-on.
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.

Figure 7-1  Example thumbnails in Content Server

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 A (File Formats Converted by Outside In Image Export).

- 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 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 PDFs 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 (page 6-17).

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 \content_server_install_dir\config\ directory.
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:

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

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.

**Example 1**

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

*Calculated Timeout* = \(10485760 \times 3 / 60000 = 524.288\) minutes = 8.74 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

*Calculated Timeout* = \(204800 \times 2 / 60000 = 6.83\) 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

*Calculated Timeout* = \(51200 \times 2 / 60000 = 1.71\) minutes

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

5. 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.

6. Set the maximum number of jobs (across all refinery queues) for each conversion type. The default is 0 (unlimited).

7. Click Update to save your changes.

8. 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.

   **Note:** For additional details about using content server and refinery settings to manage conversion queues, see Managing Refinery Conversion Queues (page 9-5).
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 add-ons, such as PDF Converter, enable you to create other types of renditions as the primary web-viewable rendition. When conversion add-ons that can generate a web-viewable rendition are installed, additional options for the add-ons are available. For more information, refer to the documentation for each conversion add-on.

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 multi-page TIFF files as the primary web-viewable rendition.
4. Click Update to save your changes.

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 add-ons and custom conversions enable you to create additional renditions. When these conversion add-ons are installed, additional options for the add-ons are available. For details, refer to the documentation provided with each conversion add-on.

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

1. Log into the refinery.
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** (page 7-17).

**Note:** When running Inbound Refinery on UNIX, 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** (page 7-9).

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 **Chapter 6 (Configuring Content Servers to Send Jobs to Refineries)**.
- The refinery must be configured to accept the conversions. For details, see **Setting Accepted Conversions** (page 7-6).
- For details about changing the size of thumbnails displayed in the content server, see **Changing the Size of Thumbnails** (page 6-17).
- 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 `<content_server_install_dir>/config` directory. For example, change **AllowableAdditionalRenditions=THUMBNAIL** to **AllowableAdditionalRenditions=**
Configuring Rendering Options on UNIX

This section covers the following topics:

- Rendering Using Internal Graphics Code (Default Option) (page 7-9)
- Rendering Using Native Graphics Subsystem (page 7-10)

Rendering Using Internal Graphics Code (Default Option)

When running Inbound Refinery on UNIX and creating multi-page TIFF files or thumbnails, by default Outside In Image Export 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 Image Export.

To configure Inbound Refinery so that Image Export can locate usable fonts, complete the following steps:

1. Log into the Inbound Refinery computer as the Inbound Refinery user.
2. Use a text editor to open the `intradoc.cfg` file located in the `<refinery_install_dir>/bin` directory.
3. Set the path to the font directories to be used by Image Export by setting the `GDFONTPATH` variable. For example:

   ```
   GDFONTPATH=/u1/work/idc4/GDFonts
   ```

   The `GDFONTPATH` setting is inserted into the environment of the process. If the `GDFONTPATH` variable is not found, the current directory is used. If fonts are called for and cannot be found, Image Export 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.

4. Save your change to the `intradoc.cfg` file.
5. Restart the refinery.

The path to the font directories is displayed on the Thumbnail Options Page. However, this path must be edited using the `GDFONTPATH` variable in the `intradoc.cfg` file.
## 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. Place the following lines in the Inbound Refinery user’s `.profile` startup script:
   ```plaintext
   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:
   ```plaintext
   xhost +localhost
   ```
6. Lock the console, leaving the Inbound Refinery user logged in.
7. Log into the refinery.
8. Select **Conversion Settings—Additional Renditions**. The **Additional Renditions Page** is displayed.
9. Click **Options**. The **Thumbnail Options Page** is displayed.
10. Select the **Use native operating system’s native graphics subsystem** radio button.
11. Click **Update**.
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. Inbound Refinery does not use any third-party applications. When conversion add-ons that use third-party applications are installed, settings are available on this page. For details, refer to the documentation provided with each conversion add-on.

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 (page 7-5).
4. Click Update to save your changes.
CONVERSION LISTING PAGE

The Conversion Listing page enables you to set accepted conversions and queue maximums. Access this page by selecting Conversion Settings—Conversion Listing.

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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum number of conversions allowed to be queued field</td>
<td>Set the total number of conversion jobs that are allowed to be queued by the refinery. The default is 0 (unlimited).</td>
</tr>
</tbody>
</table>
### Configuring Refinery Conversion Settings

#### Feature Description

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of seconds the refinery should be considered busy field</td>
<td>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.</td>
</tr>
<tr>
<td>Accept conversions check boxes</td>
<td>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.</td>
</tr>
<tr>
<td>Maximum conversions column</td>
<td>Specify the maximum number of jobs (across all refinery queues) for each conversion type. The default is 0 (unlimited).</td>
</tr>
<tr>
<td>Conversion column</td>
<td>The name of each conversion enabled in the refinery. This should match the names of the conversions enabled in the content server. For details, see Chapter 6 (Configuring Content Servers to Send Jobs to Refineries).</td>
</tr>
<tr>
<td>Conversion Description column</td>
<td>A description of each conversion.</td>
</tr>
<tr>
<td>Update button</td>
<td>Saves changes to settings. <strong>Important:</strong> 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.</td>
</tr>
<tr>
<td>Reset button</td>
<td>Reverts to the last saved settings.</td>
</tr>
</tbody>
</table>

**Note:** For additional details about using content server and refinery settings to manage conversion queues, see *Managing Refinery Conversion Queues* (page 9-5).
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. Access this page by selecting **Conversion Settings—Primary Web 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. When no conversion add-ons 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 add-ons are installed, other conversion methods might be available on this page. For example, when PDF Converter is installed, options are available to convert the native file to PDF using third-party applications, Outside In, or OpenOffice.

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 installed the PDF Converter component 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.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convert to multi-page Tiff using Outside In check box</td>
<td>When no conversion add-ons 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. This conversion method will be attempted only if it is the first selected method that supports the native file format. For a listing of file formats that can be converted to multi-page TIFF files using Outside In Image Export, see Appendix A (<em>File Formats Converted by Outside In Image Export</em>).</td>
</tr>
<tr>
<td>Update button</td>
<td>Saves changes to settings.</td>
</tr>
<tr>
<td>Reset button</td>
<td>Reverts to the last saved settings.</td>
</tr>
</tbody>
</table>
The Additional Renditions page enables you to select the additional renditions that Inbound Refinery should attempt to create. Access this page by selecting Conversion Settings—Additional Renditions.

When no conversion add-ons are installed, the only available conversion method is to use Outside In to create thumbnails of files as additional renditions. When conversion add-ons 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. For more information, refer to the documentation provided with each conversion add-on.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create Thumbnail Images using Outside In check box</td>
<td>When this option is selected, the refinery will use Outside In Image Export to create thumbnails for all files that the refinery processes.</td>
</tr>
<tr>
<td>Options button</td>
<td>Displays the Thumbnail Options Page, enabling you to set your thumbnail options.</td>
</tr>
<tr>
<td>Update button</td>
<td>Saves changes to settings.</td>
</tr>
<tr>
<td>Reset button</td>
<td>Reverts to the last saved settings.</td>
</tr>
</tbody>
</table>
## Thumbnail Options Page

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create Thumbnail Image from the Native Vault File</td>
<td></td>
</tr>
<tr>
<td>Page Number of Native Vault File to Use to Create Thumbnail Image</td>
<td>1</td>
</tr>
<tr>
<td>Thumbnail quality (1-100)</td>
<td>100</td>
</tr>
<tr>
<td>Show Gridlines in Thumbnail Image of Databases</td>
<td></td>
</tr>
<tr>
<td>Show Headings in Thumbnail Image of Databases</td>
<td></td>
</tr>
<tr>
<td>Show Gridlines in Thumbnail Image of Spreadsheets</td>
<td></td>
</tr>
<tr>
<td>Show Headings in Thumbnail Image of Spreadsheets</td>
<td></td>
</tr>
</tbody>
</table>

- Use quick sizing
- Use smooth sizing
  - Smooth sizing for grayscale graphics

- Produce jpg thumbnails
- Produce gif thumbnails
- Produce png thumbnails

### UNIX Rendering Options

- Use native operating system's native graphics subsystem
- Use Image Export internal graphics rendering

Font directory used by Image Export internal graphics rendering. (Display only)

[Update] [Reset]
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 page by selecting **Conversion Settings—Additional Renditions** and then clicking **Options** for *Create Thumbnail Images using Outside In*.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create Thumbnail Image from the Native Vault File check box</td>
<td>Specifies whether the thumbnail image will be created from the native file or the primary web-viewable file.</td>
</tr>
<tr>
<td>Page Number of Native Vault File to Use to Create Thumbnail Image field</td>
<td>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.</td>
</tr>
<tr>
<td>Thumbnail Quality (1-100) field</td>
<td>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.</td>
</tr>
<tr>
<td>Show Gridlines in Thumbnail Image of Databases check box</td>
<td>Specifies whether gridlines should be included in thumbnail images of databases. When this option is selected, the gridlines are included.</td>
</tr>
<tr>
<td>Show Headings in Thumbnail Image of Databases check box</td>
<td>Specifies whether headings should be included in thumbnail images of databases. When this option is selected, the headings are included.</td>
</tr>
<tr>
<td>Show Gridlines in Thumbnail Image of Spreadsheets check box</td>
<td>Specifies whether gridlines should be included in thumbnail images of spreadsheets. When this option is selected, the gridlines are included.</td>
</tr>
<tr>
<td>Show Headings in Thumbnail Image of Spreadsheets check box</td>
<td>Specifies whether headings should be included in thumbnail images of spreadsheets. When this option is selected, the headings are included.</td>
</tr>
<tr>
<td>Use quick sizing radio button</td>
<td>Selecting this option results in the fastest conversion of color graphics; however, the quality of the converted graphic will be somewhat degraded.</td>
</tr>
</tbody>
</table>
### Configuring Refinery Conversion Settings

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use smooth sizing radio button</td>
<td>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.</td>
</tr>
<tr>
<td>Smooth sizing for grayscale graphics radio button</td>
<td>Selecting this option uses the smooth sizing option for grayscale graphics and the quick sizing option for any color graphics.</td>
</tr>
<tr>
<td>Produce jpg thumbnails radio button</td>
<td>Specifies that all thumbnails will be created as JPG files. This is the default thumbnail file type setting.</td>
</tr>
<tr>
<td>Produce gif thumbnails radio button</td>
<td>Specifies that all thumbnails will be created as GIF files.</td>
</tr>
<tr>
<td>Produce png thumbnails radio button</td>
<td>Specifies that all thumbnails will be created as PNG files.</td>
</tr>
</tbody>
</table>
| Use native operating system’s native graphics subsystem radio button (available only when running on UNIX) | 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).  
**Note:** Note that 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. |
| Use Image Export internal graphics rendering radio button (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. |
### Feature | Description
--- | ---
Font directory used by Image Export internal graphics rendering field (display only) | Displays the font directories that will be used by Outside In Image Export for internal graphics rendering on UNIX (when the Use Image Export internal graphics rendering radio button is selected). The path to the font directories cannot be edited on this page. It is edited by setting the `GDFONTPATH` variable in the `intradoc.cfg` file located in the `<refinery_install_dir>/bin` directory. The `GDFONTPATH` setting is inserted into the environment of the process. **Note:** Fonts are not provided with Image Export. When Image Export attempts to use its internal graphics code to render fonts and graphics, it is essential that the system be able to locate usable fonts. Only TrueType fonts (*.ttf or *.ttc files) are supported. If the `GDFONTPATH` variable is not found, the current directory is used. If fonts are called for and cannot be found, Image Export will exit with an error. 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.

Update button | Saves changes to settings.
Reset button | Reverts to the last saved settings.
**THIRD-PARTY APPLICATION SETTINGS PAGE**

<table>
<thead>
<tr>
<th>Third-Party Application Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>The configuration options listed below allow you to change settings that affect how external, third-party applications perform conversion operations.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OpenOffice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration options that affect communication with the OpenOffice application.</td>
</tr>
<tr>
<td><strong>Conversion Name:</strong> OpenOfficeToPDF</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CVista PdfCompressor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration options that affect the conversion of TIFF files to PDF files with the PdfCompressor application.</td>
</tr>
<tr>
<td><strong>Conversion Name:</strong> TIFFConversion</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distiller Engine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration options that affect the engine used for PostScript to PDF conversion and PDF optimization.</td>
</tr>
<tr>
<td><strong>Conversion Name:</strong> Multiple Conversions</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Microsoft Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration options that affect the conversion of Word documents with the Word application.</td>
</tr>
<tr>
<td><strong>Conversion Name:</strong> Word</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

The Third-Party Application Settings page enables you to configure settings for third-party applications that are used during conversions. Access this page by selecting **Conversion Settings—Third-Party Application Settings**.

When conversion add-ons 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. For details, refer to the documentation provided with each conversion add-on. Most of the third-party application options are related to the PDF Converter and Tiff Converter add-ons. However, additional options can be added as necessary to control conversions using other third-party applications.
The Timeout Settings page enables you to configure your timeout settings. For details, see Calculating Timeouts (page 7-5). Access this page by selecting Conversion Settings—Timeout Settings.

Only timeout settings for graphics conversions are applicable to Inbound Refinery. When conversion add-ons that require additional timeout configurations are installed, settings are added to this page. For details, refer to the documentation provided with each conversion add-on.
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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:  
  \[ \text{timeout value [in minutes]} = \frac{\text{[file size in bytes] x timeout factor}}{60,000} \]  
  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 x 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. |
| Update button                               | Saves changes to settings.                                                                                                                  |
| Reset button                                | Reverts to the last saved settings.                                                                                                          |
Chapter 8

MONITORING REFINERY STATUS

OVERVIEW

This section covers the following topics:

**Concepts**
- About Agents (page 8-2)
- About Refinery Logs (page 8-2)

**Tasks**
- Viewing Refinery Status (page 8-4)
- Viewing Refinery Logs (page 8-4)
- Viewing Console Output (page 8-4)
- Viewing Agent Status (page 8-5)
- Viewing Agent Queues (page 8-5)
- Viewing Conversion History (page 8-5)
- Viewing Agent Logs (page 8-6)

**Interface**
- Refinery Status Page (page 8-6)
- Refinery Logs Page (page 8-8)
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.

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 following types of log entries are generated:

<table>
<thead>
<tr>
<th>Log Entry</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Info</td>
<td>Displays status information. For example, startup information or a description of a conversion engine action.</td>
</tr>
<tr>
<td>Error</td>
<td>Displays errors that occur.</td>
</tr>
</tbody>
</table>
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 (page 9-9).

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.

Figure 8-1 Sample Inbound Refinery log file

<table>
<thead>
<tr>
<th>Type</th>
<th>Time</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Info</td>
<td>11/30/06 4:03 PM</td>
<td>The refinery accepted the job '165' from agent 'stellent_3'</td>
</tr>
<tr>
<td>Info</td>
<td>11/30/06 5:32 PM</td>
<td>'NativeOsUtils' component,'060913 (build $Rev: 48765 $)' version, extends NativeOsUtils feature(s)</td>
</tr>
<tr>
<td>Info</td>
<td>11/30/06 5:32 PM</td>
<td>'PDFConverterBasic' component,'2006_11_07(8.0 dev build 6)' version, extends NativeConversion feature(s)</td>
</tr>
<tr>
<td>Info</td>
<td>11/30/06 5:32 PM</td>
<td>'OpenOfficeConversion' component,'2006_11_1(buil 4)' version, extends OpenOfficeConversion feature(s)</td>
</tr>
<tr>
<td>Error</td>
<td>11/30/06 5:32 PM</td>
<td>The required printer 'IDC PDF Converter' is not already installed. Queue monitoring will be turned off [Details ]</td>
</tr>
<tr>
<td>Info</td>
<td>11/30/06 5:32 PM</td>
<td>Server version 8.0-IR-dev ready and waiting for connection on port 5556, PID 2688.</td>
</tr>
</tbody>
</table>
**VIEWING REFINERY STATUS**

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.

**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.

**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** (page 8-2).

**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.
**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. Select **Status—<agent_name>** from the navigation menu, or select **View Detailed Status** from the Actions menu for the agent on the Refinery Status Page. The Agent Status Page is displayed.

**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.

**VIEWING CONVERSION HISTORY**

To view 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.
**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** (page 8-2).

**Note:** 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** (page 9-9).

**REFINERY STATUS PAGE**

<table>
<thead>
<tr>
<th>Refinery Status</th>
<th>Refinery Logs</th>
<th>Console Output</th>
</tr>
</thead>
</table>

**Refinery Name:** ref1

**Queue Monitor Status:** Conversion queues are being monitored normally.

**Installed Add-ons:** OpenOfficeConversion | TIFF Converter | DAM Converter | PDF Converter

**Active Agents**

<table>
<thead>
<tr>
<th>Agent Name</th>
<th>Current Status</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>cs1</td>
<td>Converting Word..</td>
<td></td>
</tr>
</tbody>
</table>

The Refinery Status page enables you to view the status of conversions for all refinery agents. Access this page using one of the following methods:

- Click **Home** in the main menu.
- Select **Status—Refinery Status** from the navigation menu.
### Monitoring Refinery Status

#### Feature | 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.
Actions menu | Select one of the following actions:
- **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.
The Refinery Logs page enables you to view the refinery logs. For details about refinery logs, see About Refinery Logs (page 8-2). Access this page using one of the following methods:

- Click Home in the main menu and select the Refinery Logs tab.
- Select Status—Refinery Status from the navigation menu, and select the Refinery Logs tab.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refinery log links</td>
<td>Click a link to display the refinery log.</td>
</tr>
<tr>
<td>Details links</td>
<td>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.</td>
</tr>
</tbody>
</table>
The Console Output page enables you to view the refinery console output. Access this page using one of the following methods:

- Click **Home** in the main menu and select the **Console Output** tab.
- Select **Status—Refinery Status** from the navigation menu, and select the **Console Output** tab.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refresh button</td>
<td>Updates the console output.</td>
</tr>
<tr>
<td>Clear button</td>
<td>Clears the console output.</td>
</tr>
</tbody>
</table>
AGENT STATUS PAGE

The Agent Status page enables you to view the status of current conversions for a specific agent. Access this page using one of the following methods:

- Select Status—<agent_name> from the navigation menu.
- Select View Detailed Status from the Actions menu for the agent on the Refinery Status Page.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent Name</td>
<td>The name of an agent (for example, a content server) that has sent at least one conversion job to the refinery.</td>
</tr>
<tr>
<td>Current Status</td>
<td>The current status of the agent.</td>
</tr>
<tr>
<td>Content ID column</td>
<td>The content ID of the content item that the refinery is converting for the agent currently.</td>
</tr>
<tr>
<td>Conversion Job ID column</td>
<td>The conversion job ID of the content item.</td>
</tr>
<tr>
<td>Title column</td>
<td>The title of the content item.</td>
</tr>
<tr>
<td>Native File column</td>
<td>The name of the native file.</td>
</tr>
<tr>
<td>Type column</td>
<td>The conversion type assigned to convert the content item.</td>
</tr>
</tbody>
</table>

Queue Monitor Status: Conversion queues are being monitored normally.

Current Status: Converting Word..


**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 page using one of the following methods:

- Select **Status—<agent_name>** from the navigation menu, and select the **Items In Queue** tab.
- Select **View Items In Queue** from the Actions menu for the agent on the Refinery Status Page.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent Name</td>
<td>The name of an agent (for example, a content server) that has sent at least one conversion job to the refinery.</td>
</tr>
<tr>
<td>Pre-Converted Queue</td>
<td>Lists the items that are in the agent’s pre-converted queue and awaiting conversion by the refinery.</td>
</tr>
<tr>
<td>Post-Converted Queue</td>
<td>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.</td>
</tr>
<tr>
<td>Refresh button</td>
<td>Updates the queue status on the page.</td>
</tr>
</tbody>
</table>
CONVERSION HISTORY PAGE

The Conversion History page enables you to view the past conversions for a specific agent. Access this page using one of the following methods:

- Select Status—<agent_name> from the navigation menu, and select the Conversion History tab.
- Select View Conversion History from the Actions menu for the agent on the Refinery Status Page.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent Name</td>
<td>The name of an agent (for example, a content server) that sent the conversion jobs to the refinery.</td>
</tr>
<tr>
<td>Content ID column</td>
<td>The content ID of the content item that was converted. Clicking a Content ID displays the Conversion Detail Page.</td>
</tr>
<tr>
<td>Conversion Job ID</td>
<td>The conversion job ID of the content item that was converted.</td>
</tr>
<tr>
<td>Title</td>
<td>The title of the content item that was converted.</td>
</tr>
<tr>
<td>Conversion Type</td>
<td>The conversion type used to convert the content item.</td>
</tr>
<tr>
<td>Conversion Status</td>
<td>The status of the conversion.</td>
</tr>
</tbody>
</table>
**Conversion Detail Page**

<table>
<thead>
<tr>
<th>Conversion Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Content ID:</strong> refl_000031</td>
</tr>
<tr>
<td><strong>Conversion Job ID:</strong> 49</td>
</tr>
<tr>
<td><strong>Title:</strong> video2</td>
</tr>
<tr>
<td><strong>Content Type:</strong> ADACCT</td>
</tr>
<tr>
<td><strong>Revision Label:</strong> 1</td>
</tr>
<tr>
<td><strong>Security Group:</strong> Public</td>
</tr>
<tr>
<td><strong>Account:</strong></td>
</tr>
<tr>
<td><strong>Conversion:</strong> Digital Media Video</td>
</tr>
<tr>
<td><strong>Message:</strong> Success</td>
</tr>
<tr>
<td><strong>Release Date:</strong> March 23, 2007 6:13 PM</td>
</tr>
<tr>
<td><strong>Time Converted:</strong> March 23, 2007 6:18 PM</td>
</tr>
<tr>
<td><strong>Extra Conversion Parameters:</strong></td>
</tr>
</tbody>
</table>

The Conversion Detail page enables you to view the details of a specific conversion. Access this page using one of the following methods:

- Select **Status—agent_name** from the navigation menu, select the **Conversion History** tab, 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**.
**AGENT LOGS PAGE**

The Agent Logs page enables you to view the logs for a specific refinery agent. Access this page using one of the following methods:

- Select **Status—<agent_name>** from the navigation menu, and select the Agent Logs tab.
- Select **View Agent Logs** from the Actions menu for the agent on the Refinery Status Page.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refinery agent log links</td>
<td>Click a link to display the refinery agent log.</td>
</tr>
<tr>
<td>Details links</td>
<td>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.</td>
</tr>
</tbody>
</table>

**Note:** 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 (page 9-9).
Chapter 9

Performing Refinery Administration

Overview

This section covers the following topics:

Concepts

- About Refinery Users (page 9-2)

Tasks

- Performing User Administration (page 9-2)
- Managing Refinery Conversion Queues (page 9-5)
- Performing Agent Administration (page 9-9)
- Viewing Refinery Configuration Information (page 9-10)
- Viewing Refinery System Audit Information (page 9-11)
- Managing Refinery Providers (page 9-12)
- Configuring the Web Server Filter (page 9-12)
- Using Admin Server (page 9-12)
- Publishing Dynamic and Static Layout Files (page 9-13)
- Using Administration Utilities (page 9-13)
- Active Virus Scanning and Inbound Refinery (page 9-15)
PERFORMING USER ADMINISTRATION

This section covers the following topics:

- About Refinery Users (page 9-2)
- Editing User Profiles (page 9-3)
- Managing Refinery Authentication and Users (page 9-3)

About Refinery Users

There are two options for authenticating refinery users:

- The refinery can manage its own authentication. In this case, the refinery has only one user: refadmin. The refadmin user has three roles: admin, sysmanager, and refineryadmin.

- A content server can manage the refinery’s authentication. In this case, the content server owns the refinery’s user base. This means that the default administrator user account is sysadmin instead of refadmin. In addition, it is possible to configure the content server’s users as sub-administrators for the refinery; giving them the right to log into and administer the refinery.

For details about managing refinery authentication and users, see Managing Refinery Authentication and Users (page 9-3).
Editing User Profiles

To change the password and view preferences (layout and skin) for refinery users, complete the following steps:

1. Log into the refinery. If the refinery is managing its own authentication, you will need to log in as the refadmin user. If a content server is managing the refinery’s authentication, you will need to log in as the sysadmin user or a user that has been configured to be a sub-administrator for the refinery. For more information, see Managing Refinery Authentication and Users (page 9-3).

2. Click User Profile in the main menu. The User Profile Page is displayed.

3. You can change your password only when logged into the refinery as the refadmin user. The default password for the refadmin user is idc. When logged into the refinery as the content server sysadmin user or a refinery sub-administrator, you cannot change the user’s password. You can change passwords for the sysadmin user and refinery sub-administrators only on the content server.

4. You can change the refinery Layout and Skin for any user. The defaults are as follows:
   - Layout—Trays
   - Skin—Oracle

5. To revert to the last saved settings, click Reset.

6. Click Update to save your changes.

**Important:** When you are using either the refadmin or sysadmin user, it is strongly recommended that you change the password from the default to another value.

Managing Refinery Authentication and Users

By default, a refinery manages its own authentication and has only one user: refadmin. However, either during or after installation, a content server can be configured to manage the refinery’s authentication (the content server will own the refinery’s user base).

To configure a content server to manage a refinery’s authentication and manage refinery users, complete the following steps:

1. Log into the content server as an administrator.

2. Choose Administration—Providers. The Providers Page is displayed.
Performing Refinery Administration

3. In the Providers table, click **Info** in the Actions column for the refinery provider to edit. The Provider Information Page is displayed.

   **Note:** For details on adding a refinery as a provider to a content server, see Configuring Refinery Providers (page 5-9).

4. Click **Edit**. The Add/Edit Outgoing Provider Page is displayed.

5. Check the **Proxied** check box to enable the content server to manage the refinery’s authentication. The content server will own the refinery’s user base. If the Proxied check box is cleared, the refinery will manage its own authentication, and the only user will be the refadmin user.

6. Click **Update** to save the changes and return to the Providers Page.

7. Restart the content server.

8. The default system administration user for the refinery is now the sysadmin user. To configure other content server users as sub-administrators for the refinery (giving them the right to log into and administer the refinery), complete the following steps:

   a. Launch the content server User Admin applet.
   
   b. Select **Security—Permissions by Role**. The Permissions by Role screen is displayed.
   
   c. Click **Add New Role**.

   d. Name the role **refineryadmin**.

   e. Click **OK**.

   f. Grant Read (R) rights to the refineryadmin role for both the Public and Secure groups. Optionally, you can grant applet rights.

   g. Click **Close** to exit the Permissions by Role screen.

   h. Restart the content server.

   i. Restart the refinery.

   j. Restart the web server.

   **Important:** You must name the role **refineryadmin**, exactly.

   e. Click **OK**.

   f. Grant Read (R) rights to the refineryadmin role for both the Public and Secure groups. Optionally, you can grant applet rights.

   g. Click **Close** to exit the Permissions by Role screen.

   h. Restart the content server.

   i. Restart the refinery.

   j. Restart the web server.

   **Important:** You must restart the web server to apply the changes made to the SecurityInfo.hda file. Also, make sure that you restart the web server after restarting the content server and the refinery.
Performing Refinery Administration

k. On the main User Admin screen, select a content server user and click **Edit**. The Edit User screen is displayed.
l. Select the **Roles** tab.
m. Click **Add Role**.
n. Select the refineryadmin role.
o. Click **OK**.
p. Repeat steps k–o to add the refineryadmin role to additional users. Users with the refineryadmin role can log into and administer the refinery.
q. Click **OK** to exit the Edit User screen.

**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**

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
<th>Content Server Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERROR</td>
<td>There was an unexpected error in processing the request.</td>
<td>The content item is left in GenWWW status and removed from the content server’s pre-converted queue.</td>
</tr>
<tr>
<td>NEVER_ACCEPT</td>
<td>The refinery is not configured to accept the conversion, and it will never accept the job.</td>
<td>The refinery provider is marked as unavailable until the conversion job is cleared from the pre-converted queue</td>
</tr>
</tbody>
</table>
Performing Refinery Administration

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).

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
<th>Content Server Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPT</td>
<td>The refinery will take the conversion job.</td>
<td>The job is removed from the pre-converted queue, transferred to the refinery, and expected to be converted.</td>
</tr>
<tr>
<td>BUSY</td>
<td>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.</td>
<td>The refinery provider is not used again until the RefineryBusyTimeSeconds it provides to the content server has elapsed.</td>
</tr>
</tbody>
</table>

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 add-ons 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:

- **Inbound 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 (page 6-12).
Performing Refinery Administration

- **Add/Edit Outgoing 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).
  - **Number of seconds the refinery should be considered busy**—you can 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.
  - **Maximum conversions**—you can specify the maximum number of jobs (across all refinery queues) for each conversion type. The default is 0 (unlimited).
PERFORMING AGENT ADMINISTRATION

This section covers the following topics:

- Enabling Verbose Logging (page 9-9)
- Deleting Agents (page 9-9)

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.

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. If there are conversion jobs listed in the refinery agent’s pre or post-converted queue, the refinery agent cannot be deleted. You can stop sending new conversion jobs to the refinery by editing the refinery provider on the content server and selecting the **Inbound Refinery Read Only Mode** check box. For details, see Editing Refinery Providers (page 5-11).

When the queues are empty, click **Delete Agent**.

**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, database 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.

**Note:** 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 (page 9-12) and Using the System Properties Utility (page 9-14).
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. If it is receiving too many requests, an e-mail is sent to the system administrator regarding load performance.
- Information about the memory cache for the system, and is useful in troubleshooting any "out of memory" errors you may receive. This is important when running the content 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. 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**.
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.

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.

USING ADMIN SERVER

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.

During installation you can choose if an Admin Server should be installed and configured to manage the refinery, or if the refinery should be added to an existing admin server on the same computer. You can also add the refinery to an existing Admin Server after installation. For details, see Adding Refineries to an Admin Server (page 4-10).

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 is displayed.

Note: For more information about using Admin Server, refer to the documentation provided with Content Server.
**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 **Refinery Administration—Actions—Publish dynamic layout files**. The PUBLISH_WEBLAYOUT_FILES service is executed. All dynamic refinery layout files (.css files and .js files) are published from the `<refinery_install_dir>/shared/config/templates` directory to the `weblayout` directory. This service is used when customizing your refinery.

   **Note:** The PUBLISH_WEBLAYOUT_FILES service is also executed each time your refinery is restarted.

3. To publish your static layout files, select **Refinery Administration—Actions—Publish static layout files**. The PUBLISH_STATIC_FILES service is executed. All static layout files (graphic files) are published from the `<refinery_install_dir>/shared/publish` directory to the `weblayout` directory. This service is used when customizing your refinery.

   **Note:** 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.

   **Note:** For more information about customizing Inbound Refinery, refer to the documentation provided with Content Server.

**USING ADMINISTRATION UTILITIES**

This section covers the following topics:

- Using the System Properties Utility (page 9-14)
- Using the Component Wizard Utility (page 9-14)
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—Stellent Content Server—<refinery_instance>—Utilities—System Properties.
- **UNIX**: Run the System_Properties 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

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, refer to the documentation provided with Content Server.

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.

**Note:** For more information about using the Component Wizard utility and component development, refer to the *Working with Components* guide and other Content Server documentation for developers.
**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:

- `<content_server_install_dir><instance_name>\weblayout\`
- `<content_server_install_dir><instance_name>\vault\`
- `<content_server_install_dir><instance_name>\shared\`
- `<content_server_install_dir><instance_name>\data\`
- `<content_server_install_dir><instance_name>\search\`

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

Exclude the following Inbound Refinery directory from active virus scanning:

- `<inbound_refinery_install_dir>\vault\temp\`
- `<inbound_refinery_install_dir>\vault\`
- `<inbound_refinery_install_dir>\weblayout\`
- `<inbound_refinery_install_dir>\shared\`
- `<inbound_refinery_install_dir>\data\`

**Tech 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.
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’).

**Note:** 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 applet:
   - **Windows:** From the Windows Start menu, select Programs—Stellent Inbound Refinery—[Instance Name]—Utilities—System Properties.
   - **UNIX:** Start the SystemProperties utility, 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).
**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 applet:
   - **Windows:** From the Windows Start menu, select Programs—Stellent Inbound Refinery—[Instance Name]—Utilities—System Properties.
   - **UNIX:** Start the SystemProperties utility, 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).
USER PROFILE PAGE

The User Profile page enables you to change settings for the refadmin or sysadmin user. Access this page by clicking User Profile in the main menu.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Password field</td>
<td>Enter the new password for the refadmin or sysadmin user.</td>
</tr>
<tr>
<td>Confirm password field</td>
<td>Renter the new password for the refadmin or sysadmin user for confirmation.</td>
</tr>
<tr>
<td>Layout drop-down menu</td>
<td>Select the layout view. The default view is Trays.</td>
</tr>
<tr>
<td>Skin drop-down menu</td>
<td>Select the layout skin. The default skin is Oracle.</td>
</tr>
<tr>
<td>Update button</td>
<td>Saves changes to settings.</td>
</tr>
<tr>
<td>Reset button</td>
<td>Reverts to the last saved settings.</td>
</tr>
</tbody>
</table>
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 page by selecting Refinery Administration—Agent Management from the navigation menu.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent Name column</td>
<td>The name of an agent that has sent at least one conversion job to the refinery.</td>
</tr>
<tr>
<td>Current Status column</td>
<td>The current status of the agent.</td>
</tr>
<tr>
<td>Agent Options column</td>
<td>Select the <strong>Enable Verbose Logging</strong> check box to enable verbose logging in the corresponding agent logs.</td>
</tr>
<tr>
<td>Actions menu</td>
<td>Select one of the following actions:</td>
</tr>
<tr>
<td></td>
<td>• <strong>View Detailed Status</strong>—displays the Agent Status Page for the refinery agent.</td>
</tr>
<tr>
<td></td>
<td>• <strong>View Conversion History</strong>—displays the Conversion History Page for the refinery agent.</td>
</tr>
<tr>
<td></td>
<td>• <strong>View Agent Logs</strong>—displays the Agent Logs Page for the refinery agent.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Delete Agent</strong>—displays the Delete Agent Page, which enables you to delete the agent.</td>
</tr>
</tbody>
</table>
DELETE AGENT PAGE

The Delete Agent page enables you to delete an agent for the refinery. Access this page by selecting **Delete Agent** from the Actions menu for the agent on the **Agent Management Page**.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update button</td>
<td>Saves changes to settings.</td>
</tr>
<tr>
<td>Reset button</td>
<td>Reverts to the last saved settings.</td>
</tr>
</tbody>
</table>

### Delete Agent

**Agent Name:** cs1

**Queue Monitor Status:** Conversion queues are being monitored normally.

**Delete Status:** The agent cs1 cannot be deleted when there are items in the conversion queues. Both queues must be empty before proceeding.

**Pre-Converted Queue:** 2 items

<table>
<thead>
<tr>
<th>Conversion J</th>
<th>Content ID</th>
<th>Title</th>
<th>Content Type</th>
<th>Security Grp</th>
<th>Account</th>
<th>Conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>49</td>
<td>ref1_0000001</td>
<td>video2</td>
<td>ADACCT</td>
<td>Public</td>
<td></td>
<td>Digital Media</td>
</tr>
<tr>
<td>50</td>
<td>ref1_0000002</td>
<td>ppt1</td>
<td>ADACCT</td>
<td>Public</td>
<td></td>
<td>PowerPoint</td>
</tr>
</tbody>
</table>

**Post-Converted Queue:** 0 items

No items to display.

The Delete Agent page enables you to delete an agent for the refinery. Access this page by selecting **Delete Agent** from the Actions menu for the agent on the **Agent Management Page**.
# CONFIGURATION INFORMATION PAGE

<table>
<thead>
<tr>
<th>Configuration Information for ref1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration --&gt; Configuration info</td>
</tr>
</tbody>
</table>

## System Configuration
- **Server Name**: ref1
- **Version**: 10.1.3.3.0-dev idcprod1 (070309T044801) (Build:7.2.0.177)
- **Install Directory**: c:/ucm/ref1/

## Features And Components
- **Number of Installed Features**: 6
- **Number of Enabled Components**: 4
- **Number of Disabled Components**: 0

## Options And Others
- **Auto Number Prefix**: 
- **Use Accounts**: FALSE
- **NtlmSecurity Enabled**: FALSE
- **Allow get copy for user with read privilege**: FALSE
- **Allow only original contributor to check out**: FALSE
- **Java Version**: 1.5.0_07

The Configuration Information page provides an overview of the main system settings, including server parameters and options, installation directories, Internet properties, database 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. Access this page by selecting **Refinery Administration—Configuration Information** from the navigation menu.

**Note**: 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** (page 9-12) and **Using the System Properties Utility** (page 9-14).
**SYSTEM AUDIT INFORMATION PAGE**

The System Audit Information page enables you to view the system audit information for the refinery. Access this page by selecting **Refinery Administration—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.

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

- Information regarding whether the system is receiving too many requests. If it is receiving too many requests, an e-mail is sent to the system administrator regarding load performance.

- Information about the memory cache for the system, and is useful in troubleshooting any "out of memory" errors you may receive. This is important when running the content 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. 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.
The Providers page enables you to view provider information for the refinery. Access this page by selecting Refinery Administration—Providers from the navigation menu. You should not need to configure any refinery providers.
CONFIGURE WEB SERVER FILTER PAGE

Configure Web Server Filter

Disable GZIP Compression
By default, the content server compresses the HTML response pages for performance reasons. You may wish to disable it if CG_RECEIVE_DUMP or CG_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.

Update Reset

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 Refinery Administration—Filter Administration from the navigation menu.
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 Refinery Administration—Admin Server from the navigation menu.

During installation you can choose if an Admin Server should be installed and configured to manage the refinery, or if the refinery should be added to an existing admin server on the same computer. You can also add the refinery to an existing Admin Server after installation. For details, see Adding Refineries to an Admin Server (page 4-10).

**Note:** For more information about using Admin Server, refer to the documentation provided with Content Server.
Chapter 10

Troubleshooting Inbound Refinery Problems

Overview

This section covers the following topics:

- Troubleshooting Process for Refinery Issues (page 10-2)
- Refinery Installation Issues (page 10-4)
- Refinery Setup and Run Issues (page 10-5)
- Thumbnailing Issues (page 10-14)
- File Display Issues (page 10-14)
TROUBLESHOOTING PROCESS FOR REFINERY ISSUES

When troubleshooting refinery issues, you should complete the following basic troubleshooting steps:

Note: Before attempting to troubleshoot a refinery issue, it is often helpful to familiarize yourself with all information available for your conversion products. Have you read the documentation available for the products? Do you understand how the products should be installed, how they can be configured, and how they should function?

1. Identify the type of issue you are experiencing. For example, are you experiencing problems installing a product, upgrading a product, or converting a file? Go to the section for that type of issue.

2. Identify the category into which your issue falls. For example, which product are you having difficulty installing? Or, which type of file are you trying to convert? Go to the subsection for that category.

3. Identify the symptom that you are experiencing. For example, are you getting an error message during the software installation? Is a single file failing to convert? Are all files of the same type failing to convert? Is a file converting, but there is a specific problem with the output? Find your symptom in the list of symptoms for the category.

4. Look through the table of possible causes for the symptom, and try the recommended solutions.

5. If you are still having problems after trying all of the recommended solutions, contact support.
Figure 10-1  Troubleshooting process for refinery issues
**Refinery Installation Issues**

When troubleshooting Inbound Refinery installation issues, keep the following important considerations in mind:

- Inbound Refinery can be installed on the same machine as Content Server, or on a separate machine. If a lot of conversion will take place, Inbound Refinery should preferably not be on the Content Server machine because of performance issues.

- For more information on installing Inbound Refinery, refer to the *Inbound Refinery Installation Guide*.

There are no refinery installation issues documented currently.
**Refinery Setup and Run Issues**

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

- Inbound Refinery Won’t Run as Application or Service (page 10-5)
- Inbound Refinery Will Run as Application, But Not as Service (page 10-6)
- Inbound Refinery Service Keeps Stopping (page 10-7)
- Can’t Log Into Refinery After Installation (page 10-8)
- Refinery Error: ‘Unable to convert, native application reported: “Permission denied”’ (page 10-10)
- Samba Won’t Work with Inbound Refinery (page 10-11)

**Inbound Refinery Won’t Run as Application or Service**

Inbound Refinery won’t run as either an application or a service. If you try to run Inbound Refinery from a command line, you receive the following error message:

*Error: Cannot read the config.cfg.*

<table>
<thead>
<tr>
<th>Possible Causes</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun Java is not installed on the Inbound Refinery computer. Sun Java must be</td>
<td>Reinstall Inbound Refinery to reinstall the Sun JVM.</td>
</tr>
<tr>
<td>installed on both the content server computer and the Inbound Refinery computer.</td>
<td></td>
</tr>
</tbody>
</table>
## Troubleshooting Inbound Refinery Problems

### Inbound Refinery Will Run as Application, But Not as Service

Inbound Refinery will run as an application, but it will not run as a service. In some cases, you will receive the following error message when launching the service:

```
Error 1069: The service did not start due to a logon failure.
```

<table>
<thead>
<tr>
<th>Possible Causes</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copy the Sun Java files from the content server computer to the Inbound Refinery computer. Open the <code>intradoc.cfg</code> file located in the <code>&lt;refinery_install_dir&gt;/bin</code> directory and make sure the <code>JAVA_EXE</code> path is correct.</td>
<td>Download a copy of Sun Java from <a href="http://java.sun.com/downloads/">http://java.sun.com/downloads/</a> and install it on the Inbound Refinery computer. Open the <code>intradoc.cfg</code> file located in the <code>&lt;refinery_install_dir&gt;/bin</code> directory and make sure the <code>JAVA_EXE</code> path is correct.</td>
</tr>
</tbody>
</table>

### Possible Causes

<table>
<thead>
<tr>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make sure user linked to the Inbound Refinery service is valid and has the right to log on as a service.</td>
</tr>
<tr>
<td>Reboot the Inbound Refinery computer.</td>
</tr>
<tr>
<td>Try running as Inbound Refinery as an application, then retry running it as a service. Sometimes running Inbound Refinery as an application once will clear up problems with the service.</td>
</tr>
<tr>
<td>Delete and re-add the service in Inbound Refinery.</td>
</tr>
</tbody>
</table>
Inbound Refinery Service Keeps Stopping

The Inbound Refinery service will run for a short period of time when started, but then the service fails and stops.

<table>
<thead>
<tr>
<th>Possible Causes</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Java options settings in the intradoc.cfg file for the refinery.</td>
<td>Change the java options settings in the intradoc.cfg file for the Inbound Refinery connection. For details, see Setting Java Options in the intradoc.cfg File (page 10-7).</td>
</tr>
</tbody>
</table>

Setting Java Options in the intradoc.cfg File

1. Open the intradoc.cfg file located in the <refinery_install_dir>\bin\ directory in a text editor.

2. First, try the following setting:
   
   ```
   JAVA_SERVICE_EXTRA_OPTIONS=-Xrs
   ```

3. Save your changes to the intradoc.cfg file and restart the Inbound Refinery service.

4. If the first change is not successful, re-open the intradoc.cfg file and try the following setting:
   
   ```
   JvmCommandLine=$JAVA_EXE $JAVA_SERVICE_EXTRA_OPTIONS $APPEND_CLASSPATH $CLASSPATH $STARTUPCLASS
   ```

5. Save your changes to the intradoc.cfg file and restart the Inbound Refinery service.
Can’t Log Into Refinery After Installation

When I attempt to log into a refinery after installation, I get an error similar to the following:

"Content Server Access Denied

Access denied to Content Server managed resource. Error getting user credentials from proxied user cache. Unable to open file c:/ucm/cs1/data/users/proxied/ref1/userdb.txt. c:/ucm/cs1/data/users/proxied/ref1/userdb.txt contains an invalid path."

<table>
<thead>
<tr>
<th>Possible Causes</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The refinery has been proxied to the content server, but the InboundRefinerySupport component has not been installed and enabled on the content server.</td>
<td>Install and enable the InboundRefinerySupport component on the content server.</td>
</tr>
</tbody>
</table>
**Files Intermittently Stuck in GenWWW Status**

When running Inbound Refinery on Windows 2003, files intermittently get stuck in GenWWW. There are no conversion errors, and when resubmitted, the files are successfully converted.

<table>
<thead>
<tr>
<th>Possible Causes</th>
<th>Solutions</th>
</tr>
</thead>
</table>
| The problem is directly related to known file locking/deleting issues on Windows 2003 and typically occurs when the Content Server resides on a UNIX platform and Samba is used to connect to the Windows 2003 machine. However, the problem can also occur when you are using Inbound Refinery on Windows 2003 and it resides on a separate physical machine from the Content Server. Please see the following knowledgebase articles on Microsoft’s web site to better understand this Windows 2003 issues: http://support.microsoft.com/default.aspx?scid=kb;en-us;885451 http://support.microsoft.com/kb/811492 | In order to confirm you are experiencing the issues described in Microsoft’s Knowledgebase entries, delete several files on your Windows 2003 machine using a remote client. If you witness a delay of up to 40 seconds in the file deletion it is likely that the Windows 2003 locking/deleting issue is the problem. Microsoft offers two solutions to this issue.  
1. Microsoft has a hotfix for Windows 2003 that can be shipped on a request-only basis. However, Microsoft's recommendation is to wait until the next service pack unless you are 'severely' affected by the problem. 
2. The alternate solution from Microsoft is to disable "opportunistic locking" on the Windows 2003 server. The solution to disable opportunistic locking does not impact the normal file locking used when writing a file. Rather, opportunistic locking is a speed tweak to the file locking process that can be safely disabled if it is causing problems. Additional information on opportunistic locks is contained in the Samba help files.  
If you need specific information on how to disable opportunistic locking on the Windows 2003 server, please see the following Microsoft article: http://support.microsoft.com/kb/296264 |
**Refinery Error: ‘Unable to convert, native application reported: “Permission denied”’**

You are running Inbound Refinery as a service, but it will not convert any documents and the following error message is displayed in the Inbound Refinery log:

Unable to convert, native application reported: ‘Permission denied’

This error will usually occur when Samba is used, with the content server on UNIX and Inbound Refinery on Microsoft Windows.

<table>
<thead>
<tr>
<th>Possible Causes</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>You are using AutoExNT to map the UNIX/Linux volumes via mapped network drive to Samba, and the DCOM permissions are not set properly for the user running the Inbound Refinery service.</td>
<td>Change the DCOM permissions for the user running the Inbound Refinery Service. For details, see Changing DCOM Permissions (page 10-10).</td>
</tr>
</tbody>
</table>

**Changing DCOM Permissions**

1. Launch `dcmocnfg.exe` to check user permissions for the user running the Inbound Refinery service.
2. On the Default Security tab, make sure the domain user is added to Connect, Access, Launch, and Configuration.
3. Restart the Inbound Refinery service.
Samba Won’t Work with Inbound Refinery

Samba and Inbound Refinery have been installed, but they are not working properly. This error will typically occur with the content server running on UNIX or Linux.

<table>
<thead>
<tr>
<th>Possible Causes</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samba and Inbound Refinery have not been installed and set up properly.</td>
<td>Re-install Samba and Inbound Refinery. For details, see Installing and Setting Up Samba to Work With Inbound Refinery (page 10-11).</td>
</tr>
</tbody>
</table>

Installing and Setting Up Samba to Work With Inbound Refinery

The following procedure describes how to install and configure Samba on a Solaris workstation. In this example Samba is set up so that a UNIX Solaris workstation running a content server will work with a refinery on a Windows 2000 workstation. It is assumed that the Inbound Refinery software has been installed and tested on the UNIX workstation (with Apache, iPlanet, or Netscape), and that the content server is up and running.

**Important:** The user name that was created under UNIX to run the content server will be the user that is referenced within the Samba configuration.

1. Install Samba. The Samba software is an application that allows file sharing between UNIX and Windows. A Samba connection allows a Windows workstation to map a drive to a UNIX directory and thus share files. The Samba software is publicly available through http://www.samba.org/. The version of Samba used in this example is the Solaris 2.8 binary version. As per the Samba installation instructions, unzip the download software (gzip) and install the package using the pkgadd -d command.

2. The Samba software can be configured by manually editing the configuration files or by using the Samba GUI (recommended). The Samba GUI is also called the Samba Admin Tool or the Samba SWAT interface. To use the Samba GUI, launch the samba admin tool from the browser on port 901. For example:

   mspsupsun2:901

3. Set the Samba global variables as shown in the following diagram. The Workgroup, WINS Server, Security, and Guest Account settings are the most critical to get things working.
4. Set the Samba share parameters as shown in the following diagram. These settings automatically access the shared directories from a Windows workstation (for example, lreepnote) that is logged in as any user (for example, lreep). No logins or passwords need to be applied manually. The Status function is then used to start and stop the Samba services. You can then map any windows drive (for example, R: for Refinery) to this shared directory.
5. Install Inbound Refinery. Inbound Refinery should be installed on the Windows workstation after setting up the drive share (for example, R: for Refinery). For more information, refer to the Refinery Products Installation Guide for Microsoft Windows.

**Important:** If the Windows workstation has a content server installation, the Inbound Refinery installation will get confused. It is necessary to stop the content server and to move the content server files (or to perform an uninstall) to force Inbound Refinery Setup to perform a clean installation.
THUMBNAILING ISSUES

There are no thumbnailing issues documented currently.

FILE DISPLAY ISSUES

There are no file display issues documented currently.
FILE FORMATS CONVERTED BY OUTSIDE IN IMAGE EXPORT

OVERVIEW

Inbound Refinery includes Outside In Image Export 8.1.9, 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.

This section lists the file formats that can be converted using Outside In Image Export on either Windows or UNIX. The file formats are organized into the following categories:

- Word Processing Formats (page A-2)
- Desktop Publishing Formats (page A-4)
- Database Formats (page A-5)
- Spreadsheet Formats (page A-6)
- Presentation Formats (page A-7)
- Graphic Formats (page A-8)
- Compressed Formats (page A-11)
- E-mail Formats (page A-11)
- Other Formats (page A-13)
# Word Processing Formats

The following word processing file formats can be converted:

<table>
<thead>
<tr>
<th>File formats</th>
<th>Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSI Text</td>
<td>7 &amp; 8 bit</td>
</tr>
<tr>
<td>ASCII Text</td>
<td>7 &amp; 8 bit</td>
</tr>
<tr>
<td>DEC WPS Plus (DX)</td>
<td>Versions through 3.1</td>
</tr>
<tr>
<td>DEC WPS Plus (WPL)</td>
<td>Versions through 4.1</td>
</tr>
<tr>
<td>DisplayWrite 2 &amp; 3 (TXT)</td>
<td>All versions</td>
</tr>
<tr>
<td>DisplayWrite 4 &amp; 5</td>
<td>Versions through 2.0</td>
</tr>
<tr>
<td>EBCDIC</td>
<td>All versions</td>
</tr>
<tr>
<td>Enable</td>
<td>Versions 3.0, 4.0, and 4.5</td>
</tr>
<tr>
<td>First Choice</td>
<td>Versions through 3.0</td>
</tr>
<tr>
<td>Framework</td>
<td>Version 3.0</td>
</tr>
<tr>
<td>Hangul</td>
<td>Versions 97 and 2002</td>
</tr>
<tr>
<td>IBM FFT</td>
<td>All versions</td>
</tr>
<tr>
<td>IBM Revisable Form Text</td>
<td>All versions</td>
</tr>
<tr>
<td>IBM Writing Assistant</td>
<td>Version 1.01</td>
</tr>
<tr>
<td>JustSystems Ichitaro</td>
<td>Versions 4.x–6.x, 8.x–13.x, and 2004</td>
</tr>
<tr>
<td>JustWrite</td>
<td>Versions through 3.0</td>
</tr>
<tr>
<td>Legacy</td>
<td>Versions through 1.1</td>
</tr>
<tr>
<td>Lotus AMI/AMI Professional</td>
<td>Versions through 3.1</td>
</tr>
<tr>
<td>Lotus Manuscript</td>
<td>Version 2.0</td>
</tr>
<tr>
<td>Lotus Word Pro (non-Window)</td>
<td>Versions SmartSuite 97, Millennium, and Millennium 9.6 (text only)</td>
</tr>
<tr>
<td>Lotus Word Pro (Window)</td>
<td>Versions SmartSuite 96 and 97, Millennium, and Millennium 9.6</td>
</tr>
<tr>
<td>File formats</td>
<td>Versions</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>MacWrite II</td>
<td>Version 1.1</td>
</tr>
<tr>
<td>MASS11</td>
<td>Versions through 8.0</td>
</tr>
<tr>
<td>Microsoft Rich Text Format (RTF)</td>
<td>All versions</td>
</tr>
<tr>
<td>Microsoft Word (DOS)</td>
<td>Versions through 6.0</td>
</tr>
<tr>
<td>Microsoft Word (Mac)</td>
<td>Versions 4.0–2004</td>
</tr>
<tr>
<td>Microsoft Word (Windows)</td>
<td>Versions through 2007</td>
</tr>
<tr>
<td>Microsoft WordPad</td>
<td>All versions</td>
</tr>
<tr>
<td>Microsoft Works (DOS)</td>
<td>Versions through 2.0</td>
</tr>
<tr>
<td>Microsoft Works (Mac)</td>
<td>Versions through 2.0</td>
</tr>
<tr>
<td>Microsoft Works (Windows)</td>
<td>Versions through 4.0</td>
</tr>
<tr>
<td>Microsoft Windows Write</td>
<td>Versions through 3.0</td>
</tr>
<tr>
<td>MultiMate</td>
<td>Versions through 4.0</td>
</tr>
<tr>
<td>Navy DIF</td>
<td>All versions</td>
</tr>
<tr>
<td>Nota Bene</td>
<td>Version 3.0</td>
</tr>
<tr>
<td>Novell Perfect Works</td>
<td>Version 2.0</td>
</tr>
<tr>
<td>Novell/Corel WordPerfect (DOS)</td>
<td>Versions through 6.1</td>
</tr>
<tr>
<td>Novell/Corel WordPerfect (Mac)</td>
<td>Versions 1.02 through 3.0</td>
</tr>
<tr>
<td>Novell/Corel WordPerfect (Windows)</td>
<td>Versions through 12.0</td>
</tr>
<tr>
<td>Office Writer</td>
<td>Versions 4.0–6.0</td>
</tr>
<tr>
<td>OpenOffice Writer (Windows &amp; UNIX)</td>
<td>OpenOffice versions 1.1 and 2.0</td>
</tr>
<tr>
<td>PC-File Letter</td>
<td>Versions through 5.0</td>
</tr>
<tr>
<td>PC-File+ Letter</td>
<td>Versions through 3.0</td>
</tr>
<tr>
<td>PFS:Write</td>
<td>Versions A, B, and C</td>
</tr>
<tr>
<td>Professional Write (DOS)</td>
<td>Versions through 2.1</td>
</tr>
<tr>
<td>Professional Write Plus (Windows)</td>
<td>Version 1.0</td>
</tr>
</tbody>
</table>
### Desktop Publishing Formats

The following desktop publishing file formats can be converted:

<table>
<thead>
<tr>
<th>File formats</th>
<th>Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adobe FrameMaker (MIF)</td>
<td>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)</td>
</tr>
</tbody>
</table>

---

### File Formats Converted by Outside In Image Export

The following desktop publishing file formats can be converted into various versions:

<table>
<thead>
<tr>
<th>File formats</th>
<th>Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q&amp;A (DOS)</td>
<td>Version 2.0</td>
</tr>
<tr>
<td>Q&amp;A Write (Windows)</td>
<td>Version 3.0</td>
</tr>
<tr>
<td>Samna Word</td>
<td>Versions through Samna Word IV+</td>
</tr>
<tr>
<td>Signature</td>
<td>Version 1.0</td>
</tr>
<tr>
<td>SmartWare II</td>
<td>Version 1.02</td>
</tr>
<tr>
<td>Sprint</td>
<td>Versions through 1.0</td>
</tr>
<tr>
<td>StarOffice Writer</td>
<td>Versions 5.2 (text only) and 6.x–8.x</td>
</tr>
<tr>
<td>Total Word</td>
<td>Version 1.2</td>
</tr>
<tr>
<td>Unicode Text</td>
<td>All versions</td>
</tr>
<tr>
<td>UTF-8</td>
<td>All versions</td>
</tr>
<tr>
<td>Volkswriter 3 &amp; 4</td>
<td>Versions through 1.0</td>
</tr>
<tr>
<td>Wang PC (IWP)</td>
<td>Versions through 2.6</td>
</tr>
<tr>
<td>WordMARC</td>
<td>Versions through Composer Plus</td>
</tr>
<tr>
<td>WordStar (DOS)</td>
<td>Versions through 7.0</td>
</tr>
<tr>
<td>WordStar (Windows)</td>
<td>Version 1.0</td>
</tr>
<tr>
<td>WordStar 2000 (DOS)</td>
<td>Versions through 3.0</td>
</tr>
<tr>
<td>XyWrite</td>
<td>Versions through III Plus</td>
</tr>
</tbody>
</table>
## Database Formats

The following database file formats can be converted:

<table>
<thead>
<tr>
<th>File formats</th>
<th>Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>Versions through 2.0</td>
</tr>
<tr>
<td>dBASE</td>
<td>Versions through 5.0</td>
</tr>
<tr>
<td>DataEase</td>
<td>Version 4.x</td>
</tr>
<tr>
<td>dBXL</td>
<td>Version 1.3</td>
</tr>
<tr>
<td>Enable</td>
<td>Versions 3.0, 4.0, and 4.5</td>
</tr>
<tr>
<td>First Choice</td>
<td>Versions through 3.0</td>
</tr>
<tr>
<td>FoxBase</td>
<td>Version 2.1</td>
</tr>
<tr>
<td>Framework</td>
<td>Version 3.0</td>
</tr>
<tr>
<td>Microsoft Works (Windows)</td>
<td>Versions through 4.0</td>
</tr>
<tr>
<td>Microsoft Works (DOS)</td>
<td>Versions through 2.0</td>
</tr>
<tr>
<td>Microsoft Works (Mac)</td>
<td>Versions through 2.0</td>
</tr>
<tr>
<td>Paradox (DOS)</td>
<td>Versions through 4.0</td>
</tr>
<tr>
<td>Paradox (Windows)</td>
<td>Versions through 1.0</td>
</tr>
<tr>
<td>Personal R:BASE</td>
<td>Version 1.0</td>
</tr>
<tr>
<td>R:BASE 5000</td>
<td>Versions through 3.1</td>
</tr>
<tr>
<td>R:BASE System V</td>
<td>Version 1.0</td>
</tr>
<tr>
<td>Reflex</td>
<td>Version 2.0</td>
</tr>
<tr>
<td>Q &amp; A</td>
<td>Versions through 2.0</td>
</tr>
<tr>
<td>SmartWare II</td>
<td>Version 1.02</td>
</tr>
</tbody>
</table>
# SPREADSHEET FORMATS

The following spreadsheet file formats can be converted:

<table>
<thead>
<tr>
<th>File formats</th>
<th>Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable</td>
<td>Versions 3.0, 4.0, and 4.5</td>
</tr>
<tr>
<td>First Choice</td>
<td>Versions through 3.0</td>
</tr>
<tr>
<td>Framework</td>
<td>Version 3.0</td>
</tr>
<tr>
<td>Lotus 1-2-3 (DOS &amp; Windows)</td>
<td>Versions through 5.0</td>
</tr>
<tr>
<td>Lotus 1-2-3 (OS/2)</td>
<td>Versions through 2.0</td>
</tr>
<tr>
<td>Lotus 1-2-3 Charts (DOS &amp; Windows)</td>
<td>Versions through 5.0</td>
</tr>
<tr>
<td>Lotus 1-2-3 for SmartSuite</td>
<td>Versions 97–Millennium 9.6</td>
</tr>
<tr>
<td>Lotus Symphony</td>
<td>Versions 1.0, 1.1, and 2.0</td>
</tr>
<tr>
<td>Mac Works</td>
<td>Version 2.0</td>
</tr>
<tr>
<td>Microsoft Excel Charts</td>
<td>Versions 2.x–7.0</td>
</tr>
<tr>
<td>Microsoft Excel (Windows)</td>
<td>Versions 2.2 through 2007</td>
</tr>
<tr>
<td>Microsoft Multiplan</td>
<td>Version 4.0</td>
</tr>
<tr>
<td>Microsoft Works (Windows)</td>
<td>Versions through 4.0</td>
</tr>
<tr>
<td>Microsoft Works (DOS)</td>
<td>Versions through 2.0</td>
</tr>
<tr>
<td>Microsoft Works (Mac)</td>
<td>Versions through 2.0</td>
</tr>
<tr>
<td>Mosaic Twin</td>
<td>Version 2.5</td>
</tr>
<tr>
<td>Novell Perfect Works</td>
<td>Version 2.0</td>
</tr>
<tr>
<td>PFS:Professional Plan</td>
<td>Version 1.0</td>
</tr>
<tr>
<td>Quattro Pro (DOS)</td>
<td>Versions through 5.0 (text only)</td>
</tr>
<tr>
<td>Quattro Pro (Windows)</td>
<td>Versions through 12.0 (text only)</td>
</tr>
<tr>
<td>SmartWare II</td>
<td>Version 1.02</td>
</tr>
</tbody>
</table>
**PRESENTATION FORMATS**

The following presentation file formats can be converted:

<table>
<thead>
<tr>
<th>File formats</th>
<th>Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corel/Novell Presentations</td>
<td>Versions through 12.0</td>
</tr>
<tr>
<td>Harvard Graphics (DOS)</td>
<td>Versions 2.x and 3.x</td>
</tr>
<tr>
<td>Harvard Graphics (Windows)</td>
<td>Windows versions</td>
</tr>
<tr>
<td>Freelance (Windows)</td>
<td>Versions through Millennium 9.6</td>
</tr>
<tr>
<td>Freelance (OS/2)</td>
<td>Versions through 2.0</td>
</tr>
<tr>
<td>Microsoft PowerPoint (Windows)</td>
<td>Versions 3.0–2007</td>
</tr>
<tr>
<td>Microsoft PowerPoint (Mac)</td>
<td>Versions 4.0–v.X</td>
</tr>
<tr>
<td>StarOffice/OpenOffice Impress (Windows and UNIX)</td>
<td>StarOffice versions 5.2 (text only) and 6.x–8.x (full support) and OpenOffice versions 1.1 and 2.0 (text only)</td>
</tr>
</tbody>
</table>
# Graphic Formats

The following graphic file formats can be converted:

<table>
<thead>
<tr>
<th>File formats</th>
<th>Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adobe Photoshop (PSD)</td>
<td>All versions</td>
</tr>
<tr>
<td>Adobe Illustrator</td>
<td>Versions 7.0 and 9.0</td>
</tr>
<tr>
<td>Adobe FrameMaker graphics (FMV)</td>
<td>Vector/raster through 5.0</td>
</tr>
<tr>
<td>Adobe Acrobat (PDF)</td>
<td>Versions 1.0, 2.1, 3.0, 4.0, 5.0, 6.0, and 7.0 (including Japanese PDF)</td>
</tr>
<tr>
<td>Ami Draw (SDW)</td>
<td>Ami Draw</td>
</tr>
<tr>
<td>AutoCAD Interchange and Native Drawing formats (DXF and DWG)</td>
<td>AutoCAD Drawing Versions 2.5–2.6, 9.0–14.0, 2000i, and 2002</td>
</tr>
<tr>
<td>AutoCAD Drawing</td>
<td>Versions 2.5–2.6, 9.0–14.0, 2000i and 2002</td>
</tr>
<tr>
<td>AutoShade Rendering (RND)</td>
<td>Version 2.0</td>
</tr>
<tr>
<td>Binary Group 3 Fax</td>
<td>All versions</td>
</tr>
<tr>
<td>Bitmap (BMP, RLE, ICO, CUR, OS/2 DIB &amp; WARP)</td>
<td>All versions</td>
</tr>
<tr>
<td>CALS Raster (GP4)</td>
<td>Type I and Type II</td>
</tr>
<tr>
<td>Corel Clipart format (CMX)</td>
<td>Versions 5–6</td>
</tr>
<tr>
<td>Corel Draw (CDR)</td>
<td>Versions 3.x–8.x</td>
</tr>
<tr>
<td>Corel Draw (CDR with TIFF header)</td>
<td>Versions 2.x–9.x</td>
</tr>
<tr>
<td>Computer Graphics Metafile (CGM)</td>
<td>ANSI, CALS NIST version 3.0</td>
</tr>
<tr>
<td>Encapsulated PostScript (EPS)</td>
<td>TIFF header only</td>
</tr>
<tr>
<td>GEM Paint (IMG)</td>
<td>All versions</td>
</tr>
<tr>
<td>Graphics Environment Mgr (GEM)</td>
<td>Bitmap and vector</td>
</tr>
<tr>
<td>Graphics Interchange Format (GIF)</td>
<td>All versions</td>
</tr>
<tr>
<td>Hewlett Packard Graphics Language (HPGL)</td>
<td>Version 2</td>
</tr>
<tr>
<td>File formats</td>
<td>Versions</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>IBM Graphics Data Format (GDF)</td>
<td>Version 1.0</td>
</tr>
<tr>
<td>IBM Picture Interchange Format (PIF)</td>
<td>Version 1.0</td>
</tr>
<tr>
<td>Initial Graphics Exchange Spec (IGES)</td>
<td>Version 5.1</td>
</tr>
<tr>
<td>JBIG2</td>
<td>JBIG2 graphic embeddings in PDF files</td>
</tr>
<tr>
<td>JFIF (JPEG not in TIFF format)</td>
<td>All versions</td>
</tr>
<tr>
<td>JPEG (including EXIF)</td>
<td>All versions</td>
</tr>
<tr>
<td>Kodak Flash Pix (FPX)</td>
<td>All versions</td>
</tr>
<tr>
<td>Kodak Photo CD (PCD)</td>
<td>Version 1.0</td>
</tr>
<tr>
<td>Lotus PIC</td>
<td>All versions</td>
</tr>
<tr>
<td>Lotus Snapshot</td>
<td>All versions</td>
</tr>
<tr>
<td>Macintosh PICT1 &amp; PICT2</td>
<td>Bitmap only</td>
</tr>
<tr>
<td>MacPaint (PNTG)</td>
<td>All versions</td>
</tr>
<tr>
<td>Micrografx Draw (DRW)</td>
<td>Versions through 4.0</td>
</tr>
<tr>
<td>Micrografx Designer (DRW)</td>
<td>Versions through 3.1</td>
</tr>
<tr>
<td>Micrografx Designer (DSF)</td>
<td>Windows 95, version 6.0</td>
</tr>
<tr>
<td>Novell PerfectWorks (Draw)</td>
<td>Version 2.0</td>
</tr>
<tr>
<td>OS/2 PM Metafile (MET)</td>
<td>Version 3.0</td>
</tr>
<tr>
<td>Paint Shop Pro 6 (PSP)</td>
<td>Windows only, versions 5.0–6.0</td>
</tr>
<tr>
<td>PC Paintbrush (PCX and DCX)</td>
<td>All versions</td>
</tr>
<tr>
<td>Portable Bitmap (PBM)</td>
<td>All versions</td>
</tr>
<tr>
<td>Portable Graymap (PGM)</td>
<td>No specific version</td>
</tr>
<tr>
<td>Portable Network Graphics (PNG)</td>
<td>Version 1.0</td>
</tr>
<tr>
<td>Portable Pixmap (PPM)</td>
<td>No specific version</td>
</tr>
<tr>
<td>Postscript (PS)</td>
<td>Levels 1–2</td>
</tr>
<tr>
<td>Progressive JPEG</td>
<td>No specific version</td>
</tr>
<tr>
<td>File formats</td>
<td>Versions</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Sun Raster (SRS)</td>
<td>No specific version</td>
</tr>
<tr>
<td>StarOffice/OpenOffice Draw (Windows and UNIX)</td>
<td>StarOffice versions 5.2–8.x and OpenOffice versions 1.1 and 2.0 (text only)</td>
</tr>
<tr>
<td>TIFF</td>
<td>Versions through 6</td>
</tr>
<tr>
<td>TIFF CCITT Group 3 &amp; 4</td>
<td>Versions through 6</td>
</tr>
<tr>
<td>Truevision TGA (TARGA)</td>
<td>Version 2</td>
</tr>
<tr>
<td>Visio (preview)</td>
<td>Version 4</td>
</tr>
<tr>
<td>WBMP</td>
<td>No specific version</td>
</tr>
<tr>
<td>Windows Enhanced Metafile (EMF)</td>
<td>No specific version</td>
</tr>
<tr>
<td>Windows Metafile (WMF)</td>
<td>No specific version</td>
</tr>
<tr>
<td>WordPerfect Graphics (WPG &amp; WPG2)</td>
<td>Versions through 2.0</td>
</tr>
<tr>
<td>X-Windows Bitmap (XBM)</td>
<td>x10 compatible</td>
</tr>
<tr>
<td>X-Windows Dump (XWD)</td>
<td>x10 compatible</td>
</tr>
<tr>
<td>X-WindowsPixmap (XPM)</td>
<td>x10 compatible</td>
</tr>
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</table>
COMPRESSED FORMATS

The following compressed file formats can be converted:

<table>
<thead>
<tr>
<th>File formats</th>
<th>Versions</th>
</tr>
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<tbody>
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<td>GZIP</td>
<td></td>
</tr>
<tr>
<td>LZA Self Extracting Compress</td>
<td></td>
</tr>
<tr>
<td>LZH Compress</td>
<td></td>
</tr>
<tr>
<td>Microsoft Binder</td>
<td>Versions 7.0–97 (conversion of files contained in the Binder file is supported only on Windows)</td>
</tr>
<tr>
<td>UUEncode</td>
<td></td>
</tr>
<tr>
<td>UNIX Compress</td>
<td></td>
</tr>
<tr>
<td>UNIX TAR</td>
<td></td>
</tr>
<tr>
<td>ZIP</td>
<td>PKWARE versions through 2.04g</td>
</tr>
</tbody>
</table>

E-MAIL FORMATS

The following e-mail file formats can be converted:

<table>
<thead>
<tr>
<th>File formats</th>
<th>Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Outlook Folder (PST)</td>
<td>Microsoft Outlook Folder and Microsoft Outlook Offline Folder files versions 97, 98, 2000, 2002, and 2003</td>
</tr>
<tr>
<td>MIME</td>
<td>MIME-encoded mail messages. For details, see MIME Support Notes (page A-12).</td>
</tr>
</tbody>
</table>
**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.

**Note:** The attachments of a MIME message can be stored in many formats. All supported attachment types are processed.
**OTHER FORMATS**

The following other file formats can be converted:

<table>
<thead>
<tr>
<th>File formats</th>
<th>Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executable (EXE, DLL)</td>
<td></td>
</tr>
<tr>
<td>HTML</td>
<td>Versions through 3.0 (with some limitations)</td>
</tr>
<tr>
<td>Macromedia Flash</td>
<td>Macromedia Flash 6.x, Macromedia Flash 7.x, and Macromedia Flash Lite (text only)</td>
</tr>
<tr>
<td>Microsoft Project</td>
<td>Versions 98–2003 (text only)</td>
</tr>
<tr>
<td>MP3</td>
<td>ID3 information</td>
</tr>
<tr>
<td>vCard, vCalendar</td>
<td>Version 2.1</td>
</tr>
<tr>
<td>Windows Executable</td>
<td></td>
</tr>
<tr>
<td>WML</td>
<td>Version 5.2</td>
</tr>
<tr>
<td>XML</td>
<td>Text only</td>
</tr>
<tr>
<td>Yahoo! Instant Messenger</td>
<td>Versions 6.x and 7.x</td>
</tr>
</tbody>
</table>
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**ZLIB LICENSE**

*zlib.h -- interface of the 'zlib' general purpose compression library

version 1.2.3, July 18th, 2005

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