

Oracle Commerce
MDEX Engine Installation Guide
Version 6.5.2 • October 2015



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Preface

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

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

About this guide

This guide provides installation instructions for setting up the MDEX Engine on Windows, Linux, and Solaris.

Who should use this guide

This guide is intended for developers and system administrators who install the MDEX Engine on Windows, LINUX, or Solaris.



Note: Unless otherwise indicated, whenever this document specifies UNIX, it applies to both 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 answers to implementation questions, product and solution help, and important news and updates about Guided Search software.

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

Chapter 1

Installing the MDEX Engine

This section contains instructions for installing the MDEX Engine.

Before you install

This section provides an overview of the MDEX Engine, system requirements, and other information that you need to know before installing.

Hardware requirements

You might need to upgrade your hardware, depending on the data you are processing. All run-time code must fit entirely in RAM. Likewise, hard disk capacity must be sufficient based on the size of your data set. Please contact your Oracle representative if you need more information on sizing your hardware.

Minimum hardware requirements:

- x64 processor, minimum 1.8 GHz
- At least 2 GB of RAM, depending on the size of the application data set
- 80 GB hard drive

Recommended hardware requirements:

- x64 3.0+ GHz processors
- 8 GB of RAM or more, depending on the size of the application data set
- One 72GB or 146 GB hard drive per CPU, minimum 10,000 or 15,000 RPM spindle speed
- Gigabit ethernet
- RAID 10 or 6 configuration

Supported operating systems

See the Oracle Commerce Supported Environments Matrix document in the My Oracle Support knowledge base at <https://support.oracle.com/> for information on supported operating systems.

UNIX utilities dependencies

This section describes the UNIX utilities required by the MDEX Engine installer.

The following UNIX utilities must be present in the `/bin` directory:

```
basename
cat
chgrp
chown
date
dd
df
mkdir
more
rm
sed
tar
true
```

The following UNIX utilities must be present in the `/usr/bin` directory:

```
awk
cksum
cut
dirname
expr
gzip
head
id
printf
tail
tr
wc
which
```

If these utilities are not in the specified locations, the installation fails with a message similar to the following:

```
Required dependency is not executable: /bin/df. Aborting.
```

Disk space requirements on Windows

The installation process requires space on the system drive C.

Even if you are installing on the other drive than the system drive C, to avoid an "out of drive space" error during the installation process, you should have approximately 190MB of space available on the system drive before installing (you may need to clear this space on C if it is not available).

The Windows installation process unpacks its `.msi` installation file and other temporary and log files to a location on the system drive (typically C), regardless of which drive you choose for the installation, and regardless of the drive indicated by the `TEMP` and `TMP` environment variables.

When the installation process completes the installation, it frees the space it consumed.

The `.msi` file, and other temporary and log files written by the installation process temporarily add a total of approximately 190MB to the C drive. If the system drive does not have this much free space, the installation fails with a "There is not enough space on the disk" error.

Required Oracle Commerce components

The MDEX Engine installation does not require any other Oracle Commerce components to be installed before it is installed.

To determine the compatibility of components in Oracle Commerce, see the [Oracle Commerce Supported Environments and Compatibility](#) available on the Oracle Technology Network (OTN).

Required reading

Before installing, Oracle recommends that you read the following documents for important information about the release.

Getting Started Guide

The *Getting Started Guide* gives an overview of the components and includes information about configuration scenarios. After installing all the components in your deployment, read this guide for information on verifying your installation. You can download the *Getting Started Guide* from the Oracle Technology Network (OTN).

Release Notes

Refer to the release notes for information about known issues for this release. You can download the *Oracle Commerce Guided Search Release Notes* from the Oracle Technology Network (OTN).

MDEX Engine Migration Guide

Refer to the *MDEX Engine Migration Guide* for information about migrating your implementation from a previous version of the software. You can download the *MDEX Engine Migration Guide* from Oracle Technology Network (OTN).

Installer file names

The MDEX installation packages and executables are named according to a common convention.

The installer file names follow the format:

```
<product><release version>-<OS>_<buildnumber>.<file extension>
```

For example:

```
OCmdex6.5.2-Linux64_xxxxxxx.bin
```

The *product* is an identifier for the component that the installer will install. In the example, `OCmdex` is the identifier for the Oracle Commerce MDEX Engine.

The *release version* is the version number of the component that the installer will install. In the example, `6.5.2` identifies version 6.5.2 of the Oracle Commerce MDEX Engine.

The *OS* identifies the operating system for which the installer is designed. In the example, `Linux64` identifies the operating system.

The build number identifies the software build of the component that the installer will install. In the example, `xxxxxxx` indicates that the installer will install build `xxxxxxx` of the MDEX Engine version 6.5.2.

The file extension identifies the type of file. In the example, `.bin` identifies the file as a UNIX (Linux) executable binary file.

The following table lists the MDEX installers and the installation platforms on which they can be used:

Operating System	Installation platform
Linux64	Linux running on 64-bit Intel processors
Win64	Windows running on 64-bit Intel processors
Solaris	Solaris running on SPARC 64-bit processors.

Installing the MDEX Engine

This section describes the installation procedure and the contents of the installation directory.

About User Account Control in Windows Server 2008

User Account Control in Windows Server 2008 R2 Enterprise limits which tasks Standard Users can run.

User Account Control divides users into two groups, Standard Users and Administrators:

- **Standard Users** have the least amount of privileges required to perform basic tasks. They cannot install or uninstall applications to or from %SYSTEMROOT%, change system settings, or perform other administrative tasks.
- **Administrators** have full permissions for adding, removing, or modifying programs and user accounts.

By default, users are created as Standard Users. Although User Account Control allows Standard Users to temporarily elevate permissions in order to perform administrative tasks, doing so requires administrative credentials.

For more information regarding User Access Control and the permissions granted to each user type, see the Microsoft documentation at <http://technet.microsoft.com/en-us/library/cc731416%28WS.10%29.aspx>.

Effects on MDEX Engine Installation

The MDEX Engine installation process has changed with the introduction of User Account Control in Windows Server 2008 R2 Enterprise. Because of the resulting security restrictions on tasks that run at elevated privilege, running a per-machine installation of the MDEX Engine now requires administrator permissions. A user may still install a per-user installation without these permissions, but this is not supported in a production environment.



Note: User Account Control (UAC) behavior and installation steps may differ for installing on Windows 7 for development purposes. For details, see the Microsoft documentation.

Installing the MDEX Engine on Windows

You run the Oracle Commerce MDEX installation wizard to install the MDEX Engine. Accept all the installation defaults unless you must modify them.

To install the 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 in the following format:

```
OCmdex<release version>-<OS>_<buildnumber>.exe
```

For more information about the format of MDEX installer file names, see [Installer file names](#) on page 11.

3. Double-click the installer file to start the wizard.
4. Select a locale, and click **OK**.
5. In the **Introduction** screen, click **Next** to begin the installation process.
6. Accept the terms of the license agreement and click **Next**.
7. In the **Choose Install Folder** screen, select an installation location or accept the default `C:\Endeca\MDEX\` installation directory and click **Next**.

You should not install the MDEX Engine into a directory whose name contains spaces.

The MDEX Engine requires approximately 770 MB of disk space. The installer requires approximately 600 MB of additional space on the system drive for temporary files. These files are cleared after the installation process completes.

The wizard verifies the contents of the installation package and confirms that whether an existing 6.5.2 installation exists in the chosen Install Folder.



Note: A warning message is displayed if the installer identifies an existing 6.5.2 installation in the chosen Install Folder. Choosing to proceed with the installation will overwrite the existing installation.

8. In the **Pre-Installation Summary** screen, review the settings you have selected and click **Install**.
9. In the **Install Complete** screen, click **Done** to exit the wizard.

If you intend to run MDEX Engine applications or tools from the command line, without using the EAC, run the batch file `mdex_setup.bat` after you install the MDEX Engine. You must run this script from a Windows Command Prompt, not a PowerShell Console.

The MDEX Engine installer creates this batch file in the target directory. For example, if you installed to the default location, this file is located at `C:\Endeca\MDEX\\mdex_setup.bat`.

The batch file sets up the environment variable `ENDECA_MDEX_ROOT` that the MDEX Engine uses and that points to `C:\Endeca\MDEX\`. The script also adds the `utilities` directory and the MDEX Engine binaries to the search path.

The script is optional and provided as a convenience. Note that it only sets the variables for the current user in the current context. Optionally, you can manually set the environment variables as global environment variables.

Installing the MDEX Engine on UNIX

The software is distributed as a self-extracting bin file.

You should not install the MDEX Engine into a directory that contains content or whose name contains spaces. The MDEX Engine requires approximately 770 MB of disk space. The installer requires approximately 600 MB of additional space on the system drive for temporary files. These files are cleared after the installation process completes.

To install the MDEX Engine:

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 installation file is in the following format: `OCmdex<release version>-<OS>_<buildnumber>.bin`. For information about the file names of MDEX installers, see [Installer file names](#) on page 11.

3. Determine where you will install the MDEX Engine. Verify that the target directory where you plan to install has enough available disk space and has write permissions (is not read-only). For example, in this procedure we assume that the target directory is `/usr/local` and that you have write permissions for it. If you do not set these permissions, the installation will fail.
4. From the local download directory, start the installation with the following command:

```
./OCmdex<release version>-<OS>_<buildnumber>.bin
```



Note: The installation must be run within a bash or sh UNIX shell.

5. Select a locale.
6. In the **Introduction** screen, press **Enter** to continue.
7. Accept the terms of the license agreement.
8. In the **Choose Install Folder** screen, enter `/usr/local` as the installation location.
9. In the **Pre-Installation Summary** screen, review the settings you have selected and press **Enter** to continue.
10. In the **Ready to Install** screen, press **Enter** to start the installation.
The Installation Complete message displays at the completion of the installation.

At the completion of the installation, the installer prompts you to run the `mdex_setup` script that sets the `ENDECA_MDEX_ROOT` environment variable.

Depending on your shell, run the following script:

For Bourne, Bash or Korn:

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

or:

For csh or tcsh:

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

The `mdex_setup` script sets up the environment variable `ENDECA_MDEX_ROOT` that the MDEX Engine uses and that points to the location `MDEX/<version>`. The script also adds the `utilities` directory and the MDEX Engine binaries to the search path. The script is optional and is provided as a convenience, although the variable is required and must be set.

Press **Enter** to exit the installation.

Installing silently on Windows

The silent installer is useful if you want to add the installation of the MDEX Engine to your own install script, or push out the installation on multiple machines.

To install silently on Windows:

1. From a command prompt, navigate to the directory where you downloaded the installer.
2. Issue a command of the following form:

```
OCmdex<release version>-<OS>_<buildnumber>.exe -i silent -f mdex_response.properties
```

where

`mdex_response.properties` contains `USER_INSTALL_DIR=C:\\Endeca\\MDEX`, which specifies the directory into which the MDEX Engine is installed.

- Optionally, use a file created by the installer to set up the `ENDECA_MDEX_ROOT` variable.

Run `C:\Endeca\MDEX\<version>\mdex_setup.bat`.



Note: If you changed the `USER_INSTALL_DIR` location in step 2, `mdex_setup.bat` will be located under the directory you specified.

The files set up the environment variable `ENDECA_MDEX_ROOT` that the MDEX Engine uses and that points to `MDEX\<version>`. The script also adds the `utilities` directory and the MDEX Engine binaries to the search path. The script itself is optional and provided as a convenience, although it only sets the variables for the current user in the current context. You can also choose to manually set the environment variables as global environment variables.

Installing silently on UNIX

The silent installer is useful if you want to add the installation of the MDEX Engine to your own install script, or push out the installation on multiple machines.

The silent installer is not interactive.

To install silently on UNIX:

- From a shell window, navigate to the directory where you downloaded the installer.
- Issue a command of the following form:

```
./OCmdex<release version>-<OS>_<buildnumber>.bin -i silent -f mdex_response.properties
```

where

`mdex_response.properties` contains `USER_INSTALL_DIR=/home/<username>`, which specifies the directory into which the MDEX Engine is installed.

- Optionally, use a file created by the installer to set up the `ENDECA_MDEX_ROOT` variable.

Run `source endeca/MDEX/<version>/mdex_setup_sh.ini` or `source endeca/MDEX/<version>/mdex_setup_csh.ini` depending on your shell.

The files set up the environment variable `ENDECA_MDEX_ROOT` that the MDEX Engine uses and that points to `MDEX/<version>`. The script also adds the `utilities` directory and the MDEX Engine binaries to the search path. The script itself is optional and provided as a convenience, although it only sets the variables for the current user in the current context.

Package contents and directory structure

This topic describes directories created in the MDEX Engine installation.

The `Endeca\MDEX\<version>` (`Endeca\MDEX\<version>` on Windows) directory is the root directory for the MDEX Engine.

Directory	Contents
root directory	The release notes (<code>README.txt</code>) and the <code>mdex_setup</code> script that you run after the installation, which sets the <code>ENDECA_MDEX_ROOT</code> variable to this location
bin	Executables such as <code>Dgraph</code> and <code>Dgidx</code>

Directory	Contents
conf	Static wordforms files and DTD/XSLT files
Uninstall	The program to uninstall the MDEX Engine
utilities	Executable files for various utilities, such as GZIP, touch, and grep (Windows only)

Installing the Presentation API

The MDEX package that you download from the Oracle Software Delivery Cloud contains two files:

- The MDEX installer file. For information about the possible names of MDEX installer files, see [Installing the MDEX Engine](#) on page 9
- OCpresAPI archive file (the Presentation API)

The OCpresAPI archive file is included for use by legacy applications that invoke the Presentation API to implement their front-end logic.

Thus, if you are migrating a legacy application, place the contents of the OCpresAPI archive file in your installation directory. Install the MDEX engine as well, if you require the version in the downloaded MDEX package.

If your application relies on the Oracle Commerce suite of products, run the MDEX installer to install MDEX but do not open the OCpresAPI archive file. The Presentation API will be installed as part of Tools and Frameworks installation.

After you install

This section describes optional post-installation procedures.

Loading the correct resolver library

If, when running the Dgraph, you get the error `Couldn't resolve host host`, your system might be loading the wrong resolver library at run time.

This can happen if `ld.so.cache` contains an entry for a different version than the one you need first.

To load the correct resolver library:

- Set `LD_LIBRARY_PATH` as follows so that it will be searched before `ld.so.cache`.

- For `csh` and similar shells:

```
setenv LD_LIBRARY_PATH /lib:${LD_LIBRARY_PATH}
```

- For `bash`:

```
export LD_LIBRARY_PATH=/lib:${LD_LIBRARY_PATH}
```


Uninstalling the MDEX Engine

This section contains the procedures for uninstalling the MDEX Engine.

Uninstalling the MDEX Engine on Windows

Before you begin the uninstall process, back up files that you want to retain from the `Endeca` directory.

Make sure that you stop all Guided Search processes (including the Dgraph and the HTTP service) before uninstalling the software.

To uninstall the MDEX Engine from a Windows machine, do one of the following:

1. From the Start menu, select **All Programs > Endeca > MDEX > Uninstall Oracle Commerce MDEX Engine 6.5.2**.
2. Alternatively, open the Windows Control Panel and select **Uninstall or change a program**.
 - a) Select the **Oracle Commerce MDEX Engine 6.5.2** from the list of installed software.
 - b) Click **Uninstall/change**.

Uninstalling the MDEX Engine on UNIX

Before you begin the uninstall process, back up files that you want to retain from the MDEX Engine directory.

Make sure that you stop all Guided Search processes (including the Dgraph and the HTTP service) before uninstalling the software.

To uninstall the MDEX Engine from your UNIX machine, do one of the following:

1. Issue an `rm` command as in this example:

```
rm -rf endeca/MDEX/<version>
```

2. Alternatively, from the `endeca/MDEX/<version>/Uninstall` directory, run the uninstall program:

```
./"Uninstall_Oracle Commerce MDEX Engine 6.5.2 x64 Edition"
```


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