Oracle Endeca Commerce

Tools and Frameworks Installation Guide

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Contents

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Preface

The Oracle Endeca 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 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 contains installation instructions for setting up Oracle Endeca Tools and Frameworks on Windows, Linux, Solaris, and UNIX.

Who should use this guide

This guide is intended for users installing Oracle Endeca Tools and Frameworks on Windows, Linux, Solaris, or UNIX.

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

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

Before You Install

This section provides an overview of Oracle Endeca Tools and Frameworks, including system requirements, package contents, and other information that you need to know before installing.

About Oracle Endeca Tools and Frameworks

Oracle Endeca Tools and Frameworks enable the dynamic presentation of content across all channels.

Deployments that use Oracle Endeca Experience Manager require the Tools and Frameworks package for Oracle Endeca Commerce with Experience Manager. Deployments that do not include Experience Manager require the Tools and Frameworks package for Oracle Endeca Commerce with Guided Search.

Both versions of the package include the following:

- Oracle Endeca Workbench, a tools suite that enables merchandising, Content Spotlighting, and search configuration for cross-channel applications
- The Endeca Assembler, an API for controlling the presentation of commerce sites and collecting usage information across all channels
- The Endeca Tools Service
- The Endeca Deployment Template, a collection of operational components that provides a starting point for developing and deploying Endeca applications.
- The Discover Electronics reference application

Supported operating systems and Web browsers

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

Endeca software requirements

This section lists the Endeca components that must be installed on your machine prior to installing the Tools and Frameworks.

The Oracle Endeca Tools and Frameworks require the following Endeca components:

- MDEX Engine
- Platform Services

To determine the compatibility of your Endeca components, see *Oracle Endeca Commerce Supported Environments and Compatibility*, available on the Oracle Technology Network.

Chapter 2

Installing Oracle Endeca Tools and Frameworks

This section describes how to install Oracle Endeca Tools and Frameworks on your machine. The steps in this guide are based on all Endeca components being installed on the same machine.

Setting the Endeca environment variables

Before you install Oracle Endeca Tools and Frameworks, you must set the `ENDECA_TOOLS_ROOT` and `ENDECA_TOOLS_CONF` environment variables.

To set the environment variables:

1. Set `%ENDECA_TOOLS_ROOT%` (`$ENDECA_TOOLS_ROOT` on UNIX) to your Tools and Frameworks installation directory.

   By default, this is `C:\Endeca\ToolsAndFrameworks\<version>` on Windows, or `/usr/local/endeca/ToolsAndFrameworks/<version>` on UNIX.
2. Set `%ENDECA_TOOLS_CONF%` (`$ENDECA_TOOLS_CONF` on UNIX) to your Tools and Frameworks `workspace` directory.

   By default, this is `C:\Endeca\ToolsAndFrameworks\<version>\server\workspace` on Windows, or `/usr/local/endeca/ToolsAndFrameworks/<version>/server/workspace` on UNIX.

Installing Oracle Endeca Tools and Frameworks on Windows

To install Oracle Endeca Tools and Frameworks, extract the ZIP archive to your Endeca directory and create the included Windows service.

To install the Oracle Endeca Tools and Frameworks:

1. If you have an earlier version of Endeca Workbench, follow the steps in the *Oracle Endeca Workbench Installation Guide* to remove it before installing the Tools and Frameworks.
2. If you have an earlier version of Oracle Endeca Tools and Frameworks, follow the steps in *Uninstalling Oracle Endeca Tools and Frameworks on Windows* on page 27 to remove it before installing the Tools and Frameworks.
3. Download the Tools and Frameworks package from the Oracle Software Delivery Cloud.

4. 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>-windows.zip` (Oracle Endeca Guided Search)
   - `xmgr-<version>-windows.zip` (Oracle Endeca Experience Manager)
5. Extract the installation file into `C:\Endeca`.
   The archive extracts to `C:\Endeca\ToolsAndFrameworks\<version>`. This is your Tools and Frameworks installation directory.

After extracting the Tools and Frameworks archive, you must create and configure the Endeca Tools Service, or alternately run the Tools and Frameworks from the included batch files.

Related Links

About the Endeca Tools Service ports on page 31
You can change the default ports for the Endeca Tools Service, as long as you choose a new port that is not being used.

Creating the Endeca Tools Service on page 12
You can choose to run the Tools and Frameworks as a Windows service.

Running Oracle Endeca Tools and Frameworks from the included batch files on page 14
If you do not wish to create the Endeca Tools Service, you can start or stop the Tools and Frameworks directly by running the included batch files.

Creating the Endeca Tools Service

You can choose to run the Tools and Frameworks as a Windows service.

Before starting the Endeca Tools Service, Endeca recommends creating an "endeca" user for whom you can control permissions, and modifying your Endeca Tools Service to run under that user. The user running `install_service.bat` and the Endeca Tools Service must have administrator privileges.

To create the Endeca Tools Service:

1. Navigate to your Endeca installation directory.
   By default, this should be `C:\Endeca\ToolsAndFrameworks\<version>`.
2. Install the Endeca Tools Service by running `server\bin\install_service.bat`.
   This creates the Endeca Tools Service and configures it to run under the current user profile.

After you have created the Endeca Tools Service, you must configure it to run under the `endeca` user.

Note: By default, Workbench runs on port 8006 of your machine. If port 8006 is unavailable on your machine, you must change this to a different port. Additionally, if you are not running the Endeca Application Controller on `localhost:8888`, you must update the EAC configuration for Workbench.

Related Links

Updating Workbench to use non-default EAC settings on page 34
If the Endeca Application Controller is not running at the default location of `localhost:8888`, you must update this information in the `%ENDECA_TOOLS_CONF%\conf\webstudio.properties` file (`$ENDECA_TOOLS_CONF/conf/webstudio.properties` on UNIX).

Endeca Tools Service Scripts on page 29
This section covers the Endeca Tools Service scripts.

Endeca Tools Service and EAC Ports Reference on page 31
This section covers the steps required to change the Endeca Tools Service and EAC ports from the default values.

Configuring the Endeca Tools Service to run under an endeca user

You can modify the Endeca Tools Service to run under a designated endeca user, rather than using the current user profile.

Once you have initialized your Endeca Tools Service you can create a new user and configure the service to run under that user. Doing so automatically grants the user permission to log on as a service.

Oracle recommends that you create a user account called endeca that has the proper file and directory permissions to access all necessary files for your application, and that you set up your Endeca Tools Service to run under this account. However, you can use any user that you prefer, as long as it meets these requirements.

To configure the Endeca Tools Service to run under an endeca user:

1. Create an endeca user:
   a) Ensure that you have administrator privileges on the local machine.
   b) Go to **Start > Administrative Tools > Computer Management > System Tools > Local Users and Groups > Users**.
   c) Right click and select **New User...**
   d) Create an Administrator user named endeca.

   

   Important: To run the Endeca Tools service under the endeca user, you must set a password for the user.

2. Configure the Endeca Tools Service to run under the endeca user:
   a) Go to **Start > Control Panel > Administrative Tools > Services**.
   b) In the **Windows Services** editor, select the **Endeca Tools Service**.
   c) From the Endeca Tools Service, right-click and select **Properties** from the drop-down menu. The **Endeca Tools Service Properties** window appears.
   d) Switch to the **Log On** tab.
   e) Select the **This account:** radio button.
   f) Enter endeca in the **This account:** field and the password you set for the endeca user in the **Password:** and **Confirm Password:** fields.
   A dialog box appears, notifying you that the endeca user has been given service permissions.
   g) Click **OK** to close the dialog box.
   h) Click **OK** to save your changes to the Endeca Tools Service.
3. Start the Endeca Tools Service.

After you have configured the Endeca Tools Service, you can provision the Discover Electronics reference application using the Deployment Template.

Starting and stopping the Endeca Tools Service on Windows

Once you have created the Endeca Tools Service, it starts automatically when you boot up Windows. You must stop and later restart the service to make certain modifications to your Tools and Frameworks installation.

When you first install the service, you must manually start it. Afterwards, the service is set to start up automatically when the computer boots up.

To manage the Endeca Tools Service after installation:

1. Go to **Start > Control Panel > Administrative Tools > Services**.
2. In the **Windows Services** editor, select the **Endeca Tools Service**.
3. Click **Stop** or **Restart**.

Running Oracle Endeca Tools and Frameworks from the included batch files

If you do not wish to create the Endeca Tools Service, you can start or stop the Tools and Frameworks directly by running the included batch files.

Note: For any topics that refer to starting or stopping the Endeca Tools Service, run the corresponding batch script instead.

To start or stop the Tools and Frameworks from the included batch files:

1. Navigate to your Endeca installation directory.
   By default, this should be `C:\Endeca\ToolsAndFrameworks\<version>`.
2. Navigate to the `server\bin` directory.
3. To start the Tools and Frameworks, run `run.bat`.
   This script sets the Endeca environment variables in the current command window and initializes the Apache Tomcat Web server, with Workbench running on `localhost:8006`.
4. To stop the Tools and Frameworks, run `stop.bat`.
   This script shuts down the Apache Tomcat Web server.

Once the Tools and Frameworks are running, you can provision the Discover Electronics reference application using the Deployment Template.

Note: By default, Workbench runs on port 8006 of your machine. If port 8006 is unavailable on your machine, you must change this to a different port. Additionally, if you are not running the Endeca Application Controller on `localhost:8888`, you must update the EAC configuration for Workbench.

Installing Oracle Endeca Tools and Frameworks on UNIX

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

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

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, 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 Tools and Frameworks installation 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 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.

Once the Tools and Frameworks are running, you can provision the Discover Electronics reference application using the Deployment Template.

Note: By default, Workbench runs on port 8006 of your machine. If port 8006 is unavailable on your machine, you must change this to a different port. Additionally, if you are not running the Endeca Application Controller on `localhost:8888`, you must update the EAC configuration for Workbench.

Related Links

About the Endeca Tools Service ports on page 31
You can change the default ports for the Endeca Tools Service, as long as you choose a new port that is not being used.

Starting the Workbench process automatically on UNIX on page 15
In a UNIX development environment, the Workbench process can be started from the command line. In a UNIX production environment, however, Oracle recommends configuring the included `workbench-init.d.sh` script to start Workbench automatically.

Starting the Workbench process automatically on UNIX

In a UNIX development environment, the Workbench process can be started from the command line. In a UNIX production environment, however, Oracle recommends configuring the included `workbench-init.d.sh` script to start Workbench automatically.

To start the Workbench process automatically on UNIX:

1. Navigate to the `server/bin` directory within your Tools and Frameworks installation directory.

By default, this is `/usr/local/endeca/ToolsAndFrameworks/<version>/server/bin`.

2. Open the `workbench-init.d.sh` script.
3. Follow the instructions within the script to configure it for your environment.

Starting and stopping the Workbench process on UNIX

You must stop and later restart the Workbench process to make certain modifications to your Tools and Frameworks installation.

You must configure the `workbench-init-d.sh` script before using the commands outlined below.

When using the following commands, you may be prompted to enter the password for the system user that Workbench runs under.

- Start the Workbench process with the following command:
  `/sbin/service workbench start`
- Stop the Workbench process with the following command:
  `/sbin/service workbench stop`

Package contents

Oracle Endeca Tools and Frameworks are available for both Or acle Endeca Guided Search and Oracle Endeca Experience Manager.

Core package components

Both distribution packages contain the following resources on Windows and UNIX:

File / Directory	Contents
`admin/bin`	Contains batch or shell scripts for running Workbench administration tasks such as importing and exporting users.
`admin/conf`	Contains configuration files for Workbench administration scripts.
`admin/lib`	Contains libraries to support the Workbench administration scripts.
`admin/logs`	Contains logs that are generated from running Workbench administration scripts.
`assembler/apidoc`	Contains the *Endeca Assembler API Reference (Javadoc)* which also includes the *URL Optimization API Reference (Javadoc)*.
`assembler/lib`	Contains the Assembler and its dependencies, including the URL Optimization API for Java.
`config_import_api/apidoc`	Contains the *Endeca Configuration Import API Reference (Javadoc)*.

File / Directory	Contents
config_import_api/lib	Contains the Endeca Configuration Import API.
deployment_template	Contains the Deployment Template and accompanying API References (Javadoc).
migration/lib	Contains libraries to support the Workbench migration script.
migration/workbench	Contains the Workbench migration script (migrate_workbench), a configuration file for the script, and a configuration file that specifies log-level settings for the migration operations.
reference/cookbook	Contains sample code and documentation for implementing advanced Oracle Endeca Commerce features in the Discover Electronics reference application.
reference/discover-data	Contains the data and Endeca application configuration for the Discover Electronics reference application. This application is configured to process the source data using Forge.
reference/discover-data/cartridge_templates	Reference application templates designed to enable content administrators to configure pages for applications.
reference/discover-data/ifcr	Sample content for the reference application.
reference/discover-data-catalog-integration	Contains data and Endeca application configuration for the Deployment Template Module for Product Catalog Integration. This application integrates data records, dimension values, precedence rules, and schema information from product catalog systems into Endeca search applications.
reference/discover-electronics	The source code for a live instance of the Discover Electronics application including renderers and configuration files, provided for reference purposes.
reference/discover-electronics-authoring	The source code for an authoring instance of the Discover Electronics application including renderers and configuration files, provided for reference purposes.
reference/discover-service	Contains the Assembler service as configured for a live instance of the Discover Electronics application.
reference/discover-service-authoring	Contains the Assembler service as configured for an authoring instance of the Discover Electronics application.
reference/endeca_jspref	A data explorer Web application that you can use to verify and browse your data.

File / Directory	Contents
`server/apache-tomcat-6.0.32`	The Apache Tomcat Web application container for Endeca Workbench.
`server/bin`	Contains batch or shell scripts for running the Endeca Tools Service, which sets environment variables and initializes the Tomcat application container.
`server/j2sdk`	The Java 2 Software Development Kit, version 1.6.0_17.
`server/webapps`	Contains the Workbench, Endeca Configuration Repository, and related tools.
`server/workspace`	The workspace into which you deploy applications to run in the Endeca Tools Service.
`sitemap_generator/bin`	Contains the `.bat` and `.sh` scripts used to run the Sitemap Generator from the command line.
`sitemap_generator/conf`	Contains all files necessary to configure the Sitemap Generator.
`sitemap_generator/lib`	Contains the Sitemap Generator classes packaged in `endeca-sitemapgen-<version>.jar`, which must be included in the Java classpath when running the Sitemap Generator.
`sitemap_generator/samples`	Contains sample sitemaps that have been generated using different configuration settings.

Oracle Endeca Experience Manager components

In addition to the contents described above, the Tools and Frameworks package specific to Oracle Endeca Experience Manager also includes the following resources:

File / Directory	Contents
`editor_sdk`	Contains the SDK for developing custom editors for use with the Experience Manager tool in Oracle Endeca Workbench.
`reference/media-mdex-cas`	Contains the data and Endeca application configuration for populating the Media MDEX Engine with Discover Electronics media using CAS.

Related Links

Endeca Tools Service scripts on page 29

The Windows and UNIX versions of the Tools and Frameworks archive contain scripts for running the Endeca Tools Service.

Troubleshooting Oracle Endeca Tools and Frameworks

This section provides an overview of how to address possible problems with your Tools and Frameworks installation.

Error	Solution
Discover Electronics reference application not displaying data	If your MDEX Engine is not running on `localhost:15002`, you must modify the Assembler context files so that the Assembler can query the MDEX for data. See "Communicating with the MDEX Engine" for details.
Experience Manager editors display but are inactive or "Loading..."	If you are not accessing Workbench from the same hostname specified for the MDEX, you must create a cross-domain policy file. Additionally, both the EAC configuration in the <app dir>\config\script\AuthoringDgraphCluster.xml file and the data service configuration in the <app dir>\config\editors_config\services\dataservice.json file must have the same host and port configuration in order for Experience Manager editors to function correctly.
Experience Manager displays red warning boxes instead of editors	This behavior indicates that required editors are either not present or are incorrectly configured in the editor configuration file, located in the deployed application directory under <app dir>\config\editors_config\editors.xml. Updates to this file can be pushed to the deployed application by running the <app dir>\control\set_editors_config script.

Chapter 3

Deploying a Reference Application

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

About the Discover Electronics reference application

Tools and Frameworks provides a reference application called the Discover Electronics reference application. You can deploy the Discover Electronics reference application using the Deployment Template, then provision the application, run a baseline update, and view the data set in the front-end application.

About multichannel support

In Tools and Frameworks 3.1.0 and later, the Discover Electronics reference application has been augmented to demonstrate best practices for multichannel implementations.

Supported devices

The Discover Electronics reference application is supported on the following mobile browsers:

- Mobile Safari
- Google Android
- BlackBerry (OS 6 or later)
- Skyfire (iOS/Android)

The following browsers are partially supported (some features such as JavaScript, auto-suggest, and cosmetic issues may not work as designed):

- BlackBerry (OS 5)
- Firefox Mobile (Android)

Deploying the Discover Electronics reference application using Forge

As part of the deployment process, the source data in `reference\discover-data` is copied to the `<installation path>\Endeca\Apps\Discover`, and Forge processes the source data as part of the baseline update.

The indexed data is loaded into two separate Dgraph instances. One is an authoring instance Dgraph and the other is a live Dgraph for the application.

To deploy the Discover Electronics reference application:

1. Ensure that the Endeca Tools Service is running.
2. If you haven't already, create a directory for deployed Endeca applications, such as `C:\Endeca\Apps` on Windows, or `/usr/local/endeca/apps` on UNIX.
3. Run the Deployment Template to create the application:
   a) Open a command prompt or command shell.
   b) Navigate to the `<installation path>\ToolsAndFrameworks\<version>\deployment_template\bin` directory on Windows, or `<installation path>/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\3.1.2\deployment_template\bin>deploy
      --app C:\Endeca\ToolsAndFrameworks\3.1.2\reference\discover-data\de¬
      ploy.xml
      ```

   d) Confirm the Platform Services installation directory.
   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.
4. 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.
5. 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. (This action occurs only if you are using Experience Manager.)
6. Run the `load_baseline_test_data` script.

7. Run the `baseline_update` script.
8. Run the `promote_content` script.
9. 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.

Deploying the Discover Electronics reference application using CAS

You can deploy the Discover Electronics reference application by provisioning it using the Deployment Template and running a baseline update. In this procedure, the Deployment Template copies the source data in `reference\discover-data-cas` to the `C:\Endeca\Apps\Discover` directory, and CAS processes the source data as part of the baseline update.

To deploy the Discover Electronics reference application using CAS:

1. Ensure that Install the Content Acquisition System is installed. (See the *Endeca CAS Installation Guide*.)
2. Ensure that the Endeca Tools Service is running.
3. If you haven't already, create a directory for deployed Endeca applications, such as `C:\Endeca\Apps` on Windows, or `/usr/local/endeca/apps` on UNIX.
4. Run the Deployment Template to create the application:
   a) Open a command prompt or command shell.
   b) Navigate to the `<installation path>\ToolsAndFrameworks\<version>\deployment_template\bin` directory on Windows, or the equivalent path on UNIX.
   c) Run the `deploy` script with the `--app` flag and an argument that specifies the path to the `deploy.xml` descriptor file that uses CAS.

      For example:

      ```
      C:\Endeca\ToolsAndFrameworks\3.1.2\deployment_template\bin>deploy
      --app C:\Endeca\ToolsAndFrameworks\3.1.2\reference\discover-data-
      cas\deploy.xml
      ```

   d) Press **Enter** to confirm your Platform Services installation directory.
   e) Specify n when prompted to install a base deployment.

      Note: This configuration is different from deploying using Forge. When using CAS, you must specify no to this prompt.

   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 you can press **Enter** to accept the default values for subsequent prompts about port values. (Oracle recommends using the default port values.)
i) Specify the path to the CAS installation directory and specify the Endeca CAS Service port.

5. Navigate to the `control` directory of the new deployed application.

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

6. 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. (This action occurs only if you are using Experience Manager.)

7. Run the `load_baseline_test_data` script.
8. Run the `baseline_update` script.
9. Run the `promote_content` script.
10. Confirm that the Discover Electronics reference applications are running:

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

Verifying your Tools and Frameworks configuration

Once you have deployed the Discover Electronics reference application, you should verify that all included Tools and Frameworks components are correctly configured for your environment.

To verify that your Tools and Frameworks installation is correctly configured:

1. Confirm that the Discover Electronics reference application is running by navigating to `http://<hostname>:8006/discover-authoring` in your browser, or to the appropriate port if you changed the default value. In this release, be sure to replace `<hostname>` with the actual host name rather than `localhost`.

   Note the **Customer Favorites** spotlight in the right column contains the following records:

   - .LINK™ Digital Interface Cable
   - IXUS 210 Camera
   - EF 50mm f/1.2L USM Lens

2. Confirm that Oracle Endeca Workbench is running by navigating to `http://localhost:8006` in your browser, or to the appropriate port if you changed the default value.
3. Log in to Workbench.

   
   Note: The default login is **Username** "admin" with **Password** "admin".

4. Confirm that the Discover Electronics reference application has been deployed.

The application drop-down on the left side of the top menu bar should display the **Discover** application.

5. Open the **Rule Manager** or **Experience Manager** tool.
6. If you are running Tools and Frameworks for the Oracle Endeca Commerce with Experience Manager package, confirm that the Experience Manager editors are available and able to send and receive information from the MDEX Engine:
   a) In the Experience Manager **Content** tree, expand the **Web** view.
   b) Expand **Category Spotlights**.
   c) Select **Top Rated Bags**.
   d) Verify the editors, confirming that all editors display correctly and do not show warning messages.
7. In the Experience Manager or Rule Manager **Content** tree, navigate to the **Default Spotlight** cartridge:
   - In Experience Manager, expand **Web > Web Browse Pages** and select **Default Browse Page**. Select **Spotlight Records** in the tree view of the Content Details Panel.
   - In Rule Manager, expand **Right Column Spotlights** and select **Default Spotlight**.
8. Change the selection of spotlighted records:
   a) In the editor panel, click the **Edit Query** button.
   b) In the Filter State panel, click the **Remove All** link.
   c) Click the **Price Range** dimension.
   d) Select the **100-250** Price Range.
   e) Increase the **Maximum Number of Records** value to 5.
   f) Click **Save Filter State**.
9. Click the **Save Changes** button in the upper-right corner of the screen to publish changes to the MDEX Engine.
   This displays the following message at the bottom of the Rule Manager or Experience Manager pane:
   ```
   Success: Last publish to the MDEX Engine completed at <date> <time>
   ```
10. Navigate to `http://localhost:8006/discover-authoring` in your browser and confirm that the **Customer Favorites** spotlight now includes the following:
    - EF 50mm f/1.2L USM Lens
    - Camera PowerShot A550 Camera
    - Digital IXUS 120 IS Camera
    - Dioptric Adjustment Lens
    - EOS 5D + EF Camera

About logging and reporting in the reference application

By default, Oracle Endeca Tools and Frameworks is configured to log certain events within the Assembler and collect this information in daily, weekly, and monthly reports.

You can view the reports for the reference application by navigating to the current day, daily, or weekly reports under the **View Reports** tool in Workbench.

For information on configuring logging requests specific to your own Assembler application, see the *Assembler Application Developer's Guide*.

For information on generating log files and reports, see the *Platform Services Log Server and Report Generator Guide*.

Chapter 4

Uninstalling Oracle Endeca Tools and Frameworks

This section describes how to uninstall Oracle Endeca Tools and Frameworks from Windows and UNIX.

Uninstalling a deployed application

You should remove any deployed applications from the Endeca Application Controller prior to deleting the application directory.

The steps provided below outline the removal of a deployed application from Oracle Endeca Tools and Frameworks.

To remove a deployed application:

1. Remove the application from the Endeca Application Controller:
   a) In a command prompt window, list the current applications by running `eaccmd list-apps`.
   b) Navigate to the `<app dir>\control` directory.
      For the Discover Electronics reference application installed using the suggested directory paths, this is `C:\Endeca\apps\Discover\control` (on Windows) or `/usr/local/endeca/apps/Discover/control` (on UNIX).
   c) Remove the application by running `runcommand --remove-app`.
      This removes the specified application and its configuration in Workbench.
   d) List the current applications again by running `eaccmd list-apps`.
      The selected application should no longer display.
2. Navigate to `C:\Endeca\apps` (on Windows) or `/usr/local/endeca/apps` (on UNIX).
3. Delete the selected application directory.
   For the Discover Electronics reference application, this is the `Discover` directory.

Uninstalling Oracle Endeca Tools and Frameworks on Windows

Oracle Endeca Tools and Frameworks must be manually uninstalled, including removing the Endeca Tools Service.

Before uninstalling the Tools and Frameworks, you should remove any deployed applications.

To uninstall Oracle Endeca Tools and Frameworks on Windows:

1. Remove the Endeca Tools Service:
   a) Stop the Endeca Tools Service.
   b) Navigate to your `%ENDECA_TOOLS_ROOT%` directory.
      By default, this is `C:\Endeca\ToolsAndFrameworks\<version>`.
   c) Navigate to the `server\bin` directory.
   d) Run `uninstall_service.bat` to remove the service.

   

   Note: If you leave the Services window open after removing the Endeca Tools Service, it does not update to show that the service has been removed until you close and re-open it.

2. Copy the `ToolsAndFrameworks\<version>\server\workspace` directory to a back up location that is outside the Endeca installation directory.
   (You may use this content later in migration scenarios.)
3. Navigate to the Endeca installation directory, for example `C:\Endeca`.
4. Delete the `ToolsAndFrameworks` directory.

Uninstalling Oracle Endeca Tools and Frameworks on UNIX

Oracle Endeca Tools and Frameworks must be manually uninstalled.

Before uninstalling the Tools and Frameworks, you should remove any deployed applications.

To uninstall Oracle Endeca Tools and Frameworks on UNIX:

1. Navigate to `/usr/local/endeca`.
2. Delete your `ToolsAndFrameworks` directory.

Appendix A

Endeca Tools Service Scripts

This section covers the Endeca Tools Service scripts.

Endeca Tools Service scripts

The Windows and UNIX versions of the Tools and Frameworks archive contain scripts for running the Endeca Tools Service.

The following scripts are located in the `server/bin` directory of your Tools and Frameworks installation:

Script	Function
`run.bat` or `startup.sh`	Installation script for setting variables and initializing the Tomcat application container.
`install_service.bat`	On Windows, installs the Endeca Tools Service.
`setenv.bat`	Script for setting environment variables, called by `run.bat`.
`stop.bat` or `shutdown.sh`	Shuts down Workbench and the Tomcat application container.
`start_service.bat`	On Windows, starts the Endeca Tools Service.
`stop_service.bat`	On Windows, stops the Endeca Tools Service.
`uninstall_service.bat`	On Windows, removes the Endeca Tools Service.
`workbench.sh`	On UNIX, controls the Workbench process.
`workbench-init.d.sh`	On UNIX, can be configured to start Workbench automatically.

Appendix B

Endeca Tools Service and EAC Ports Reference

This section covers the steps required to change the Endeca Tools Service and EAC ports from the default values.

About the Endeca Tools Service ports

You can change the default ports for the Endeca Tools Service, as long as you choose a new port that is not being used.

The ports on which the Endeca Tools Service and Endeca Workbench listen are specified in the `server.xml` file, which is located in the `%ENDECA_TOOLS_CONF%\conf` directory (`$ENDE¬CA_TOOLS_CONF/conf` for UNIX).

The `server.xml` file also specifies the default server port. The default values are:

- Port 8006 for the Endeca Tools Service port.
- Port 8007 for the Endeca Tools Service Promotion port.
- Port 8446 for the Endeca Tools Service SSL port.
- Port 8084 for the Endeca Tools Service shutdown port.

Additionally, the Endeca Tools Service port is listed in the `%ENDECA_TOOLS_CONF%\conf\webstudio.properties` file (`$ENDECA_TOOLS_CONF/conf/webstudio.properties` on UNIX).

Changing the Endeca Tools Service port

You can change the Endeca Tools Service port by editing the `server.xml` file located in the `%ENDECA_TOOLS_CONF%\conf` directory (`$ENDECA_TOOLS_CONF/conf` on UNIX). You must also update this information in the `%ENDECA_TOOLS_CONF%\conf\webstudio.properties` file.

To change the Endeca Tools Service port:

1. Stop the Endeca Tools Service.
2. Open the `%ENDECA_TOOLS_CONF%\conf\server.xml` file in a text editor.
3. Find the non-SSL HTTP/1.1 `Connector` element:

```
<!-- Define a non-SSL HTTP/1.1 Connector on port 8006 -->
 <Connector port="8006" maxHttpHeaderSize="8192"
   maxThreads="150" minSpareThreads="25" maxSpareThreads="75"
   enableLookups="true" redirectPort="8446" acceptCount="10"
```

```
    connectionTimeout="60000" disableUploadTimeout="true" debug="0"
    URIEncoding="UTF-8"/>
```

4. Change the number in the port attribute to the new port you want Workbench to use.

   
   Note: You must choose a port not already in use.

5. Save and close the `server.xml` file.
6. Open the `%ENDECA_TOOLS_CONF%\conf\webstudio.properties` file in a text editor (`$ENDECA_TOOLS_CONF/conf/webstudio.properties` on UNIX).
7. Find the line that specifies `com.endeca.webstudio.port`:

```
# This must be set to a non-SSL port, even if you are using the
# SSL version of Endeca Workbench
com.endeca.webstudio.port=8006
```

8. Change the port number to the new port that you specified in Step 4.
9. Save and close the file.
10. In your application, and the Discover Electronics reference application, change the Endeca Tools Service Promotion port by doing the following:
    a) Open the `<application name>\WEB-INF\assembler.properties` file in a text editor. For example, in the Discover Electronics reference application (on Windows) this file is in `C:\Endeca\ToolsAndFrameworks\3.1.0\reference\discover-electronics-authoring\WEB-INF\assembler.properties`
    b) Find the `workbench.publishing.serverPort` property and change the value to the new port you want to use.
    c) Save and close the `assembler.properties` file.
11. Start the Endeca Tools Service.

Changing the Endeca Tools Service Promotion port

You can change the Endeca Tools Service Promotion port by editing the `server.xml` file located in the `%ENDECA_TOOLS_CONF%\conf` directory (`$ENDECA_TOOLS_CONF/conf` on UNIX). You must also update this information in the `%ENDECA_TOOLS_CONF%\conf\webstudio.properties` file.

To change the Endeca Tools Service Promotion port:

1. Stop the Endeca Tools Service.
2. Open the `%ENDECA_TOOLS_CONF%\conf\webstudio.properties` file in a text editor (`$ENDECA_TOOLS_CONF/conf/webstudio.properties` on UNIX).
3. Find the line that specifies `com.endeca.webstudio.promotion.port`:

```
# Port opened for promotion of content from Workbench to
# Live Environments.
com.endeca.webstudio.promotion.port=8007
```

4. Change the port number to the new port you want Workbench to use.
5. Save and close the file.
6. In your application, and the Discover Electronics reference application, change the Endeca Tools Service Promotion port by doing the following:
   a) Open the `<application name>\WEB-INF\assembler.properties` file in a text editor.

For example, in the Discover Electronics reference application (on Windows) this file is in `C:\Endeca\ToolsAndFrameworks\3.1.0\reference\discover-electronics-authoring\WEB-INF\assembler.properties`

b) Find the `workbench.publishing.serverPort` property and change the value to the new port you want to use.

c) Save and close the `assembler.properties` file.

7. Start the Endeca Tools Service.

Changing the Endeca Tools Service SSL port

You can change the Endeca Tools Service SSL port by editing the `server.xml` file located in the `%ENDECA_TOOLS_CONF%\conf` directory (`$ENDECA_TOOLS_CONF/conf` on UNIX). You must also update this information in the `%ENDECA_TOOLS_CONF%\conf\webstudio.properties` file.

To change the Endeca Tools Service SSL port:

1. Stop the Endeca Tools Service.
2. Open the `%ENDECA_TOOLS_CONF%\conf\server.xml` file in a text editor.
3. Find the SSL HTTP/1.1 `Connector` element:

```
<Connector port="8446" SSLEnabled="true"
    protocol="org.apache.coyote.http11.Http11Protocol"
    maxPostSize="0"
    maxThreads="150" scheme="https" secure="true"
    clientAuth="false" sslProtocol="TLS"
    keystoreFile="conf/eac.ks" keystorePass="eacpass"
    truststoreFile="conf/ca.ks" truststorePass="eacpass"
    />
```

4. Change the number in the port attribute to the new SSL port you want the Endeca Tools Service to use.

Note: You must choose a port not already in use.

5. Save and close the `server.xml` file.
6. Save and close the file.
7. Start the Endeca Tools Service.

Changing the Endeca Tools Service shutdown port

You can change the Endeca Tools Service shutdown port by editing the `server.xml` file located in the `%ENDECA_TOOLS_CONF%\conf` directory (`$ENDECA_TOOLS_CONF/conf` on UNIX). This port is used internally by the Endeca Tools service software. It is typically only necessary to change it in cases where you have port number conflicts.

To change the Endeca Tools Service shutdown port:

1. Stop the Endeca Tools Service.
2. Open the `server.xml` file in a text editor.
3. Find the `Server` element in the file:

```
<!-- Note:  A "Server" is not itself a "Container", so you may not
     define subcomponents such as "Valves" at this level.
```

```
     Documentation at /docs/config/server.html
 -->
<Server port="8084" shutdown="SHUTDOWN">
```

4. Change the number in the port attribute to the new port you want to use.

Note: You must choose a port not already in use.

5. Save and close the `server.xml` file.
6. Start the Endeca Tools Service.

Updating Workbench to use non-default EAC settings

If the Endeca Application Controller is not running at the default location of `localhost:8888`, you must update this information in the `%ENDECA_TOOLS_CONF%\conf\webstudio.properties` file (`$ENDECA_TOOLS_CONF/conf/webstudio.properties` on UNIX).

To update the Workbench EAC information:

1. Stop the Endeca Tools Service.
2. Open the `webstudio.properties` file in a text editor.
3. Find the lines that specify the EAC server and port:

```
# The EAC Central Server that this Workbench uses
com.endeca.webstudio.eac.hostname=localhost
com.endeca.webstudio.eac.port=8888
```

4. Replace `localhost` with the hostname of the EAC host.
5. Replace `8888` with the EAC port.
6. Save and close the file.
7. Start the Endeca Tools Service.

Appendix C

Communicating with the MDEX Engine

This section covers configuring the Tools and Frameworks to communicate with the MDEX Engine and MDEX Web services.

Setting up a cross-domain policy file

By default, MDEX Web services are accessible from Experience Manager and other Endeca Workbench tools only if the MDEX Engine and Workbench are hosted on the same domain.

For example, if Workbench is hosted on `apps.example.com`, the MDEX must also be accessible at `apps.example.com`, and Experience Manager must be configured to access the MDEX Engine at `"apps.example.com"`. Using the host's IP address or an alias hostname, such as `"localhost"` causes a "Security Error" alert box to appear in Experience Manager when an editor attempts to access the MDEX Engine.

If the MDEX Engine is hosted on a different domain from Workbench, you must set up a cross-domain policy file on the MDEX Engine server. These steps apply to any Flex client application that communicates with an MDEX Engine via Web services.

To configure cross-domain access to MDEX Web services from a Flex client:

1. Navigate to the `/conf/dtd/xform` directory of your MDEX Engine installation, for example:
   `C:\Endeca\MDEX\6.4.0\conf\dtd\xform`
2. Create an Adobe Flash cross-domain policy file, `crossdomain.xml`.
3. Configure your `crossdomain.xml` file to grant access to all domains hosting instances of Workbench.

   An example is provided below:

```
<?xml version="1.0"?>
<!DOCTYPE cross-domain-policy SYSTEM "http://www.macrome¬
dia.com/xml/dtds/cross-domain-policy.dtd">
<cross-domain-policy>
  <allow-access-from domain="*.example.com" />
  <allow-http-request-headers-from domain="*" headers="SOAPAction" />
</cross-domain-policy>
```

   - The `<allow-access-from>` element grants access to the local MDEX Web service from a set of domains. The `domain` attribute may be specific, or may include a wildcard, as shown above. You can include any number of `<allow-access-from>` elements, each for a different domain.

- The <allow-http-request-headers-from> element as specified above is required. It enables Flash clients to communicate with the MDEX using the SOAP protocol.

For a complete specification of the cross-domain policy file format, please see the Adobe documentation at *http://www.adobe.com/devnet/articles/crossdomain_policy_file_spec.html*.

Updating Assembler host configuration

By default, the Assembler properties files use `localhost` as the host value for Workbench, MDEX Engine, and Log Server. If you are not installing Tools and Frameworks and the MDEX Engine on the same machine, you must update these files with fully qualified host names to ensure that the components can communicate.

To update the Assembler host configuration:

1. Navigate to the `reference` subdirectory of your Tools and Frameworks installation directory.
   By default, this is `C:\Endeca\ToolsAndFrameworks\<version>\reference` on Windows, or `/usr/local/endeca/ToolsAndFrameworks/<version>/reference` on UNIX.
2. Navigate to the `discover-service\WEB-INF` directory.
3. In a text editor, open the `assembler.properties` file.
4. Find the lines that specify the Workbench, MDEX Engine, and Log Server host:
   ```
   workbench.host=localhost
   mdex.host=localhost
   logserver.host=localhost
   ```
5. Modify the properties to specify the fully qualified name of the host machine.
6. Save and close the file.
7. Repeat Steps 4-6 for the following Assembler property files:
   - `reference\discover-electronics\WEB-INF\assembler.properties`
   - `reference\discover-service-authoring\WEB-INF\assembler.properties`
   - `reference\discover-electronics-authoring\WEB-INF\assembler.properties`

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