Oracle Endeca Commerce

Getting Started Guide

Version 6.3.0 • July 2012

Contents

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Preface

Oracle Endeca's Web commerce solution enables your company to deliver a personalized, consistent customer buying experience across all channels — online, in-store, mobile, or social. Whenever and wherever customers engage with your business, the Oracle Endeca Web commerce solution delivers, analyzes, and targets just the right content to just the right customer to encourage clicks and drive business results.

Oracle Endeca Commerce 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, Oracle Endeca Commerce enables businesses to help guide and influence customers in each step of their search experience. At the core of Oracle Endeca Commerce is the MDEX Engine,™ a hybrid search-analytical database specifically designed for high-performance exploration and discovery. The Endeca 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. Endeca Assembler dynamically assembles content from any resource and seamlessly combines it with results from the MDEX Engine.

Oracle Endeca Experience Manager is a single, flexible solution that enables you to create, deliver, and manage content-rich, cross-channel customer experiences. It also enables non-technical business users to deliver targeted, user-centric online experiences in a scalable way — creating always-relevant customer interactions that increase conversion rates and accelerate cross-channel sales. Non-technical users can control how, where, when, and what type of content is presented in response to any search, category selection, or facet refinement.

These components — along with additional modules for SEO, Social, and Mobile channel support — make up the core of Oracle Endeca Experience Manager, a customer experience management platform focused on delivering the most relevant, targeted, and optimized experience for every customer, at every step, across all customer touch points.

About this guide

This guide walks you through a basic installation of Oracle Endeca Commerce. 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.

Who should use this guide

This guide is intended for developers and system integrators who want to install Oracle Endeca Commerce 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 important information regarding Oracle Endeca software, implementation questions, product and solution help, as well as overall news and updates.

You can contact Oracle Support through Oracle's Support portal, My Oracle Support at *https://support.oracle.com*.

Chapter 1

Overview of the Getting Started Tasks

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

Read the Oracle Endeca Commerce Concepts Guide

If you are new to Oracle Endeca Commerce and have not attended training for the product, read the *Oracle Endeca Commerce Concepts Guide*. There are many Endeca specific terms and concepts explained in that guide. You may also want to have the *Oracle Endeca Commerce Concepts 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 Endeca Commerce is made up of the installation packages listed below. Download them from the Oracle Software Delivery Cloud.

- MDEX Engine 6.3.0. *Required.*
- Platform Services 6.1.3. *Required.*
- Tools and Frameworks 3.1.0. *Required.* This component has two packaging options. There is an installation package for Oracle Endeca Guided Search and an installation package for Oracle Endeca Experience Manager.
- Content Acquisition System (CAS) 3.0.2. *Optional.*
- Developer Studio 6.1.3. *Optional.*

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 Endeca Commerce and so that you can explore the full range of features in a development environment.

Install Oracle Endeca Commerce 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.

Install the software in the order listed:

1. Install MDEX Engine 6.3.0.
2. Install Platform Services 6.1.3.
3. Install Tools and Frameworks 3.1.0.
4. Install Content Acquisition System (CAS) 3.0.2.
5. Install Developer Studio 6.1.3.

Version compatibilities

You can find more details about the compatibility of components in Oracle Endeca Commerce in the *Oracle Endeca Commerce Compatibility Matrix* available on the Oracle Technology Network.

Hardware requirements

In this guide, the term "x64" refers to any processor compatible with the AMD64/EM64T architecture.

Linux on x64 or Windows on x64

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

The Endeca software supports the following 64-bit operating systems running on servers with x64 processors:

- Oracle Linux 5
- Red Hat Enterprise Linux Server (version 5 for x64)
- Red Hat Enterprise Linux Advanced Platform (version 5 for x64)
- SUSE Enterprise Linux 11
- Windows Server 2008 R2 Enterprise

Note: 32-bit versions of any operating systems are not supported by the MDEX Engine in any environment.

Note: Windows 7 is not supported for production deployment, but operates sufficiently to enable training and small-scale development work. Developers who use Windows 7 may select either a per-machine installation, which requires administrative rights, or a per-user installation, which does not require administrative rights but has reduced capabilities.

Oracle Exalogic Elastic Cloud 11gR1 support

Oracle Endeca Commerce is supported in Oracle Exalogic 11gR1 environments on the following guest operating systems:

- Oracle Linux 5

VMware ESX 3.5 support

Oracle Endeca Commerce is supported in VMware ESX 3.5 environments on the following guest operating systems:

- Red Hat Enterprise Linux Server (version 5 for x64)
- Red Hat Enterprise Linux Advanced Platform (version 5 for x64)

VMware vSphere 4 and 4.1 support

Oracle Endeca Commerce is supported in VMware vSphere 4 and 4.1 environments on the following guest operating systems:

- Red Hat Enterprise Linux Server (version 5 for x64)
- Red Hat Enterprise Linux Advanced Platform (version 5 for x64)
- SUSE Enterprise Linux 11
- Windows Server 2008 R2 Enterprise

Amazon Elastic Compute Cloud (EC2) support

Oracle Endeca Commerce is supported in Amazon EC2 environments on the following guest operating systems:

- Amazon Linux AMI
- SUSE Enterprise Linux 11
- Windows Server 2008 R2 Enterprise

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

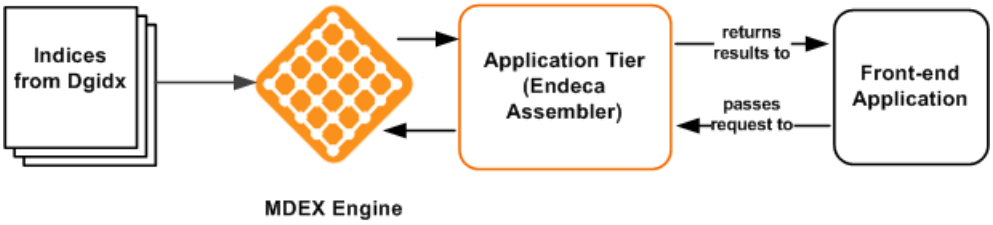
Components of Oracle Endeca Commerce

This section describes each component that makes up Oracle Endeca Commerce.

About the MDEX Engine

The Endeca MDEX Engine is the indexing and query engine that provides the backbone for all Endeca 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 Dgidx. After the indices are stored, the MDEX Engine receives client requests via 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
- Reference applications
- emgr_update

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

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.

Logging and Reporting System

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

Reference Implementations

Sample Endeca applications such as the JSP and .NET front-end applications. These applications are used primarily to examine and validate source data.

emgr_update

A utility that uploads portions of the instance configuration to Endeca Workbench and downloads it from Endeca Workbench.

About Tools and Frameworks

The Tools and Frameworks package contains the following components:

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

Oracle Endeca Workbench

Oracle Endeca Workbench is a Web-based tool that provides a way for business users and merchandisers to configure portions of their 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, Oracle Endeca 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.

Endeca Assembler

The Endeca Assembler API enables a Web application to query the MDEX Engine and retrieve the appropriate dynamic content based on a user's navigation state or other triggers. The Endeca Assembler returns both Endeca query results familiar from the Presentation API 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 uses 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 URL Optimization API and to the 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 Endeca Workbench that enables rapid creation of rich, dynamic landing pages. Experience Manager gives content administrators unprecedented control over site content without the 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 Endeca Workbench that allows content administrators to create and modify rules, activate/deactivate rules, change their priority, and preview rules in an authoring application. However, user permissions determine which of these actions are available.

Endeca for Mobile (Web only)

Endeca for Mobile provides Experience Manager cartridges and reference application support for multichannel applications. The cartridges in Endeca for Mobile use the Endeca Assembler API to render Endeca applications on mobile devices.

Note: Endeca for Mobile is licensed separately from Oracle Endeca Guided Search and Oracle Endeca Experience Manager. It requires an additional software license.

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 MDEX Media 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 Endeca Guided Search and Oracle Endeca Experience Manager

Tools and Frameworks comes in two installation packages.

- Oracle Endeca Experience Manager - contains Experience Manager and Experience Manager Editor SDK. (This package is a super set of Oracle Endeca Guided Search.)
- Oracle Endeca Guided Search - contains Rule Manager but not Experience Manager and 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 Endeca 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 Endeca Workbench

The CAS Console for Endeca 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 Endeca Workbench.

CMS data sources

CMS data sources are available for use in the CAS Console for Endeca 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.

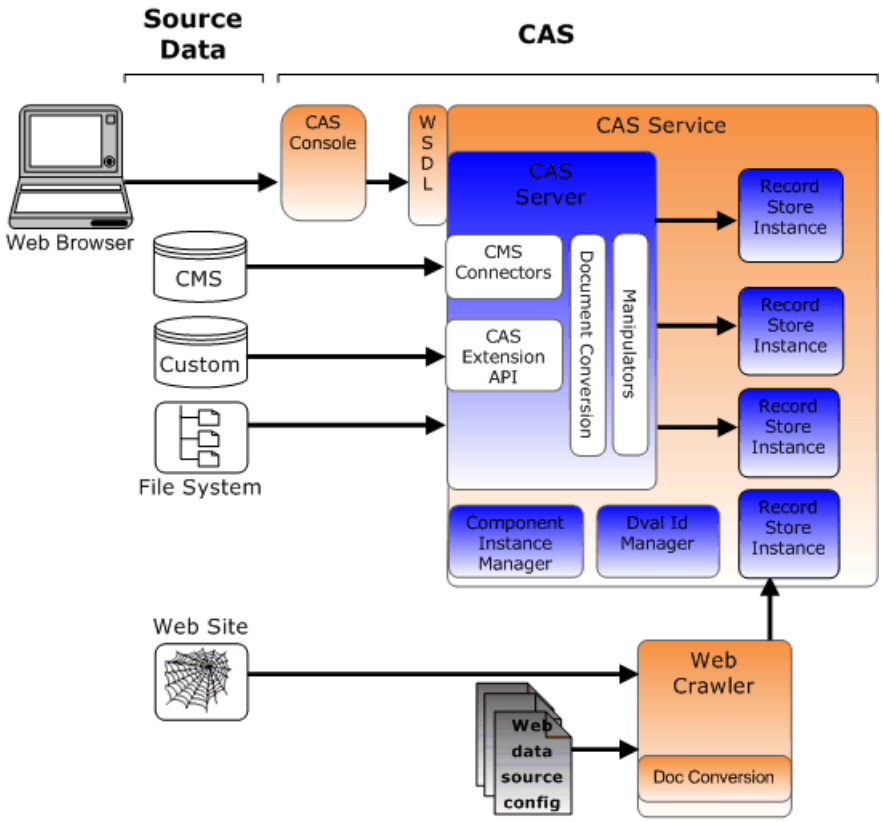
Endeca Web Crawler

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.

The following image shows the Endeca Content Acquisition System components as they work together in a typical implementation to crawl data sources and produce Endeca records:



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

Introduction to Endeca Assembler Applications

This section provides an overview of applications built using the Endeca Assembler and configured using Oracle Endeca Workbench.

About Tools and Frameworks application features

Tools and Frameworks enable the development of Web applications that present dynamic and contextual content to front-end application users across multiple channels.

Multi-channel applications built with Tools and Frameworks offer the following benefits:

Business-user control over dynamic content

Experience Manager provides an interface for merchandisers, brand managers, and content administrators to manage the content of a customer-facing site. In Experience Manager, business users can create dynamic pages that present contextual content based on the end user's search or navigation state, user profile, and other factors. The "cartridge"-based component model enables flexible content configuration within a template-driven framework that ensures consistency across an entire site.

Integration with multiple services at query time

The Endeca Assembler not only consolidates queries to the MDEX Engine for information stored as Endeca records, but can also make requests to third-party services such as a content management system, inventory tracking system, or other Web-based services. The results are merged into a model object that the Endeca Assembler returns to the rendering layer. This enables Experience Manager to be a central source of configuration for the presentation of content whether it is maintained as records in an MDEX Engine or stored in another system.

Language-neutral application-tier support

The Endeca Assembler can return XML or JSON representations of "ready to render" model objects for consumption by a variety of rendering engines, such as .NET, PHP, or Flash-based applications. It is also ideal for AJAX or mobile applications. The Endeca Assembler can also return model objects as POJOs (plain old Java objects) when embedded in a native Java application.

Ease-of-use with configurable reference applications

The Oracle Endeca Tools and Frameworks package includes a full-featured reference application that demonstrates best practices for Guided Search applications built on the Endeca Assembler. The application can be customized to cover most core Endeca functionality through simple configuration with a minimum of custom code. Additional Endeca modules, such as Oracle Endeca for Mobile, provide similar accelerator applications to expand the basic reference application into a multichannel deployment.

Extensible framework

Every aspect of the Endeca Assembler application architecture is extensible from the Experience Manager interface to Assembler components (called cartridge handlers) that produce model objects and manage interaction with external content resources. Oracle provides a set of core modules that enable configuration of core Endeca features and manage queries to an Endeca MDEX Engine.

Oracle Endeca Commerce architectural overview

The Endeca Assembler and Experience Manager work together to power dynamic applications that can present content from a variety of source systems in a consistent manner through a range of client applications.

Experience Manager, part of the Oracle Endeca Workbench suite of tools, provides an interface to manage contextual content configuration, enabling content administrators to create a targeted and compelling customer experience. For more information about setting up and configuring Workbench, refer to the *Workbench Administrator's Guide*.

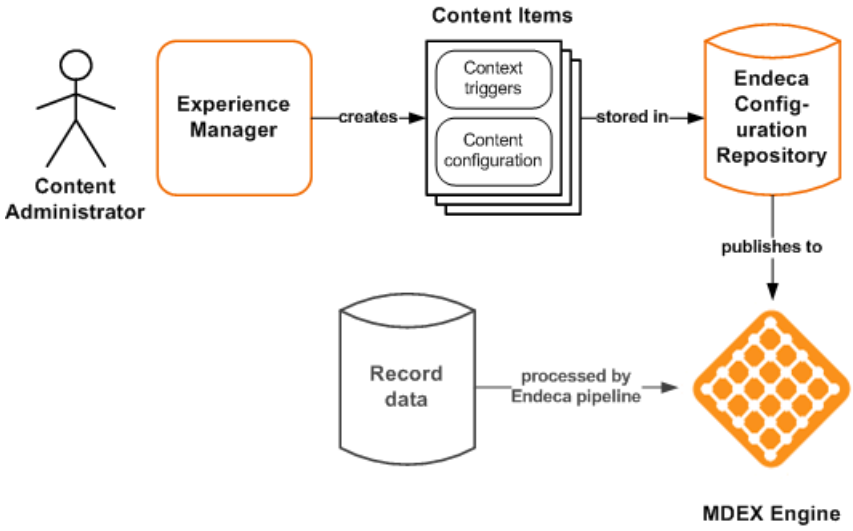
The Endeca Assembler provides a unified interface for all content queries, regardless of the source system that manages the content or the client that displays it. The Assembler assembles the content to display on the site based on the end user's context and the content administrator's configuration and returns it as ready-to-render models.

Configuration flow

Using Experience Manager, a content administrator creates a set of content items for a site. Each content item specifies some configuration that the Assembler can use to generate the response model for the client application. The content administrator can associate this content configuration with a set of facts about the end user's context, or *triggers*. Trigger criteria may include:

- The user's search terms or refinement selections (the user's *navigation state*)
- Characteristics of the user, such as past buying habits or geographical location (*user profile* triggers)

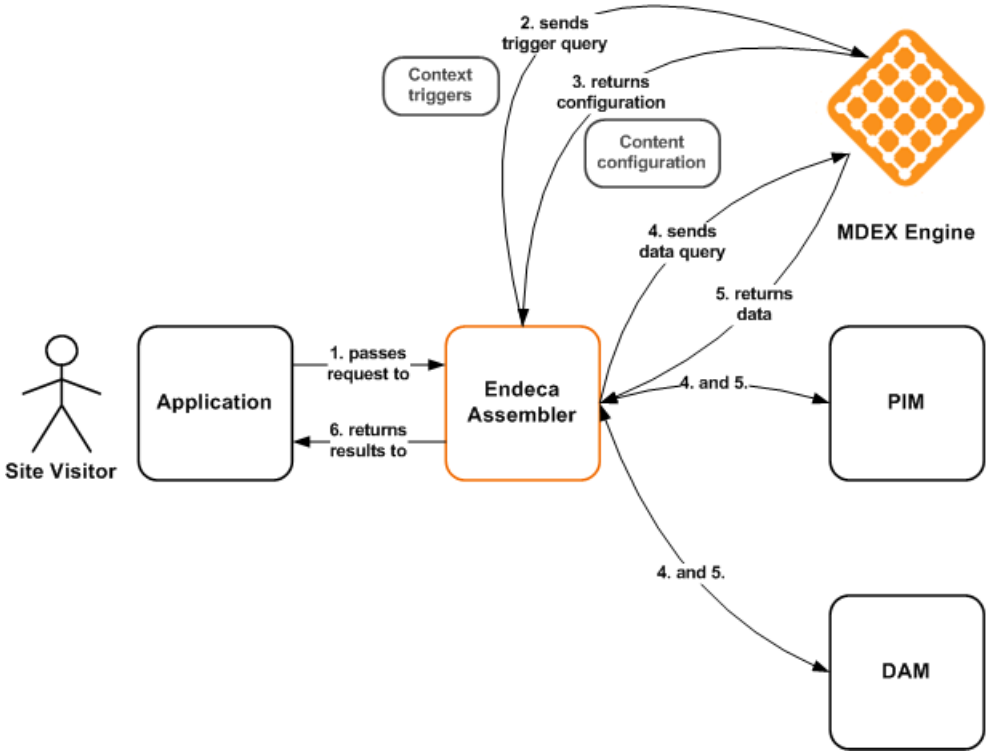
Content items (including the content configuration and associated context triggers) are managed in the Endeca Configuration Repository and published to the MDEX Engine as Endeca records for retrieval at query time.



Runtime query processing flow

When an end user accesses an Endeca application (whether through a Web client or as a native mobile application), the application sends the request to the Endeca Assembler. The Assembler extracts information from the request about the user's context and makes a trigger query to the MDEX Engine to retrieve the appropriate content configuration.

Based on the content configuration, the Assembler may make further queries to the MDEX Engine (for search and navigation or record detail information) or to another system such as a product information management or digital asset management system for additional data and content. It assembles the results into a single response model that it returns to the client application.



About content items and cartridges

The component model consists of configurable *content items*.

A content item is a map of properties or key-value pairs, where the key is a string representing the property name and the value may be any primitive type (including String, Boolean, List, and Map) or another content item. This allows for content items to be nested within other content items, forming a content tree that represents the structure of a Web page and all its components.

There are generally two kinds of content items within an application:

- *Container content items* are primarily structural components. They define the logical (and sometimes physical) structure of the content to be rendered by an application. The top-level container typically represents a Web page with sections that can contain other content items (leaf content items or, occasionally, other containers). In a Web application, these sections may correspond to areas on the page with certain assumptions about layout and rendering. In other applications, they may represent logical groupings of related components.
- *Leaf content items* are typically functional components. They contain information about content to be displayed in the application, and typically encapsulate the configuration for a particular feature, such as a Guided Navigation component, spotlight, or results list. Leaf content items are also referred to as *cartridges*.

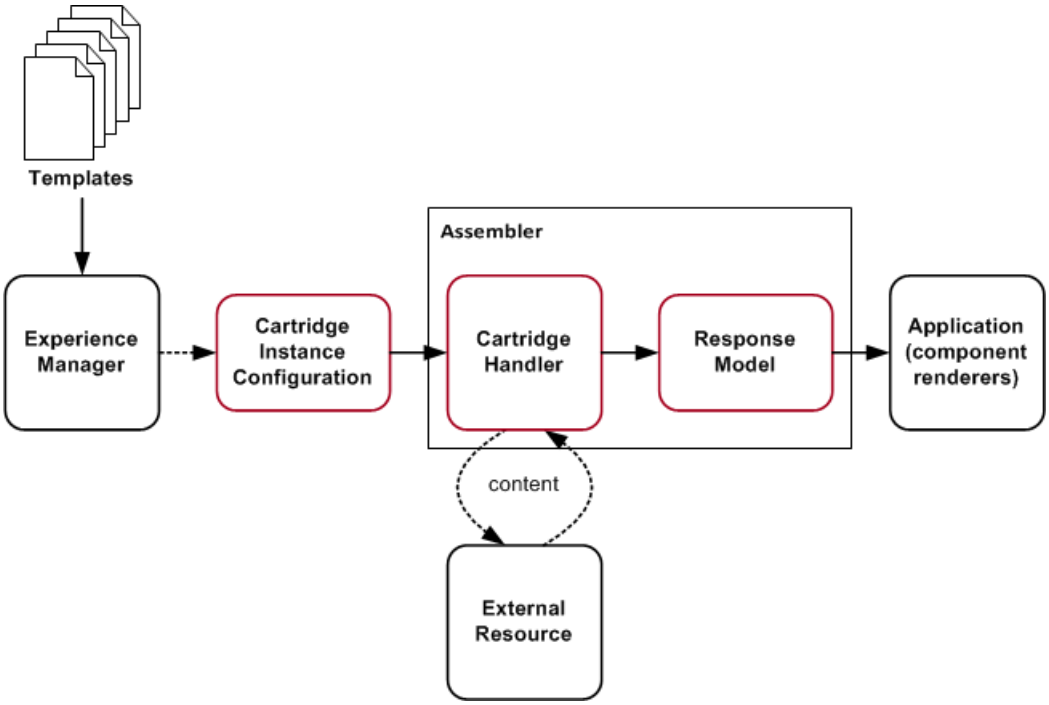
A page may contain cartridges directly (in which case the configuration for the cartridges is triggered along with the page) or the page can contain a dynamic slot, which serves as a placeholder for cartridges that can be triggered independently of the page in which they display.

Anatomy of a cartridge

A cartridge is a functional component that a content administrator can choose to display on a page.

The core aspects of a cartridge are the following:

- The *cartridge instance configuration*, which is typically created by a content administrator using Experience Manager
- The *cartridge handler*, which is the Assembler component that contains the processing logic for the associated feature
- The *response model*, which is returned from the Assembler to the application for rendering



The configuration model for a cartridge is defined by a *cartridge template*, which describes the properties that can be configured as well as the interface through which the content administrator can specify their values in Experience Manager. Cartridges typically have configuration options specific to the cartridge's function, such as the number of refinements to display (and the order in which to display them) for a Dimension Navigation cartridge; the records to promote for a Spotlight cartridge; or the sort options and records per page for a Results List cartridge.

1. At query time, the configured values of the cartridge properties become an input to the Assembler.

   The Discover Electronics reference application contains several sample templates that demonstrate core Endeca functionality. You can customize them for your own application or write your own templates in order to add or remove configuration options or to pass additional information to the Assembler or the front-end application.

2. At query time, the Assembler invokes the appropriate cartridge handler to process the cartridge configuration.

   The core cartridge handlers also have access to information about the initial request context that triggered the cartridge. The cartridge handler is responsible for generating a response model based on this configuration. In most cases this involves fetching content from an external resource.

   In the case where the configuration model is the same as the response model, no cartridge handler is needed; the default behavior of the Assembler is to pass the configuration properties through to the response model.

3. The Assembler passes the response model to the corresponding renderer in the application.

As a best practice, the application should contain several modular *renderers*, each intended to handle the output model for a particular cartridge or cartridge type. The Discover Electronics application includes reference JSP pages to render each cartridge. These renderers are intended to be updated for styling or otherwise customized for your application.

About the Discover Electronics application

the Oracle Endeca Tools and Frameworks package includes a reference application that provides a set of reusable and customizable cartridges as a starting point for the development of your own Guided Search application.

The Discover Electronics application is a fully functional Java Web application that demonstrates development best practices in the following areas:

- Experience Manager configuration (via the associated Discover data project)
- Assembler and cartridge handler configuration
- controller architecture and renderer dispatching mechanism
- URL generation including the ability to generate search-engine optimized URLs with the URL Optimization API

Chapter 4

Installing Oracle Endeca Commerce on Windows

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 `mdex_<version>_x86_64pc-win32.exe`.
3. Double-click the installer file `mdex_<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 `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.

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 `platformservices_<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 is not selected to install. This is Ok. You do not need it 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\6.3.0`).
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 Endeca 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.
   Depending on what you downloaded, this results in one of the following installation files.
   - `gs-<version>-<platform>.zip` (Oracle Endeca Guided Search)
   - `xmgr-<version>-<platform>.zip` (Oracle Endeca Experience Manager)
3. Extract the installation file into `C:\Endeca`.

The archive extracts to `C:\Endeca\ToolsAndFrameworks\<version>`. This is the Tools and Frameworks installation directory.

4. In Windows Explorer, navigate to the Tools and Frameworks installation directory.
5. 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.
6. 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**.

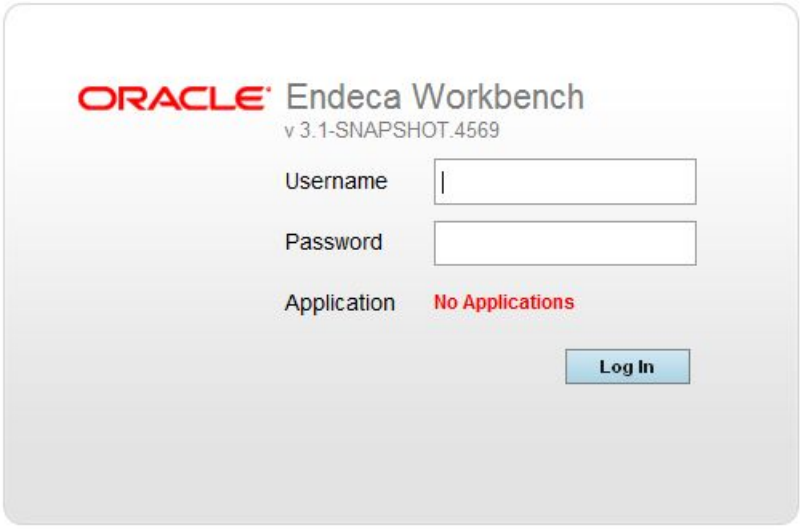
Verifying the Tools and Frameworks installation

The simplest way to check that the installation is to load Oracle Endeca 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. It is similar to the following:



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 `cas-<version>_x86_64pc-win32.exe`.
3. Double-click the installer file `cas-<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 Endeca 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`.
4. Click **Admin Console**.
5. In **New Application Name**, specify an arbitrary name, such as `test` and click **Create**.
6. Click the **Log out** link for Workbench.
7. Log back 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 Endeca Developer Studio package from the Oracle Software Delivery Cloud.
2. Extract the Endeca Developer Studio package to a local directory.
   The name of the extracted installer file is `dstd_version_i86pc-win32.exe`.
3. Double-click the installer file: `dstd_version_i86pc-win32.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 Endeca 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**.

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

Chapter 5

Installing Oracle Endeca Commerce 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 `mdex_<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 Endeca Platform Services on UNIX:

1. Download the Endeca Platform Services package from the Oracle Software Delivery Cloud.
2. Extract the Endeca 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: `platformservices_<version>_x86_64pc-linux.sh`
   - For SPARC Solaris: `platformservices_<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:

   ```
   ./platformservices_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/6.3.0`).
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/6.1.2/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

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

To install Oracle Endeca 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.

   Depending on what you downloaded, the name of the extracted installation file is as follows:

   - `ToolsAndFrameworks-<version>-linux-gs.tar.gz` (Oracle Endeca Guided Search)
   - `ToolsAndFrameworks-<version>-linux-xmgr.tar.gz` (Oracle Endeca Experience Manager)

3. Extract the installation file into `/usr/local/endeca`.
   The archive extracts to `/usr/local/endeca/ToolsAndFrameworks/<version>`. This is your Tools and Frameworks installation directory.
4. Navigate to the `server/bin` directory.
5. Run `startup.sh`.

   This script sets environment variables, and starts the Endeca Tools Service as a background process. The service hosts Oracle Endeca Workbench and a number of sample reference applications.

   To manage the Endeca Tools Service after installation:

   - Start the service with the `startup.sh` script.
   - Stop the service with the `shutdown.sh` script.

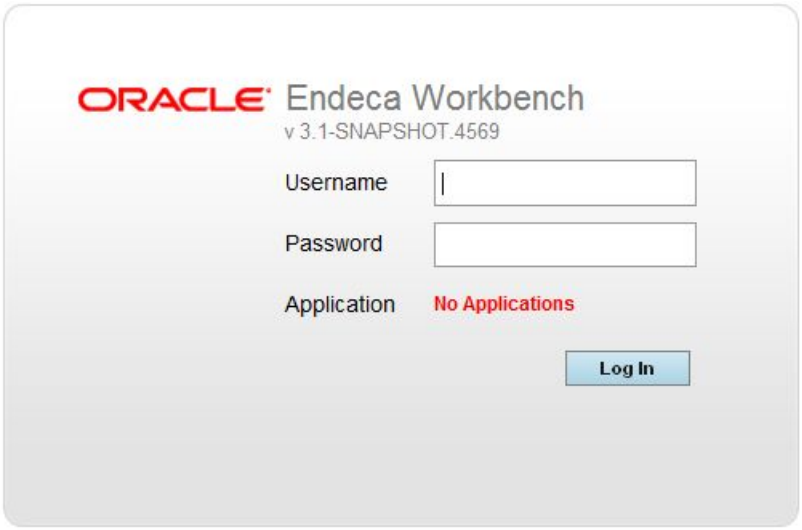
Verifying the Tools and Frameworks installation

The simplest way to check that the installation is to load Oracle Endeca 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. It is similar to the following:



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
   - `cas-<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/cas-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 Endeca 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`.
4. Click **Admin Console**.
5. In **New Application Name**, specify an arbitrary name, such as `test` and click **Create**.
6. Click the **Log out** link for Workbench.
7. Log back 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 6

Deploying a Reference Application

After installing Oracle Endeca Guided Search, you can deploy a reference application to process a test data set and examine it in an 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\3.1.0\deployment_template\bin>deploy --
      app C:\Endeca\ToolsAndFrameworks\3.1.0\reference\discover-data\de¬
      ploy.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 argu¬
ment:
<Endeca Directory>/ToolsAndFrameworks/<version>/reference/discover-
data/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.
h) Oracle recommends using the default options for subsequent prompts. You must specify the EAC Port even if you use the default. During the subsequent prompts for port values, you can press Enter to accept the default value.

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 7

What's Next

At this point, you can build your own 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 Endeca Guided Search documentation relevant to each major implementation task.

For information about	See this documentation
Basic Endeca concepts	• *Oracle Endeca Commerce Concepts Guide* • *Endeca Glossary*
Pipeline creation	• *Tools and Frameworks Deployment Template Usage Guide* • *Platform Services Forge Guide* • *CAS Developer's Guide* • *Oracle Endeca Developer Studio Help*
Data incorporation	The CAS documentation set, especially: • *CAS Quick Start Guide* • *CAS Developer's Guide* • *CAS Console for Oracle Endeca Workbench Help*
Front end-application development	For information about the Endeca Assembler and Experience Manager: • *Assembler Application Developer's Guide* • *Experience Manager Cartridge Developer's Guide*

For information about	See this documentation
	For information about the MDEX Engine and about the Endeca Presentation API: • *MDEX Engine Basic Development Guide* • *MDEX Engine Advanced Development Guide*
Deployment and operational tasks	• *Oracle Endeca Commerce Administrator's Guide* • *Tools and Frameworks Deployment Template Usage Guide*

Appendix A

Full List of Documentation Resources

This section describes the documentation related to each Oracle Endeca Commerce component. Only essential documentation is included with the product installation, but all Endeca documentation is available on the Oracle Technology Network for browsing or download, either individually or as part of an overall Documentation package.

General Endeca documentation

The following table lists the documentation that applies across multiple Endeca packages.

Title	Description
Oracle Endeca Commerce Getting Started Guide	Overview of Endeca components including information about configuration scenarios.
Oracle Endeca Commerce Compatibility Matrix	Summary of version compatibility information for Endeca components.
Oracle Endeca Commerce Concepts Guide	Introduction to Oracle Endeca Guided Search. Covers the key concepts underlying Endeca applications.
Oracle Endeca Commerce Administrator's Guide	Describes tasks involved in administering and maintaining applications built upon the Oracle Endeca Guided Search. It bridges the gap between the work performed by the Endeca Services team and the issues that system administrators encounter when maintaining the system.
Oracle Endeca Commerce Glossary	A reference for Endeca terms and definitions.
Oracle Endeca Commerce Third-Party Software Usage and Licenses	Provides copyright, license agreement, and/or disclaimer of warranty information for the third-party software packages that Endeca incorporates.

MDEX Engine documentation

The following table lists the documentation that supports the MDEX Engine package.

Title	Description
MDEX Engine Analytics Guide	Provides an overview of Endeca Analytics and describes the Analytics and Charting APIs, date and time properties, and key properties.
MDEX Engine Basic Development Guide	Provides information about working with records, dimensions, and basic search features.
MDEX Engine Advanced Development Guide	Covers such topics as Endeca Query Language (EQL), record filters, bulk export, spelling correction, phrasing, relevance ranking, and dynamic business rules.
MDEX Engine Installation Guide	Provides a brief overview of the Endeca MDEX Engine, details installation procedures, and describes how to configure the licensing keys for the Language Pack. Covers both Windows and Linux/UNIX system requirements and installation procedures.
MDEX Engine Migration Guide	Provides information on migrating from previous versions of Endeca software.
MDEX Engine Partial Updates Guide	A guide to preparing and running partial updates in your Endeca application.
MDEX Engine Performance Tuning Guide	Provides guidelines on monitoring and tuning the performance of the Endeca MDEX Engine. Contains tips on resolving associated operational issues.
MDEX Engine Web Services and XQuery Developer's Guide	Describes how to use Web services and XQuery for Endeca. Web services and XQuery for Endeca provides Endeca application developers with a flexible, extensible, and standards-compliant query processing solution.
MDEX Engine Release Notes	Details the changes specific to this release, including bug fixes and new features.

Presentation API documentation

The following table lists the documentation that supports the Presentation API package.

Title	Description
Endeca Presentation APIs - Installation Instructions and Release Notes	The system requirements, installation procedure, migration procedure, and known issues. (There is no separate Installation Guide or Migration Guide for the Presentation API package.)
Presentation API for Java Reference (Javadoc)	The Java reference documentation for the Endeca Presentation, Analytics, and Charting APIs.
Presentation API for .NET Reference (HTML Help)	The .NET reference documentation for the Endeca Presentation, Analytics, and Charting APIs.
Logging API for Java Reference (Javadoc)	The Java reference documentation for the Endeca Logging API.

Title	Description
Logging API for .NET Reference (HTML Help)	The .NET reference documentation for the Endeca Logging API.

Platform Services documentation

The following table lists the documentation that supports the Platform Services package.

Title	Description
Content Adapter Developer's Guide	Describes how to write Java manipulators and content adapters using the Endeca Content Adapter Development Kit.
Control System Guide	Provides information on using the Endeca Control System, including communicating with the JCD service and running control scripts.
Oracle Endeca Application Controller Guide	Describes the tasks involved in managing implementations using the Endeca Application Controller.
Forge Guide	The essential reference for developers of the back-end of Endeca applications (the instance configuration), including Forge pipeline-related tasks.
Log Server and Report Generator Guide	Describes how to configure and run the Endeca Log Server and the Report Generator.
Platform Services Installation Guide	Describes how to install the Endeca Platform Services software and the Endeca Document Conversion Module. Covers both Windows and Linux/UNIX system requirements and installation procedures.
Platform Services Migration Guide	Provides information on migrating from previous versions of Endeca software.
Relationship Discovery Guide	Describes the tasks involved in creating an Endeca Relationship Discovery application. Relationship Discovery is a separately licensed module.
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.
Data Foundry Expression Reference	Describes the Data Foundry expression language, used in record manipulators in Developer Studio.
Oracle Endeca Developer Studio Help	Help (including context-sensitive help) for using Endeca Developer Studio to define all aspects of your instance configuration, including properties, dimensions, and pipelines.
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.
XML Reference	Describes the XML elements contained in the XML and DTD files of the Endeca Information Transformation Layer.

Title	Description
API reference documentation (Javadoc and .NET API reference)	The reference documentation for the Endeca Presentation, Logging, Analytics, and Charting APIs.

Tools and Frameworks documentation

The following table lists the documentation that supports the Tools and Frameworks package.

General documentation for Tools and Frameworks

Title	Description
Tools and Frameworks Installation Guide	This guide covers installation procedures for Oracle Endeca Tools and Frameworks.
Tools and Frameworks Release Notes	Details the changes specific to this release, including bug fixes and new features.

Oracle Endeca Workbench documentation

Title	Description
Oracle Endeca Workbench Administrator's Guide	This guide describes the tasks involved in the configuration and administration of an Endeca implementation using Oracle Endeca Workbench, as well as the administration of the Oracle Endeca Workbench instance itself.

Endeca Assembler documentation

Title	Description
Assembler Application Developer's Guide	Describes the process of developing applications with cartridges (for use with the Endeca Experience Manager), including usage of the Content Assembler API and an overview of the reference applications. Also describes extending Content Assembler functionality with community tag handlers. There are versions for Java and .NET.
Experience Manager Cartridge Developer's Guide	This guide is intended for developers using Oracle Endeca Experience Manager who need to customize or extend the Endeca Assembler for a specific application.
Experience Manager Editor Developer's Guide	This guide describes the major tasks involved in developing extensions for Experience Manager using the Experience Manager Extension SDK. This guide assumes that you have read the Assembler Application Developer's Guide and that you are familiar with Experience Manager in Workbench.

Title	Description
Endeca Assembler API for Java Reference (Javadoc)	The reference documentation for the Endeca Assembler APIs. See `<installation path>\ToolsAndFrameworks\<version>\assembler\apidoc\assembler`.
Experience Manager Editor API Reference	The reference documentation for the Experience Manager Editor API, part of the Experience Manager Editor SDK. See `<installation path>\ToolsAndFrameworks\<version>\editor_sdk\asdoc`.

Deployment Template documentation

Title	Description
Oracle Endeca Deployment Template Usage Guide	Describes the Deployment Template directories and script functionality, and identifies touch-points where developers may need to configure or extend the template for their projects.
Deployment Template Module for Product Catalog Integration - Usage Guide	This guide describes how to install, configure, and run the Deployment Template Module for Product Catalog Integration that is installed as part of Endeca Tools and Frameworks. The module integrates data from product catalog systems, such as Oracle ATG Web Commerce, with Endeca search applications.

Search Engine Optimization Module documentation

Title	Description
Sitemap Generator Developer's Guide	Describes the Endeca Sitemap Generator and provides instructions for using it to generate sitemaps for an Endeca application.
URL Optimization API Developer's Guide	Describes the major tasks involved in developing an application that utilizes the Endeca URL Optimization API.
URL Optimization API for Java Reference (Javadoc)	The reference documentation for the URL Optimization APIs. See `<installation path>\ToolsAndFrameworks\<version>\assembler\apidoc\urlformatter-core`.

Mobile documentation

Title	Description
Oracle Endeca for Mobile Getting Started Guide	Contains instructions for building and customizing the Oracle Endeca for Mobile applications. There are versions of this guide for the iPhone, iPad, and for configuring the API.
Release Notes (README)	Details the changes specific to this release, including bug fixes and new features.

Content Acquisition System (CAS) documentation

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

Title	Description
CAS Quick Start Guide	Describes the basics of the Endeca Content Acquisition System (CAS) and then walks you through the high-level process of installing Endeca with CAS, adding manipulators, crawling data sources, and processing the Endeca records in a Forge pipeline.
CAS Console Help	Describes the tasks involved in managing various data sources including file systems, Documentum repositories, and other CMS repositories using the CAS Console for Endeca Workbench.
CAS Developer's Guide	Provides an overview of the Endeca Content Acquisition System, including the Endeca CAS Server, the Component Instance Manager, and the Record Store. The guide also explains how to create a Forge pipeline that utilizes the source data gathered from file system and CMS crawls.
CAS Extension API Guide	Describes how to implement, test, and package CAS extensions using the CAS Extension API.
CAS Installation Guide	Describes how to install the Endeca CAS software. Covers both Windows and Linux/UNIX system requirements and installation procedures.
CAS Migration Guide	Describes the major migration tasks for the suite of CAS components.
CAS API Guide	Provides reference information about the Endeca CAS Server API, the Component Instance Manager API, and the Record Store API.
CMS Connector Guides	Describe the tasks involved in enabling and configuring the various CMS connectors for use with the CAS Server.
Web Crawler Guide	Describes the major tasks involved in configuring the Endeca Web Crawler and using it to run crawls that gather source data from Web sites.
CAS Release Announcement	Describes the major new features in this release.
CAS Release Notes	Details the changes specific to this release, including bug fixes and new features.

Developer Studio documentation

The following table lists the documentation that supports the Developer Studio package.

Title	Description
Oracle Endeca Developer Studio Installation Guide	Provides an overview of Developer Studio and describes system requirements and installation procedures.
Oracle Endeca Developer Studio Help	Help (including context-sensitive help) for using Endeca Developer Studio to define all aspects of your instance configuration, including properties, dimensions, and pipelines.
Data Foundry Expression Reference	Describes the Data Foundry expression language, used in record manipulators in Developer Studio.
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.
XML Reference	Describes the XML elements contained in the XML and DTD files of the Endeca Information Transformation Layer.

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