

Oracle® Fusion Middleware

Understanding Oracle WebCenter Content

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This document provides an overview of Oracle WebCenter Content products which are used across the enterprise to cohesively track, manage, and dispose of content including written, digital images, and email.

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Preface

This document provides an overview of the products available as part of Oracle WebCenter Content.

Audience

This document is intended for anyone interested in an overview of the components and features that comprise Oracle WebCenter Content as well as complimentary products.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

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Related Documents

Detailed documentation is available for all of the products mentioned in this document. For more information, see the documentation listed in each section.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Introduction

This guide provides an overview of the features and applications associated with Oracle WebCenter Content, which is a comprehensive suite of digital content management tools that enable you to manage content through its life cycle from creation, collaboration, approval, revision, publishing, search, and retrieval to retention, archiving, and destruction.

This guide includes the following chapters:

- [Chapter 2, "Overview of Oracle WebCenter Content"](#)
- [Chapter 3, "Managing Oracle WebCenter Content: Imaging"](#)
- [Chapter 4, "Managing Oracle WebCenter Enterprise Capture"](#)
- [Chapter 5, "Integrating Oracle WebCenter Content into Your Environment"](#)
- [Chapter 6, "Overview of Oracle WebCenter Application Adapters"](#)
- [Chapter 7, "Overview of Oracle WebCenter Content Connectors"](#)

Much of the software discussed in this document uses other applications to increase functionality and flexibility. For example, Oracle WebCenter Enterprise Capture is used to capture physical documents into digital formats so that they can be archived into either WebCenter Content or WebCenter Content: Imaging.

Most of the software mentioned in this overview uses Oracle WebCenter Content to manage the files used in the product set. Because of this interaction, it is recommended that you read this entire document to familiarize yourself with the entire product family available with Oracle WebCenter Content.

Detailed documentation is available for all of the features and applications discussed in this document as well as online help. In addition to the guides, you can access information about product functionality with context-sensitive tooltips, quick help, and the help menu. Click the **Help** button where available on pages and screens to view context-sensitive help for that page or screen.

This chapter also discusses the following topics:

- [Section 1.1, "Why Use Oracle WebCenter Content?"](#)
- [Section 1.2, "Key Components of Oracle WebCenter Content"](#)
- [Section 1.3, "About Oracle WebCenter Content and Oracle WebLogic Server"](#)

1.1 Why Use Oracle WebCenter Content?

Content management used to be focused only on organizing content along departmental lines, for specific niche uses. Now many companies are struggling with

growth in the sheer amount of information to be managed. Content is often stored in disparate locations, including the corporate repository, laptop and desktop computers, email accounts as well as being stored in a variety of formats.

Oracle WebCenter Content can help a corporation unify, manage, and leverage all types of content across the entire enterprise. All corporate lines of business such as marketing, brand management, web presence, accounting, sales, human resources, and engineering can share the same tools and easily access the same information in a common repository.

By centralizing information and allowing access to information by qualified users, Oracle WebCenter Content provides cost savings, eliminates redundancy and increases efficiency. At the same time, information is properly managed, tracked, and disposed of as needed.

In addition to proper content management, enterprises are now faced with the need to manage content in conjunction with legislative compliance laws or for litigation purposes. Organizations must be able to find the correct information in a timely manner. It is also essential that information be preserved or disposed of in accordance with an enterprise-wide policy. If an organization cannot track content, it makes it difficult if not impossible to enforce corporate policies regarding information security and disposal.

1.2 Key Components of Oracle WebCenter Content

Oracle WebCenter Content, an Oracle Fusion Middleware component, is an integrated suite of applications designed for managing content. Oracle WebCenter Content contains the Oracle WebCenter Content Server, which is used to manage the content repository. Oracle WebCenter Content can be accessed using several methods. This section provides an overview of the following topics:

- [Section 1.2.1, "About the Content Repository"](#)
- [Section 1.2.2, "About Content Conversion"](#)
- [Section 1.2.3, "About Retention Management"](#)
- [Section 1.2.4, "About Imaging Management"](#)
- [Section 1.2.5, "About Accessing Oracle WebCenter Content"](#)

1.2.1 About the Content Repository

The content repository is used to store content and deliver it to users as needed in the correct format. By using specific repository tools, the Oracle WebCenter Content administrator can manage the unstructured content and make certain the correct content is delivered to the correct user according to security permissions and rights.

Oracle WebCenter Content Server is a web-based interface to the content repository and is used to manage the content life cycle from creation to disposition. Folders and folios can be used to manage groups of content, and content also can be categorized as it is checked in to the repository.

For more details about the content repository, see [Chapter 2, "Overview of Oracle WebCenter Content."](#)

1.2.2 About Content Conversion

Oracle WebCenter Content: Inbound Refinery is a conversion server that manages file conversions for electronic assets such as documents, digital images, and motion video.

In addition to conversion, Inbound Refinery provides thumbnail functionality for documents and images, storyboarding for video, and the ability to extract and use EXIF data from digital images and XMP data from electronic files generated from programs such as Adobe Photoshop and Adobe Illustrator. You can use Inbound Refinery to convert content items stored in the Content Server repository.

For more information, see [Section 2.2.2, "Converting Native Content to Different Formats."](#)

1.2.3 About Retention Management

Oracle WebCenter Content offers optional records management features integrated with the main application, and an Oracle WebCenter Content: Records application which provides additional functionality to allow organizations to track and preserve content. When the content has fulfilled its purpose in the organization, it can be disposed of or archived.

Organizations may need to retain content because of regulatory requirements or have a litigation-related need for effective and efficient retention management. The Records application can manage internal content stored within Content Server and external content, such as files stored in a warehouse or on an external repository. The software can manage the disposition schedule, search metadata associated with the external file, and manage an electronic rendition of an external file.

Options can be chosen during configuration to ensure that the system supported retention of records for a number of regulations (such as Sarbanes Oxley, DoD 5105.2, SEC Rule 17a, and HIPAA and FDA) and litigation-related and business-related needs the DoD 5015.2 standard (including Chapter 4). The software has been certified by the Joint Interoperability Test Command (JITC) to comply with that standard.

For more details about records and retention management, see [Section 2.4, "Managing Records Retention"](#) and [Section 2.5, "Managing Records Retention with Adapters."](#)

1.2.4 About Imaging Management

The Oracle WebCenter Content: Imaging application uses additional technologies such as Oracle WebCenter Enterprise Capture to capture and categorize transactional content to include physical and electronic documents. The content repository is used to store the images, which allows retention management features to manage the life cycle and disposition of imaging content.

In addition, tools such as Oracle BPM or BPEL can insert imaging content directly into business processes.

For more details about imaging, see [Chapter 3, "Managing Oracle WebCenter Content: Imaging"](#) and [Chapter 4, "Managing Oracle WebCenter Enterprise Capture."](#)

1.2.5 About Accessing Oracle WebCenter Content

Oracle WebCenter Content supports several methods for accessing and using the application and its features. For more information about these methods, see *Oracle Fusion Middleware Using Oracle WebCenter Content*.

- **Web browser interface:** Oracle WebCenter Content provides a web browser user interface for a simple and convenient way of accessing all of Oracle WebCenter Content features.
- **Desktop client:** Oracle WebCenter Content: Desktop can be installed on your computer to provide convenient access to Content Server from within popular

desktop applications (for example, Microsoft Windows Explorer, Microsoft Office application, email clients, and various web browsers).

- **Mobile client:** Oracle WebCenter Content offers mobile apps for iPhone, iPad, and Android phones, so you can access content stored in an Oracle WebCenter Content Server.

1.3 About Oracle WebCenter Content and Oracle WebLogic Server

Oracle WebCenter Content 11g is deployed in Oracle WebLogic Server, resulting in many significant changes from previous releases of Oracle Universal Content Management. This section summarizes those changes.

- [Section 1.3.1, "Installation Changes from 10g"](#)
- [Section 1.3.2, "Administrative Changes"](#)
- [Section 1.3.3, "Other Changes"](#)

1.3.1 Installation Changes from 10g

Oracle WebCenter Content uses the Oracle Universal Installer and the Repository Creation Utility (RCU). The following steps, detailed in *Oracle Fusion Middleware Installing and Configuring Oracle WebCenter Content*, are required to install the product:

1. Install WebLogic Suite
2. Install patch updates if needed
3. Set up a database schema
4. Unpack and run RCU
5. Unpack and run the installer
6. Create a domain using the Configuration Wizard
7. Start the servers in the domain

Other optional tasks, such as modifying memory arguments for managed servers and setting up a node manager, can also be done.

For details about installation and options, see *Oracle Fusion Middleware Installing and Configuring Oracle WebCenter Content*.

1.3.2 Administrative Changes

Oracle WebCenter Content uses an Oracle WebLogic Server datasource to communicate with the database where metadata and other information is stored. This database connectivity and the communication parameters are managed using the WebLogic Management Console, not the Content Server System Properties utility as was previously done.

Other administrative changes are summarized in this list:

- **Running in standalone mode:** To run applications or utilities in a standalone mode the database connection information must be entered into the `config.cfg` file using the System Properties utility.
- **Connection pooling and management:** The Oracle WebLogic Server datasource connection pooling mechanism handles database connections.
- Support has been added for the IBM WebSphere Application Server (WAS).

- **User administration:** Oracle WebCenter Content uses the Oracle WebLogic Server user store to manage user names and passwords. Therefore user management must be performed using the Oracle WebLogic Server user management tools rather than the User Admin applet in Content Server. All user authentications are done against the Oracle WebLogic Server user store. You can use the Admin applet to create users and assign passwords, but the user must also be created and assigned a password in the Oracle WebLogic Server user store.
- **System administration:** Starting in 11g Release 1 (11.1.1.8) the Content Server's Admin Server no longer has a separate interface page. Admin Server functions are now accessed through the Administration tray or menu in the Content Server interface.

1.3.3 Other Changes

The following list provides a cursory overview of other important changes when using Oracle WebCenter Content in an Oracle WebLogic Server environment. Consult the product documentation for detailed information:

- **Admin Server use:** Each Content Server instance has one admin server instance. An Admin Server can only perform management tasks on the Content Server that is installed on the same Oracle WebLogic Server domain.
- **Proxy Server:** You can install only one Content Server per Oracle WebLogic Server domain. You can no longer run a proxied Content Server instance.
- **Port:** By default, Content Server no longer listens on any port. Configuration settings can be changed to use a specific port.
- **Login:** Oracle WebCenter Content provides a form-based login mechanism rather than a basic authentication login method. As a result, users can now log out of the Content Server without closing their browser.
- **Access mode:** Oracle WebCenter Content is accessible via HTTP and HTTPS by default.
- **Internationalization:** Users can specify a time zone using their profile page. If the locale is not specified in a profile, the system determines that from a HTTP header variable.
- **Services and WLST:** Content Server cannot easily be run as a Windows service using Oracle WebLogic Server. Mbeans are provided that are accessible through WebLogic Scripting Tool (WLST) commands which can be used to view and set some configuration parameters.
- **Directory structure:** the directory structure and location of files has changed significantly. Consult the product documentation for details.

Overview of Oracle WebCenter Content

Oracle WebCenter Content provides a unified application for several different kinds of content management. It provides organizations with a unified repository to house unstructured content and deliver it to business users in the proper format, and within context of familiar applications to fit the way they work.

This chapter discusses the following topics:

- [Section 2.1, "Managing Content"](#)
- [Section 2.2, "Managing Digital Assets"](#)
- [Section 2.3, "Managing Web Content"](#)
- [Section 2.4, "Managing Records Retention"](#)
- [Section 2.5, "Managing Records Retention with Adapters"](#)

Oracle WebCenter Content is documented in the following manuals:

- *Oracle Fusion Middleware Installing and Configuring Oracle WebCenter Content*
- *Oracle Fusion Middleware Administering Oracle WebCenter Content*
- *Oracle Fusion Middleware Managing Oracle WebCenter Content*
- *Oracle Fusion Middleware Developing with Oracle WebCenter Content*
- *Oracle Fusion Middleware Using Oracle WebCenter Content*
- *Oracle Fusion Middleware Services Reference for Oracle WebCenter Content*
- *Oracle Fusion Middleware Configuration Reference for Oracle WebCenter Content*

2.1 Managing Content

Oracle WebCenter Content manages content that can include documents, email, electronic discussions, images, videos, and other types of digital information. This section describes those features that can be used to manage content items. It includes the following sections:

- [Section 2.1.1, "The Content Server"](#)
- [Section 2.1.2, "Business and Oracle WebCenter Content Application Integration"](#)

2.1.1 The Content Server

Oracle WebCenter Content Server is the foundation for a variety of Oracle content management features. It provides a flexible, secure, centralized, web-based repository

that manages all phases of the content life cycle from creation and approval to publishing, searching, expiration, and archiving or disposition.

Every contributor throughout the organization can easily contribute content from native desktop applications, efficiently manage business content via rich library services, and securely access that content anywhere using a web browser or mobile app.

Oracle WebCenter Content Server offers a number of components that provide advanced functionality. Some of these components are installed with the core system and are available out-of-the-box, while other components can be enabled after installation.

All content, regardless of content type, is stored in the web repository or database for management, reuse and access. While stored in the repository, all types of content ranging from email, discussions, documents, reports, spreadsheets and records to images, multimedia or other digital formats receive the same set of fundamental core services.

The following sections describe some of the most commonly used Content Server features:

- [Section 2.1.1.1, "Organizing Content Items in Folders"](#)
- [Section 2.1.1.2, "Organizing Groups of Content Items in Folios"](#)
- [Section 2.1.1.3, "Managing Content Using Your Desktop"](#)
- [Section 2.1.1.4, "Converting Documents into Web Pages"](#)
- [Section 2.1.1.5, "Categorizing Content Checked In to the Repository"](#)
- [Section 2.1.1.6, "Analyzing Use of Content Server"](#)
- [Section 2.1.1.7, "Using Watermarks in PDF Files"](#)
- [Section 2.1.1.8, "Organizing Content Items in Content Basket"](#)

2.1.1.1 Organizing Content Items in Folders

FrameworkFolders is an optional component that is automatically installed with Content Server. When enabled, Folders provides a hierarchical folder interface similar to a conventional file system, for organizing and locating some or all of the content in the repository. The folders functionality is installed and enabled by default. It provides a scalable, enterprise solution and is intended to replace the earlier Contribution Folders (Folders_g component) interface. You should not enable both FrameworkFolders and Folders_g at the same time.

Query folders can be used to return content based on a query associated with the folder. These types of folders can also have retention dispositions associated with the folder.

In addition, a migration utility is available to move folders and folder content from the earlier Folders_g based structure to the FrameworkFolders based structure.

For more information, see *Oracle Fusion Middleware Managing Oracle WebCenter Content*.

2.1.1.2 Organizing Groups of Content Items in Folios

Content Folios is an optional component that is automatically installed with Content Server. When enabled, it provides a quick and effective way to assemble, track, and access logical groupings of multiple content items from within the secure environment of Content Server. For example, all items relevant to an upcoming brochure, such as images, logos, legal disclosures, and ad copy, can be assembled and sent through a

workflow process. Once approved, all associated content can be downloaded and sent for print.

Or perhaps a new project requires a virtual place to assemble all relevant content items in a particular hierarchy, whenever they are checked in, with restricted access to particular areas of the hierarchy. Or a video may need to be associated and tracked with release waivers and narration text. All this can be done with Content Folios.

Technically, a content folio is an XML file checked into the repository that uses elements to define a hierarchical structure of nodes, slots, and specified content items in Content Server. In practice, a content folio is a logical grouping, or a framework in which content stored in the repository can be structured. Simple folios are a flat container, while advanced folios can nest content in a hierarchy within folders. In an advanced folio, the hierarchy may be established prior to assembling content items, or it may be created during or subsequent to assembling the items.

Existing folios can have content added to them, or can be locked so that no changes can be made. Content items can be added to a simple folio by searching Content Server, and to an advanced folio by checking new items into the repository or by searching for content that has previously been checked in, all through the folio interface. An advanced folio can even contain hyperlinks to outside resources such as web sites or shared network drives.

For more information, see *Oracle Fusion Middleware Managing Oracle WebCenter Content*.

2.1.1.3 Managing Content Using Your Desktop

Oracle WebCenter Content: Desktop provides a set of embedded applications that help you seamlessly integrate your desktop experience with WebCenter Content Server. More specifically, it provides convenient access to the repository from Microsoft Windows Explorer, desktop applications like Microsoft Office applications (Word, Excel, and PowerPoint), and email clients like Microsoft Outlook and Lotus Notes.

As a result, you can easily manage files in the repository and share files with users directly from your desktop instead of logging into Content Server and using a web browser.

For more information, see *Oracle Fusion Middleware Using Oracle WebCenter Content: Desktop*.

2.1.1.4 Converting Documents into Web Pages

Dynamic Converter is a transformation technology and on-demand publishing solution for critical business documents. With Dynamic Converter, you can easily convert any business document into a web page for a specified audience without use of the native application used to create that document. The benefits are immediate. Information can be exchanged freely without the bottleneck of proprietary applications.

When a web browser first requests a document, a set of rules are applied to determine how that document should appear as a web page. These rules can be defined in a template, a core component of Dynamic Converter.

Dynamic Converter offers a number of benefits to the user:

- Business documents can be easily viewed in a web browser.
- Native applications (such as Adobe Acrobat, Microsoft Word, and so forth) are not required.
- Multiple renditions of a document are available for different devices (web browsers, wireless devices, and so forth)

- Numerous business document types, including legacy formats, are supported.

For more information, see *Oracle Fusion Middleware Managing Oracle WebCenter Content* and *Oracle WebCenter Content Template Editor Guide for Dynamic Converter*.

2.1.1.5 Categorizing Content Checked In to the Repository

Content Categorizer provides organizations with the capability to use one or more taxonomies within WebCenter Content Server. In addition to its out-of-the-box categorization tools and functionality, Content Categorizer provides an open API for third-party categorization engines. With this open architecture, users can take advantage of the rule sets and taxonomies provided by third-party categorization tools. As a result, organizations can choose the categorization engine that best fits their business needs. For example, organizations can use their existing vertical industry taxonomy to organize their managed content into specific categories and subcategories.

Content Categorizer enables administrators and content contributors to automatically, uniformly and intelligently categorize content as it is checked into the repository. Perfect for loading large amounts of existing content into Content Server, Content Categorizer can be used in batch mode, freeing administrators of the responsibility of assigning metadata to each individual content item. End users, on the other hand, will appreciate Content Categorizer for its ability to suggest appropriate metadata as they check in new pieces of content.

To suggest a category or specific value for each of the metadata fields, Content Categorizer uses a set of rules to analyze content items. Some automatic categorization rules include: direct correlation using file properties or text references; score computations based on word matching; sentence or paragraph summaries automatically pulled from files; or certain language pattern recognition. Rule sets can also be used from other third party categorization engines.

For more information, see *Oracle Fusion Middleware Managing Oracle WebCenter Content*.

2.1.1.6 Analyzing Use of Content Server

Content Tracker allows website administrators to use key metrics to define reports for analyzing usage of Content Server. Content Tracker's tight integration with Content Server makes it possible to run reports based on specific user profile information, groups of users, or on any set of content that can be defined by a query or group of metadata values. This flexibility allows for extremely granular content analysis, giving web teams crucial information to more strategically manage and improve upon their site.

Content Tracker uses data gathered in the web server log files, web filter log files, and Content Server's database tables to generate information regarding the content items accessed. This information could include metadata, user profile data as well as information from the users themselves. Content Tracker then populates this information into database tables in any RDBMS database such as Oracle or Microsoft SQL Server. Once this database is populated, customized reports can be generated according to the needs of the user.

This functionality is documented in *Oracle Fusion Middleware Managing Oracle WebCenter Content*.

2.1.1.7 Using Watermarks in PDF Files

PDF Watermark is an optional component that is automatically installed with WebCenter Content Server. If enabled, it allows watermarks to be applied to PDF files

generated by PDF Converter (static watermarking) and checked back in to the repository.

Existing PDF files already residing on the repository can also be watermarked (dynamic watermarking). Dynamic watermarks are generated as needed and can contain variable information (for example, user name, date and time of download, or file name). System administrators can define variables and set up specific conditions for generating dynamic watermarks.

PDF Watermark can also add security features to PDF files as they are downloaded for viewing. Access settings can be enabled or disabled, such as printing or modifying the file.

Static watermarking is conducted in cooperation with Inbound Refinery and PDF Converter. Only content that is converted to PDF by the PDF Converter can be watermarked. You can request a static watermark for content that you expect to be converted to PDF by entering a valid PDF Watermark Template ID (dDocName) in the xPdfwTemplateID metadata field during checkin.

Content checked in by an automated process, for example WebDAV or BatchLoader, can also be given a static watermark, subject to the IBR/PDFC restriction described above and provided the xPdfwTemplateID field contains a valid template ID.

Dynamic watermarking of PDF content is rules-based. The PDF Watermark Administration screen is provided to define rulesets via the **Rules** tab. If a given request for a PDF document satisfies one of the pre-defined rules, the template associated with that rule is used to watermark a copy of the content before the copy is returned to the requesting user. Only the weblayout form will be watermarked, the original PDF file is unchanged in its vault location.

For more information, see *Oracle Fusion Middleware Managing Oracle WebCenter Content* and *Oracle Fusion Middleware Using Oracle WebCenter Content*.

2.1.1.8 Organizing Content Items in Content Basket

Content Basket enables you to quickly find, group, and download multiple content items. For example, you may need to send an organization's logo along with several articles for your newsletter to a printing agency, or email a group of documents to a vendor. With Content Basket, you can select items to add to your content basket from any content information or search results page.

After an item is added to your content basket, you can access the content basket from the My Content Server tray and download a single compressed file of the content items you need.

For more information, see *Oracle Fusion Middleware Managing Oracle WebCenter Content* and *Oracle Fusion Middleware Using Oracle WebCenter Content*.

2.1.2 Business and Oracle WebCenter Content Application Integration

The following adapters can be used to integration business applications with Oracle WebCenter Content:

- Oracle E-Business Suite Adapter, described in [Section 6.2, "Oracle E-Business Suite Adapter for WebCenter Content Server and Imaging."](#)
- Siebel Adapter for Content Server, described in [Section 6.3, "Oracle Siebel Adapter for WebCenter Content Server."](#)
- Oracle PeopleSoft Adapter, described in [Section 6.4, "Oracle PeopleSoft Adapter for Content Server and Imaging."](#)

2.2 Managing Digital Assets

Several solutions are available for managing digital assets such as graphics and videos, and converting those assets for use in a Content Server repository.

This section discusses the following topics:

- [Section 2.2.1, "Managing Images and Videos"](#)
- [Section 2.2.2, "Converting Native Content to Different Formats"](#)

2.2.1 Managing Images and Videos

The Digital Asset Manager (DAM) feature 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.

DAM 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 example, one person can 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 the repository.

Digital assets are valuable electronic images and videos to be made available within your organization in multiple output formats, 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 the repository.

For DAM to work, Inbound Refinery must be installed and properly configured to work with the content server on which DAM is installed.

For more information, see *Oracle Fusion Middleware Managing Oracle WebCenter Content*.

2.2.1.1 Managing Images

The Image Manager feature enables users to quickly find, group, and download images of various sizes and resolutions. For example, an organization's logo may need to be available in a variety of sizes for advertisements, web pages, and presentation. At check-in, the image is automatically converted into the defined formats and sizes. Users can then search for the image using standard metadata, group renditions into a content basket, and download a single compressed file of the image renditions they need.

Image Manager installs six pre-defined rendition sets for use with Image Alchemy:

- DefaultGraphicSet: Required Default Rendition Set
- CorporateImage: Common Corporate Format Requirements
- ProductCatalog: CMYK HiRes and Proof Images for Print
- DigitalPhoto: Process Digital Photos
- WebImages: Renditions for web applications and web images
- Print: Renditions for productivity and layout applications

2.2.1.2 Managing Videos

The Video Manager feature enables users to quickly find, group, and download videos of various sizes and resolutions. For example, a company training video may need to be available in a variety of sizes for streaming on an intranet, presenting to an audience, or copying to tape. At check-in, the video is automatically converted into the defined formats and sizes. Users can then search for the video using standard metadata, group renditions into a content basket, and download a single compressed file of the video renditions they need. FlipFactory, a third-party conversion application, is required to convert video files to multiple formats.

2.2.2 Converting Native Content to Different Formats

Several different conversion features are available to publish native content items in different formats as needed at your site. The following conversion features are discussed in this section:

- [Section 2.2.2.1, "Creating Thumbnail Files"](#)
- [Section 2.2.2.2, "Converting Content to PDF"](#)
- [Section 2.2.2.3, "Converting Content to XML"](#)
- [Section 2.2.2.4, "Converting Tiff Files to PDF"](#)

For more information, see *Oracle Fusion Middleware Using Oracle WebCenter Content* and *Oracle Fusion Middleware Managing Oracle WebCenter Content*.

2.2.2.1 Creating Thumbnail Files

WebCenter Content Server now optionally provides basic thumbnail creation for supported file types or you can use Inbound Refinery, an add-on module to Content Server that manages all file conversions at the input side of Content Server (hence *Inbound*). It also provides the ability to generate thumbnails. Files are converted upon check-in of the content into Content Server.

Inbound Refinery includes Outside/In Image Export, which can be used for the following:

- To create thumbnails of files checked into the repository. Thumbnails are small preview images of content. Outside In Image Export can also be used to create thumbnails of PDF files generated by PDF Converter.
- To convert files checked into the repository to multi-page TIFF files as the primary web-viewable rendition.

In addition to the conversions that Inbound Refinery can perform using Outside In Image Export, several conversion components are available for purchase and use with Inbound Refinery. The additional types of files that Inbound Refinery can convert, and the result of each conversion, depend on the conversion components that are installed on the Inbound Refinery computer.

The Refinery Process

When a file is checked into the repository, a copy of the native file is stored in the native file repository (the *vault* directory). The native file is the format in which the file was originally created (for example, Microsoft Word).

If the file format is configured to be converted, it is placed in a queue for further processing. At set intervals, Inbound Refinery checks the queue. If a file is present, Inbound Refinery calls the appropriate conversion add-on to perform the actual conversion. The exact conversion process depends on how Inbound Refinery is set up.

In some situations, conversion may be done entirely in the background, with no noticeable interaction. In others, a file may be opened in its native application and printed to a PostScript file, which is subsequently translated into a different format (for example, a PDF file). In that case, windows are automatically opened and closed on the Inbound Refinery machine. The converted file (for example, a web-viewable PDF file) is then copied to the web-viewable file repository (the *weblayout* directory). Users can then view the file through their web browser.

If the file format is not set up to be converted (or if the conversion fails), no web-viewable file is created and a copy of the native file is placed in the weblayout directory. This means that the file is passed through to the library in its native format. Users must then have the native application installed on their computer to view the file.

2.2.2.2 Converting Content to PDF

The PDF Converter feature enables the automatic publishing of native content items to web-viewable PDF (Portable Document Format) files. A PDF rendition of the native format is immediately generated upon check-in of new content into the repository. This PDF rendition allows web viewing of that content item without requiring users to install native applications. PDF Converter converts a large number of file formats to PDF, such as Adobe Framemaker, Illustrator, InDesign, PageMaker, and Photoshop as well as Hangul, Just System Ichitaro, Microsoft Office, Microsoft Visio, and Oracle OpenOffice.

PDF Converter optimizes non-optimized PDF files and also processes links such as Microsoft Word hyperlinks, "mailto" links, and table-of-content links.

2.2.2.3 Converting Content to XML

The XML Converter feature gives XML-based access to information in unstructured business content. With XML Converter, content contributed to Content Server is converted to XML at the time of check-in. XML Converter converts many document types and supports the leading word processing formats, such as Microsoft Word, Lotus WordPro, and Corel WordPerfect. It also includes support for popular spreadsheet, presentation, and graphic formats.

When a new content item is checked into the repository, XML Converter converts the content to either a SearchML or FlexionDoc format. FlexionDoc is very verbose and captures all information, including attributes such as styles in a Microsoft Word document. From there, administrators have the ability to check in different XSL files that would then convert the SearchML or FlexionDoc document to any XML format.

Administrators also have the option to use a DTD (Document Type Definition) to validate the XML generated from the XSL transformation. If there is an error in conversion, all the relevant documents (for example, the original SearchML or FlexionDoc file, the XML file generated after XSL transformation, and the error report) are all checked in and can be sent through a workflow for the developer/administrator to debug.

Because the XML file is stored and managed within the web-based repository, it can be accessed from any location using a web browser, making it available for other enterprise applications, data exchange, re-use and further conversion into additional formats. XML Converter provides an out-of-the box XML solution with enterprise level performance, while ensuring compatibility with the W3C standards specifications.

2.2.2.4 Converting Tiff Files to PDF

The Tiff Converter feature enables organizations to check TIFF (Tagged Image File Format) image files into Content Server and then publish these as multiple-page PDF files.

Tiff Converter uses either CVISION CVista PdfCompressor or Adobe Acrobat Capture to convert single-page TIFF files, multiple-page TIFF files, or zip files containing multiple TIFF files (TIFZ, TIZ or ZIP file extensions) to a single PDF file. Additionally, during the TIFF to PDF conversion, Optical Character Recognition (OCR) is performed, enabling users to perform full-text searches of managed TIFF files in Content Server. You can also use Oracle WebCenter Enterprise Capture to convert TIFF files to searchable PDF documents.

Note: CVISION CVista PdfCompressor and Adobe Acrobat Capture are third-party products.

Tiff Converter is very useful in scanning applications. It automatically converts TIFF images to PDF format upon check-in to the repository for easy viewing of legacy content. The conversion of the released TIFF image can occur on the client side or server side and uses the Adobe Acrobat Capture technology. With TIFF Converter, users can easily view and access managed legacy content (scanned documents) via a browser with the Adobe Reader.

2.3 Managing Web Content

Oracle WebCenter Content provides several tools that can be used to manage content on web sites, including how that content is deployed and stored.

This section discusses the following topics:

- [Section 2.3.1, "About Site Studio"](#)
- [Section 2.3.2, "About Site Studio for External Applications"](#)

2.3.1 About Site Studio

Site Studio is a web development application suite that offers a comprehensive approach to designing, building, and maintaining enterprise-scale web sites. Everything associated with the web site, including site assets (such as templates, graphics, CSS files, and so on) and all site content, is stored and managed in the content server. Site Studio enables organizations to maintain accurate, timely, and current web content with consistent branding and presentation across all corporate sites.

Some of the website creation and contribution features include:

- In-context contribution and updates directly from the website
- Hierarchical website structure and navigation
- Template-based pages comprised of multiple regions
- Separation of content and presentation
- Separation of navigational structure and its presentation
- Secure, regional-level content authoring and editing
- WYSIWYG XML-based contribution forms

- Reusable content and XML-based fragments
- Single-source content management
- Multi-site management

Organizations may also prefer to build websites using Site Studio if they would like to distribute website development to multiple site designers, yet still have a centralized team of developers maintain control over the brand and look-and-feel. Site Studio gives developers the ability to create customizable libraries to provide site designers with reusable drag-and-drop layouts, fragments, navigation, and code that integrates with back-end applications for developing their own unique websites.

With Site Studio's customizable library as well as its built-in framework for designing websites, these site designers can create robust and well-architected sites with little or no knowledge of HTML or other programming languages.

Oracle Site Studio is documented in the following manuals:

- *Oracle WebCenter Content User's Guide for Site Studio Contributor*
- *Oracle WebCenter Content User's Guide for Site Studio Designer*
- *Oracle WebCenter Content User's Guide for Site Studio Publisher*
- *Oracle WebCenter Content Administrator and Manager's Guide for Site Studio*
- *Oracle WebCenter Content Technical Reference Guide for Site Studio*
- *Oracle WebCenter Content Developer's Guide for Site Studio for External Applications*

2.3.2 About Site Studio for External Applications

Site Studio for External Applications (SSXA) is a powerful, flexible web development tool that offers a comprehensive approach to designing, building, and maintaining enterprise-scale Web sites in an Application Server environment.

Web site development and template creation are performed in the JDeveloper environment. Site assets such as files and graphics are stored and managed in the Content Server. Page templates, region templates, and subtemplates (which are typically JSP/JSPX pages) are located in the WAR file of the web application associated with a JDeveloper project.

Site Studio for External Applications dramatically improves productivity and allows organizations to maintain accurate, timely, and current web content with consistent branding and presentation across all corporate sites. With Site Studio for External Applications, you can centralize control of site architecture and presentation, while distributing content development and ongoing maintenance to business units or other teams. Site Studio for External Applications can also be integrated with third party applications servers.

For more information, see *Oracle WebCenter Content Developer's Guide for Site Studio for External Applications*

2.4 Managing Records Retention

Oracle WebCenter Content: Records offers records management features that allow organizations to track and preserve content according to a retention schedule. When the content has fulfilled its purpose in the organization, it can be disposed of or archived. For the records management features to work, you must enable the optional Records component on WebCenter Content Server.

The focus of *records management* tends to be the preservation of content for historical, legal, or archival purposes while also performing retention management functions. The focus of *retention management* tends to be the scheduled elimination of content in which the costs of retaining content outweighs the value of keeping it.

Oracle WebCenter Content combines both record and retention management in one system. You can use it to track and preserve content as needed, or dispose of content when it is no longer required.

This section covers the following topics:

- [Section 2.4.1, "Records Management Configurations"](#)
- [Section 2.4.2, "The Retention Process"](#)

For details about the use of an adapter to integrate with Content Server, see [Section 2.5, "Managing Records Retention with Adapters."](#)

Records management is documented in the following manuals:

- *Oracle Fusion Middleware Managing Oracle WebCenter Content*
- *Oracle Fusion Middleware Using Oracle WebCenter Content*

For additional information, see *Oracle Fusion Middleware Installing and Configuring Oracle WebCenter Content*.

2.4.1 Records Management Configurations

You can choose which records management options are installed at your site. By choosing specific options, you determine which components will be enabled and are ready for use. The following configurations can be used:

- **Minimal:** enables the minimal amount of functionality and excludes some disposition actions and most of the features.
- **Typical:** enables all disposition actions and all features except for DoD Configuration, Classified Topics, and Email. This option does enable Physical Content Manager (PCM).
- **DoD Baseline:** enables the features from a Typical installation with the addition of DoD Configuration and Email.
- **DoD Classified:** enables all features.
- **Custom:** enables the ability to choose a variety of features. Note that some disposition actions are dependent on other actions. If you select an action, dependent actions are also automatically selected.

Different reasons may exist for why organizations need to retain content. Many organizations are subject to regulations that require the retention of information for a specified period such as compliance with Sarbanes-Oxley or government regulations such as DoD 5015.2. An organization may have a litigation-related need for effective and efficient retention management. Or an organization may wish to provide a uniform infrastructure for retrieving and sharing content across an organization. Records management options can be configured and customized to fit any of these business needs.

In addition to internal content (electronic items stored within WebCenter Content Server), Oracle WebCenter Content can also manage external content. An *external* retained content item can be in a variety of formats, both physical or electronic. If the source file is not specifically stored in Content Server, then it is considered external. The software can manage the disposition schedule, search metadata associated with

the external file, and manage an electronic rendition of an external file. An electronic rendition can either be checked in as a primary file of an external item, or be filed as a separate file, and then linked to the external file metadata.

Oracle WebCenter Content can be used to manage classified content which requires protection against unauthorized disclosure (for example, because it contains information sensitive to the national security or because it is essential for a corporation's operation). Options can be chosen during configuration to insure that the system complies with the DoD 5015.2 standard (including Chapter 4). The software has been certified by the Joint Interoperability Test Command (JITC) to comply with that standard.

2.4.2 The Retention Process

The following steps outline the basic workflow of retained content:

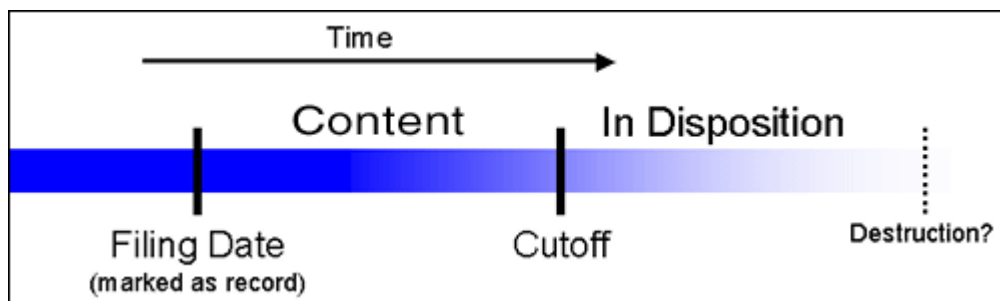
1. The retention schedule and any required components are created, such as triggers, periods, classifications, and custom security or metadata fields.
2. Items are filed into the retention schedule by users. The filed items assume the disposition schedules of their assigned category.
3. Disposition rules are processed in accordance with the defined disposition schedules, which usually have a retention period. The processing is activated by either a system-derived trigger or custom trigger. The trigger could affect one or more items simultaneously.
4. Whenever a disposition event is due for action (as activated by a trigger), an email notification is sent to the person responsible for processing the events. The same is true for review. The pending events and reviews are displayed in the user interface pages accessed from the emailed Retention Assignments links.
5. The records administrator or privileged user performs the review process. This is a manual process.
6. The records administrator processes the disposition actions in the pending events pages. This is a manual process.

Many disposition schedules are *time-based* according to a predictable schedule. For example, content is often filed and then destroyed after a certain number of years. The system tracks when the affected content is due for action. Notification email is sent, and the content is routed to the Retention Assignments area.

The person responsible for the pending events reviews then processes the content accordingly. Available menu actions are context-sensitive according to the state of the item. For example, a retention folder due for its final disposition step of destruction would have the Destroy actions available, but not the Archive actions.

In contrast, *time-event* and *event-based* dispositions must be triggered with a non-system-derived trigger (a trigger that was defined for a particular scenario). For example, when a pending legal case starts litigation, the records administrator must enable the custom trigger and set its activation date because the start date information is external. Custom triggers enable you to define event and time-event based disposition actions based on the occurrence of a particular event.

The following illustration shows a typical life cycle of a record that is retained and then processed (disposed).



2.5 Managing Records Retention with Adapters

An *adapter* provides a bridge between Oracle WebCenter Content with its records management features enabled, which contains the content management policies, and an adapter server's content vault (which stores additional content). Corporations can then manage records, retention policies, and legal holds across multiple systems from a single location.

An adapter sends information back to WebCenter Content Server so it can maintain an up-to-date catalog of the enterprise's important content. By doing so, companies can apply their records and retention policies to more content, more consistently, with less administrative effort and less disruption for users. These same benefits apply to litigation searches and holds. The Records Adapter for WebCenter Content Server obtains these policies from the server and applies them to the content items stored in the vault.

Multiple records adapters can be used with Oracle WebCenter Content to manage an enterprise's content needs. See [Section 2.4](#) for information about records management.

- [Section 2.5.1, "Adapter Architecture"](#)
- [Section 2.5.2, "Basic Operation"](#)

2.5.1 Adapter Architecture

The major components involved in a typical Content Server Adapter installation include:

- **Oracle WebCenter Content with records management features enabled:** Enables organizations to manage their content and retention policies, disposition processes and litigation or audit holds in a central repository. These policies, dispositions, and holds can then be applied to external repository content through the Content Server Adapter.
- **Content Server:** Stores and manages content in a repository.
- **Content Server Adapter:** Communicates between Oracle WebCenter Content with its records management features enabled and the Content Server Adapter's content vault. The Content Server Adapter provides common retention functionality as follows:
 - Identifying the content in the repository that is of interest to the Records system.
 - Performing searches and declaring the applicable content items to the Records system.
 - Performing disposition actions on the existing content items when their retention periods end.

- Establishing and removing holds and freezes on the content items, as necessary.

2.5.2 Basic Operation

Oracle WebCenter Content manages records and retention policies, disposition processes, and litigation holds or freezes in a central repository. Those policies, dispositions, and holds can be applied to content stored in multiple repositories by using adapters. The repositories may be any server or application that holds content whose retention is to be controlled.

The Content Server Adapter's content vault holds content that must be preserved for a retention period, specified in a corporate retention schedule, and then destroyed according to a corporate disposition process. The records are preserved in place because the adapter ensures that the record remains unalterable during the retention period. Upon request, the adapter server's content vault can purge the content at the end of the retention period.

The adapter server's vault may also hold content that does not need to be retained. When retention of this content is no longer necessary, it can be disposed of according to the disposition processes stored within Oracle WebCenter Content

There is an obligation to ensure that any material that is subject to a litigation or audit hold (freeze) is not deleted, either by a user or as part of a disposition process. The Content Server Adapter enables Oracle WebCenter Content to ensure deletions do not happen.

Note: Content items that are non-records and are not subject to a litigation or audit hold are not transferred to the Records system. Instead, these documents remain in the Content Server Adapter's content vault and only their metadata is stored in Oracle WebCenter Content.

The Content Server Adapter is the communications intermediary between Oracle WebCenter Content and the adapter's repository. Content is stored in and remains in the adapter's content vault while Oracle WebCenter Content simultaneously enforces corporate retention policies, disposition processes, and legal holds on the stored content.

Managing Oracle WebCenter Content: Imaging

Oracle WebCenter Content: Imaging provides organizations with a scalable solution that can be used to develop process-oriented imaging applications and image-enablement solutions for enterprise applications.

This application is available as part of the Oracle WebCenter Content suite of tools. Oracle WebCenter Imaging is also available as a separate product. This chapter discusses the functionality of Imaging as part of Oracle WebCenter Content.

This chapter covers the following topics:

- [Section 3.1, "About Imaging"](#)
- [Section 3.2, "Imaging and Content Server"](#)
- [Section 3.3, "Imaging Integration with Oracle Technologies"](#)

Oracle WebCenter Content: Imaging is documented in the following manuals:

- *Oracle Fusion Middleware Developing Oracle WebCenter Content: Imaging*
- *Oracle Fusion Middleware Administering Oracle WebCenter Content: Imaging*
- *Oracle Fusion Middleware Using Oracle WebCenter Content: Imaging*

For additional information, see *Oracle Fusion Middleware Installing and Configuring Oracle WebCenter Content* and *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle WebCenter Content*.

3.1 About Imaging

Oracle WebCenter Content: Imaging combines multiple Oracle technologies, providing a streamlined document imaging platform on which numerous business solutions can be built by leveraging image enablement, application extension, and long term archiving. Imaging adds a metadata-focused document management model, a powerful viewer tool, image annotation capabilities, high volume ingestion and storage of data, and advanced searching tools to these solutions. To support business transaction needs, Imaging manages many kinds of physical and electronic documents, including scanned documents, faxes, email, HTML, XML, electronic forms, Microsoft Office documents, enterprise report management data and reports, and even computer output to laser disk, and others, all from a single user interface.

Oracle WebCenter Enterprise Capture can be added to capture and categorize transactional content to include physical and electronic documents. Imaging leverages Oracle WebCenter Content Server as the document repository which allows the use of Oracle WebCenter Content with records management features enabled to be used to manage the life cycles and dispositions of Imaging content.

An easily configured integration with tools such as Oracle BPM or BPEL injects Imaging document content directly into automated core business processes to reduce manual steps and increase efficiency.

Organizations can quickly extend these solutions by integrating with Oracle enterprise applications such as Oracle E-Business Suite, PeopleSoft Enterprise, and JD Edwards EnterpriseOne. Customers thus benefit by having a single source for all transaction-based content.

Oracle WebCenter Content: Imaging manages documents through the entire document life cycle, from image capture to archiving. Documents are uploaded into Imaging either singly by individual users or in bulk through a background agent. After uploading, a document becomes part of an *application*, which is a type of container for documents that defines metadata, storage information, and BPEL process configuration for all documents within it.

Applications are defined by the system administrator based on a specific business need. For example, an Invoicing application may track invoice number, date sent, date due, status, and any other metadata required by an accounting department.

Depending on how your repository is configured, uploaded documents can be stored within an Oracle database, on a file system, or in storage-specific hardware for retrieval. Security is applied to an Imaging document based on its application, ensuring access only by authorized users. In addition, Oracle WebCenter Content: Imaging can be configured to initiate a business process instance within Oracle's BPEL server.

Users can retrieve stored documents using a predefined search. Predefined searches are created to find documents based on document metadata and full-text indexes. With the proper permissions, users can:

- View documents in a standard web-browser
- Print, download, or email the document to others
- Annotate documents
- Upload documents and initiate a BPEL process if one is defined in the application
- Delete, copy, or move documents

3.2 Imaging and Content Server

Oracle WebCenter Content: Imaging resides within Oracle WebLogic Server, connected to a database. Imaging events are routed through WebLogic Server using Java Messaging Service (JMS) to communicate with its background agents.

Custom applications can interact with Imaging through its set of application programming interfaces (APIs). Custom applications wishing to integrate with an Imaging system can communicate with Imaging through the Imaging public API. The API is available in two forms:

- through standard web services generated with the Java API for XML Web Services (JAX-WS)
- through Imaging Java APIs, a set of portable Java class files

Oracle WebCenter Content: Imaging provides architectural features designed to help business managers simplify the process of building imaging solutions. Features such as applications, searches, and inputs provide convenient constructs that can be used to organize data, apply security to user groups, and facilitate the movement of those constructs between systems such as a development and production instance.

Imaging agents operate in the background to perform tasks not associated with immediate requests from users. The Input Agent facilitates high volume ingestion of document content and the Workflow Agent handles any interaction with the BPEL server as required by document activity.

Standard Java Management J2EE Beans (or MBeans) are used to configure the operation of Imaging's business logic as well as its agents. The values of these MBean configuration objects can be manipulated through Oracle Enterprise Manager and WebLogic Scripting Tool, allowing you to choose the best system management tool for your needs.

3.3 Imaging Integration with Oracle Technologies

Oracle WebCenter Content: Imaging integrates with several other key Oracle technologies:

- It works with Oracle application adapters to allow document processing of workflow tasks and allows related images to be easily invoked, viewed and acted on. Two adapters are available for use with Imaging: the Oracle E-Business Suite Adapter, described in [Section 6.2](#) and Oracle PeopleSoft Adapter, described in [Section 6.4](#).
- It integrates with Oracle WebCenter Enterprise Capture to allow you to convert physical documents into an electronic format to be uploaded to Oracle WebCenter Content: Imaging.
- It leverages Oracle WebCenter Content Server as a repository for document storage and retrieval. Oracle WebCenter Content Server supports both out-of-the-box content management services and open, customizable integration options that can manage a broad range of enterprise content such as email, documents, and images from different content sources. WebCenter Content Server supports Oracle and SQL Server databases to allow indexing and storage of content in a variety of ways. Depending on the database and configuration, documents and metadata can be stored within the database, on a file system, or a combination of both. Flexible search options allow you to configure the repository to support either metadata searching or full-text searching as configured within the Imaging application to provide the most applicable search capabilities.
- It integrates with Oracle WebCenter Content: Desktop to allow users to view or add Imaging content directly from Microsoft Windows Explorer, Microsoft Office applications (Word, Excel, and PowerPoint), and Microsoft Outlook.
- It is designed to leverage many of the features of Oracle WebLogic Server including its standard J2EE architecture, integrations with Oracle security components, scalability, clustering, and system management tools like WebLogic Scripting Tools, and WebLogic Server Administration Console.
- A connection to a workflow server is used to initiate a workflow process when documents are uploaded to Oracle WebCenter Content: Imaging, allowing for business process integration across the enterprise using key technologies such as Oracle BPEL Process Manager or Oracle Business Process Management (Oracle BPM).

Managing Oracle WebCenter Enterprise Capture

Oracle WebCenter Enterprise Capture provides scalable document capture for paper and electronic documents, that focuses on process-oriented imaging applications and image-enabling enterprise applications.

The following topics are discussed in this chapter:

- [Section 4.1, "About Oracle WebCenter Enterprise Capture"](#)
- [Section 4.2, "Oracle WebCenter Enterprise Capture Client"](#)
- [Section 4.3, "Oracle WebCenter Enterprise Capture Workspace"](#)
- [Section 4.4, "Oracle WebCenter Enterprise Capture Processors"](#)
- [Section 4.5, "Oracle WebCenter Enterprise Capture Security"](#)
- [Section 4.6, "Managed Attachments"](#)

Capture is documented in the following guides:

- *Oracle Fusion Middleware Managing Oracle WebCenter Enterprise Capture*
- *Oracle Fusion Middleware Using Oracle WebCenter Enterprise Capture*
- *Oracle Fusion Middleware Administering Oracle WebCenter Enterprise Capture*
- *Oracle Fusion Middleware Developing Scripts for Oracle WebCenter Enterprise Capture*
- *Oracle Fusion Middleware Oracle WebCenter Forms Recognition/Enterprise Capture Integration Guide*

4.1 About Oracle WebCenter Enterprise Capture

Oracle WebCenter Enterprise Capture provides organizations with a single system to capture both paper and electronic documents. Capture supports both centralized and distributed image capture from a user-friendly web interface capable of using high-volume, production-level scanners. Support for the industry-standard TWAIN scanning interface enables Capture to use a wide variety of industry-leading document imaging scanners to digitize paper content. Existing electronic document files can be easily captured by users or automatically captured through an importing process that can monitor an email server or network folder. Once captured, documents are organized and indexed by applying metadata through manual or automated processes that use bar code recognition technology. After documents are completed, they are committed into a content management system. Capture is fully integrated with Oracle WebCenter Content: Imaging and with Oracle WebCenter Content to

provide organizations with one system to capture, store, manage and retrieve their mission critical business content.

Capture is also integrated with Oracle WebCenter Forms Recognition which uses intelligent data capture capabilities to recognize, classify, and extract information from documents. For more information, refer to *Oracle Fusion Middleware Oracle WebCenter Forms Recognition/Enterprise Capture Integration Guide*.

With the above added capabilities, Capture facilitates processing large volumes of business documents to automate data extraction and minimize the need for human intervention.

Batches and documents are the primary drivers of work in Capture. In Capture, documents are scanned or imported and stored in batches. A batch consists of scanned images or electronic document files (such as PDF or Microsoft Office files) that are organized into documents and assigned metadata (index) values. Each document shares a set of metadata values.

Capture involves the following main processes:

- Capture: Scan or import documents into batches within a Capture workspace.
- Conversion: Convert non-image documents such as PDFs or Microsoft Office documents to a standard image format.
- Classification: Separate a batch into its logical documents and assign a set of metadata values to each document.
- Commit: Write all of a batch's documents (image and non-image) and their metadata in a selected output format to a specific location or content repository, and then remove them from the Capture workspace.

4.2 Oracle WebCenter Enterprise Capture Client

The Oracle WebCenter Enterprise Capture client is the end-user application that a knowledge worker, business application user, or scan operator uses to create batches using scanners or by importing electronic document files. After batches are created, users can classify and index documents.

The client's main functionality includes:

- Scanning and importing documents, using the industry standard TWAIN-compliant interface to scan from desktop scanners or other TWAIN-compliant input devices
- Reviewing, editing, and indexing documents
- Releasing batches so that documents can be further processed, checked in to a content repository, or attached to business application records

4.3 Oracle WebCenter Enterprise Capture Workspace

An Oracle WebCenter Enterprise Capture workspace represents a complete Capture environment, providing a centralized location for metadata, configuration profiles, and physical data for a particular environment. A workspace manager can define more than one workspace. Workspace managers configure and manage workspaces they have been granted access to and control others' access to the workspace. Capture client users create and access batches within the workspace to which they have been granted access.

This section covers these topics:

- [Section 4.3.1, "About Capture Workspaces"](#)
- [Section 4.3.2, "About Capture Workspace Console"](#)

4.3.1 About Capture Workspaces

A Capture workspace provides these benefits:

- A separate work area useful for managing document capture for a department, division, or even an organization
- Shareable elements for re-use in multiple Capture components
- Secure access to workspaces, provided by Capture's user/group restrictions on workspaces
- Ability to copy a workspace, for easily adapting its configuration for another environment
- Ability to restrict access to batches created within a workspace

4.3.2 About Capture Workspace Console

The Capture Workspace Console provides a central configuration location in which workspace managers set up workspaces for use throughout the Capture application. For example, workspace managers create and configure workspaces and their elements, create metadata fields, choice lists, database lookups, configure profiles, then use them in multiple areas such as client profiles and batch processor jobs. The workspace managers also can plan the processing order for a particular environment.

For more information on the roles of a workspace manager, refer to *Oracle Fusion Middleware Managing Oracle WebCenter Enterprise Capture*.

4.4 Oracle WebCenter Enterprise Capture Processors

Oracle WebCenter Enterprise Capture provides the following processors, which workspace managers configure for automation in the workspace console:

- **Import Processor:** Provides automated bulk importing, from sources such as a file system folder, a delimited list (text/ASCII) file, or an email server account folder. The import job monitors the source and imports at a specified frequency, such as once a minute, hour, or day.
- **Document Conversion Processor:** Automatically converts non-image documents to a specified format in Capture using Oracle Outside In Technology. For example, the Document Conversion Processor can convert document files such as PDFs or Microsoft Office documents to TIFF image format. Documents also can be merged in various ways during conversion.
- **Recognition Processor:** Automatically performs bar code and patch code recognition, separation of documents, and automatic indexing.
- **Commit Processor:** Executes commit profiles to automatically output batches to a specified location or content repository, then removes the batches from the workspace. Supported document output formats include Multiple Page TIFF, image only PDF/A, and Searchable PDF. A commit profile specifies how to output the documents and their metadata, and includes metadata field mappings, output format, error handling instructions, and commit driver settings.

4.5 Oracle WebCenter Enterprise Capture Security

Capture's user login, access, and authentication are integrated with Oracle Platform Security Services (OPSS). After authentication, users' permissions depend on their assigned Capture roles, which the system administrator assigns in Oracle Enterprise Manager.

4.6 Managed Attachments

Business solutions using Oracle WebCenter Content can leverage Capture to scan paper documents from directly within their application and have the content indexed.

Integrating Oracle WebCenter Content into Your Environment

Several methods are available for integrating Oracle WebCenter Content with enterprise applications such as application servers, catalog solutions, personalization applications, enterprise portals, and client-side software. In general, these integration methods serve to translate or pass methods and associated parameters with the goal of executing Oracle WebCenter Content Server services.

An Oracle WebCenter Content Server service is a window for accessing the content and content management functions within Oracle WebCenter Content. For example, one simple integration option is to reference content that is managed within Oracle WebCenter Content by a persistent URL. Some other integration options enable you to use the Java API, the Microsoft Component Object Model (COM) interface, or the ActiveX control.

For complete details about integrations options, see *Oracle Fusion Middleware Developing with Oracle WebCenter Content*.

This chapter discusses the following topics:

- [Section 5.1, "IdcCommand Utility"](#)
- [Section 5.2, "COM API"](#)
- [Section 5.3, "Remote Intradoc Client \(RIDC\)"](#)

5.1 IdcCommand Utility

The IdcCommand utility is a standalone Java application that executes Oracle WebCenter Content Server services. Almost any action you can perform from the Oracle WebCenter Content Server browser interface or administration applets can be executed from IdcCommand.

The program reads a specifying command file, which contains service commands and parameters, and then calls the specified services. A log file can record the time that the call was executed, whether the service was successfully executed, and if there were execution errors.

The IdcCommand utility returns only information about the success or failure of the command. To retrieve information from Oracle WebCenter Content Server in an interactive session, use the Java COM wrapper IdcCommandX, available on Microsoft Windows platforms.

5.2 COM API

You can use a COM interface to integrate Content Management with Microsoft environments and applications. An ActiveX control and an Object Linking and Embedding Control Extension (OCX) component are provided as interface options to gain access to the content and content management functions within Oracle WebCenter Content Server.

Using the IntradocClient OCX Component

An OCX control is provided for connecting to a remote Oracle WebCenter Content Server instance and executing Oracle WebCenter Content Server services. The `IdcClient` OCX control is used within a Windows Visual Basic development environment to gain access to the content and content management functions within Oracle WebCenter Content Server.

You can call Oracle WebCenter Content Server services with the `IdcClient` OCX control. The `IdcClient.ocx` control is used to connect to a remote Oracle WebCenter Content Server instance and perform typical server functions.

5.3 Remote Intradoc Client (RIDC)

The Remote Intradoc Client (RIDC) feature supersedes Content Integration Suite (CIS).

As mentioned earlier, RIDC provides a thin communication API for communication with Oracle WebCenter Content Server. This API removes data abstractions to the Oracle WebCenter Content Server while still providing a wrapper to handle connection pooling, security, and protocol specifics.

RIDC supports Intradoc socket-based communication and the HTTP protocol.

Intradoc communication is handled via the Oracle WebCenter Content Server Intradoc port. This communication method requires a trusted connection between the client and Oracle WebCenter Content Server. Intradoc communication can also be configured to run over SSL.

The implementation of the HTTP protocol uses Apache's Jakarta `HttpClient`. Communication with the content server using the HTTP protocol requires authentication credentials for each request.

For details, see *Oracle Fusion Middleware Developing with Oracle WebCenter Content*.

Overview of Oracle WebCenter Application Adapters

This chapter provides a summary of the application adapters provided with Oracle WebCenter.

Oracle's Extension Framework (AXF) is a command-driven, web services integration between a business application such as Oracle E-Business Suite or Oracle PeopleSoft and a content management application such as Oracle WebCenter Content Server or Oracle WebCenter Content: Imaging.

This chapter covers the following sections:

- [Section 6.1, "Application Extension Framework \(AXF\)"](#)
- [Section 6.2, "Oracle E-Business Suite Adapter for WebCenter Content Server and Imaging"](#)
- [Section 6.3, "Oracle Siebel Adapter for WebCenter Content Server"](#)
- [Section 6.4, "Oracle PeopleSoft Adapter for Content Server and Imaging"](#)

6.1 Application Extension Framework (AXF)

The open Java-based architecture of AXF allows integrators to configure and modify multiple business process solutions separately from the systems themselves, and to upgrade systems without affecting implemented solutions.

AXF is provided in two versions:

- **AXF for BPM:** This newer infrastructure takes advantage of the application development and customization capabilities provided by Oracle technologies such as BPM Suite (Oracle Business Process Management Suite), ADF (Oracle Application Development Framework), MDS (Metadata Repository), and Business Rules, to create a set of reusable and configurable business components for use in customizing WebCenter Content business application integration solutions.
- **AXF for BPEL:** This older infrastructure relies on AXF database tables (WebCenter Imaging tables) as the basis for configuring AXF solutions, commands, and web tools, implemented and customized by a solution developer or solution accelerator.

The following adapters can be configured:

- [Oracle E-Business Suite Adapter for WebCenter Content Server and Imaging](#)
- [Oracle Siebel Adapter for WebCenter Content Server](#)
- [Oracle PeopleSoft Adapter for Content Server and Imaging](#)

6.2 Oracle E-Business Suite Adapter for WebCenter Content Server and Imaging

The Oracle E-Business Suite Adapter for Oracle WebCenter Content Server provides integrations between Oracle E-Business Suite and the following Oracle WebCenter Content features:

- **Imaging:** Allows document processing workflow tasks and related images associated with Oracle E-Business Suite business processes to be easily invoked, viewed and acted on.
- **Content Server:** Allows documents related to the current Oracle E-Business Suite context (Forms or OAF page) to be easily accessed and attached via the Managed Attachments user interface.

For details, see *Oracle Fusion Middleware Administering the Application Adapters for Oracle WebCenter* and *Oracle Fusion Middleware Using the Application Adapters for Oracle WebCenter*.

6.3 Oracle Siebel Adapter for WebCenter Content Server

The Siebel Adapter for Oracle WebCenter Content Server provides integration between Siebel and WebCenter Content Server, allowing documents related to the current Siebel context to be easily accessed and attached from within the Siebel user interface.

For details, see *Oracle Fusion Middleware Administering the Siebel Application Adapter for Oracle WebCenter* and *Oracle Fusion Middleware Using the Siebel Application Adapter for Oracle WebCenter*.

6.4 Oracle PeopleSoft Adapter for Content Server and Imaging

The Oracle PeopleSoft Adapter for Oracle WebCenter Content Server provides integrations between PeopleSoft and the following Oracle WebCenter Content features:

- **Imaging:** Allows document processing workflow tasks and related images associated with PeopleSoft business processes to be easily invoked, viewed and acted on.
- **Content Server:** Allows documents related to the current PeopleSoft context to be easily accessed and attached via the Managed Attachments user interface.

For details, see *Oracle Fusion Middleware Administering the Application Adapters for Oracle WebCenter* and *Oracle Fusion Middleware Using the Application Adapters for Oracle WebCenter*.

Overview of Oracle WebCenter Content Connectors

This chapter provides information on connectors which can be used with Oracle WebCenter Content.

The following topics are discussed in this chapter:

- [Section 7.1, "Microsoft SharePoint Connector"](#)
- [Section 7.2, "Cross Enterprise Document Sharing \(XDS\) Connector"](#)
- [Section 7.3, "Digital Imaging and Communications in Medicine \(DICOM\) Connector"](#)

7.1 Microsoft SharePoint Connector

The primary responsibility of the storage connector for Microsoft SharePoint 2010 is to transfer and store documents, with their metadata, from the SharePoint library to Oracle WebCenter Content. The connector replicates upload, update, check in, check out, discard check out, and delete operations from SharePoint to Oracle WebCenter Content. Using the connector, you can perform the following tasks:

- Configure connection settings
- Configure security settings
- Map SharePoint metadata
- Activate the connector
- Configure scope rules and conditions
- Perform data migration

For more information, see *Oracle Fusion Middleware Administering the Oracle WebCenter Content Storage Connector for Microsoft SharePoint 2010*.

7.2 Cross Enterprise Document Sharing (XDS) Connector

Cross Enterprise Document Sharing (XDS) is a standard used by the *Integrating The Healthcare Enterprise* initiative to help medical devices that create documents, such as MRI machines, to better communicate with content repositories. XDS is a data exchange specification composed of elements which communicate with each other using standard SOAP-based web services.

The WebCenter Content XDS Connector is used to allow Oracle WebCenter Content and the Content Server to act as a repository in an XDS exchange. With the WebCenter

Content XDS Connector enabled, documents are downloaded to the repository in Oracle WebCenter Content. The downloading is based on a unique XDS-specific document ID supplied by the Document Source.

For more information, see *Oracle Fusion Middleware Configuring the XDS Connector for Oracle WebCenter Content*.

7.3 Digital Imaging and Communications in Medicine (DICOM) Connector

Digital Imaging and Communications in Medicine (DICOM) is a standard specifying an imaging file format and a networking protocol to be used in the medical imaging domain. Picture Archiving and Communications Systems (PACS) are designed to store and transfer medical images in the DICOM format using DICOM network protocol.

Medical imaging devices (such as CT scanners and X-ray machines) communicate with one or more PACS to store images. Health care professionals then review images using a DICOM viewer application to query PACS to retrieve relevant patient information.

DICOM support has been integrated into Oracle WebCenter Content to give Content Server users access to DICOM images. This integration allows images originally stored in a PACS or on the local file system to be managed using Content Server. The DICOM support that has been integrated is based on the functionality of Oracle Multimedia DICOM, a feature of Oracle Database.

For more information, see *Oracle Fusion Middleware Configuring and Using the DICOM Component*.

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