Oracle Commerce Guided Search

Getting Started Guide

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Contents

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Preface

Oracle Commerce Guided Search is the most effective way for your customers to dynamically explore your storefront and find relevant and desired items quickly. An industry-leading faceted search and Guided Navigation solution, Guided Search enables businesses to influence customers in each step of their search experience. At the core of Guided Search is the MDEX Engine™, a hybrid search-analytical database specifically designed for high-performance exploration and discovery. The Oracle Commerce Content Acquisition System provides a set of extensible mechanisms to bring both structured data and unstructured content into the MDEX Engine from a variety of source systems. The Oracle Commerce Assembler dynamically assembles content from any resource and seamlessly combines it into results that can be rendered for display.

Oracle Commerce Experience Manager enables non-technical users to create, manage, and deliver targeted, relevant content to customers. With Experience Manager, you can combine unlimited variations of virtual product and customer data into personalized assortments of relevant products, promotions, and other content and display it to buyers in response to any search or facet refinement. Out-of-the-box templates and experience cartridges are provided for the most common use cases; technical teams can also use a software developer's kit to create custom cartridges.

About this guide

This guide walks you through a basic installation of Oracle Commerce Guided Search. It also covers deploying the Discover Electronics reference application and your first steps with an Assembler-based application.

For more detailed installation information, including information about silent installation, refer to the *Installation Guide* for the particular component you are installing.

Note: Unless otherwise indicated, whenever this document specifies UNIX, it applies to Linux and Solaris.

Who should use this guide

This guide is intended for developers and system integrators who want to install Oracle Commerce Guided Search in a development environment and become familiar with the basics of Assembler applications.

Conventions used in this guide

This guide uses the following typographical conventions:

Code examples, inline references to code elements, file names, and user input are set in `monospace` font. In the case of long lines of code, or when inline monospace text occurs at the end of a line, the following symbol is used to show that the content continues on to the next line: ¬

When copying and pasting such examples, ensure that any occurrences of the symbol and the corresponding line break are deleted and any remaining space is closed up.

Contacting Oracle Support

Oracle Support provides registered users with answers to implementation questions, product and solution help, and important news and updates about Guided Search software.

You can contact Oracle Support through the My Oracle Support site at *https://support.oracle.com*.

Chapter 1

Overview of the Getting Started Tasks

This guide provides guidance to install Oracle Commerce Guided Search and deploy a reference application to examine a test data set in a full-featured application.

Finding Information Relevant to Your Oracle Commerce Guided Search Data Integration Model

This section describes where to find the information in the Oracle Commerce Guided Search documentation that is relevant to each of the common ways of configuring and integrating data into your Guided Search system.

Related Links

Download the installation packages on page 14
Oracle Commerce Guided Search is made up of the installation packages listed below. Download them from the Oracle Software Delivery Cloud.

Install Oracle Commerce Guided Search on one machine on page 15
For the sake of simplicity, install all components on a single machine for development work. This makes installation, configuration, and communication among components simpler as you get familiar with how the system operates. More complicated environments, such as staging and production environments, with multiple hosts, are described in other Developer Guides and Administrator Guides. See *Appendix A: Full List of Documentation Resources*.

Deploy a reference application on page 15
After the installation process, you can deploy the Discover Electronics reference application to examine a fully-featured Web application and the architecture of an Endeca Assembler application.

Read the Oracle Commerce Guided Search Concepts Guide on page 14
If you are new to Oracle Commerce Guided Search (formerly Oracle Endeca Guided Search) and have not attended training for the product, read the *Oracle Commerce Guided Search Concepts Guide*. Many Guided Search-specific terms and concepts are explained in that guide. You may also want to have the *Oracle Commerce Guided Search Glossary* available. (You can download documentation from the Oracle Technology Network.)

Guided Search Data Integration Models

In recent releases, components of Guided Search have evolved to provide greater simplicity of implementation.

As a result, currently deployed Guided Search applications reflect different stages in the evolution of Guided Search. The parts of the Guided Search documentation that you will find applicable to your needs will depend on the stage on which you have based your application.

The stages take the form of one of the three following data integration models, depending on which components they use and how they use them:

Forge and Developer Studio Model on page 10

Product Catalog Integration Model (deprecated in Guided Search 11.0) on page 11

CAS Record Store Merger Model on page 13

Prior to the release of Oracle Commerce 3.1, all applications were based on the Developer Studio model. With the introduction of 3.1 (and the productized integration with ATG), some new applications were based on the Product Catalog Integration. With the release of 11.1, most new applications are based on the CAS Record Store Merger model.

Finding the documentation that is applicable to your deployment model

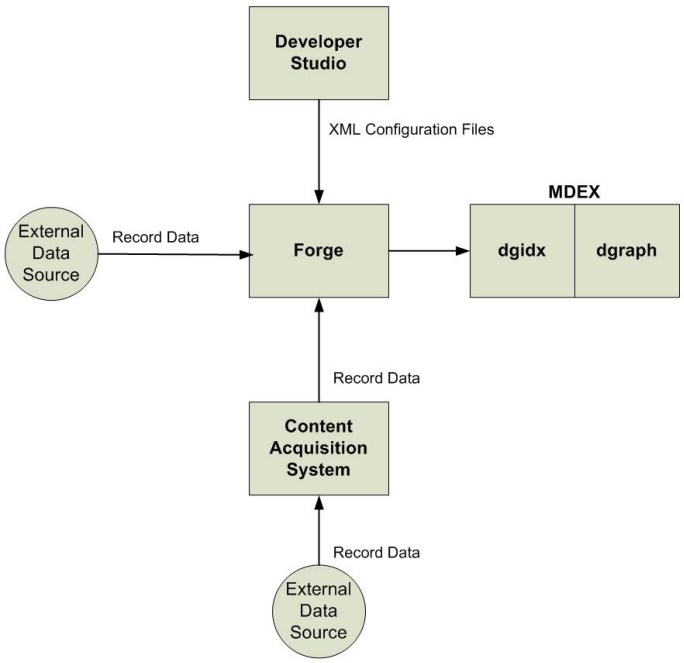
Sections of the documentation that describe technical concepts are equally valid for all data integration models.

However, sections of the documentation that describe procedures for configuring, starting, or stopping specific components are specific to one or two data integration models. For this reason, it is important to know which components are used in your data integration model before you consult the documentation. It is also important to know if any features of Guided Search are not supported by the model on which your application is based.

The following sections describe the Guided Search components used by each data integration model, and indicate which parts of the documentation are relevant to each.

Forge and Developer Studio Model

The following diagram illustrates the main components of a Guided Search application based on the Forge and Developer Studio model:



Significant Features of the Forge and Developer Studio Model

This deployment model uses all components of Guided Search. It is the only deployment model that uses Developer Studio.

Forge is the source of input to dgidx.

Forge receives record data from the Content Acquisition System (CAS) and/or external sources.

Forge receives configuration data in XML files that are generated by Developer Studio. The XML files are stored in the `config/pipeline` directory. The XML files should be edited through Developer Studio and not through a text editor.

Note: In this model, Forge receives record and configuration data from external sources only when it requests (pulls) the data. In other models, external sources send (push) record and configuration data to Forge or CAS without having received requests for the data.

Software Versions Used by the Forge and Developer Studio Model

Guided Search applications implemented according to the Forge and Developer Studio model use this version of the Discover reference application:

```
.../ToolsAndFrameworks/version/reference/discover-data
```

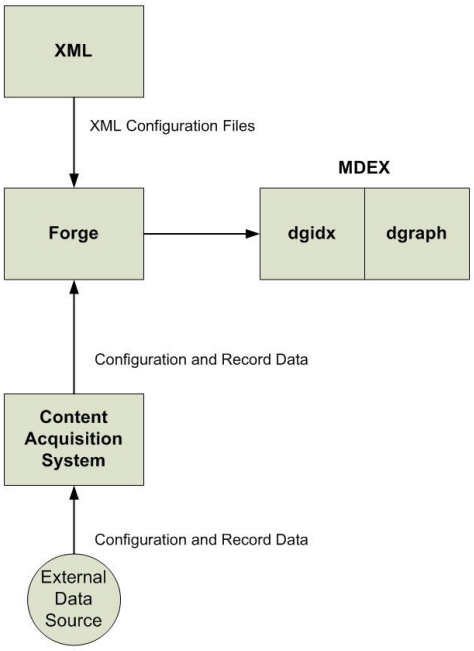
Documentation for the Forge and Developer Studio Model

Because the Forge and Developer Studio Model uses all components of Guided Search, you will find applicable information throughout the Guided Search documentation set.

Note, however, that *Platform Services XML Reference* is applicable only as a source of background information about configuration parameters. You do not need to edit the XML configuration files directly, and you can ignore sections of the documentation that explain how to edit XML files as an alternative to using Developer Studio.

Product Catalog Integration Model (deprecated in Guided Search 11.0)

The following diagram illustrates the main components of a Guided Search application deployed in the Product Catalog Integration model:



Significant Features of the Product Catalog Integration Model

This model uses all components of Guided Search except Developer Studio. It programmatically creates the XML files previously generated by Developer Studio.

Forge is the source of input to dgidx.

Forge receives record and configuration data from the Content Acquisition System (CAS). It receives additional configuration data in xml configuration files, which are stored in the directory `config/pipeline`. The xml configuration files can be edited in a text editor.

Software Versions Used by the Product Catalog Integration Model

Guided Search applications implemented according to the Product Catalog Integration model use the following software versions:

- ATG 10.1.*x*, 10.2.*x*
- Endeca 3.1.*x*
- CRS 10.1.*x*, 10.2.*x*
- The following versions of the Discover reference application:

```
.../ToolsAndFrameworks/version/reference/discover-data-pci
.../ToolsAndFrameworks/version/reference/discover-data-product-catalog-integra¬
tion (last shipped with Endeca version 3.1.2
```

Documentation for the Product Catalog Integration Model

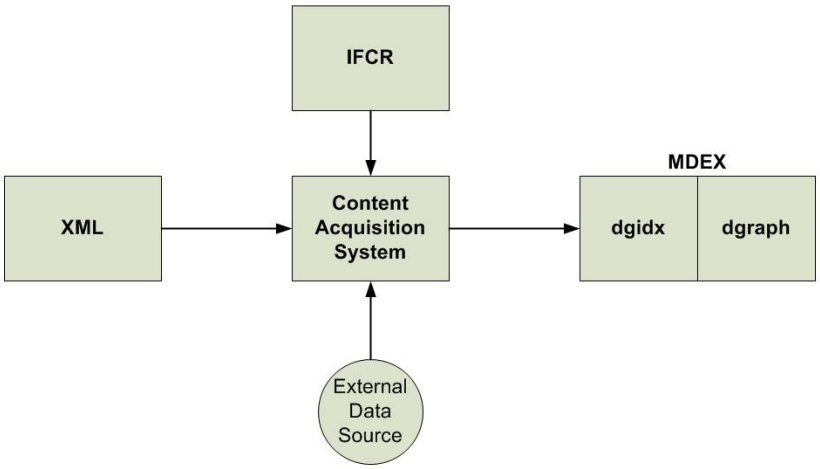
You will find applicable information throughout the Guided Search documentation set, except for sections that refer to Developer Studio, which cannot be used in this model.

Consult the *Platform Services XML Reference* for information about parameters of XML configuration files.

Note, however, that some configuration parameters, such as merchandising rules and thesaurus entries, are now edited in Workbench. Thus, before you attempt to edit a configuration parameter in an XML configuration file, consult the *Oracle Commerce Workbench User Guide* to determine whether it must be edited in Workbench.

CAS Record Store Merger Model

The following diagram illustrates the main components of a CAS record store merger model Guided Search application:



Software Versions Used by the CAS Record Store Model

Guided Search applications implemented according to the CAS record store merger Mode use the following software versions:

- ATG 11.*x*
- Endeca 11.*x*
- CRS 11.1.*x*
- The following version of the Discover reference application:

```
.../ToolsAndFrameworks/version/reference/discover-data-cas
```

CAS Record Store Merger Model

This model does not use either Forge or Developer Studio. It uses all other components of Guided Search.

CAS is the source of input to dgidx.

CAS receives record data from external sources, and it receives configuration data from the Endeca Configuration Repository and in XML configuration files.

The CAS record store merger Model relies largely on resources other than XML files to configure the data that CAS provides as input to dgidx:

- To configure MDEX properties and dimensions, methods of `config_import_api` are invoked by `index_config_cmd.[bat|sh]` through CAS-based deployment templates . You can use `index_config_cmd.[bat|sh]` to import and export these property and dimension configurations in the `index-config.json` file.
- Dimension configurations, including configuration managed externally to Guided Search, must be written to dimension value record stores. This mechanism makes it possible to specify ranges of values and order information as dimension values.
- The following features are configured in the Workbench:
  - Experience Manager rules
  - Keyword redirect rules

- Thesaurus entries
- Phrases

Documentation for the CAS record store merger Model

References in the documentation to Forge and Developer Studio are not applicable to the CAS record store merger model.

Refer to the *Oracle Commerce Content Acquisition System Developer's Guide* for information about:

- The features of a CAS-based application that must be edited through XML files. Refer to the *Oracle Commerce XML Reference Guide* for detailed information about these XML files.
- How to use `index_config_cmd.[bat|sh]`.
- How to export and import configuration data in JSON files.
- How to load dimensions, properties, and precedence rules to record stores
- The role of the Endeca Configuration Repository in configuring a CAS-based application.

Refer to the *Oracle Commerce Workbench User Guide* for information about how to configure Experience Manager rules, keyword redirect rules, thesaurus entries, and phrases. You do not configure these features in XML files.

Refer to the *Content Acquisition System Developer's Guide* for information about the XML files used for configuring application features in a CAS-based application.

Read the Oracle Commerce Guided Search Concepts Guide

If you are new to Oracle Commerce Guided Search (formerly Oracle Endeca Guided Search) and have not attended training for the product, read the *Oracle Commerce Guided Search Concepts Guide*. Many Guided Search-specific terms and concepts are explained in that guide. You may also want to have the *Oracle Commerce Guided Search Glossary* available. (You can download documentation from the Oracle Technology Network.)

You can defer reading the other documentation until you have installed everything and worked with the reference application.

Download the installation packages

Oracle Commerce Guided Search is made up of the installation packages listed below. Download them from the Oracle Software Delivery Cloud.

- MDEX Engine. *Required.*
- Platform Services. *Required.*
- Tools and Frameworks. *Required.* This component has two packaging options. There is an installation package for Oracle Commerce Guided Search and an installation package for Oracle Commerce Guided Search with Experience Manager.
- Content Acquisition System (CAS). *Optional.*
- Developer Studio. *Optional.*

See *Oracle Commerce Supported Environments* in the My Oracle Support knowledge base for information on which versions are compatible with one another.

Not all of the installation packages are required for the getting started scenario described in this guide. For example, Developer Studio and the Content Acquisition System are optional installations. However, it is useful to install the optional packages for the sake of understanding the full scope of Oracle Commerce Guided Search and so that you can explore the full range of features in a development environment.

Install Oracle Commerce Guided Search on one machine

For the sake of simplicity, install all components on a single machine for development work. This makes installation, configuration, and communication among components simpler as you get familiar with how the system operates. More complicated environments, such as staging and production environments, with multiple hosts, are described in other Developer Guides and Administrator Guides. See *Appendix A: Full List of Documentation Resources*.

Install the latest versions of the software in the order listed:

1. MDEX Engine.
2. Platform Services.
3. Tools and Frameworks.
4. Content Acquisition System (CAS).
5. Developer Studio.

To determine version compatibility of components in Oracle Commerce Guided Search, see *Oracle Commerce Supported Environments* in the My Oracle Support knowledge base

Hardware requirements

This list contains the minimum hardware requirements.

- x64 processor, minimum 1.8 GHz
- At least 4 GB of RAM
- 10 GB of available hard drive space for the installation packages

Supported operating systems

See *Oracle Endeca Commerce Supported Environments and Compatibility* on the Oracle Technology Network for information on supported operating systems and Web browsers.

Deploy a reference application

After the installation process, you can deploy the Discover Electronics reference application to examine a fully-featured Web application and the architecture of an Endeca Assembler application.

Chapter 2

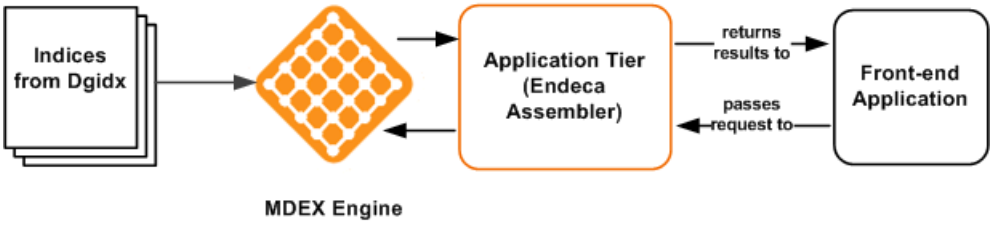
Components of Oracle Commerce Guided Search

This section describes the components that make up Oracle Commerce Guided Search.

About the MDEX Engine

The Oracle Commerce MDEX Engine is the indexing and query engine that provides the backbone for all Guided Search solutions.

The MDEX Engine uses proprietary data structures and algorithms that allow it to provide real-time responses to client requests. The MDEX Engine stores the indices that were created by the Dgidx indexing program. After the indices are stored, the MDEX Engine receives client requests through the application tier, queries the indices, and then returns the results.



The MDEX Engine is designed to be stateless. This design requires that a complete query be sent to the MDEX Engine for each request. The stateless design of the MDEX Engine facilitates the addition of MDEX Engine servers for load balancing and redundancy. Because the MDEX Engine is stateless, any replica of an MDEX Engine on one server can reply to queries independently of a replica on other MDEX Engine servers.

Consequently, adding replicas of MDEX Engines on additional servers provides redundancy and improved query response time. That is, if any one particular server goes down, a replica of an MDEX Engine provides redundancy by allowing other servers in the implementation to continue to reply to queries. In addition, total response time is improved by using load balancers to distribute queries to a replica MDEX Engine on any of the additional servers.

The two primary components of the MDEX Engine package are the following:

- Dgraph
- Dgidx

Dgraph

The Dgraph is the name of the process for the MDEX Engine. A typical Endeca implementation includes one or more Dgraphs.

Dgidx

Dgidx is the indexing program that reads the tagged Endeca records that were prepared by Forge or CAS and creates the proprietary indices for the Endeca MDEX Engine.

About Platform Services

The Platform Services package contains the following components:

- Endeca Application Controller (EAC)
- Data Foundry
- Logging and Reporting System
- Reference Implementations

Endeca Application Controller (EAC)

The EAC components consist of the EAC Central Server (which coordinates the command, control, and monitoring of all Agents in an Endeca implementation), the EAC Agent (which controls the work of an Endeca implementation on a single host machine) and the EAC command-line utility, `eaccmd`.

Data Foundry

The Data Foundry includes components for ingesting data into the MDEX Engine. Consists of the Forge program and its related components, such as record adapters, record manipulators, dimension servers, property mappers, and so on. The Content Adapter Development Kit (CADK) is also installed. Note that the Dgidx program is not part of this package, but is available in the MDEX Engine installation package.

Note: Oracle recommends using the Content Acquisition System (CAS) for data ingest.

Logging and Reporting System

The Log Server and Report Generator, together with the Logging API, make up the Endeca Logging and Reporting System.

Reference Implementations

These sample Endeca applications, which include the JSP and .NET front-end applications, are used primarily to examine and validate source data.

About Tools and Frameworks

The Tools and Frameworks package contains the following components:

- Oracle Commerce Workbench
- Endeca Assembler
- Experience Manager

- Experience Manager SDK
- Rule Manager
- Endeca for Mobile (Web only)
- Deployment Template
- Reference applications
- URL Optimization API

Oracle Commerce Workbench

Oracle Commerce Workbench is a Web-based tool that provides a way for merchandisers and other business users to configure portions of their Guided Search (Endeca) application and provides system administrators with a means to configure and administer an Endeca implementation.

Unlike Developer Studio, which provides a rich development environment for configuring all aspects of an Endeca implementation, Workbench focuses on a smaller set of common, every day configuration and maintenance tasks. This reduced focus gives Workbench a smaller footprint (than Developer Studio) that can exist within the bounds of a Web-based application. Workbench also provides additional capabilities for business users, such as Experience Manager or Rule Manager.

Endeca Assembler

The Endeca Assembler API enables an application to query external data sources and retrieve content based on a user's navigation state or other triggers. By default, it includes functionality for querying an MDEX Engine and returning query results as well as a content item object that encapsulates the page configuration specified by the content administrator. All the content for a page, including the results of any additional queries needed for spotlighting or merchandising, are wrapped in the content item object, simplifying the logic in the front-end application by reducing the need to manage sub-queries in the application layer.

The Endeca Assembler API also incorporates the URL Optimization API which enables you to create application URLs that are optimized for internet search engines. In particular, the API provides the capability to shorten and canonicalize URLs and add search and navigation keywords to URLs. The resulting URLs are more optimized for internet search engines and more understandable to front-end application users.

The core cartridges and the Discover Electronics reference application use the URL Optimization API in conjunction with the Endeca Assembler to produce search-engine optimized URLs. In this scenario, the reference application uses a configuration file to both enable the URL Optimization API and to produce search-engine optimized URLs. By default, the reference application does not use the URL Optimization API. You have to explicitly enable it.

Experience Manager

Experience Manager is an extension to Oracle Workbench that enables rapid creation of rich, dynamic application pages. Experience Manager enables administrators to control site content without need for IT intervention.

Experience Manager Editor SDK

Experience Manager Editor SDK enables application developers to introduce new functionality into Experience Manager via custom content editors. The SDK consists of Experience Manager Editor API, a sample editor project, and associated documentation.

Rule Manager

The Rule Manager is an extension to Oracle Workbench that allows content administrators to create and modify rules, activate/deactivate rules, change their priority, and preview rules in an authoring application.

Deployment Template

The Deployment Template is a utility that you run to create a new Endeca application with the complete directory structure required for deployment, including Endeca Application Controller (EAC) control scripts, configuration files, and batch files or shell scripts that wrap common script functionality.

Reference applications

Reference applications include the Discover Electronics reference application, the JSP reference application (installed with Workbench), and the Media MDEX application.

Once deployed, the Discover Electronics reference application has an *authoring instance* and a *live instance* of the application.

The authoring instance is a development environment for a content administrator to develop, test, and preview content changes for a site. A content administrator can immediately see changes reflected in the authoring application. When the content administrator is satisfied with the authoring application, he or she can promote the configuration and content from the authoring application to the live application that is available to front-end application users.

Packaging for Oracle Commerce Guided Search and Oracle Commerce Guided Search with Experience Manager

Tools and Frameworks comes in two installation packages.

- Oracle Commerce Guided Search with Experience Manager - contains Experience Manager and Experience Manager Editor SDK. (This package is a super set of Oracle Commerce Guided Search.)
- Oracle Commerce Guided Search - contains Rule Manager, but not Experience Manager or the Experience Manager Editor SDK.

About the Content Acquisition System

The Content Acquisition System is a set of components that add, configure, and crawl data sources for use in an Endeca application. Data sources include file systems, content management systems, Web servers, and custom data sources. The Content Acquisition System crawls data sources, converts documents and files to Endeca records, and stores them for use in a pipeline.

The Endeca Content Acquisition System is made up of the following components:

- Endeca CAS Service
- CAS Server
- CAS Console for Workbench
- CMS Data Sources
- CAS Extension API
- Endeca Web Crawler
- Endeca Record Store
- Dimension Value Id Manager
- Component Instance Manager

Endeca CAS Service

The Endeca CAS Service is a servlet container that runs the CAS Server, the Component Instance Manager, and any number of Record Store instances (one per data source).

CAS Server

The CAS Server is the component that manages all file system and CMS crawling operations. The CAS Server API allows users to write programs that communicate with the CAS Server. The CAS Server API has a WSDL interface and also a CAS Server Command-line Utility.

CAS Console for Oracle Commerce Workbench

The CAS Console for Workbench is a Web-based application used to crawl various data sources including file systems and content management systems. During the Content Acquisition System installation, the CAS Console is installed as an extension to Workbench.

CMS data sources

CMS data sources are available for use in the CAS Console for Workbench or the CAS Server API. CMS data sources provide a means to access and crawl data sources in a wide variety of CMS types, such as Documentum, eRoom, FileNet, JSR-170 compliant repositories, Lotus Notes, Microsoft SharePoint, and Interwoven TeamSite.

CAS Extension API

The CAS Extension API provides interfaces and classes to build extensions such as custom data sources and custom manipulators. You package extensions into a plug-in and install it into the Content Acquisition System. After you install the plug-in, the extensions are available and configurable using the CAS Console, the CAS Server API, and the CAS Server Command-line Utility.

Endeca Web Crawler

The Endeca Web Crawler manages all Web crawl-related operations.

Endeca Record Store

The Endeca Record Store provides persistent storage for generations of records. The Record Store has a WSDL interface and also a Record Store Command-line Utility. The CAS Server writes crawl output from each data source to a unique Record Store instance.

About Developer Studio

Developer Studio is a Windows application that you use to define all aspects of your instance configuration including pipeline components such as Endeca properties and dimensions, precedence rules, dynamic business rules, and user profiles.

With Developer Studio, you can define:

- Pipeline components for tasks such as loading, standardizing, joining, mapping, and exporting data.
- Endeca properties and property attributes such as sort and rollup.
- Dimensions and dimension values, including dimension hierarchy.
- Precedence rules among dimensions that provide better control over your implementation's navigation flow.
- Search configurations, including which properties and dimensions are available for search.

Developer Studio uses a project file, with an `.esp` extension, that contains pointers to the XML files that support an instance configuration.

Chapter 3

Installing Oracle Commerce Guided Search on Windows

Before you begin, you should uninstall components of previous versions of Oracle Commerce Guided Search. See the installation guides for these components on the Oracle Technology Network at http://www.oracle.com/technetwork/indexes/documentation/endecaguidedsearch-1552767.html.

Installing the MDEX Engine on Windows

Oracle recommends installing a machine-wide installation (step 6) assuming that administrator permissions are available for the user running the installer program. Accept all the installation defaults unless you must modify them.

To install the Endeca MDEX Engine on Windows:

1. Download the MDEX Engine package from the Oracle Software Delivery Cloud.
2. Extract the MDEX Engine package to a local directory.
   The name of the extracted installer file is `OCmdex_<version>_x86_64pc-win32.exe`.
3. Double-click the installer file `OCmdex_<version>_x86_64pc-win32.exe` to start the wizard.
4. Click **Next** to begin the installation process.
5. In the **Copyright and Legal** screen, click **Next**.
6. In the **Select Program Folder** screen, do the following:
   - Accept the default value for **Program Folder**.
   - Select the **Anyone who uses this computer (all users)** button.
   - Click **Next**.
7. Select an installation location or accept the default installation of `C:\Endeca\MDEX\<version>` and click **Next**.
8. Click **Finish**.

Installing Platform Services on Windows

In this procedure, you have to specify a user name that runs the Endeca services. The user name should be the same admin user that ran the MDEX Engine installation. It does not need to be an `endeca` user. The user name cannot be null or have a blank password. At the end of the installation, you have to restart the machine.

If you have uninstalled Platform Services in the current session, restart your computer before you begin reinstalling Platform Services.

Here again, accept all the installation defaults unless you must modify them. Do not install the Endeca Control System in the **Custom Setup** screen.

To install the Endeca Platform Services on Windows:

1. Download the Endeca Platform Services package from the Oracle Software Delivery Cloud.
2. Extract the Endeca Platform Services package to a local directory.
   The name of the extracted installer file is `OCplatformservices_<version>_x86_64pc-win32.exe`.
3. Double-click the installer file to start the wizard.
4. When the **Endeca Platform Services Setup Wizard** screen appears, click **Next**.
5. Read the copyright information and click **Next**.
6. In the **Select Installation Type** screen, select **Anyone who uses this computer (all users)** and click **Next**.
7. In the **Destination folder** screen, select an installation location or accept the default `C:\Endeca\PlatformServices` installation directory and then click **Next**.

   Keep in mind that you cannot install the Endeca software in a directory with spaces in its name.

8. In the **Custom Setup** screen, leave all the defaults selected and then click **Next**.

   Note: The Endeca Control System and Endeca Reference Implementation are not selected. You do not need these components for new applications.

9. In the **Endeca Services Information** screen, enter the user name, domain name, and password to use when launching the Endeca HTTP Service and then click **Next**.
10. In the **Endeca Application Controller Service Information** screen, do the following and then click **Next**:
    - Accept the default **EAC service port** of 8888.
    - Accept the default **EAC service shutdown port** of 8090.
    - Specify an absolute path to the MDEX Engine root directory (for example, `C:\Endeca\MDEX\<version>`).
11. In the **Ready to install the program** screen, confirm the settings you selected in previous screens and then click **Install**.
12. When the installation is complete, click **Finish** to exit the wizard.
13. Click **Yes** to restart the computer.
    Restarting sets the Endeca environment variables (such as `ENDECA_ROOT`) correctly and starts the Endeca HTTP Service.

Installing Tools and Frameworks on Windows

To install the Oracle Commerce Tools and Frameworks:

1. If you have an earlier version of Oracle Commerce Tools and Frameworks, follow the steps in *Oracle Commerce Tools and Frameworks Installation Guide* to remove it before installing the Tools and Frameworks.
2. In your local environment, locate the Tools and Frameworks software that you downloaded from the Oracle Software Delivery Cloud.
3. Extract the Tools and Frameworks package to a local directory.
4. Navigate to the `\cd\Disk1\install` directory and double-click the `setup.exe` installer file to start the wizard.
   The Welcome screen displays.
5. Click **Next** to begin the installation process.
6. Read the License Agreement and click **I accept the License Terms and Export Restrictions**.
7. If this is the first product that you have installed on this machine using the Oracle Universal Installer, the Specify Inventory directory screen appears. Specify the directory where the Oracle Universal Installer should place inventory files and directories. Oracle recommends that you accept the default path.

   The Installer uses the Oracle Inventory directory to store inventory information in files and subdirectories. This directory contains permanent and product specific files. Ensure that the files in this folder are not deleted or modified, as this would make patching or upgrading impossible.

   Click **Next**
8. Choose the installation type, and click **Next**.

   The **Complete Installation** includes the reference application; the **Minimal Installation** does not.
9. Specify a name and a path where you want to install Tools and Frameworks. Oracle recommends `C:\Endeca\ToolsAndFrameworks` as your path. This is the path that Oracle refers to as your default path throughout the Oracle Endeca Commerce documentation.

   Click **Next**.

   Note: If you are reinstalling Tools and Frameworks and you receive a message that the name is in use, click **Installed Products** and remove the previous instance of the name from your Oracle Inventory.
10. Enter an *admin* password and confirm the password.

    The admin user is the default administrator user for Tools and Frameworks.

    Click **Next**
11. When the Summary screen appears, click **Install**.
12. When the End of Installation screen appears, click **Exit**.
13. In Windows Explorer, navigate to the Tools and Frameworks installation directory.
14. Install the Endeca Tools Service by double clicking `server\bin\install_service.bat`.

    This creates the Endeca Tools Service and configures it to run under the current user profile. The user running `install_service.bat` and the Endeca Tools Service must have administrator privileges.
15. Start the Endeca Tools Service by doing the following:
    - Start the Microsoft Services console.
    - Select the Endeca Tools Service from the list of services.
    - Click **Start Service**.

Verifying the Tools and Frameworks installation

The simplest way to check the installation is to load Oracle Commerce Workbench in a Web browser. This indicates the Endeca Tools service is running and that Workbench is available.

To verify the Tools and Frameworks installation:

1. Start a Web browser.
2. In the URL, specify the machine name and default port of Workbench (8006).
   For example, `http://localhost:8006/`

The Workbench login screen displays.

Installing CAS on Windows

Here again, accept all the installation defaults unless you must modify them.

To install CAS on Windows:

1. Download the Content Acquisition System package from the Oracle Software Delivery Cloud.
2. Extract the Content Acquisition System package to a local directory.
   The name of the extracted installer file is `OCcas-<version>_x86_64pc-win32.exe`.
3. Double-click the installer file `OCcas-<version>_x86_64pc-win32.exe` to start the wizard.
4. Click **Next** to begin the installation process.
5. In the **Important Information** screen, read the copyright and then click **Next**.
6. In the **Custom Setup** screen, select both program features and then click **Next**.
7. In the **Destination Folder** screen, accept the default location of `C:\Endeca\CAS` and then click **Next**.
8. In the **Endeca CAS Service Information** screen, specify the user name, password, and domain information for the admin user who will run the CAS Service and then click **Next**.
9. In the **CAS Server Information** screen, accept the default values for the CAS Server port(`8500`) and CAS Server shutdown port (`8506`).
10. In the **Completing the Setup Wizard** screen, click **Next**.

The CAS Service starts automatically.

Verifying the CAS installation

The simplest way to check the installation is to load Oracle Commerce Workbench in a Web browser and confirm that the **Data Sources** option displays. This indicates the Endeca CAS service is running and that CAS Console is installed as an extension to Workbench.

To verify the CAS installation:

1. Start a Web browser.
2. In the URL, specify the machine name and default port of Workbench (8006).
   For example, `http://localhost:8006/`
3. Log in to Workbench with a **Username** of `admin` and a **Password** of `admin`.

On the Workbench Home screen, you will see the **Data Sources** option. That indicates CAS Console is installed and running.

Installing Developer Studio

Developer Studio is only available for Windows.

To install Developer Studio:

1. Download the Oracle Commerce Developer Studio package from the Oracle Software Delivery Cloud.
2. Extract the Developer Studio package to a local directory.
   The name of the extracted installer file is `OCdevstudio-`*`version`*`_i86pc-win32.exe`.
3. Double-click the installer file: `OCdevstudio<`*`version`*`>-<`*`OS`*`>_<`*`BUILD`*`>.exe`
4. Click **Next** to begin the installation wizard.
5. On the Copyright and legal screen, click **Next**.
6. In the License Agreement screen, select **I accept the terms in the license agreement**, then click **Next**.
7. In the Destination Folder screen, either accept the default location or click **Change** and browse to the directory where you want to install the software. Oracle recommends that you accept the default location (`C:\Endeca\DeveloperStudio`). When you have finished, click **Next**.
8. In the **Ready to Install the Program** screen, click **Install**.
9. When the installation is complete, click **Finish**.

Verifying the Developer Studio installation

You can verify the installation simply by starting the program. It is not necessary to open a Developer Studio project at this point.

To verify the Developer Studio installation:

From the Windows Start menu, select **All Programs** > **Endeca** > **Developer Studio** > **Developer Studio 6.1.3**.

Developer Studio displays with an empty Project Explorer window. (You will use Developer Studio later to modify your Endeca instance configuration.)

Chapter 4

Installing Oracle Commerce Guided Search on UNIX

Installing the MDEX Engine on UNIX

The software is distributed as a self-extracting TAR file and install script. In these instructions, we assume `/usr/local` as the installation target directory.

To install the Endeca MDEX Engine:

1. Download the MDEX Engine package from the Oracle Software Delivery Cloud.
2. Extract the MDEX Engine package to a local directory. This procedure assumes the location is `/downloads/[ARCH_OS]`.
   The name of the extracted installation file is `OCmdex_<version>_[ARCH_OS].sh`.
3. Determine where you will install the MDEX Engine. Oracle recommends you install to `/usr/local/endeca`.
4. Verify that the target installation directory has write permissions (is not read-only) and that you have write permissions for it.

   If you do not set these permissions, the install script will not run.
5. Assuming the location above, run the installation script with the following command:

   ```
   /downloads/[ARCH_OS]/mdex_<version>_[ARCH_OS].sh --target /usr/local
   ```
6. The copyright and legal information displays. Scroll to the end.

   As the installation is being unpacked, a series of dots serves as a progress monitor. The unpacking may take several minutes.

   After installation, the installer prompts you to run the `mdex_setup` script that sets the `ENDECA_MDEX_ROOT` environment variable.
7. Run `mdex_setup`.
   Depending on your shell, it will be one of the following scripts:

   ```
   source endeca/MDEX/<version>/mdex_setup_sh.ini
   ```

   or

   ```
   source endeca/MDEX/<version>/mdex_setup_csh.ini
   ```

The `mdex_setup` script sets up the environment variable `ENDECA_MDEX_ROOT` that points to `MDEX/<version>`. The script also adds the utilities directory and the MDEX Engine binaries to the search path.

Installing Platform Services on UNIX

The software is distributed as a self-extracting TAR file and install script. In these instructions, we assume `/usr/local` as the installation target directory.

To install the Oracle Commerce Guided Search Platform Services on UNIX:

1. Download the Platform Services package from the Oracle Software Delivery Cloud.
2. Extract the Platform Services package to a local directory. This procedure assumes the location is `/downloads/[ARCH_OS]`. The name of the extracted installation file is as follows:
   - For Intel Linux 64-bit: `OCplatformservices_<version>_x86_64pc-linux.sh`
   - For SPARC Solaris: `OCplatformservices_<version>_sparc_64-solaris.sh`
3. Run the install script with the `--target` flag, which specifies the absolute path of the target installation directory. Oracle recommends you install to `/usr/local/endeca`.

   For example:

   ```
   ./OCplatformservices_612_x86_64pc-linux.sh --target /usr/local/endeca
   ```
4. The copyright and legal information displays. Scroll to the end.

   As the installation is being unpacked, a series of dots serves as a progress monitor. The unpacking may take several minutes.
5. Enter the port on which the EAC service will listen. The default is **8888**, but you must specifically enter that number in the prompt.
6. Enter the shutdown port of the EAC service. The default is **8090**, but you must specifically enter that number in the prompt.
7. Enter the Endeca Control System JCD port, or nothing if you do not intend to use the Endeca Control System. The default is 8088.
8. Enter **Y** to configure this host to run the Application Controller, including the Application Controller Agent.
9. Enter the location (an absolute path) of the MDEX Engine root directory (for example, `/usr/local/endeca/MDEX/<version>`).
10. Enter **Y** to install the reference implementations.
    The installation is complete when the screen displays a reminder message about setting the environment variables.
11. After the installation is finished, run an `installer` script to set the Platform Services environment variables (such as `ENDECA_ROOT`), as well as additional variables that are used internally.
    Depending on your shell, it will be one of the following scripts:

    ```
    source /usr/local/endeca/workspace/setup/installer_sh.ini
    ```

    or

    ```
    source /usr/local/endeca/workspace/setup/installer_csh.ini
    ```

After installation, setting environment variables, start the Endeca HTTP Service. Change to the `endeca/PlatformServices/<version>/tools/server/bin` directory and run the `startup.sh` script. (For information on controlling this service, see the *Oracle Endeca Application Controller Guide*.)

Installing Tools and Frameworks on UNIX

To install Oracle Commerce Tools and Frameworks, extract the package to your Endeca directory and run the included runinstaller script.

If you have an earlier version of Tools and Frameworks, you must follow the steps in the *Oracle Commerce Tools and Frameworks Installation Guide* to remove it before installing the latest version.

To install Tools and Frameworks:

1. Download the Tools and Frameworks package from the Oracle Software Delivery Cloud.
2. Extract the Tools and Frameworks package to a local directory.
3. Navigate to the `/cd/Disk1/install` directory.
4. Run `runinstaller.sh`.
   The Welcome screen displays.
5. Click **Next** to begin the installation process.
6. Read the License Agreement and click **I accept the License Terms and Export Restrictions**.
7. If this is the first product that you have installed on this machine using the Oracle Universal Installer, the Specify Inventory directory screen appears.
   a) Specify the directory where the Oracle Universal Installer should place inventory files and directories. Oracle recommends that you accept the default path.

      The Installer uses the Oracle Inventory directory to store inventory information in files and subdirectories. This directory contains permanent and product specific files. Ensure that the files in this folder are not deleted or modified, as this would make patching or upgrading impossible.

   b) Specify the UNIX group name that should own the base directory.

      You must specify a UNIX group name that has permission to update, install, and deinstall Oracle software. Members of this group must have write permissions to the base directory chosen.

   c) Click **Next**
8. Choose the installation type, and click **Next**.

   The **Complete Installation** includes the reference application; the **Minimal Installation** does not.
9. Specify a name and a path where you want to install Tools and Frameworks. Oracle recommends `/usr/local/endeca/ToolsAndFrameworks` as your path. This is the path that Oracle refers to as your default path throughout the Oracle Endeca Commerce documentation.

   Click **Next**.

   Note: If you are reinstalling Tools and Frameworks and you receive a message that the name is in use, click **Installed Products** and remove the previous instance of the name from your Oracle Inventory.

10. Enter an *admin* password and confirm the password.

    The admin user is the default administrator user for Tools and Frameworks.

    Click **Next**
11. When the Summary screen appears, click **Install**.
12. When the End of Installation screen appears, click **Exit**.
13. Navigate to the `server/bin` directory.
14. Run `startup.sh`.

This script sets the environment variables for your Tools and Frameworks installation and initializes the Apache Tomcat Web server, with Workbench running on `localhost:8006` as a background process.

To manage the Workbench process after installation:

- Start the Workbench process with the `startup.sh` script.
- Stop the Workbench process with the `shutdown.sh` script.

Verifying the Tools and Frameworks installation

The simplest way to check the installation is to load Oracle Commerce Workbench in a Web browser. This indicates the Endeca Tools service is running and that Workbench is available.

To verify the Tools and Frameworks installation:

1. Start a Web browser.
2. In the URL, specify the machine name and default port of Workbench (8006).
   For example, `http://localhost:8006/`

The Workbench login screen displays.

Installing CAS on UNIX

The software is distributed as a self-extracting TAR file and install script.

To install CAS on UNIX:

1. Download the CAS package from the Oracle Software Delivery Cloud.
2. Extract the CAS package to a local directory. This procedure assumes the location is `downloads/<arch-OS>.` The name of the installation file is
   - `OCcas-<version>_<ARCH_OS>.sh`
3. Determine an installation location for CAS. Oracle recommends you install to `/usr/local/endeca`.
4. Assuming the locations above, run the installation script with the following command:

```
downloads/arch-OS/OCcas-version_ARCH-OS.sh --target /usr/local [--ende¬
ca_tools_root full path to the Endeca Tools
root directory]
[--endeca_tools_conf full path to the Endeca Tools /conf directory]
```

5. Enter the CAS Service port.
6. Enter the CAS Service Shutdown port.
7. If `ENDECA_TOOLS_ROOT` or `ENDECA_TOOLS_CONF` is not set in the environment, the installer prompts you for these values.
8. Enter the fully qualified CAS Server host name.

Following installation:

- Restart the Endeca Tools Service.
- To start the CAS Service, navigate to `/usr/local/endeca/CAS/<version>/bin` and run the following script: `cas-service.sh`

Verifying the CAS installation

The simplest way to check the installation is to load Oracle Commerce Workbench in a Web browser and confirm that the **Data Sources** option displays. This indicates the Endeca CAS service is running and that CAS Console is installed as an extension to Workbench.

To verify the CAS installation:

1. Start a Web browser.
2. In the URL, specify the machine name and default port of Workbench (8006).
   For example, `http://localhost:8006/`
3. Log in to Workbench with a **Username** of `admin` and a **Password** of `admin`.

On the Workbench Home screen, you will see the **Data Sources** option. That indicates CAS Console is installed and running.

Chapter 5

Deploying a Reference Application

After installing Oracle Commerce Guided Search, you can deploy a reference application to process a test data set and examine it in a Guided Search (Endeca) front-end application.

Deploying the Discover Electronics reference application

You deploy the Discover Electronics reference application by running the Deployment Template and then running the application's operational scripts such as `initialize_services`, `load_baseline_test_data`, `baseline_update`, and so on. In this procedure, the Deployment Template copies the source data in `reference\discover-data` to the `C:\Endeca\apps\Discover` directory, and Forge processes the source data as part of the baseline update. The deployment process creates an authoring application and a live application.

Before deploying the Discover Electronics reference application:

- Ensure that the Endeca Tools Service is running.
- You also need to create a directory for deployed Endeca applications, such as `C:\Endeca\apps` on Windows, or `/usr/local/endeca/apps` on UNIX.

To deploy the Discover Electronics reference application:

1. Run the Deployment Template to provision the application:
   a) Open a command prompt or command shell.
   b) Navigate to the `C:\Endeca\ToolsAndFrameworks\<version>\deployment_template\bin` directory on Windows, or `/usr/local/endeca/ToolsAndFrameworks/<version>/deployment_template/bin` on UNIX.
   c) Run the `deploy` script with the `--app` flag and an argument that specifies the path to the `deploy.xml` descriptor file:

      For example:

      ```
      C:\Endeca\ToolsAndFrameworks\<version>\deployment_template\bin>deploy --app
       C:\Endeca\ToolsAndFrameworks\<version>\reference\discover-data\deploy.xml
      ```

   d) Confirm the Platform Services installation directory.

Note: If you specify an incorrect path to the `deploy.xml` file, the Deployment Template proceeds to deploy a legacy dataset. Ensure that the following message is present after you confirm the Platform Services directory:

```
The following app modules were specified on the command line argument:
<Endeca Directory>/ToolsAndFrameworks/<version>/reference/discover-da¬
ta/deploy.xml
```

e) Select y to install a base application.
f) Specify `Discover` as the application name.

Note: The application configuration depends on this name and case sensitivity is important.

g) Specify the application directory previously created for Endeca applications. This is typically a directory, such as `C:\Endeca\Apps` on Windows or `/usr/local/endeca/apps` on UNIX.
h) Specify the EAC port and then Oracle recommends using the default values for subsequent prompts about port values and the Oracle Wallet.
i) Specify the path to the location where you can export your application content to, or press **Enter** to accept the default path of ../../server/workspace/state/repository.

2. Navigate to the `control` directory of your new deployed application.

   This is located under your application directory, for example: `C:\Endeca\apps\Discover\control` on Windows.

3. Initialize the application and load the baseline data and templates:
   a) Run the `initialize_services` script.

      This script does the following:

      - Provisions the application in the Endeca Application Controller.
      - Uploads sample templates and configuration to the application.
      - Uploads sample content and media to the application.

   b) Run the `load_baseline_test_data` script.
   c) Run the `baseline_update` script.
   d) Run the `promote_content` script.

4. Confirm that the Discover Electronics reference applications are running:

   - Navigate to `http://localhost:8006/discover-authoring` to view the authoring version of the Discover application.
   - Navigate to `http://localhost:8006/discover` to view the live version of the Discover application.

Chapter 6

What's Next

At this point, you can build your own Guided Search (Endeca) implementation. Very broadly speaking, you start by running the deployment template to create a pipeline, directory structure, and control scripts. Then incorporate your own source data into the pipeline using either Forge or CAS, and build your front-end application using the Endeca Assembler.

Where to find documentation for the next development tasks

This topic lists Oracle Commerce Guided Search documentation relevant to each major implementation task.

For information about	See this documentation
Basic Guided Search concepts	• *Oracle Commerce Guided Search Concepts Guide* • *Oracle Commerce Guided Search Glossary*
Pipeline creation	• *Platform Services Forge Guide* • *CAS Developer's Guide* • *Oracle Commerce Developer Studio Help*
Data incorporation	The CAS documentation set, especially: • *CAS Developer's Guide* • *CAS Console for Oracle Commerce Workbench Help*
Front-end application development	For information about the Endeca Assembler and Experience Manager: • *Assembler Application Developer's Guide* For information about the MDEX Engine and the Endeca Presentation API: • *MDEX Engine Developer's Guide*  **Note:** Oracle recommends that the Assembler API be used for all new application development.

For information about	See this documentation
Deployment and operational tasks	• *Oracle Commerce Guided Search Administrator's Guide*

Appendix A

Full List of Documentation Resources

This section describes the documentation related to each Oracle Commerce Guided Search component. All Guided Search documentation is available on the Oracle Technology Network for browsing or download. Documents are organized into documentation libraries, described in the following sections.

Common documentation

The following table lists the documentation that is relevant to multiple Guided Search components.

Title	Description
Glossary	Defines terms used in Oracle Commerce Guided Search and Oracle Commerce Guided Search with Experience Manager.
Getting Started Guide	Walks you through a basic installation of Oracle Commerce Guided Search. It also covers deploying the Discover Electronics reference application and your first steps with an Assembler-based application.
Concepts Guide	Walks you through the key concepts of Guided Search applications including basic data structures, query syntax, and comparisons of difference search types.
Administrator's Guide	Describes tasks involved in administering and maintaining Guided Search and Experience Manager. It bridges the gap between the work performed by the Services team when your Guided Search implementation is initially deployed, and the issues that you, as a system administrator, may need to address to maintain the system.
Security Guide	Describes security features and the major tasks involved in using them to develop a secure Guided Search implementation.
Internationalization Guide	Describes system architectures and approaches to setting up an application for handling data in multiple languages.
Performance Tuning Guide	Describes how to diagnose and tune components in a Guided Search application to provide optimal performance. Also includes hardware provisioning recommendations as well as storage, memory, and network support recommendations.
Third-Party Software Usage and Licenses	Provides copyright, license agreement, and/or disclaimer of warranty information for any third-party software packages and other components incorporated in Oracle Commerce Guided Search.

MDEX Engine documentation

The following table lists the documentation for the MDEX Engine component.

Title	Description
MDEX Engine Release Notes	Provides general release information including bug fixes and known issues.
MDEX Engine Installation Guide	Provides installation instructions for setting up the MDEX Engine on Windows, UNIX, and Linux.
MDEX Engine Migration Guide	Provides instructions to upgrade the MDEX Engine and describes the major changes between versions.
MDEX Engine Developer's Guide	Describes how to develop an Oracle Commerce Guided Search implementation.
MDEX Engine Partial Updates Guide	Describes the different types of Endeca updates and how to configure and run a partial update.
MDEX Engine Performance Tuning Guide	Describes how to diagnose and tune Dgidx and the Dgraph to provide optimal performance. Also includes hardware provisioning recommendations as well as storage, memory, and network support recommendations.
MDEX Engine Analytics Guide	Describes how to add Endeca Analytics features to an Oracle Commerce Guided Search application.

Presentation API Documentation

The Presentation API is packaged with the MDEX Engine, and the documentation is included with the MDEX Engine documentation library on the Oracle Technology Network.

Title	Description
Endeca Presentation APIs - Installation Instructions and Release Notes	Provides general release information including installation instructions, bug fixes, and known issues.
Presentation API for Java Reference (Javadoc)	Generated API reference documentation for the Presentation API for Java.
Logging API for Java Reference (Javadoc)	Generated API reference documentation for the Logging API for Java.
Presentation API for .NET Reference (HTML Help)	Generated API reference documentation for the Presentation API for .NET.
Logging API for .NET Reference (HTML Help)	Generated API reference documentation for the Logging API for .NET.

Platform Services documentation

The following table lists the documentation for the Oracle Commerce Guided Search Platform Services components.

Title	Description
Platform Services Release Notes	Provides general release information including bug fixes and known issues.
Platform Services Migration Guide	Describes the major tasks necessary to upgrade to Platform Services 6.1.x from either Platform Services 6.0.1 or IAP 5.1.x.
Platform Services Installation Guide	Contains installation instructions for setting up Platform Services on Windows, Linux, and Solaris.
Content Adapter Developer's Guide	Describes how to use the Content Adapter Development Kit to create content connections and transform records.
Data Foundry Expression Reference	Describes the Data Foundry expression language, used in record manipulators in Developer Studio.
Endeca Application Controller Guide	Describes the tasks involved in managing implementations using the Endeca Application Controller.
Forge API Guide for Perl	Describes the classes and methods you can incorporate into Perl manipulators in Developer Studio. You can use Perl manipulators in pipelines to manipulate records.
Forge Guide	Describes the major tasks involved in developing the instance configuration and pipeline of a Guided Search application.
Log Server and Report Generation Guide	Describes how to use the Endeca Logging API, implement the Endeca logging and reporting system in Oracle Commerce Workbench, and generate customized reports from logs of activity on your site.
Relationship Discovery Guide	Describes the tasks involved in creating a Relationship Discovery application.
Security Guide	Describes how to implement user authentication and how to structure your data to limit access to only those users with the correct permissions.
XML Reference	Provides descriptions of the XML elements in Endeca project files, including XML elements used to build components for a Forge pipeline.
Content Adapter API Reference	Generated API reference documentation for the Content Adapter API.

Advanced JDBC Column Handler

The Advanced JDBC Column Handler documentation is included with the Platform Services documentation library on the Oracle Technology Network.

Title	Description
Release Notes	Provides general release information including bug fixes and known issues.
Advanced JDBC Column Handler Usage Guide	Describes installation and usage of the Advanced JDBC Column Handler.

Tools and Frameworks documentation

The following table lists the documentation for the Oracle Commerce Tools and Frameworks components. Application deployment and provisioning tasks are covered within the *Oracle Commerce Administrator's Guide*.

Title	Description
Tools and Frameworks Release Notes	Provides general release information including bug fixes and known issues.
Tools and Frameworks Installation Guide	Provides installation instructions for setting up Tools and Frameworks on Windows, UNIX, and Linux.
Tools and Frameworks Migration Guide	Describes how to upgrade earlier versions of Tools and Frameworks to the most recent version. This guide also describes how to migrate an Endeca application to the most recent version of Tools and Frameworks.
Workbench User's Guide	Provides installation instructions for setting up Tools and Frameworks on Windows, UNIX, and Linux.
Sitemap Generator Developer's Guide	Describes the Endeca Sitemap Generator and provides instructions for using it to generate sitemaps for an Endeca application.
Assembler Application Developer's Guide	Describes the Endeca Assembler and the configuration and customization tasks required to implement features in an Assembler application.
Assembler API Reference (Javadoc)	Generated API reference documentation for the Assembler API.
Configuration Import API Reference (Javadoc)	Generated API reference documentation for the Configuration Import API.

Content Acquisition System (CAS) documentation

The following table lists the documentation that supports the Content Acquisition System (CAS) package.

Title	Description
Release Notes	Provides general release information including bug fixes and known issues.
CAS Quick Start Guide	Describes the basics of the Content Acquisition System (CAS) and then walks you through the high-level process of installing Oracle Commerce Guided Search with CAS, adding custom data sources and manipulators, and deploying a reference application that uses CAS to produce MDEX-compatible output.
CAS Install Guide	Describes how to install CAS and set up CAS components after installation on Windows and UNIX.
CAS Migration Guide	Describes how to upgrade the Content Acquisition System and describes the major changes between versions.
CAS Developer's Guide	Describes how to configure and run CAS to incorporate source data gathered from file systems, CMS data sources, and custom data sources. The guide also explains how to create both Forge pipelines

Title	Description
	and CAS pipelines that process the data for use in an MDEX Engine. It includes documentation that describes how to configure and use the CMS connectors available with CAS.
CAS API Guide	Describes how to programmatically configure and run CAS crawls using the CAS Server API, the Component Instance Manager API, and the Record Store API.
CAS Extension API Guide	Describes how to implement, test, and package CAS extensions using the CAS Extension API. CAS extensions include data source extensions and manipulator extensions.
Web Crawler Guide	Describes how to configure the Endeca Web Crawler and run it to gather source data from Web sites.
CAS Console for Endeca Workbench Help	Describes how to create, configure, crawl, and monitor data sources using CAS Console for Oracle Endeca Workbench.
CAS Server API Reference (Javadoc)	Generated API reference documentation for the CAS Server API.
Component Instance Manager API Reference (Javadoc)	Generated API reference documentation for the Component Instance Manager API.
Record Store API Reference (Javadoc)	Generated API reference documentation for the Record Store API.
CAS Extension API Reference (Javadoc)	Generated API reference documentation for the CAS Extension API.
Web Crawler API Reference (Javadoc)	Generated API reference documentation for the Web Crawler API.
EAC Component API Reference for CAS Server (Javadoc)	Generated API reference documentation for the CAS Server Component of the EAC Component API.

Developer Studio documentation

The following table lists the documentation for Developer Studio.

Title	Description
Release Notes	Provides general release information including bug fixes and known issues.
Developer Studio Installation Guide	Contains installation instructions for setting up Developer Studio on Windows.
Developer Studio Help	Contains the online help system for Developer Studio.
XML Reference	Provides descriptions of the XML elements in Endeca project files, including XML elements used to build components for a Forge pipeline.
Data Foundry Expression Reference	Describes the Data Foundry expressions available for use in a record manipulator component in Developer Studio.
Forge API Guide for Perl	Describes the available classes and methods for Perl manipulator components when building a Data Foundry pipeline.

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