

Endeca® IAP Workbench

Installation Guide



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The software may be covered by one or more of the following patents: US Patent 7035864, US Patent 7062483, US Patent 7325201, Australian Standard Patent 2001268095, Republic of Korea Patent 0797232, and European Patent EP1459206B1.

Endeca IAP Workbench Installation Guide • October 2008 • Rev. A

Preface

The Endeca® Information Access Platform is the foundation for building applications that help people understand complex information, fostering discovery and improving daily decision-making. These applications instantly summarize data and content for users -- even for unanticipated requests. The Guided Summarization™ experience leads to unexpected insights in millions of everyday decisions, increasing revenue, decreasing costs, and accelerating operations.

The Endeca Information Access Platform is powered by MDEX Engine™ technology, a new class of database designed for exploring information, not managing transactions. The MDEX Engine is supported by:

- The Information Transformation Layer that unites and enriches disparate sources of information while maintaining, augmenting, and even creating structures across the data and content.
- An adaptive application component library that enables the rapid development of information access applications that automatically adapt to changes in the data and content.
- A Web-based management suite that empowers managers to highlight the right information at the right time to end users through adaptive presentation rules and dynamic pages.

These essential capabilities are delivered as an enterprise-class platform, with the scalability, reliability, and security that leading organizations demand.

About this guide

This guide contains installation instructions for setting up IAP Workbench on Windows, UNIX, and Linux.

This guide assumes that you have read the *Endeca Quick Start Guide*. This guide covers installation of Endeca IAP Workbench; for information about installing other Endeca components, refer to the appropriate Installation Guide.

Who should use this guide

This guide is intended for developers who are building applications using the Endeca Information Access Platform, as well as for system administrators managing the Endeca Information Access Platform on Windows, UNIX, or Linux.



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

Conventions used in this book

This book 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 Endeca Customer Support

The Endeca Support Center provides registered users with important information regarding Endeca software, implementation questions, product and solution help, training and professional services consultation as well as overall news and updates from Endeca.

You can contact Endeca Standard Customer Support through the Support section of the Endeca Developer Network (EDeN) at <http://eden.endeca.com>.



Chapter 1

Installation for Endeca IAP Workbench

This section contains instructions for installing the IAP Workbench suite of tools.

Before you install

This section provides an overview of IAP Workbench, system requirements, and other information you need to know before installing.

Overview of IAP Workbench

Endeca IAP Workbench is a suite of tools that brings together best-in-class Web-site management capabilities including merchandising, Content Spotlighting, search configuration, and usage reporting.

In addition to these powerful tools for business users, IAP Workbench provides features for system administrators to configure the resources used by an Endeca implementation, monitor its status, start and stop system processes, and download an implementation's instance configuration for debugging and troubleshooting purposes.

The IAP Workbench package contains the following components:

- Endeca Tools Service
- IAP Workbench

In addition, the installation includes a version of the Endeca JSP reference application, which serves as the default preview application in IAP Workbench.

System requirements

The machine you install your Endeca software on must meet the following operating system and software requirements.

Supported operating systems

The Endeca software supports the following 64-bit operating systems running on servers with x64 or SPARC processor capabilities:

- Red Hat Enterprise Linux AS (version 4 for x64) running on x64 processors
- Red Hat Enterprise Linux ES (version 4 for x64) running on x64 processors

- Red Hat Enterprise Linux Server (version 5 for x64) running on x64 processors
- Red Hat Enterprise Linux Advanced Platform (version 5 for x64) running on x64 processors
- Windows Server 2003 x64 running on x64 processors
- SPARC Solaris 10 running on x64 processors

32-bit operating systems are not supported in a production environment. However, if you are only doing application development, you can use the 32-bit versions of Windows Server 2003 or Windows XP Professional.

Software requirements

IAP Workbench is a Web-based application that supports Internet Explorer versions 6 and 7.

Compatibility with Endeca components

IAP Workbench is compatible with the following Endeca components:

- MDEX Engine 6.0.1
- Platform Services 6.0.1
- Developer Studio 6.0.1
- Deployment Template 3.0.0

You can install the Endeca MDEX Engine and Platform Services packages either before or after you install the IAP Workbench package.

Required reading

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

Quick Start Guide

The *Endeca Quick Start Guide* gives an overview of Endeca components and includes information about configuration scenarios. After installing all the components in your Endeca deployment, read this guide for information on verifying your installation. You can download the *Endeca Quick Start Guide* from the Downloads section of the Endeca Developer Network (EDeN) at <http://eden.endeca.com>.

Release Notes

Refer to the Endeca release notes for information about new features, changed features, and bug fixes for this release. You can download the release notes (`README.txt`) from the Knowledge Base section of the Endeca Developer Network (EDeN) at <http://eden.endeca.com>. After installation, release notes are also available in the following location:

- Windows: `C:\Endeca\Workbench\version`
- UNIX: `installation_directory/edeca/Workbench/version`

Migration Guide

Refer to the *Endeca Migration Guide* for information about migrating your implementation from a previous version of Endeca software. You can download the *Endeca Migration Guide* from the Knowledge Base section of the Endeca Developer Network (EDeN) at <http://eden.endeca.com>. After installation, the *Endeca Migration Guide* is also available in the following location:

- Windows: `C:\Endeca\Workbench\version\doc`
- UNIX: `installation_directory/endeca/Workbench/version/doc`

Installer file names

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

The installer file names follow the format:

```
componentname_version_arch-OS
```

For example:

```
mdex_601_x86_64pc-linux.sh
```

The *componentname* is the component identifier for the component being installed. In the example installer, `mdex` is the identifier for the Endeca MDEX Engine.

The *version* is the release version, without periods. In the example installer, `601` identifies MDEX Engine version 6.0.1.

The *arch-OS* is the architecture and operating system identifier for the component being installed. In the example installer, `x86_64pc-linux` identifies the file as an installer for the 64-bit Linux platform. The following table lists the *arch-OS* identifiers and their platforms:

arch-OS identifier	Installation platform
x86_64pc-linux	Linux running on 64-bit Intel processors
sparc_64-solaris	Solaris running on 64-bit Sparc processors
x86_64pc-win32	Windows running on 64-bit Intel processors
i86pc-win32	Windows running on 32-bit Intel processors (for development use only)



Note: Not all platforms may be supported by all Endeca components. For more details about platform support, see the System Requirements section of the appropriate Installation Guide.

Installing IAP Workbench

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

Windows installation procedures


This section contains the IAP Workbench installation procedures for Windows.

Creating a user for the Endeca services on Windows

You must run the Endeca services as a specified user, for which you can control permissions.

You are asked to provide information about this Endeca services user during the installation process. Endeca 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 create the user `endeca`:

1. Ensure that you have administrator privileges on the local machine.
 2. From the Windows Control Panel, select **Administrative Tools** and then select **Computer Management**.
 3. In the tree pane of the Computer Management window, expand **Local Users and Groups**.
 4. Right-click **Users** and select **New User**.
 5. In the New User dialog box, do the following:
 - a) Enter `endeca` for both the User name and the Full name.
 - b) Optionally, enter a description.
 - c) Set a password for user `endeca`.
-  **Note:** The user must have a non-blank password, because the installer will not accept a blank password for the services user.
- d) Uncheck **User must change password at next logon**.
 - e) Select **Password never expires**.
6. Click **Create** to create the new user, and then **Close** to exit the dialog box.
 7. Close the Computer Management window, but do not exit Administrative Tools.
 8. From Administrative Tools, do the following:
 - a) Open **Local Security Policy**.
 - b) In the Local Security Settings window, expand **Local Policies** on the left and select **User Rights Assignments**.
 - c) From the list of policies on the right, open **Log on as a Service**.
 - d) Add user `endeca` to the list of users that can register a process as a service.
 - e) Close the dialog box and exit Administrative Tools.
 9. Restart your computer for the changes to take effect.

Installation steps on Windows

This section describes how to install the Endeca software for the first time on a system, or after you have removed a previous version following the upgrade instructions in the *Endeca Migration Guide*.

Use the following prerequisites before installing:

- Ensure that you have administrator privileges on the local machine.
- The user name that is used to start the Endeca services must exist and have a non-blank password.
- Close all running programs.

To install IAP Workbench on Windows:

1. In your local environment, locate the IAP Workbench installer that you downloaded from the Endeca Developer Network (EDeN).
2. Double-click the installer file, which is: `iapworkbench_version_arch-OS.exe`.
3. Click **Next** to begin the installation wizard.

4. In the License Agreement screen, select “I accept the terms of the license agreement,” then click **Next**.
5. On the Copyright and legal screen, click **Next**.
6. In the Destination Folder screen, either accept the default installation location or click **Change** and browse to the directory where you want to install the Endeca software. Endeca recommends that you accept the default location (C:\Endeca\Workbench).

The wizard displays both the required and available disk space for the target directory chosen. IAP Workbench requires approximately 155 MB of disk space.



Note: If you do not use the default location, and you are installing more than one Endeca product on the same machine, ensure that you install each product to a separate location.

7. In the first Endeca Tools Service Information screen, do the following:
 - a) Enter the user name and password to use when launching the Endeca Tools Service.
 - b) Update the user domain if necessary.
 - c) Click **Next**.

This user must already exist.

8. In the first Endeca Tools Service Information screen, confirm or change the default values for the ports IAP Workbench uses for HTTP and server shutdown, then click **Next**.
9. In the IAP Workbench Information screen, do the following:
 - a) Specify the name of the host on which the EAC Central Server will be installed in the staging environment. This may be either your local machine, or a remote one.



Note: Endeca does not recommend that IAP Workbench connects to the EAC Central Server that is being used in the production environment.

- b) Confirm or change the default value for the EAC Central Server port.
 - c) Click **Next**.
10. In the Completing the Setup Wizard screen, click **Next**.
The Installing Endeca IAP Workbench displays. As the program installs, you can follow its progress on the status bar. When the installation is complete, click **Finish**.

The installation wizard installs IAP Workbench, sets the `ENDECA_TOOLS_ROOT` and `ENDECA_TOOLS_CONF` environment variables, and starts the Endeca Tools Service.

It is not necessary to restart your computer after installing IAP Workbench.

Silent installation steps on Windows

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



The silent installer is not interactive and is available for both Windows and UNIX.

To launch the silent installer on Windows:

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


```
iapworkbench_version_arch-OS.exe /s USERNAME=endeca PASSWORD=endecapwd
CONFIRMPASSWORD=endecapwd EACHOST=localhost
```

The options that you can pass to the command line installer are as follows:

Option	Description
TARGETDIR	Optional. The absolute path to the directory where you want to install IAP Workbench. The default location is <code>C:\Endeca\Workbench</code> .  Note: If you do not use the default location, and you are installing more than one Endeca product on the same machine, ensure that you install each product to a separate location.
USERNAME	Required. The user name to use when launching the Endeca Tools Service. The user must already exist.
PASSWORD	Required. The password for the Endeca Tools Service user.
CONFIRMPASSWORD	Required. Confirm the password for the Endeca Tools Service user.
DOMAINNAME	Optional. The Windows domain for the Endeca Tools Service user. The default is the domain the current user is logged in to.
SERVICEPORT	Optional. The port on which IAP Workbench accepts HTTP connections. The default is 8006.
SHUTDOWNPORT	Optional. The shutdown port for the Endeca Tools Service. The default is 8084.
EACHOST	Required. The fully qualified name, including domain information, of the host on which the EAC Central Server will be installed in the staging environment. This may be either your local machine, or a remote one.  Note: Endeca does not recommend that IAP Workbench connects to the EAC Central Server that is being used in the production environment.
EACPORT	Optional. The port on which EAC Central Server accepts HTTP connections. The default is 8888.

The command line call returns immediately, but the installer continues to run for a few minutes in the background as it installs IAP Workbench, sets the `ENDECA_TOOLS_ROOT` and `ENDECA_TOOLS_CONF` environment variables, and starts the Endeca Tools Service.

Here is a more detailed example of a silent installation command on Windows:

```
iapworkbench_version_arch-OS.exe /s TARGETDIR=C:\Endeca\Workbench
USERNAME=endeca PASSWORD=endecapwd CONFIRMPASSWORD=endecapwd
DOMAINNAME=MYDOMAIN SERVICEPORT=8006 SHUTDOWNPORT=8084
EACHOST=dataproc.example.com EACPORT=8888
```

It is not necessary to restart your computer after installing IAP Workbench.

UNIX installation procedures

This section contains the IAP Workbench installation procedures for UNIX.

Installation steps on UNIX

The Endeca software is distributed as a self-extracting tar file and install script. It can be installed at any location.

To install IAP Workbench on UNIX:

1. Determine where you will install the Endeca system. In this procedure, we assume this is the `/usr/local` directory.



Note: IAP Workbench unpacks to approximately 155 MB. Because multiple versions may eventually be stored, a destination in a large partition is recommended.

2. Locate the Endeca installation file. This procedure assumes the location is `/downloads`. The name of the installation file is:

```
iapworkbench_version_arch-OS.sh
```

3. Assuming the locations used in steps 1 and 2, run the IAP Workbench install script with the following command:

```
/downloads/iapworkbench_version_arch-OS.sh --target /usr/local
```

4. The copyright and legal information displays followed by the Endeca End-User License Agreement. Scroll to the end, then type `Y` to accept the agreement and continue with the installation. As the installation is being unpacked, a series of dots serves as a progress monitor. The unpacking may take several minutes. After the unpacking, you are asked a series of configuration questions.



Note: Where applicable, the default value for each option is shown. However, to accept the default you must manually enter that value in the installer.

5. Enter the fully qualified name, including domain information, of the host on which IAP Workbench will be running. The default is the name of the machine you are installing on.
6. Enter the port for the Endeca Tools Service, which is the port on which IAP Workbench accepts HTTP connections.
7. Enter the shutdown port for the Endeca Tools Service.
8. Enter the fully qualified name, including domain information, of the host on which the EAC Central Server will be installed in the staging environment. This may be either your local machine, or a remote one.



Note: Endeca does not recommend that IAP Workbench connects to the EAC Central Server that is being used in the production environment.

9. Enter the port for the Endeca Application Controller, which is the port on which EAC Central Server accepts HTTP connections.

The installation package installs IAP Workbench and the Endeca Tools Service.

When the installation is complete, the screen displays a reminder message about setting the environment variables similar to the following:

```
Please run the following command to set your environment variables:
```

```
Bourne, Bash or Korn:
```

```
source /usr/local/endecca/Workbench/workspace/setup/installer_sh.ini
```

```
csh or tcsh:
```

```
source /usr/local/endecca/Workbench/workspace/setup/installer_csh.ini
```

The command referenced in the message sets the `ENDECA_TOOLS_ROOT` and `ENDECA_TOOLS_CONF` environment variables for the current user. Generally this command should be placed in a script run at the startup of the shell so the variables are set for future use.

After running the installer, you also need to start the Endeca Tools Service.

Silent installation steps on UNIX

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


The silent installer is not interactive and is available for both Windows and UNIX.


To launch the silent installer on UNIX:

1. From a command prompt, navigate to the directory where you downloaded the installer.
2. Create a new text file named `iapworkbench_install_config.txt`.
3. In the file, specify the value for each configurable option on its own line, in the order in which they appear in the interactive installer. For example:

```
Y
workbench.example.com
8006
8084
dataproc.example.com
8888
```

The options are as follows:

Line number	Description
1	Value must be <code>Y</code> . Accepts the Endeca End-User License Agreement.
2	The fully qualified name, including domain information, of the host on which IAP Workbench will be running. This should be the name of the local machine. In the example, this is specified as <code>workbench.example.com</code> .
3	The port on which IAP Workbench accepts HTTP connections. In the example, this is specified as <code>8006</code> .
4	The shutdown port for the Endeca Tools Service. In the example, this is specified as <code>8084</code> .
5	The fully qualified name, including domain information, of the host on which the EAC Central Server will be installed in the staging environment. This may be either your local machine, or a remote one. In the example, this is specified as <code>dataproc.example.com</code> .
	 Note: Endeca does not recommend that IAP Workbench connects to the EAC Central Server that is being used in the production environment.
6	The port on which EAC Central Server accepts HTTP connections. In the example, this is specified as <code>8888</code> .

 **Note:** Do not include the line numbers in your configuration file. You must specify a value for each option. Even if you want to use the default, you must specify that value to the installer.

4. Issue the following command:

```
./iapworkbench_version_arch-OS.sh --silent --target /usr/local <
iapworkbench_install_config.txt
```

Replace `/usr/local` with the location to which you want to install.

When the installation is complete, the screen displays a reminder message about setting the environment variables similar to the following:

```
Please run the following command to set your environment variables:
```

```
Bourne, Bash or Korn:
```

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

```
csh or tcsh:
```

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

The command referenced in the message sets the `ENDECA_TOOLS_ROOT` and `ENDECA_TOOLS_CONF` environment variables for the current user. If you are scripting the install, add this command after the installation to set up the environment variables properly. Additionally, this command should be placed in a script run at the startup of the shell so the variables are set for future use.

After running the installer, you also need to start the Endeca Tools Service.

Verifying your IAP Workbench installation

When you have completed the installation, you can do a simple check to make sure that IAP Workbench is installed correctly.

Before you can access IAP Workbench, the Endeca Tools Service must be running.

To verify your Workbench installation:

Open Internet Explorer and enter the following URL:

```
http://host:8006
```

Replace `host` with the name of your IAP Workbench server and `8006` with the IAP Workbench port if you specified a different port.

If IAP Workbench has been successfully installed, the IAP Workbench login screen displays.

Fully verifying your Endeca implementation requires installation of additional components. For more information, see the *Endeca Quick Start Guide*.

Package contents and directory structure

This topic describes in detail the directories that are created in the IAP Workbench installation.

The `Workbench` directory is the top-level directory for IAP Workbench. Its sub-directories are described below.

Root directory

The `Workbench/version` directory is the root directory for IAP Workbench. This is the `ENDECA_TOOLS_ROOT` directory, which contains the release notes (`README.txt`) and the following directories:

Directory	Contents
/conf/dtd	The document type definitions (DTDs) for Endeca XML configuration files.
/doc	The essential documentation for IAP Workbench, including the <i>IAP Workbench Installation Guide</i> , <i>Endeca Migration Guide</i> , and <i>Endeca Third-Party Software Usage and Licenses</i> . Additional documentation is available from the Endeca Developer Network (EDeN) at http://eden.endeca.com .
/j2sdk	Version 5 of the Java 2 Platform Standard Edition Development Kit (JDK).
/server	The Web applications that run inside the Endeca Tools Service, including IAP Workbench, the Workbench Help Infocenter, and the Endeca JSP reference application.
/workspace-template	A set of files that you can use to create another copy of the workspace on UNIX (using <code>\$ENDECA_TOOLS_ROOT/setup/create_workbench_workspace.sh</code>) or restore the default settings to your current workspace.

Workbench directory

The `Workbench/workspace` directory is the `ENDECA_TOOLS_CONF` directory and contains the following directories:

Directory	Contents
/conf	Configuration files for IAP Workbench and the Endeca Tools Service.
/logs	Logs for IAP Workbench and the Endeca Tools Service.
/reports	The default directory for reports to be viewed in IAP Workbench.
/state	Storage for the instance configuration for Endeca applications being managed by IAP Workbench, as well as the IAP Workbench database.
/temp	Temporary storage for IAP Workbench and the Endeca Tools Service.
/work	The Endeca Tools Service cache. This is not part of the IAP Workbench installation but is created when you first run the Endeca Tools Service.

After you install

After installing IAP Workbench, you may need to run or configure the Endeca Tools Service.

For details about configuring the Endeca Tools Service, for example to change its port usage or to enable SSL, see the *Workbench Administrator's Guide*.

About the Endeca Tools Service

The Endeca Tools Service is a Servlet container that runs IAP Workbench, the Workbench Help Infocenter, and a version of the Endeca JSP reference application, which serves as the default preview application in IAP Workbench.

Starting and stopping the Endeca Tools Service on Windows

The Endeca Tools Service is installed with IAP Workbench and automatically started on Windows when installation is complete.

The service is also 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**.

Starting and stopping the Endeca Tools Service on UNIX

The Endeca Tools Service is installed with IAP Workbench but the UNIX installation does not automatically start the service.

To manage the Endeca Tools Service after installation:

- Start the Endeca Tools Service with the following command:
`$ENDECA_TOOLS_ROOT/server/bin/startup.sh`
- Stop the Endeca Tools Service with the following command:
`$ENDECA_TOOLS_ROOT/server/bin/shutdown.sh`

About starting the Endeca Tools Service from inittab

In a UNIX development environment, the Endeca Tools Service can be started from the command line. In a UNIX production environment, however, Endeca recommends that it be started by `init` from `inittab`.

The UNIX version of IAP Workbench contains a file named `endeca_run.sh` that is in the `$ENDECA_TOOLS_ROOT/server/bin` directory. This is a version of `startup.sh` that calls `run` instead of `start` and redirects `stdout` and `stderr` to `$ENDECA_TOOLS_CONF/logs/catalina.out`.

You can write a script that is referenced in `inittab`. The script sets environment variables and then calls `endeca_run.sh`. When writing your script, it is recommended as a best practice that you run the Endeca Tools Service as a user other than `root`. When running the service as a non-root user, you can set a `USER` environment variable that will be inherited by other scripts, such as EAC scripts.

This sample script (named `start_endeca_tools_service.sh`) sets the `ENDECA_USER` variable to the “endeca” user, sets the `INSTALLER_SH` variable to the path of the environment variables script and sources it, and then does an `su` to change to the “endeca” user:

```
#!/bin/sh
ENDECA_USER=endeca
INSTALLER_SH=/usr/local/endeca/Workbench/workspace/setup/installer_sh.ini
# We want to use installer_sh.ini variables in this script,
# so we source it here
source $INSTALLER_SH
```

```
# change to user endeca
su $ENDECA_USER -c "/bin/sh -c \"source $INSTALLER_SH; \
cd $ENDECA_TOOLS_CONF/work; exec env USER=$ENDECA_USER \
$ENDECA_TOOLS_ROOT/server/bin/endeca_run.sh\" "
```

On Solaris platforms, replace "source" with "." because `source` is not a command in the Bourne shell. The `start_endeca_tools_service.sh` script is then referenced in `inittab` with an entry similar to this example.

```
ec:2345:respawn:/usr/local/endeca/Workbench/workspace/setup/start_ende-
ca_tools_service.sh
```

When writing your startup script, keep in mind that it is server-specific, and therefore its details (such as paths and user names) depend on the configuration of your server.

What's next

This section describes the documentation related to each platform component.

All Endeca documentation is available on the Endeca Developer Network (EDeN), and essential documentation is also included with the product installation.

General Endeca documentation

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

Title	Description
<i>Endeca Quick Start Guide</i>	Overview of Endeca components including information about configuration scenarios.
<i>Endeca Concepts Guide</i>	Introduction to the Endeca Information Access Platform. Covers the key concepts underlying Endeca applications.
<i>Endeca Glossary</i>	A reference for Endeca terms and definitions.
<i>Endeca Third-Party Software Usage and Licenses</i>	Provides copyright, license agreement, and/or disclaimer of warranty information for the third-party software packages that Endeca incorporates.
<i>Endeca Migration Guide</i>	Provides information on migrating from previous versions of Endeca software.
<i>Release Announcement</i>	Describes the major new features in this release.

MDEX Engine documentation

The following table lists the documentation related to the MDEX Engine package.

Title	Description
<i>Analytics Guide</i>	Provides an overview of Endeca Analytics and describes the Analytics and Charting APIs, date and time properties, and key properties.

Title	Description
<i>Developer's Guide</i>	The essential guide for developers of the front-end of Endeca applications (primarily API-related tasks). There are versions for Java and .NET.
<i>MDEX Engine Installation Guide</i>	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.
<i>Performance Tuning Guide</i>	Provides guidelines on monitoring and tuning the performance of the Endeca MDEX Engine. Contains tips on resolving associated operational issues.
<i>Web Services and XQuery Developer's Guide</i>	Describes how to use Web services and XQuery for Endeca for Endeca. Web services and XQuery for Endeca provides Endeca application developers with a flexible, extensible, and standards-compliant query processing solution.
<i>MDEX Engine Release Notes</i>	Details the changes specific to this release, including bug fixes and new features.

IAP Workbench documentation

The following table lists the documentation related to the IAP Workbench package.

Title	Description
<i>Workbench Administrator's Guide</i>	The essential guide for administrators of Endeca implementations and application developers who maintain and customize Workbench instances.
<i>Workbench User's Guide</i>	The essential guide for business users of IAP Workbench. Describes all the enhancements business users can make to Endeca implementations.
<i>IAP Workbench Installation Guide</i>	Describes how to install the Endeca IAP Workbench software. Covers both Windows and Linux/UNIX system requirements and installation procedures.
<i>IAP Workbench Help</i>	Help (including context-sensitive help) for using IAP Workbench to perform business-user tasks and administer an Endeca implementation.
<i>IAP Workbench Release Notes</i>	Details the changes specific to this release, including bug fixes and new features.

Platform Services documentation

The following table lists the documentation related to the Platform Services package.

Title	Description
<i>Content Adapter Developer's Guide</i>	Describes how to write Java manipulators and content adapters using the Endeca Content Adapter Development Kit.
<i>Control System Guide</i>	Provides information on using the Endeca Control System, including communicating with the JCD service and running control scripts.
<i>EAC Guide</i>	Describes the tasks involved in managing implementations using the Endeca Application Controller.
<i>Forge Guide</i>	The essential reference for developers of the back-end of Endeca applications (the instance configuration), including Forge pipeline-related tasks.
<i>Log Server and Report Generator Guide</i>	Describes how to configure and run the Endeca Log Server and the Report Generator.
<i>Platform Services Installation Guide</i>	Describes how to install the Endeca Platform Services software, the Endeca Document Conversion Module, and the optional Corda software. Covers both Windows and Linux/UNIX system requirements and installation procedures.
<i>Security Guide</i>	Describes how to implement user authentication and how to structure your data to limit access to only those users with the correct permissions.
API reference documentation (Javadoc and .NET API reference)	The reference documentation for the Endeca Presentation, Logging, Analytics, and Charting APIs.
<i>Data Foundry Expression Reference</i>	Describes the Data Foundry expression language, used in record manipulators in Developer Studio.
<i>Developer Studio Help</i>	Help (including context-sensitive help) for using Endeca Developer Studio to define all aspects of your instance configuration, including properties, dimensions, and pipelines.
<i>Forge API Guide for Perl</i>	Describes the classes and methods you can incorporate into Perl manipulators in Developer Studio. You can use Perl manipulators in pipelines to manipulate records.
<i>XML Reference</i>	Describes the XML elements contained in the XML and DTD files of the Endeca Information Transformation Layer.

Content Acquisition System (CAS) documentation

The following table lists the documentation related to the Content Acquisition System (CAS) package.

Title	Description
<i>CAS Server Command Line Utility Guide</i>	Documents how to use the CAS Server Command-line Utility.
<i>CAS Console Help</i>	Help (including context-sensitive help) for using Endeca CAS Console to manage crawls of various data sources by connecting to one or more CAS Servers.

Title	Description
<i>CAS Installation Guide</i>	Describes how to install the Endeca software. Covers both Windows and Linux/UNIX system requirements and installation procedures and includes information on migrating from previous versions of Endeca software.
<i>CAS Server Guide</i>	Provides a general overview of the Endeca Content Acquisition System, describes the features of the Endeca CAS Server, and explains how to create a Forge pipeline that utilizes the source data gathered from file system and CMS crawls.
<i>CAS Server API Guide</i>	Provides reference information about the Endeca CAS Server API.
<i>CAS Server Sample Client Guide</i>	Describes the Endeca CAS Server Sample Client package, which provides a template for writing a client application for the CAS Server.
<i>CMS Connector Guides</i>	Describe the tasks involved in enabling and configuring the various CMS connector for use with the CAS Server. These guides are available only from the Product Downloads section of the Endeca Developer Network (EDeN).
<i>Record Store Guide</i>	Describes the major tasks involved in configuring the Endeca Record Store and setting up other components to write to and read from the Record Store. Also includes reference information about the Record Store API.
<i>Record Store Sample Client Guide</i>	Describes the Endeca Record Store Sample Client package, which provides a template for writing a client application for the Record Store.
<i>Web Crawler Guide</i>	Describes the major tasks involved in configuring the Endeca Web Crawler and using it to run crawls that gather source data from Web sites.
<i>CAS Release Announcement</i>	Describes the major new features in this release.
<i>CAS Release Notes</i>	Details the changes specific to this release, including bug fixes and new features.

Rapid Application Development (RAD) Toolkits documentation

The following table lists the documentation related to the Rapid Application Development (RAD) Toolkits package.

Title	Description
<i>RAD Toolkit Developer's Guide</i>	The essential guide for developers of the front-end of Endeca applications (primarily API-related tasks). There are versions for Java and .NET.
<i>RAD Toolkit Installation Guide</i>	Describes how to install the Endeca software. Covers both Windows and Linux/UNIX system requirements and installation procedures.
<i>RAD Toolkit Release Announcement</i>	Describes the major new features in this release.

Title	Description
<i>RAD Toolkit Release Notes</i>	Details the changes specific to this release, including bug fixes and new features.
API reference documentation (Javadoc and .NET API reference)	The reference documentation for the Endeca RAD APIs.

Documentation for other packages

The following table lists the documentation related to other Endeca packages.

Content Assembler API

Title	Description
<i>Content Assembler API Developer's Guide</i>	Describes the process of developing templates and cartridges for the Endeca Page Builder including installation and usage of the Content Assembler API. There are versions for Java and .NET.
API reference documentation (Javadoc and .NET API reference)	The reference documentation for the Endeca Content Assembler APIs.
<i>Content Assembler Release Notes</i>	Details the changes specific to this release, including bug fixes and new features.

Deployment Template

Title	Description
<i>Deployment Template Usage Guide</i>	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.
<i>EAC Development Toolkit Usage Guide</i>	Discusses the EAC Development Toolkit's configuration file format, BeanShell scripting, command invocation and logging.
<i>Deployment Template Inserting a Custom Pipeline</i>	Describes how to modify an existing pipeline or create a new pipeline that takes advantage of the Deployment Template structure.
<i>Release Notes (CHANGES)</i>	Details the changes specific to this release, including bug fixes and new features.

Developer Studio

Title	Description
<i>Developer Studio Installation Guide</i>	Provides an overview of Developer Studio and describes system requirements and installation procedures.
<i>Developer Studio Help</i>	Help (including context-sensitive help) for using Endeca Developer Studio to define all aspects of your instance configuration, including properties, dimensions, and pipelines.

Title	Description
<i>Data Foundry Expression Reference</i>	Describes the Data Foundry expression language, used in record manipulators in Developer Studio.
<i>Forge API Guide for Perl</i>	Describes the classes and methods you can incorporate into Perl manipulators in Developer Studio. You can use Perl manipulators in pipelines to manipulate records.
<i>XML Reference</i>	Describes the XML elements contained in the XML and DTD files of the Endeca Information Transformation Layer.

Accessing documentation on EDeN

All Endeca documentation is available for download or browsing on the Endeca Developer Network (EDeN).

In order to access EDeN, you must have a registered account. If you do not have an account, contact your Endeca administrator.

To access the documentation on EDeN:

1. In a Web browser, navigate to <http://eden.endeca.com>.
2. Log in using your username and password.
3. From the top menu, click **Knowledge Base**.
4. From the drop-down list, select the product and version you are interested in.
5. Click on the following headings to expand or collapse each category:
 - For IAP 6.0.x, click a package name to view the documentation for that package, or **General** to view the documentation that applies across all IAP packages.
 - For earlier releases, the documentation is organized into the following categories:

Guides	General documentation including manuals and online help systems.
Release	Information about the release, including release notes and the Release Announcement.
References	Reference material such as API documentation.

6. Click the title of a document to browse its contents online, or click the **[Download PDF]** link to save a printable version of the document for offline reading.

Endeca environment variables and port usage

This section lists all the environment variables and ports used by the Endeca software. Depending on which components you have installed, not all of them may apply to your implementation.

Endeca environment variables

The Endeca Information Access Platform installation programs create several environment variables.

For each variable, the first value listed is the path if you accept the default installation path on Windows (under `C:\Endeca`). The second value is the path within your installation directory on UNIX. For example, if you install Endeca to `/usr/local/`, the full path of `ENDECA_ROOT` would be `/usr/local/endeca/PlatformServices/version` in your environment.

In addition to creating the variables below, the installation may add Endeca directories to the `PATH` variable.



Note: For the MDEX Engine installation, environment and `PATH` variables are set by running the `mdex_setup` scripts provided by the installation. See the *MDEX Engine Installation Guide* for more information.

MDEX Engine variables

The following variable is used by the MDEX Engine:

Variable	Description	Default value
<code>ENDECA_MDEX_ROOT</code>	Specifies the path of the MDEX Engine root directory.	<ul style="list-style-type: none"> <code>C:\Endeca\MDEX\version</code> <code>endeca/MDEX/version</code>

Platform Services variables

The following variables are used by the Platform Services:

Variable	Description	Default value
<code>ENDECA_ROOT</code>	Specifies the path of the Platform Services root directory.	<ul style="list-style-type: none"> <code>C:\Endeca\PlatformServices\version</code> <code>endeca/PlatformServices/version</code>
<code>ENDECA_REFERENCE_DIR</code>	Specifies the path of the directory that contains the Endeca reference implementations, such as the sample wine project and the JSP and .NET UI references.	<ul style="list-style-type: none"> <code>C:\Endeca\PlatformServices\reference</code> <code>endeca/PlatformServices/reference</code>
<code>ENDECA_CONF</code>	Specifies the path of the workspace directory for the Endeca HTTP service, which contains configuration files, logs, and temporary storage directories.	<ul style="list-style-type: none"> <code>C:\Endeca\PlatformServices\workspace</code> <code>endeca/PlatformServices/workspace</code>
<code>PERLLIB</code>	Specifies the path of the perl root directory and its directory of libraries.	<ul style="list-style-type: none"> <code>%ENDECA_ROOT%\perl</code> and <code>%ENDECA_ROOT%\perl\5.8.3\lib</code> <code>\$ENDECA_ROOT/lib/perl:\$ENDECA_ROOT/lib/perl/Control:\$ENDECA_ROOT/perl/lib:\$ENDECA_ROOT/perl/lib</code>

Variable	Description	Default value
		DE- CA_ROOT/perl/lib/site_perl
PERL5LIB	Same as the PERLLIB variable.	Same as the PERLLIB variable.
UnixUtils	Specifies the path of the utilities directory, which contains Windows versions of some UNIX common utilities.	<ul style="list-style-type: none"> • %ENDECA_ROOT%\utili- ties • not available on UNIX

IAP Workbench variables

The following variables are used by the IAP Workbench:

Variable	Description	Default value
ENDECA_TOOLS_ROOT	Specifies the path of the IAP Workbench root directory.	<ul style="list-style-type: none"> • C:\Endeca\Work- bench\version • endeca/Workbench/ver- sion
ENDECA_TOOLS_CONF	Specifies the path of the workspace directory for the Endeca Tools Service, which contains configuration files, logs, and temporary storage directories.	<ul style="list-style-type: none"> • C:\Endeca\Work- bench\workspace • endeca/Work- bench/workspace

Other variables

Other variables used by Endeca include the following:


Variable	Description	Default value
CAS_ROOT	Specifies the path of the CAS root directory. This variable must be set by the user.	<ul style="list-style-type: none"> • C:\Endeca\ITL\ver- sion\CAS • endeca/ITL/ver- sion/CAS
ENDECA_PROJECT_DIR	Specifies the path of the deployed application. This variable is set and used by the Endeca Deployment Template.	Value is taken from user input at installation time.
ENDECA_PROJECT_NAME	Specifies the project name that is used. For example, as the JCD job prefix for jobs defined in the project's Job Control Daemon. This variable is set and used by the Endeca Deployment Template.	Value is taken from user input at installation time.

Endeca ports

This topic describes the ports used by the Endeca Information Access Platform and their default port numbers.


You can replace any of the default port numbers with numbers of your own, as long as they do not conflict with an existing port on your machine. Port numbers can be no larger than 32767.

Service ports

Port	Default
Endeca Tools Service port	8006
Endeca Tools Service shutdown port	8084
Endeca HTTP service port	8888
Endeca HTTP service shutdown port	8090
Endeca Control System JCD port	8088
 Note: The JCD is deprecated.	

Deployment Template ports


These are the port numbers suggested by the Deployment Template installation, but you can specify any other port when you deploy your application.

Port	Default
Dgraph1 user query port	15000
Dgraph2 user query port	15001
Agraph1 user query port (Agraph deployments only)	14000
Agraph2 user query port (Agraph deployments only)	14001
Forge server (Agraph deployments with Parallel Forge only)	14099
Endeca Logging and Reporting Server port	15010
 Note: The Log Server port number can be no larger than 32767.	

Reference implementation ports

These port numbers are used in the configuration files that ship with the reference implementation (`sample_wine_data`).

Port	Default
Endeca MDEX Engine user query port	8000
Endeca Logging and Reporting Server port	8002

Port	Default
 <p>Note: The Logging Server port number can be no larger than 32767. The default Logging server port number is larger by 2 than the corresponding Dgraph port number. This assumes that the Logging Server is running on the same host as the MDEX Engine. For example, for the Dgraph port 15000, the default port for the Logging Server in the reference implementation is 15002. For the Dgraph port 15001, the default port for the Logging Server in the reference implementation is 15003.</p>	

Uninstalling IAP Workbench

This section contains the procedures for uninstalling the package on Windows and UNIX.

Steps to uninstall IAP Workbench on Windows

Follow these steps to uninstall IAP Workbench from your Windows machine.

The uninstall process creates a backup of the `ENDECA_TOOLS_CONF` (`workspace`) directory then removes IAP Workbench and the Endeca Tools Service from the machine. If you have any files that you want to retain from the IAP Workbench directory that are not in this directory, copy them to a safe location before you begin the uninstall process.

To uninstall IAP Workbench from your Windows machine:

1. From the Windows Control Panel, select **Add or Remove Programs**.
2. Select **Endeca IAP Workbench** from the list of installed software.
3. Click **Remove**.
The installation wizard displays.
4. Confirm that **Uninstall** is selected, then click **Next** twice.
5. When uninstallation has completed, click **Finish** to exit the wizard.

It is not necessary to restart your computer after uninstalling IAP Workbench.

Steps to uninstall IAP Workbench on UNIX

Follow these steps to uninstall IAP Workbench from your UNIX machine.

Before you begin the uninstall process, back up any files that you want to retain from the IAP Workbench directory. In particular, it is recommended that you preserve the contents of the `ENDECA_TOOLS_CONF` (`workspace`) directory.

Make sure that you stop all Endeca processes (including the Endeca Tools Service) before uninstalling the Endeca software.

To uninstall IAP Workbench from your UNIX machine:

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

```
rm -rf endeca/Workbench
```

2. Unset any environment variables (such as `ENDECA_TOOLS_ROOT` and `ENDECA_TOOLS_CONF`) that reference directories that no longer exist.

This command removes IAP Workbench and the Endeca Tools Service from the machine.

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