Endeca® Latitude

Quick Start Guide

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Preface

Endeca® Latitude applications guide people to better decisions by combining the ease of search with the analytic power of business intelligence. Users get self-service access to the data they need without needing to specify in advance the queries or views they need. At the same time, the user experience is data driven, continuously revealing the salient relationships in the underlying data for them to explore.

The heart of Endeca's technology is the MDEX Engine.™ The MDEX Engine is a hybrid between an analytical database and a search engine that makes possible a new kind of Agile BI. It provides guided exploration, search, and analysis on any kind of information: structured or unstructured, inside the firm or from external sources.

Endeca Latitude includes data integration and content enrichment tools to load both structured and unstructured data. It also includes Latitude Studio, a set of tools to configure user experience features including search, analytics, and visualizations. This enables IT to partner with the business to gather requirements and rapidly iterate a solution.

About this guide

This guide discusses how to get a basic Endeca Latitude application up and running in a short period of time.

It outlines how to perform a quick installation on a single Windows machine, and then walks you through loading the sample data, provisioning an application, and exploring the sample data in a Latitude Studio application.

Who should use this guide

This guide is written for business analysts, ETL developers, data architects, and application developers who want to install and explore Endeca Latitude using a sample application.

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 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

About Endeca Latitude

This section discusses the Endeca Latitude platform.

Overview of Endeca Latitude

Endeca Latitude is an Agile BI platform that guides people to better decisions on diverse and changing data. Latitude, based on a patented hybrid search-analytical database, gives IT a centralized platform to rapidly deploy interactive analytic applications, and keep pace with changing business requirements while maintaining information governance.

Endeca Latitude consists of the following modules:

- Self-service composition and configuration of applications, views and dashboards—by business analysts—through **Latitude Studio**.
- Search, Guided Navigation™, and analytics capabilities powered by the **MDEX Engine**.
- A comprehensive **Information Integration Suite**, featuring an enterprise ETL solution, **Latitude Data Integrator**, which includes connectors for standard structured and unstructured data sources, a comprehensive data enrichment library, and a direct connector to the MDEX Engine.

Chapter 2

Installing Endeca Latitude

This section describes how to install Endeca Latitude on a single Windows machine, so that you can run the Latitude Sample Application.

Installing Latitude modules

Before running the Latitude Quick Start project, you must install the Latitude modules.

You can install the modules in any order. In this procedure, we follow this order:

- Latitude Data Integrator
- MDEX Engine
- Latitude Studio
  - In addition, in order to use the Latitude Studio **Chart** component, you must install the Corda servlet.
- The Latitude Quick Start project files

The installation process for the Quick Start assumes the following:

- You are installing and running all modules on a single Windows machine (dual-core at a minimum).
- You are installing the Latitude Studio Tomcat bundle.
- You accept each module's installation default settings.

In this section, we outline the minimal installation required to run the Latitude Quick Start project. In this scenario, you do not need to set up any automated services, such as process monitoring, automated backups, or log management. For detailed installation instructions and a full list of system requirements and supported platforms, see the *Latitude Installation Guide*.

Note: The Latitude Studio **Chart** component requires the Adobe Flash Player 10.x. If you do not already have the Flash Player, you can download it from the *Adobe site*.

Downloading the Latitude software

You can download Endeca Latitude modules from the Downloads section of the Endeca Developer Network (EDeN).

To download the Latitude software needed to run the sample application:

1. If you have not previously done so, establish a Support account with download access through the Support section of the Endeca Developer Network (EDeN) at *http://eden.endeca.com*. This enables the Endeca Support and Customer Care groups to track which versions of the software you are using.
2. On the EDeN homepage, click **Downloads**.
3. On the **Tools and Utilities** page, find the **Product Downloads** section, then click **View and download purchased products**.
4. On the **Product Downloads** page, click **Latitude 2**.
5. In the **Current Releases** table, click **Latitude 2.1**.
6. In the **Product Download** page, download the **MDEX Engine for Windows 64-bit** software:
   `latitude_2.1.0_mdex_x86_64pc-win.exe`
7. Download the following set of the Latitude Data Integrator files:

To install:	Download:	Resulting downloaded file:
LDI Designer for Windows	**Data Integrator Designer for Windows**	Latitude_2.10_data-integrator-designer.exe
LDI MDEX Components for Windows	**Data Integrator MDEX Components for Windows**	Latitude_2.1.0_data-integrator-MDEX-components-win.zip

8. Download the following Latitude Studio files:

To install:	Download:	Resulting downloaded files:
Latitude Studio Tomcat 6 bundle for Windows	• **Latitude Studio for Windows** • **Latitude Studio Components** • **Latitude Studio License**	• Latitude_2.1.0_endeca-portal.zip • Latitude_2.1.0_components.zip • Latitude_2.1.0_studio_license.xml
Corda, which is required by the Chart component	• **Studio Charting and Visualization Servlet**	• Latitude_2.1.0_Corda.zip

9. Download the Latitude Quick Start Project package (Latitude Sample Application):
   `Latitude_2.1.0_QuickStart.zip`

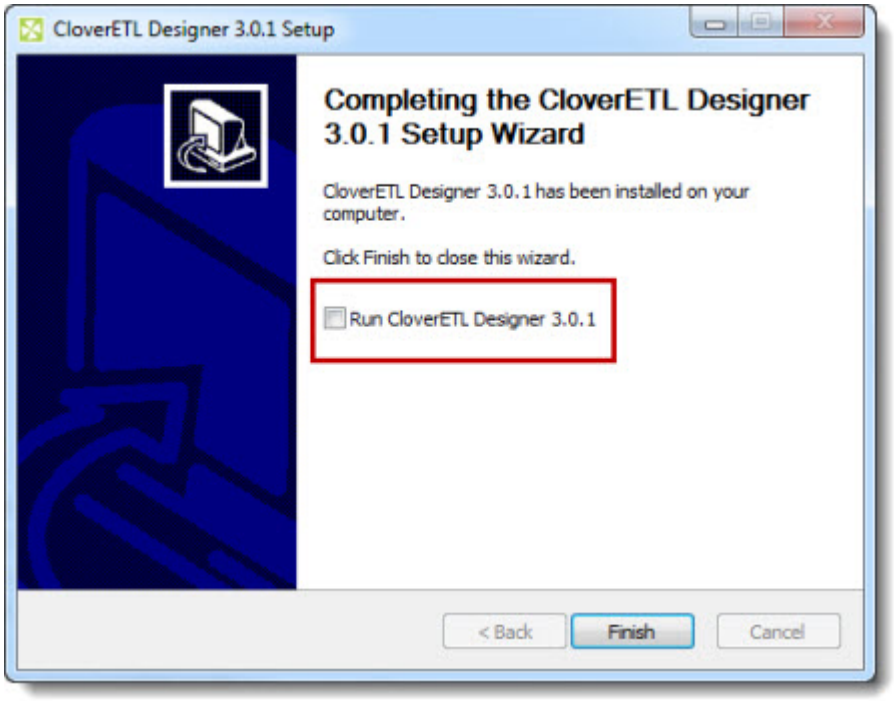
Installing the Latitude Data Integrator

This topic describes how to install Latitude Data Integrator.

To install Latitude Data Integrator on a Windows client:

1. Right-click on the `Latitude_2.10_data-integrator-designer.exe` installer and choose **Run as administrator**.
   The Setup Wizard is displayed.
2. From the Setup Wizard, click **Next**.

3. Click **I Agree** to accept the license agreement.
4. Choose the Install Location.
5. At the Designer Settings screen, make these selections and then click **Next**:
   a) Select **Install a separate Java Development Kit**.
   b) Choose one of the install location shortcuts.
6. Click **I Agree** to accept the Java SDK license agreement.
7. Choose either a Start Menu folder for the shortcut or check **Do not create a new folder in start menu**. Then click **Install**.
8. When the installation completes, first uncheck the **Run CloverETL Designer 3.0.1** box (highlighted in the image below), and then click **Finish** to exit the Setup Wizard.



Important: Do not start the program before completing the next step. If you do start the Designer at this point, the Endeca components will not be available after step 9. In this case, you must completely uninstall the Designer and re-install it.

9. Unzip `Latitude_2.1.0_data-integrator-MDEX-components-win.zip` and overlay it into the CloverETL Designer installation directory.

   The directory's pathname is `C:\Program Files (x86)\CloverETL Designer` if you used the default install location.

Installing the MDEX Engine

For the Quick Start, Endeca recommends that you use a machine-wide installation any time administrator permissions are available.

You may still install a per-user installation without these permissions, but note that this is not supported in a production environment.

Before installing, make sure to uninstall any previous versions of the MDEX Engine using the **Uninstall a program** utility in the Control Panel.

To install the MDEX Engine on Windows:

1. In your local environment, locate the Endeca MDEX Engine software that you downloaded from the Endeca Developer Network (EDeN).
2. Double-click the installer file `Latitude_2.1.0_mdex_x86_64pc-win.exe` to start the wizard.

   The wizard verifies the contents of the installation package and confirms that no previous version is installed.

   When running an installation with administrator permissions, User Account Control will check the digital signature of the installer. Digital signatures provide system administrators with a higher level of confidence in the authenticity of the installation package.

   Note: If the installer identifies that the previous version is still installed, cancel the installation and uninstall the previous version using the **Uninstall a program** utility in the Control Panel.

3. Click **Next** to begin the installation process.
4. In the **Copyright and Legal** screen, click **Next**.
5. In the **License Agreement** screen, select **I accept the terms in the license agreement**, then click **Next**.
6. In the **Select Program Folder** screen, select the **Anyone who uses this computer (all users)** radio button.
7. For the getting started experience, accept the default installation `C:\Endeca\Latitude\2.1.0`, which creates the directory `C:\Endeca\Latitude\2.1.0\mdex`.

   You cannot install the MDEX Engine into a non-empty directory.

   The wizard displays both the required and available disk space for the target directory chosen. The MDEX Engine requires approximately 200 MB of disk space. The installer requires approximately 400 MB of space on the system drive for temporary files. These temporary files are cleared after the installation process completes.

   Note: If you install to a non-default location, the installation does not create the subdirectory structure `MDEX\<version>` unless you specify this structure explicitly. Additionally, clicking the **Back** button in the installation wizard resets the installation path to the default directory.

8. Click **Finish**.
   The wizard confirms that you have successfully completed the installation.
9. Run `C:\Endeca\Latitude\2.1.0\mdex\mdex_setup.bat`.

   This batch file adds the `utilities` directory and the MDEX Engine binaries to the `PATH` environment variable.

   Note: If you changed the `TARGETDIR` location in step 7, `mdex_setup.bat` will be located in the directory you specified.

   The script itself is optional and provided as a convenience—it only affects the `PATH` variable for the current user in the current context.

Installing Latitude Studio

This topic provides the steps for installing the Latitude Studio Windows Tomcat bundle on your development server. In this version Tomcat 6 and the JRE 6 are embedded.

Note: The Latitude Studio **Chart** component requires the Adobe Flash Player 10.x. If you do not already have the Flash Player, you can download it from the *Adobe site*.

To install the Latitude Studio Tomcat bundle:

1. Unzip `Latitude_2.1.0_endeca-portal.zip` to the directory of your choice.

   Latitude Studio creates a directory called `endeca-portal`. For example, if you unzip into `C:`, Latitude Studio installs into `C:\endeca-portal`.

2. Extract the `.war` files from `Latitude_2.1.0_components.zip` and place them into the `endeca-portal\deploy` directory. The `.war` files go in the root of `endeca-portal\deploy`. There should be no subdirectories.

   Note: This directory already contains themes, hooks, and layouts required by the portal. It is safe to overwrite these files with the versions in `Latitude_2.1.0_components.zip`.

3. If the environment variables `CATALINA_HOME` or `JAVA_HOME` are already set, update them to point to your newly installed Tomcat directory and a valid 1.6 JRE. For example, `set CATALI¬NA_HOME=C:\path\to\endeca-portal\tomcat-6.0.29`. (If you do not have these environment variables set, you can leave them un-set.)
4. Save the Latitude Studio license file (`Latitude_2.1.0_studio_license.xml`) to the `endeca-portal\deploy` directory of your Latitude Studio installation.
5. Unzip the `Latitude_2.1.0_Corda.zip` file to your hard drive to make the `corda.war` file available.
6. Deploy the `corda.war` file into Tomcat's `webapps` directory (`C:\endeca-portal\tomcat-6.0.29\webapps`).

   Important: Deploying the Corda servlet on the same Tomcat server as Latitude Studio is intended for development purposes only. You should install Corda on a separate application server (or as a standalone server) for production use.

7. Start the portal's Tomcat instance by running `endeca-portal\tomcat-6.0.29\bin\start¬up.bat`.

   Note: Server startup can take several minutes. You can follow the log messages to ascertain when the process is complete. Do not shut down the Tomcat window while Latitude Studio is running.

8. Go to the portal (`http://localhost:8080/`) in your browser, and log in using the following default credentials:

Option	Description
Email address	test@endeca.com
Password	test

Installing the Quick Start project files

This section describes the files you need to install for the Latitude Quick Start project.

To install the sample application files, extract the `Latitude_2.1.0_QuickStart.zip` file to `C:\Endeca\Latitude\2.1.0\QuickStart`. (This directory is created automatically by the extract.)

The Quick Start project consists of the following directories:

- **data-integrator:** The sample Latitude Data Integrator unified graph (pipeline) along with the sample data.
- **studio:** The Latitude Sample Application itself, which you import into Latitude Studio.

Chapter 3

Provisioning the Latitude Sample Application

This section walks you through loading the data set for the Latitude Sample Application, starting the MDEX Engine, and then exploring the data using Latitude Studio.

Loading the sample data

You load the sample data using the Latitude Data Integrator.

Starting the Latitude Data Integrator

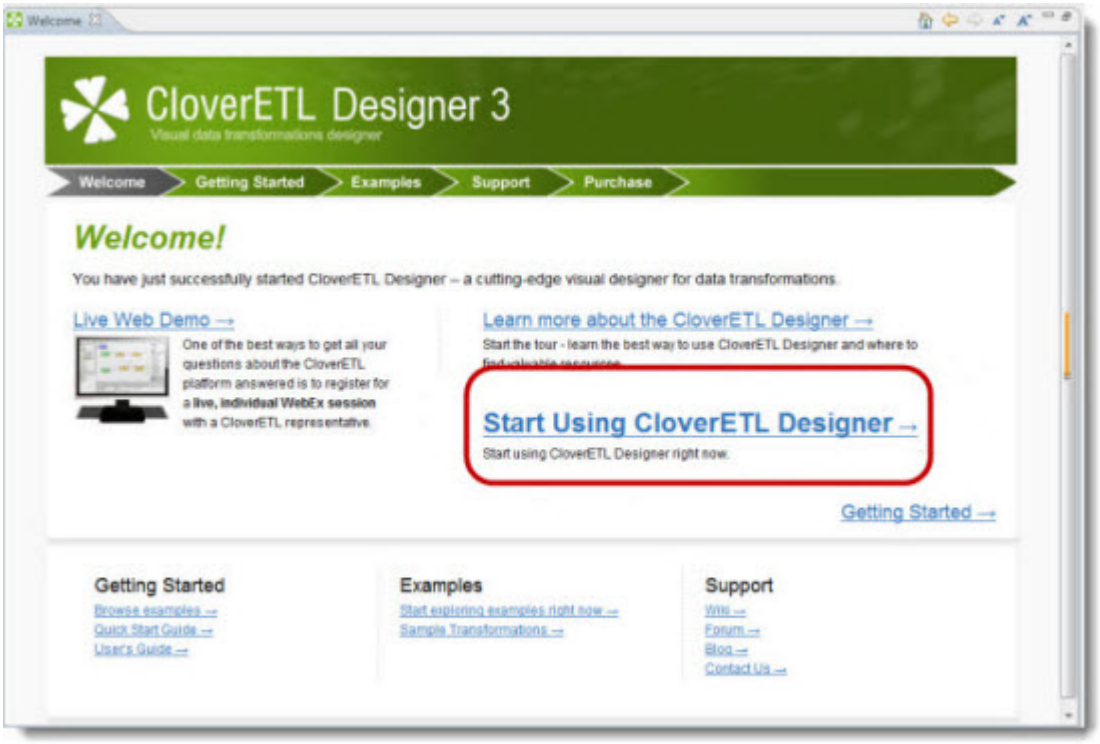
After you install the Latitude modules, you launch the Latitude Data Integrator.

To start the Latitude Data Integrator:

1. On the Windows desktop, right-click the CloverETL Designer shortcut, and click **Run as Administrator**.

   Important: Do not double-click the shortcut to start the program—if you do, you will not be running as an administrator.

2. The first time you launch the Latitude Data Integrator, an introductory screen appears. Make sure you click the **Start Using CloverETL Designer** link highlighted in the image below:



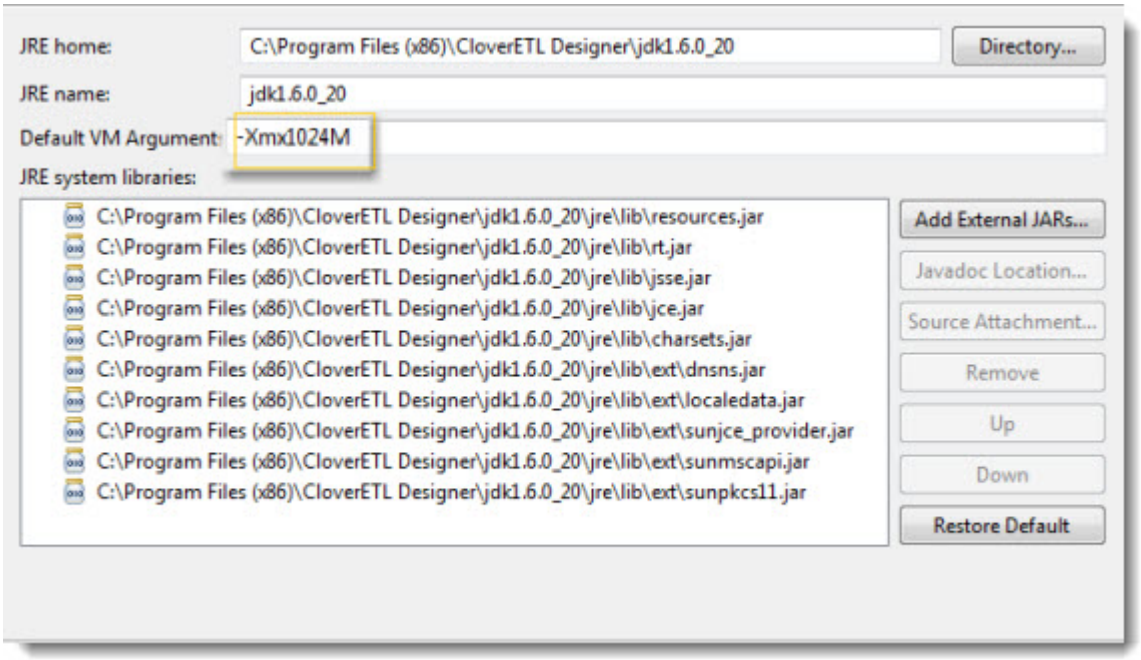
The Latitude Data Integrator workspace opens.

Reconfiguring the Java heap space

To avoid possible out of memory errors, you should increase the default Latitude Data Integrator heap space size before running the pipeline.

To increase the Java heap space in the Latitude Data Integrator:

1. Click **Window** > **Preferences** > **Java** to open Java preferences.
2. Click **Installed JREs**.
3. Select the installed JRE and click **Edit**.
4. In the **JRE Definition** window, in the **Default VM Arguments** text box, type `-Xmx1024M`.



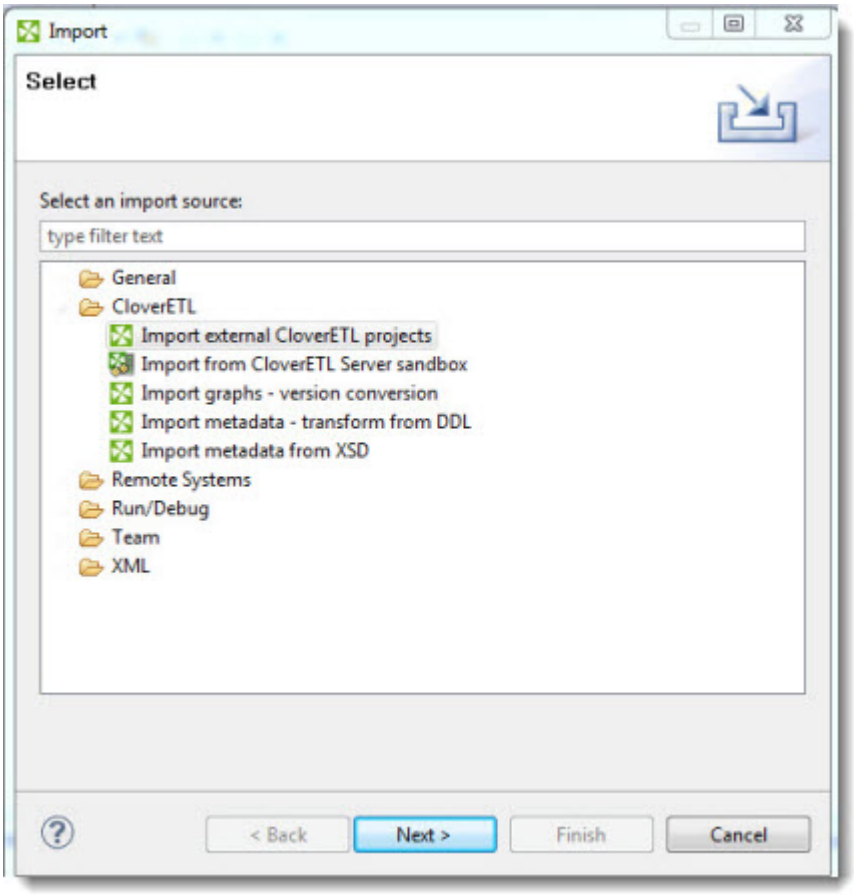
5. Click **Finish**, and then click **OK**.

Importing the project for the sample application

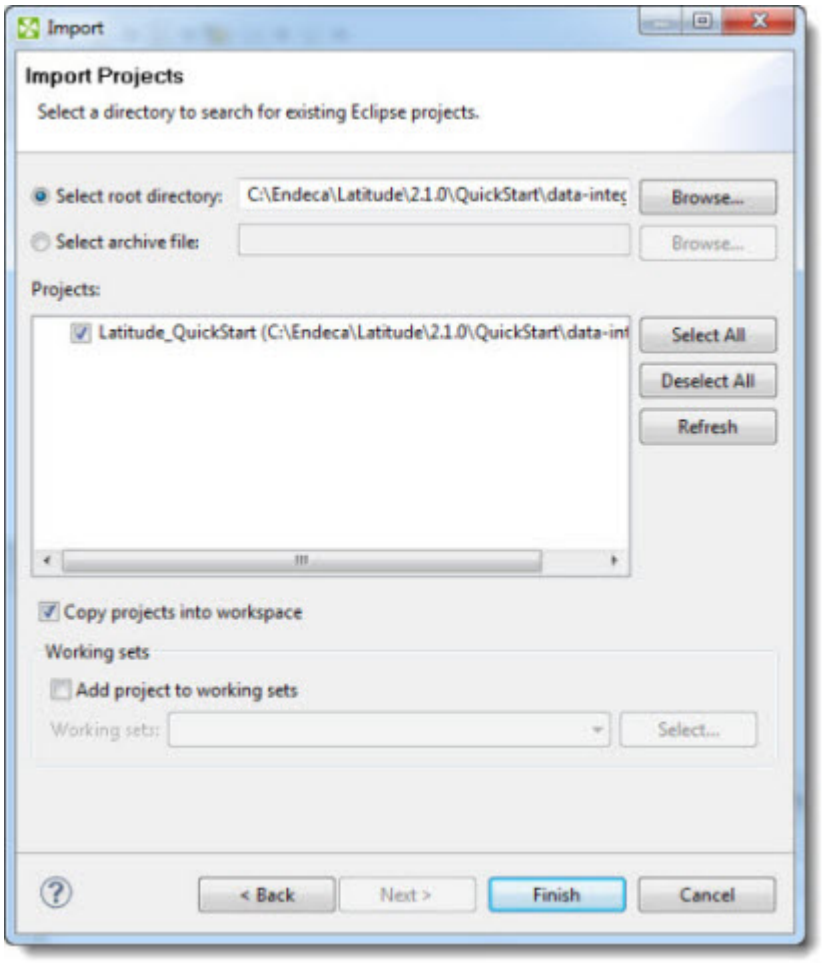
You import the Latitude Sample Application project into Latitude Data Integrator.

To import the project for the sample application:

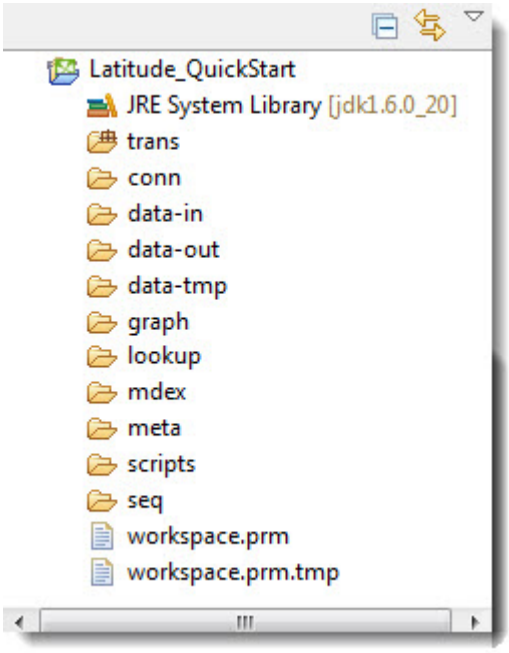
1. In the Latitude Data Integrator, click **File** > **Import.**
2. In the **Select** dialog box, open the **CloverETL** folder and then select **Import external CloverETL projects**.



3. In the **Import Projects** dialog box, browse to your project directory `C:\Endeca\Latitude\2.1.0\QuickStart` and select `data-integrator`. Make sure that **Copy projects into workspace** is checked.



4. Check the Latitude_QuickStart project and click **Finish**. The Latitude_QuickStart project appears in the **Navigator**.

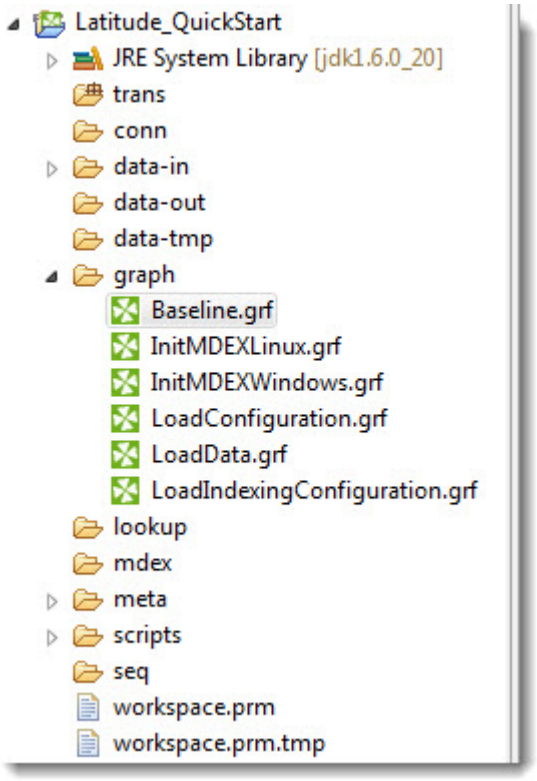


Running the pipeline project

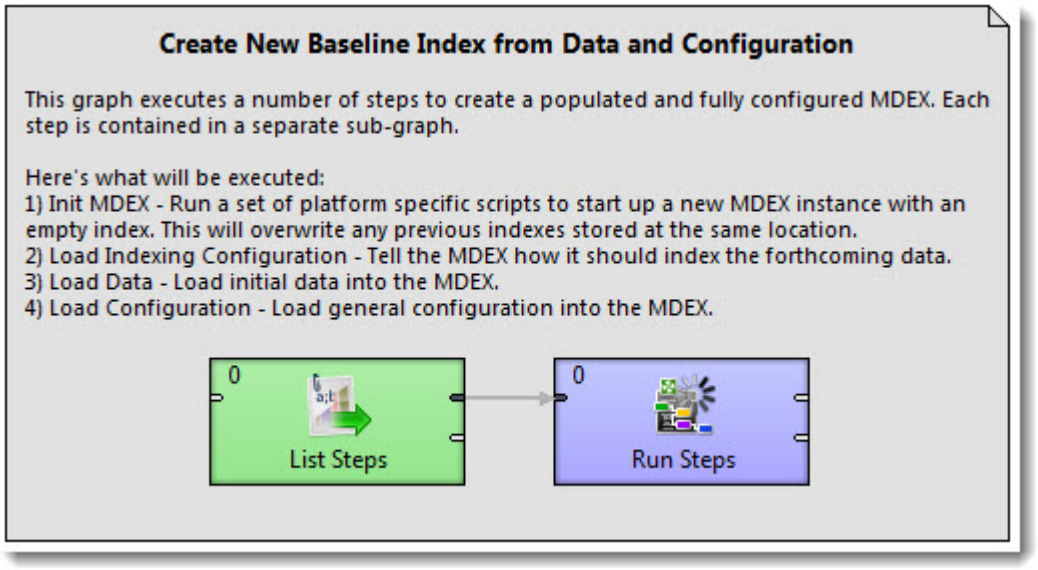
This topic discusses how to run the pipeline for the sample application.

To run the pipeline project:

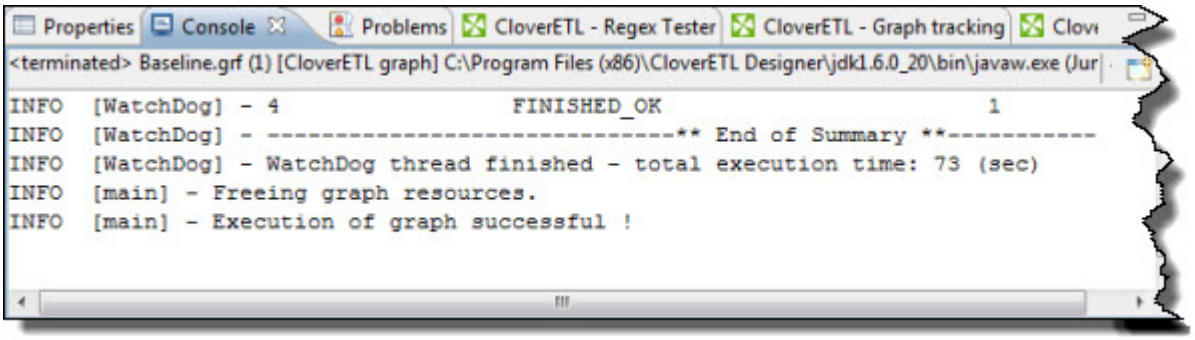
1. In the Latitude Data Integrator Navigator, open the Latitude_QuickStart project's **graph** directory.



2. Double-click the **Baseline.grf** to open it.



3. Click **Run** .
The Latitude Data Integrator processes **baseline.grf**, which initializes a new, empty MDEX Engine instance and loads the data and configuration for the Latitude Sample Application. This step may take several moments. You can monitor the graph's progress in the console at the bottom of the workspace. It issues an `Execution of graph successful` message when finished.



4. When the graph processing completes, close the Latitude Data Integrator.

Importing the Latitude Sample Application

Next, we will launch Latitude Studio and import the Latitude Sample Application.

Starting Latitude Studio

If Latitude Studio is not already running, you must start it before you can import the Latitude Sample Application.

To start Latitude Studio:

1. Start the portal's Tomcat instance by running `endeca-portal\tomcat-6.0.29\bin\startup.bat`. Server startup can take several minutes. You can follow the log messages to ascertain when the process is complete. Do not shut down the Tomcat window while Latitude Studio is running.
2. In your Web browser, go to the portal (`http://localhost:8080/`) .
3. Log in using the default login and password:

Login:	`test@endeca.com`
Password:	`test`

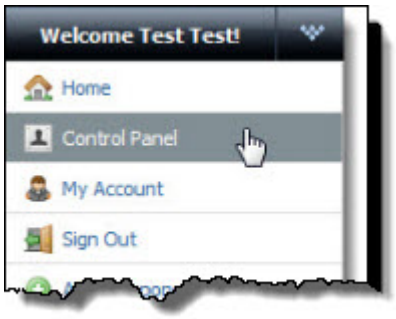
Importing the sample application

You add the LAR file for the sample application to ensure that Latitude Studio is configured to display a set of components through which you can explore the sample application.

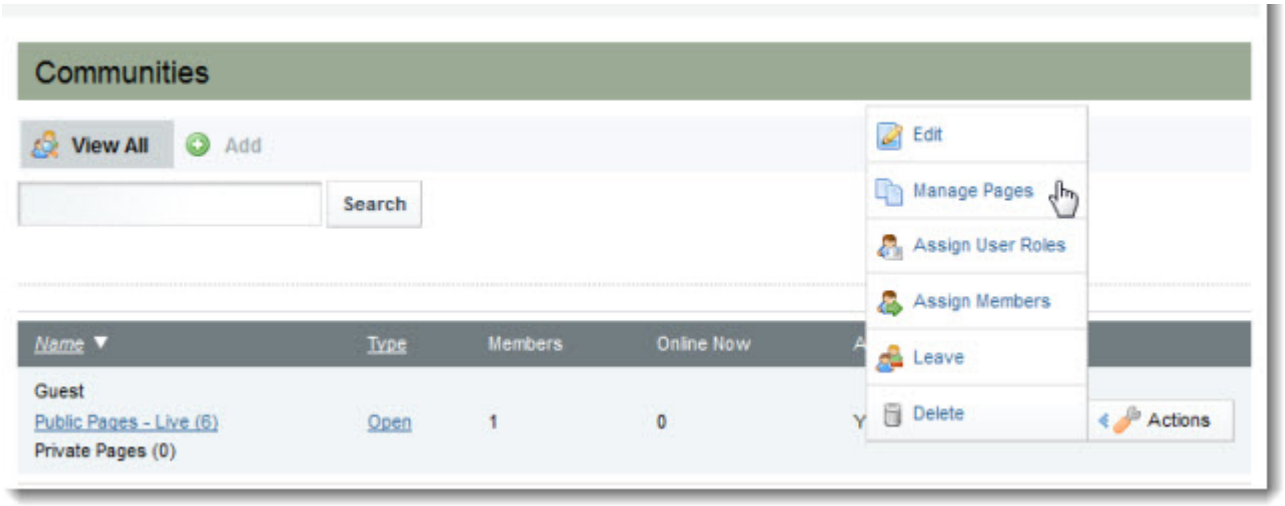
Note: You must have administrator privileges in order to import an application.

To import the sample application:

1. From the **Latitude Studio Dock**, click **Control Panel**.



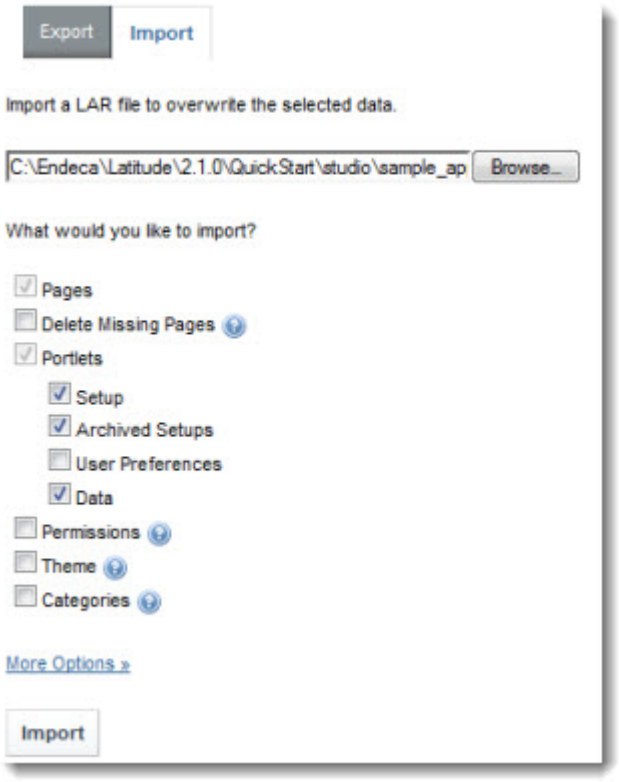
2. In the **Portal** menu, click **Communities**.
3. In the **Communities** pane, click **Actions** > **Manage Pages**.



4. Click **Export/Import**.

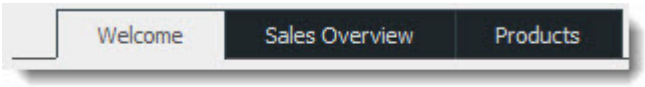
5. Click **Import**.
6. In the **Import** tab, do the following:
   a) Navigate to the sample application LAR file, located at `C:\Endeca\Latitude\2.1.0\QuickStart\studio\sample_app.lar`.
   b) Accept the defaults for the rest of the page.

c) Click **Import**.



Latitude Studio displays the following confirmation message.

7. Click **Back to Guest** to return to the Latitude Studio application. You should see the following tabs:



Chapter 4

Exploring the Latitude Sample Application

In this section, you'll explore the Latitude Sample Application in Latitude Studio.

About the Latitude Sample Application

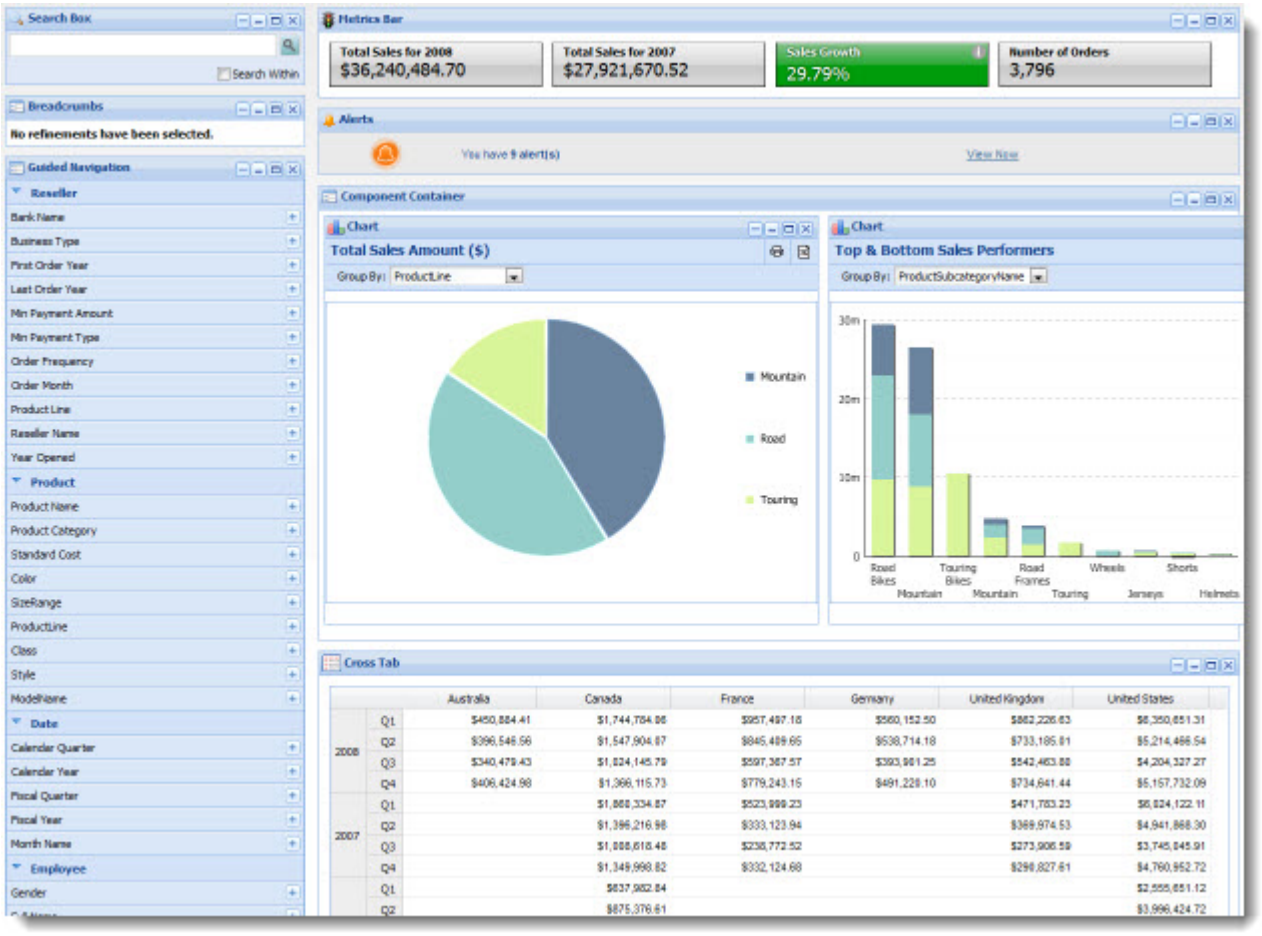
The Latitude Sample Application included with this guide demonstrates Endeca Latitude in action, using sales and product data from a fictitious bicycle manufacturer.

Endeca customers can rapidly and iteratively deploy applications like this, incorporating data from multiple disparate sources, into easily consumable, interactive online experiences. Featuring familiar visualizations, such as charts, tag clouds, and tables, and the power of Endeca's patented search and Guided Navigation™ technology, Endeca Latitude provides visibility and better decision making capabilities to a broad range of business users. Using this sample application, you can explore Endeca Latitude by analyzing the performance of resellers and products across a wide variety of dimensional attributes.

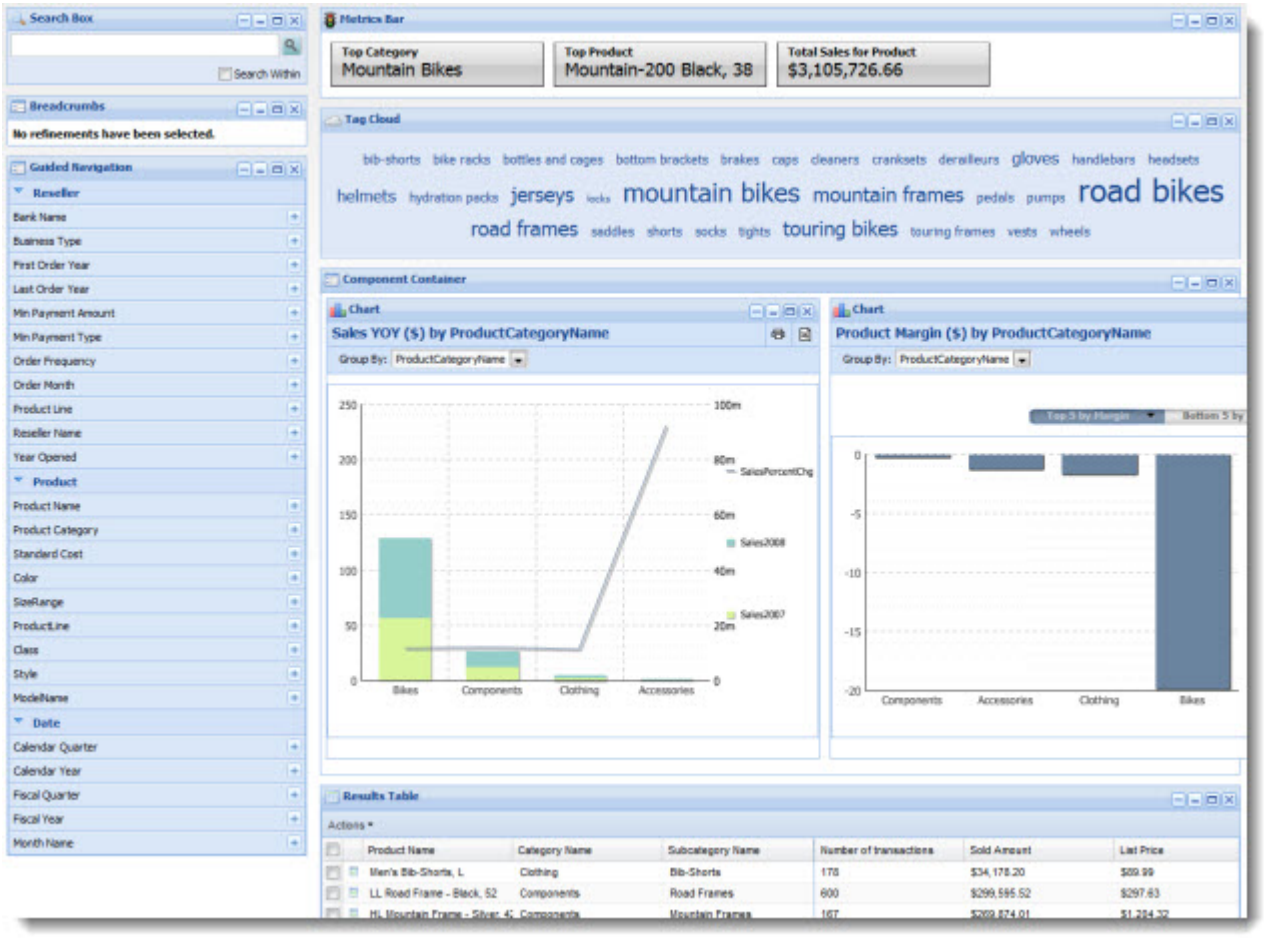
Parts of the sample application

This topic provides an overview of the sample application.

Along with the Welcome page, the Latitude Sample Application contains two pages: **Sales Overview** and **Products**.



The **Sales Overview** page, above, presents a dashboard focusing on Sales information.



The **Products** page, above, provides record-level detail and product comparisons.

Chapter 5

Next Steps

This section describes the next steps you can take with Endeca Latitude after you explore the Latitude Sample Application.

Obtaining more information

This topic describes additional Endeca resources that can help you be successful with Endeca Latitude.

This guide walked you through a basic scenario and does not account for possible differences that you may have in your real staging environment, such as alternate platforms, additional system requirements, or specific use cases for loading data. Depending on your role in the deployment process, you should consult the following Endeca Latitude guides to find more specific in-depth information:

If you are...	See this guide...
An administrator who needs to install Latitude, or learn about system requirements or platform support	The *Latitude Installation Guide* contains platform support information and detailed installation instructions for all installation environments that are currently supported.
Any user who needs to learn more about Latitude terminology	The *Latitude Glossary* contains definitions for Latitude modules, concepts and terms.
An application developer who needs to configure the behavior of various components in Latitude Studio	The *Latitude Power User's Guide* describes how to configure the Latitude Studio framework and components.
An ETL developer or data architect who needs to load data into Latitude	The *Latitude Data Integrator Guide* describes how to load data. In addition, the *Latitude Data Ingest API Guide* describes the Data Ingest Web Service API used by the Latitude Data Integrator.
An administrator who needs to know how to administer and maintain the MDEX Engine and Latitude Studio	The *Latitude Administrator's Guide* provides information about various administrative tasks, such as job monitoring, capturing snapshots, and deploying Latitude in a cluster, associated with the MDEX Engine and Latitude Studio.
A developer who needs to know about features of Latitude such as	The *Latitude Developer's Guide* describes the core features of the Endeca MDEX Engine that you can access via applications built

If you are...	See this guide...
search, refinements, search interfaces, or thesaurus	with Latitude Studio. It covers basic concepts, working with records and attributes, and search configuration.
A developer who needs to know about the APIs for the MDEX Engine, or how to extend Latitude Studio	The *Latitude Developer's Guide* describes the Endeca Web Services used by the Latitude Studio. It also contains a section describing how to extend Latitude Studio. In addition, see the *API Reference* for information about Web services and schemas that are packaged with the MDEX Engine. It is located in the `doc/wsdl` and `doc/xsd` directories of the MDEX Engine installation. For information about extending Latitude Studio, see the *Latitude Studio Javadoc*, which is packaged with the rest of the Latitude documentation.

You can access the Latitude documentation in two ways:

- A searchable hosted version is available in the Knowledge Base of the *Endeca Developer Network (EDeN)*.
- A full downloadable version is available in the *Downloads* section of EDeN.

Endeca Latitude forums

You can obtain more information about Latitude and other Endeca products at the Endeca Developer Network (EDeN) at *http://eden.endeca.com*. In particular, EDeN's forums provide discussions for technical and business users, including topics such as development, extension, deployment, and configuration. Further, the Endeca Encyclopedia features a *Latitude 2 Enablement Wiki*.

Endeca Education

To get the most out of your Endeca technology investment, consider Latitude training. Endeca Latitude training is designed for customers using Endeca for Agile BI. Learning paths have been created for the various roles within Latitude projects, including business analyst, data architect, and system administrator. For more information, see *Latitude Role-based Enablement Plans*.

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