

Endeca® Merchandising Workbench Help



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Chapter 1

Getting started

This section provides an introduction to Merchandising Workbench and explains how to log into and out of the tool.

Welcome to Endeca Merchandising Workbench

Endeca Merchandising Workbench is a Web-based tool that provides a way for business users and merchandisers to configure portions of their Endeca application and provides system administrators with a means to configure and administer an Endeca implementation.

Typically, business users employ Merchandising Workbench to define business logic such as merchandising and content spotlighting, keyword redirects, application search configuration, and the presentation order of dimensions, while merchandisers utilize the Page Builder to create rich, dynamic landing pages. Business users and merchandisers typically make changes to parts of an Endeca implementation after the implementation's core functionality has been developed. For example, a developer uses Developer Studio to specify which Endeca properties and dimensions are available for search, then a business user uses Merchandising Workbench to specify thesaurus entries that support search functionality.

In addition, Merchandising Workbench provides access to reports that describe how customers are using an Endeca implementation. These reports expose details such as the most popular search terms, the most popular navigation locations, search terms that are most often misspelled, and so on.

System administrators can configure and run the Endeca Advanced Crawler and perform a number of system operations including: provisioning the resources used by an Endeca implementation, monitoring system status, starting and stopping system processes, and managing user permissions.



Note: This version of Merchandising Workbench Help does not include index or search functionality. For a full-featured version of the Help, please visit the Endeca Support Site.

To access the online version of Merchandising Workbench Help:

1. In a Web browser, type in the following URL: <http://eden.endeca.com>.
2. Log in using your username and password. (If you do not have a username and password, contact your support site administrator.)
3. From the top menu, click **Knowledge Base**.
4. From the drop-down list, select **Merchandising Workbench 1.0.x**.
5. Click **Merchandising Workbench Help**. The help system opens in a new window.

- [Logging in to Merchandising Workbench](#) on page 12
You need a user name and password to access Merchandising Workbench.
- [Logging out of Merchandising Workbench](#) on page 12
You can log out of Merchandising Workbench manually, or else Merchandising Workbench logs you out automatically if you are inactive.

Logging in to Merchandising Workbench

You need a user name and password to access Merchandising Workbench.

When you log in to Merchandising Workbench as a business user, it displays all rules, thesaurus entries, reporting information, and so on as specified by your user permissions.

When you log in to Merchandising Workbench with administrator permissions, in addition to seeing the same content as a business user, you also have access to the Configuration and Administration tabs.

1. Enter your user name and password and then select the application you want to log in to.

2. Click **Log In**.

- [Logging out of Merchandising Workbench](#) on page 12
You can log out of Merchandising Workbench manually, or else Merchandising Workbench logs you out automatically if you are inactive.
- [Welcome to Endeca Merchandising Workbench](#) on page 11
Endeca Merchandising Workbench is a Web-based tool that provides a way for business users and merchandisers to configure portions of their Endeca application and provides system administrators with a means to configure and administer an Endeca implementation.

Logging out of Merchandising Workbench

You can log out of Merchandising Workbench manually, or else Merchandising Workbench logs you out automatically if you are inactive.

1. Save any changes you made.

2. In the Logout pane (the upper left section of the window), click **Logout**.

3. Alternatively, close your Web browser and Merchandising Workbench logs you out automatically after one minute.

- [Logging in to Merchandising Workbench](#) on page 12
You need a user name and password to access Merchandising Workbench.
- [Welcome to Endeca Merchandising Workbench](#) on page 11
Endeca Merchandising Workbench is a Web-based tool that provides a way for business users and merchandisers to configure portions of their Endeca application and provides system administrators with a means to configure and administer an Endeca implementation.



Chapter 2

Overview of the interface

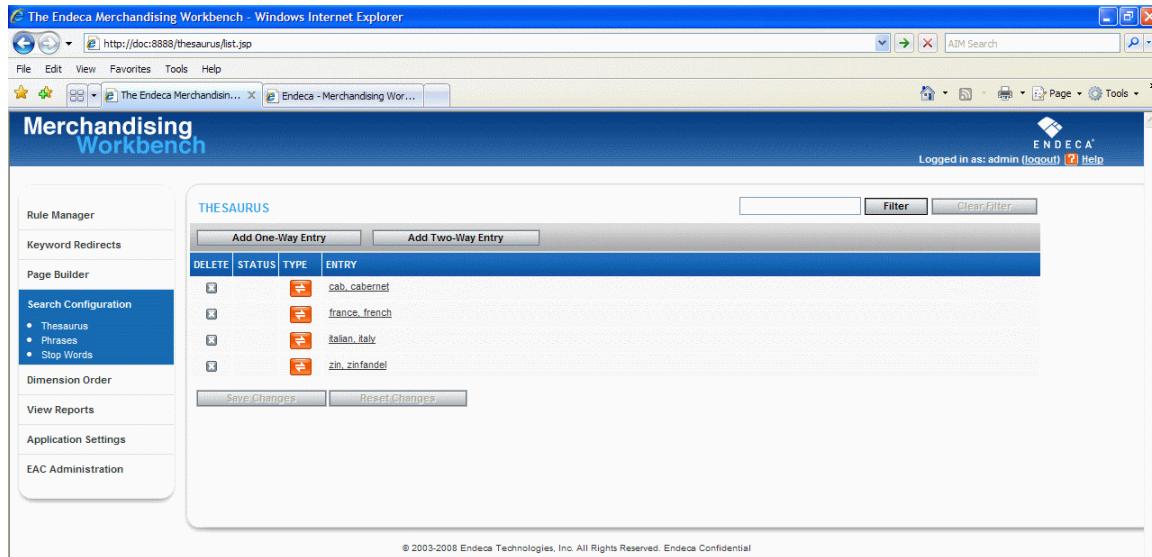
This section provides an overview of the Merchandising Workbench interface, briefly explaining the individual components of the tool.

Parts of the Merchandising Workbench window

Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.

This screenshot shows the Merchandising Workbench window. Depending on your login ID, you may not see all of these items in your Merchandising Workbench. The Merchandising Workbench window consists of the following pages:

- Logout (in the right hand corner of the screen)
- Rule Manager
- Keyword Redirects
- Page Builder
- Search Configuration
- Dimensions Order
- View Reports
- Application Settings
- EAC Administration



The Rule Manager Page

The **Rule Manager** page is where you create and modify rules, activate/deactivate rules, change their priority, and preview rules. However, your user permissions determine which of these actions you can perform.

The upper half of this page is the **Rule List**, which contains summary information about the rules. This includes the status, name, modified date, trigger and target values, state, priority, and so on.

The lower half of this page contains the **Preview** pane, which displays your preview application. You can navigate and search in the preview application, and then set your dynamic business rule configuration according to your search and navigation location.

- [Parts of the Merchandising Workbench window](#) on page 13
Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.
- [About dynamic business rules](#) on page 23
A dynamic business rule describes the logic of how to promote records for display to application users.
- [About rule triggers](#) on page 27
A trigger is a set of conditions that must exist in a query for a rule to fire.
- [About rule targets](#) on page 29
A target is a collection of one or more dimension values and one or more featured results that tells the MDEX engine which records you want to promote when your rule is evaluated for firing.
- [About rule properties](#) on page 30
Rule properties let you associate additional information, such as images or banners with a rule. Rule properties can be based on a template.
- [Symbols used in the Rule List](#) on page 31
Icons in the **Rule List** indicate if a rule is valid, not deployed, dynamic, static, has a trigger, has record(s).

- [Status messages for dynamic business rules](#) on page 48

When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

The Keyword Redirects page

The **Keyword Redirects** page is where you create and modify keyword redirects.

The **Keyword Redirects** page is available to users who have the **Rule Manager** role assigned to their user profile. You can test keyword redirects in the preview application on the **Rule Manager** page.

- [Parts of the Merchandising Workbench window](#) on page 13
Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.
- [About keyword redirects](#) on page 105
Keyword redirects are used to redirect a user's search to a Web page (that is, a URL).
- [About dynamic business rules](#) on page 23
A dynamic business rule describes the logic of how to promote records for display to application users.
- [Creating keyword redirects](#) on page 106
The **Keyword Redirects** page allows you to create, modify, and delete keyword redirects in your application.
- [Modifying keyword redirects](#) on page 107
The **Keyword Redirects** page allows you to create, modify, and delete keyword redirects in your application.
- [Deleting keyword redirects](#) on page 108
You can delete a keyword redirect if it is no longer needed or desired.
- [Filtering your view of keyword redirects](#) on page 109
Filtering your view of keyword redirects provides a way to simplify the view of a large list. You can filter by keyword, partial word, or letter.

The Phrases page

The **Phrases** page is where you add, edit, or remove multi-word search terms that are available for automatic phrasing in your Endeca-enabled application.

This page also displays dimension names, if any, that have been enabled in Developer Studio for automatic phrasing.

- [Parts of the Merchandising Workbench window](#) on page 13
Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.
- [About automatic phrases](#) on page 116
When an application user provides several search terms in a query, the automatic phrasing feature groups certain terms into a search phrase and returns query results for the phrase.
- [Creating automatic phrases](#) on page 117
The **Phrases** page allows you to create, modify, or remove phrases from your application.

- [Modifying automatic phrases](#) on page 118
The **Phrases** page allows you to create, modify, or remove phrases from your application.
- [Deleting automatic phrases](#) on page 118
The **Phrases** page allows you to create, modify, or remove phrases from your application.
- [Filtering your view of automatic phrases](#) on page 119
Filtering your automatic phrases provides a way to simplify the view of a large list of phrases or locate a particular phrase.

The Stop Words page

The **Stop Words** page is where you add, edit, or remove words that are excluded from searching.

This page displays the full list of stop words for your Endeca-enabled application.

- [Parts of the Merchandising Workbench window](#) on page 13
Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.
- [About stop words](#) on page 119
Stop words are words that are ignored if an application user includes them as part of search.
- [Creating stop words](#) on page 120
The **Stop Words** page allows you to create, modify, or remove stop words from your application.
- [Modifying stop words](#) on page 121
The **Stop Words** page allows you to create, modify, or remove stop words from your application.
- [Deleting stop words](#) on page 121
The **Stop Words** page allows you to create, modify, or remove stop words from your application.
- [Filtering your view of stop words](#) on page 122
Filtering your view of stop words provides a way to simplify the view of a largelist of stop words.

The Dimension Order page

The **Dimension Order** page is where you can change the presentation order of dimension groups, dimensions, and dimension values in your application.

You can reorder the presentation of any level in the hierarchy of your data set. For example, you can modify the order of dimension groups with respect to other sibling dimension groups. You can modify the order of dimensions with respect to other sibling dimensions. You can drill down in to a dimension and reorder the dimension values with respect to other sibling dimension values.

- [Parts of the Merchandising Workbench window](#) on page 13
Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.
- [About dimension reordering](#) on page 123

On the **Dimension Order** page, you can modify the order in which dimension groups, dimensions, and dimension values are presented in your application.

- [Reordering the presentation of dimension groups, dimensions, and dimension values](#) on page 124
You can reorder the presentation of any underlined dimension group, dimension, or dimension value.

The Thesaurus page

The **Thesaurus** page is where you add and edit synonyms used for searching.

This page displays the full list of thesaurus entries for your Endeca-enabled application.

- [About the thesaurus](#) on page 111
Thesaurus entries provide a means to account for alternate forms of a user's query.
- [Thesaurus tips](#) on page 115
The thesaurus feature is very powerful, and poorly-conceived entries can be expensive and not useful.
- [Creating one-way thesaurus entries](#) on page 112
You create one-way thesaurus entries on the **Thesaurus** page of Merchandising Workbench.
- [Creating two-way thesaurus entries](#) on page 113
You create two-way thesaurus entries on the **Thesaurus** page of Merchandising Workbench.
- [Editing thesaurus entries](#) on page 113
You can revise your thesaurus entries as you gain a better understanding of what search terms users are searching for.
- [Filtering your view of thesaurus entries](#) on page 114
Filtering your thesaurus entries provides a way to simplify the view of a large list of entries or locate a particular entry.
- [Deleting thesaurus entries](#) on page 115
You can delete a thesaurus if it is no longer needed or desired.
- [Parts of the Merchandising Workbench window](#) on page 13
Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.

The Instance Configuration page

The **Instance Configuration** page displays the list of XML files that describe the all the configuration settings of your application.

Each file in an instance configuration, and information about the file, is listed on the **Instance Configuration** page. You can download a zip file of the entire instance configuration. These files can be used for debugging and support purposes.

- [Parts of the Merchandising Workbench window](#) on page 13
Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.
- [Downloading the instance configuration](#) on page 143
You download the instance configuration files in a single archive called instconfig.zip.

The Resource Locks page

On the **Resource Locks** page, an administrator can view or break resource locks that users have acquired during their Merchandising Workbench session.

A resource corresponds to a page in Merchandising Workbench, such as the **Thesaurus** page, **Rule Manager** page, or a rule group on the **Rule Manager** page.

- [Parts of the Merchandising Workbench window](#) on page 13
Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.
- [About resource locks](#) on page 139
A resource corresponds to a page in Merchandising Workbench, such as the **Thesaurus** page, **Rule Manager** page, or a rule group on the **Rule Manager** page. A user acquires a resource lock by selecting a page, rule group, or redirect group that the user has permission to access.
- [Breaking a resource lock](#) on page 140
An administrator can break the resource locks of any user logged in to Merchandising Workbench. After breaking a lock, the resources (Merchandising Workbench pages or groups) will be available to other users. Note that breaking a user's lock causes that user to lose any unsaved changes.

The User Management page

The **User Management** page is where an administrator adds and removes users and modifies their page access and rule group permissions.

An administrator can configure a user manually in Merchandising Workbench or set up a user through LDAP.

- [About user management](#) on page 127
An administrator must create users with a user name, password, identity information, and set of roles (permissions) to log in to Merchandising Workbench. A user can be configured manually in Merchandising Workbench or set up through LDAP.
- [Adding business users to Merchandising Workbench](#) on page 128
Administrators and users with the settings role can configure users on the **User Management** page.
- [Adding administrators to Merchandising Workbench](#) on page 130
Administrators can configure other administrators on the **User Management** page.
- [Modifying a user's profile](#) on page 132
Administrators and users with the settings role can modify aspects of a user profile including password, identity information, roles, and rule group permissions.
- [Modifying your password](#) on page 133
A business user can modify his or her password as necessary by accessing the **User Settings** page.
- [Filtering rule group permissions by rule group name](#) on page 134
Filtering on the **User Management** page provides a way to locate rule group permissions that are assigned to a particular user or user group.
- [Parts of the Merchandising Workbench window](#) on page 13

Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.

The Rule Group Permissions page

The **Rule Group Permissions** page is where an administrator controls how users access rule groups and the rules contained in the groups.

Rule group permissions also specify which users participate in the workflow of dynamic business rules. An administrator assigns rule group permissions in one of two ways:

- Assign by rule group on the **Rule Group Permissions** page.
- Assign by user or user group name on the **User Management** page.
- [Parts of the Merchandising Workbench window](#) on page 13
Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.
- [About rule group permissions](#) on page 135
Rule group permissions control how users access rule groups and the rules contained in the groups.
- [Assigning rule group permissions by rule group](#) on page 136
Once you create different rule groups, you may want to assign permissions to them for approving, editing and viewing rules.
- [Setting default permissions for new users and rule groups](#) on page 137
On the **Rule Group Permissions** pane on the **User Management** page, an administrator specifies the default permission that controls how users may access rule groups. This is a system-wide default that affects new users, existing users, new rule groups, and existing rule groups.
- [Filtering rule group permissions by user name](#) on page 138
Filtering on the **Rules Group Permissions** page lets you identify users and user groups that have rule group permissions.

The Reporting page

The **Reporting** page is where you view reporting data for your Endeca application.

Reporting information is especially useful for tuning your application based on actual information from user queries. In addition to viewing a current report, you can also browse historic reports, if your system is configured to display them.

If you need to include or exclude particular reporting information, ask your Endeca technical team to modify the report settings file.

- [Parts of the Merchandising Workbench window](#) on page 13
Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.

The Preview App Settings page

The **Preview App Settings** page is where you set up communication between Merchandising Workbench and a preview application via URL Mapping values.

The URLs configured on this page contain variable mappings that instruct Merchandising Workbench about how to build search and navigation URLs for your preview application.

By default, the URL Mapping values are filled in with URL settings for the preview application of the JSP reference implementation. If you do not want to display the preview application, you can clear out these settings.

To enable the display of the preview application for your own application, you can replace the URL Mapping settings with the settings specific for your application.

- [Parts of the Merchandising Workbench window](#) on page 13
Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.
- [About the preview application](#) on page 44
The Endeca-enabled application that appears in the **Preview** pane of the **Rule Manager** page is called the preview application.
- [Testing dynamic business rules by using a preview application](#) on page 45
Merchandising Workbench lets you preview each dynamic business rule in a rule group.
- [Previewing rules](#) on page 47
Users who have Approve, Edit, or View permissions can preview rules.
- [Syntax of URL mapping in the preview application](#) on page 146
The **URL Mapping** fields allow you to define a generic syntax that describes to Merchandising Workbench how to build URLs.
- [Default values for the preview application URLs](#) on page 145
Once you first open your application in Merchandising Workbench, the **URL Mapping** values are filled in by default in Merchandising Workbench. This enables Merchandising Workbench to display the preview application for the reference implementation.

The EAC Settings page

The **EAC Settings** page is where you specify the host and port for the EAC Central Server.

These settings control which machine Merchandising Workbench communicates with when making requests to EAC.

- [Parts of the Merchandising Workbench window](#) on page 13
Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.
- [Adding a host to an application](#) on page 154
Adding a host to an application informs Merchandising Workbench that the machine is available for any task in an Endeca implementation.
- [Editing a host in an application](#) on page 155
You can change the properties of a host that you provision using Merchandising Workbench.
- [Deleting a host from an application](#) on page 155

If you are no longer using a machine in your Endeca implementation, you can remove its information from Merchandising Workbench.

The EAC Administration Console page

The **EAC Admin Console** page provides a graphical representation of an Endeca implementation.

On this page, administrators can do any of the following:

- Establish and modify system provisioning
- Start and stop system components
- [Parts of the Merchandising Workbench window](#) on page 13
Merchandising Workbench consists of several pages that are accessible through the launch page and a navigation menu.
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.
- [Starting an Endeca component in Merchandising Workbench](#) on page 184
After you provision an Endeca component (i.e. Forge, the Indexer, MDEX Engine and so on), it is available to start or stop.
- [Stopping an Endeca component in Merchandising Workbench](#) on page 184
After you provision an Endeca component (i.e. Forge, the Indexer, MDEX Engine and so on), it is available to start or stop.

The Logout pane

The Logout pane is located in the upper right hand corner of the Merchandising Workbench window.

In the Logout pane you can do the following:

- Identify the user that you are logged in as (in this case, the user setup).
- Log out of Merchandising Workbench.
- Access the Merchandising Workbench online help.

The Navigation menu

The Navigation menu appears in the left column of the Merchandising Workbench window.

Click a tab to navigate to that page. Your login ID controls which tabs you see.



Chapter 3

Working with dynamic business rules

The following sections provide an introduction to dynamic business rules and explain in-depth how to create, edit, and maintain them.

Basics of dynamic business rules and merchandising

This section details basic business rule concepts as they relate to merchandising and application performance.

About dynamic business rules

A dynamic business rule describes the logic of how to promote records for display to application users.

Dynamic business rules implement merchandising and Content Spotlighting features in the Endeca Information Access Platform. Merchandising and spotlighting records is a process of identifying and promoting contextually relevant records, based on dynamic business rules, to users as they navigate or search within a data set. The dynamic business rule is the core element of merchandising or spotlighting your records.

Each dynamic business rule consists of:

- One or more triggers that specify when to fire the rule
- A target that indicates which records to promote

Once you create and apply a dynamic business rule, the MDEX Engine compares each query a user makes to each rule to determine if the query triggers the rule. If a user's query or profile triggers a business rule, the MDEX Engine returns the following results:

- Standard record results for the query.
- Promoted records specified by the rule. (This includes records specified by target dimension values and any featured result records that may be specified.)
- Any rule properties specified as key/value pairs in the business rule.

About rule zones, styles and groups

A rule requires an associated zone. Zones ensure that merchandising results always appear on screen. If the first rule in a zone does not display results, the MDEX Engine evaluates the second rule in the zone. If the second rule does not return results, the MDEX Engine evaluates the third rule in the zone and so on.

A rule requires an associated style that describes how to display the results of that rule on screen.

A rule belongs to a rule group. Rule groups have these characteristics:

- By default, there is one rule group in your project.
- If additional rule groups are implemented in your project, then before you can create or modify a rule, you must select the rule group to which the rule belongs.
- The **Rule Manager** page displays the rule groups available for an Endeca-enabled application. Each rule group contains dynamic business rules displayed in a **Rule List**. You can edit rules, create new ones, and set their evaluation priority within the group.
- Rules with a higher priority in the **Rule List** are evaluated before rules that appear lower in the **Rule List**.

Your Endeca technical team creates zones, styles, and groups for you using Endeca Developer Studio.

- [The Rule Manager Page](#) on page 14
The **Rule Manager** page is where you create and modify rules, activate/deactivate rules, change their priority, and preview rules. However, your user permissions determine which of these actions you can perform.
- [About rule triggers](#) on page 27
A trigger is a set of conditions that must exist in a query for a rule to fire.
- [About rule targets](#) on page 29
A target is a collection of one or more dimension values and one or more featured results that tells the MDEX engine which records you want to promote when your rule is evaluated for firing.
- [About rule properties](#) on page 30
Rule properties let you associate additional information, such as images or banners with a rule. Rule properties can be based on a template.
- [Symbols used in the Rule List](#) on page 31
Icons in the **Rule List** indicate if a rule is valid, not deployed, dynamic, static, has a trigger, has record(s).
- [Status messages for dynamic business rules](#) on page 48
When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.
- [Implementing merchandising with business rules](#) on page 36
The tasks involved in implementing merchandising require coordination between business users and developers.
- [Configuring a new dynamic business rule](#) on page 35
You configure new dynamic business rules from the **Rule Manager** page in Merchandising Workbench.
- [Adding rule properties](#) on page 43
Rule properties are key/value pairs that are passed back to the application along with query results.
- [Symbols used in the Rule List](#) on page 31
Icons in the **Rule List** indicate if a rule is valid, not deployed, dynamic, static, has a trigger, has record(s).
- [Status messages for dynamic business rules](#) on page 48
When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Merchandising in action

To see how merchandising looks in action, consider this example, based on a sample wine application.

When a user first opens the wine application, no queries have been made against the data. When a user makes a query that triggers a dynamic business rule, the Endeca MDEX Engine evaluates the rule, checking for records to promote as merchandising records.

These merchandising records constitute a supplemental set of results that the MDEX Engine returns in addition to the regular results of the query.

Typically, the merchandising record results are displayed differently than standard results. The initial set of default merchandising results appears in the Featured Wines area (lower right) like this:



The screenshot shows the Endeca Wine Directory homepage. The top navigation bar includes 'about us', 'contact us', and 'learn more'. The main content area is titled 'Browse by ...' and includes sections for 'Wine Types', 'Country', 'Wineries', 'Rating', 'Price Range', 'Year', 'Special Designations', 'Drinkability', and 'Flavors'. Below this, there are three columns of wine categories: 'White Wines' (Chardonnay, Chenin Blanc, Gewurztraminer, Riesling, Sauvignon Blanc, More...), 'Red Wines' (Cabernet Sauvignon, Chianti, Merlot, Syrah / Shiraz, Zinfandel, More...), and 'Sparkling Wines' (Champagnes, Cava). The 'Featured Wines' section is circled in red and contains two wine labels: 'RAVENSWOOD VINTNERS BLEND CALIFORNIA ZINFANDEL' and 'Penfolds KALIMNA BIN 28 SOUTH AUSTRALIA Shiraz'. Below these are labels for 'Ravenswood, Zinfandel Sonoma Valley Cooke 1990' and 'Penfolds, Shiraz South Australia Grange 1990'. The bottom section, 'Wines Around the World', shows flags for Portugal, Spain, France, Germany, Austria, Bulgaria, and the Czech Republic.

The first step to implement additional merchandising is to create a new dynamic business rule with triggers and targets. The merchandising strategy for this new rule assumes that a buyer interested in white wines is also likely to be interested in highly-rated white wines from Sonoma County.

In this case, the business rule has the following configuration:

- A title called "Sonoma Specials."
- A specified zone and style that dictates how the rule's results display.
- A trigger value that causes the rule to fire when a user navigates to the "White Wines" in the data set.
- A target value of Region > Sonoma County with a "Restrict results to the active Navigation State" designation, to display white wines from Sonoma County.
- Merchandising results that are ordered by a wine's score.

The entry in the **Rules** list for the dynamic business rule looks like this:

NAME	MODIFIED	TRIGGER	TARGET
Sonoma Specials	6/10/2008	 Wine Type > White	 Region > Sonoma

The new rule appears in the **Rule List** with an asterisk to indicate it has not been applied yet. The priority of the rule relative to other rules in the **Rule List** may now be modified. Once the **Save Changes** button is clicked, the red asterisk disappears from the **Status** column and a message displays above the **Rule List** to indicate updated rules have been committed. At this point, the dynamic business rule has been successfully applied to the preview application.

Now you can test the rule to see if it promotes the intended records. In the **Preview** pane, navigate to White Wines. In addition to the regular navigation results (33,663 matches for white wines), the records for three highly rated white wines from Sonoma County appear in the lower right area reserved for merchandising results, as shown here:



The screenshot shows the ENDECA Wine Directory homepage. At the top, there's a banner with the text 'ENDECA WINE DIRECTORY' and a background image of a vineyard. Below the banner, there are several search filters on the left: 'Narrow Selection By....', 'White Wines' (with links to Chardonnay, Riesling, Sauvignon Blanc, Chenin Blanc, More...), 'Country' (United States, France, Germany, Italy, More...), 'Wineries' (Bouchard Pere & Fils, Chandon & Trebuchet, Chateau St. Jean, Chateau Ste. Michelle, More...), 'Rating' (100-95, 94-90, 89-80, 79-70, More...), 'Price Range' (Below \$10, \$10-\$15, \$15-\$20, \$20-\$40, More...), 'Year' (1999, 1998, 1997, 1996, More...), and 'Special Designations' (Auslese, Barrel Fermented, Beerenauslese, More...). On the right, there are sections for 'Within Results' (checkbox), 'Drinkability' (Drink Now, Drink or Hold, Hold, Past Prime), and 'Flavors' (Fruit Flavors, Other Flavors, Plant Flavors, Floral Flavors, More...). Below these filters, there's a section for 'Current Selection' with a 'White Wines' link and a '33,663 Matches' count. The results are sorted by 'Rating (high to low)' with a dropdown menu. A page navigation bar shows '1 2 3 4 5 Next >'. The main content area displays two wine entries: 'Schloss Schonborn, Riesling Auslese Rheingau Marcobrunner 1893' and 'Schloss Schonborn, Riesling Auslese Rheingau Marcobrunner 1911'. Each entry includes a small German flag icon, a glass icon, the wine name, price (N/A), rating (98/93), date reviewed (09/30/99), and a brief description. To the right, there's a sidebar for 'Sonoma County Specials' with three more wine entries: 'Ravenswood Chardonnay Valley 1989' (Price: \$18.00), 'Sonoma-C Chardonnay Coast Cutr 1987' (Price: \$16.00), and 'Chestnut H Chardonnay County 198' (Price: \$7.00).

- [Implementing merchandising with business rules](#) on page 36
The tasks involved in implementing merchandising require coordination between business users and developers.
- [Configuring a new dynamic business rule](#) on page 35
You configure new dynamic business rules from the **Rule Manager** page in Merchandising Workbench.

About rule triggers

A trigger is a set of conditions that must exist in a query for a rule to fire.

A dynamic business rule typically has one or more triggers and a target. If a user's query contains a condition that triggers a rule, the MDEX Engine fires the rule and returns a set of records to application users. Each trigger may include dimension values and a set of search terms.

- A rule trigger that is based on dimension values:

A collection of one or more dimension values can trigger a rule if a user's query contains the dimension values. For example, in a wine store, you could set up a rule that is triggered when a user clicks the dimension value Red. If the user clicks White, the MDEX Engine does not fire the rule. If the user clicks Red, the MDEX Engine fires the rule and returns any promoted records. You specify dimension value triggers in the **Triggers** tab.

- A rule trigger that is based on search terms:

One or more search terms can trigger a rule if a user's query includes the terms. You specify search terms and the match mode for the search terms in the **Triggers** tab.

You can apply triggers for your rules globally or depending on where in the application the user is located. For example, you can make a trigger for a rule apply everywhere in the application (global trigger), or only if the user is located at the root location of the application.

Triggers that apply everywhere

By default, a new rule has no trigger locations (no dimension values or search terms) until you add them. You can choose not to add any specific locations and instead allow the rule to trigger at every location in the application. Creating a rule whose trigger applies everywhere is a global trigger. This means that any query an application user makes -- with any search term or any navigation location -- triggers the rule and promotes records.

Triggers that apply only at the root location

You can also create a trigger that fires a rule when a user navigates to the root location of an application. Generally speaking, navigating to the root location is navigating to the home page for a search application. Technically speaking, navigating to the root location for an application is the navigation location where $N=0$. Such a trigger applies to queries made only from the root. For example, if a user searches with a search term or navigates to other locations from the root, the queries do not trigger the rule.

Multiple triggers in a rule

You can add multiple triggers to your business rule: Adding more than one trigger to a rule is very useful if you want to promote the same records from multiple locations in your application, or if you want to promote the same records from more than one search term. Each trigger can describe a different location where a user's query can trigger a rule; however, the rule promotes records from a single target location. Each trigger that you create appears in its own row in the **Triggers** section.

This example shows two triggers, each containing one search term. A query containing either "pears" or "apricot" matches one of the triggers and therefore fires the rule:

Triggers			
DELETE	COPY	LOCATION	
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> Search Terms: pears OR	<input checked="" type="checkbox"/> Applies only at this exact location
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> Search Terms: apricot	<input checked="" type="checkbox"/> Applies only at this exact location

This example shows two triggers, each containing a different location in the data set. A query to either location "Chardonnay" or "Savignon Blanc" triggers the rule:

Triggers		
DELETE	COPY	LOCATION
		Wine Type > White > Chardonnay OR Wine Type > White > Sauvignon Blanc
		<input checked="" type="checkbox"/> Applies only at this exact location

Trigger interaction in multi-trigger rules

Each trigger can be made up of a set of search terms and navigation locations. For a single trigger to fire a rule, search terms and navigation locations must all be present in a user's query. For example suppose Trigger A is made of two search criteria -- a search term and a navigation location. The search term is "mango" and the location is "Wine Type > White > Chardonnay". An application user's query must contain both the term "mango" and the location Chardonnay to trigger the rule.

If you have more than one trigger associated with a rule, a query that satisfies any single trigger is sufficient to fire the rule. For example, if a rule has two triggers, Trigger A and Trigger B, a query that matches either Trigger A or Trigger B fires the rule. In short, a trigger fires if all of its search terms and locations match a query; while the rule fires if any of its triggers fire. Also see the procedures regarding adding triggers for additional examples of these interactions.

- [Specifying a time to trigger a rule](#) on page 41
You can specify a time to associate with a dynamic business rule to control the point in time at which a rule can fire and the point in time after which it cannot fire.
- [Status messages for dynamic business rules](#) on page 48
When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.
- [About match mode for search terms that trigger rules](#) on page 37
On the **Triggers** tab, you can specify different match modes for matching the search term that will be used to trigger your business rule.
- [Triggering a rule by allowing any dimension value](#) on page 37
You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.
- [Triggering a rule by adding only the root dimension value](#) on page 38
You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.
- [Triggering a rule by adding both search terms and dimension values](#) on page 39
You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.
- [About rule targets](#) on page 29
A target is a collection of one or more dimension values and one or more featured results that tells the MDEX engine which records you want to promote when your rule is evaluated for firing.
- [About dimensions and dimension values](#) on page 191
Describes Endeca dimensions and dimension values.
- [About featured records](#) on page 192
Defines a featured record.

About rule targets

A target is a collection of one or more dimension values and one or more featured results that tells the MDEX engine which records you want to promote when your rule is evaluated for firing.

You specify a target in the **Target** tab of the **Edit Rule** page.

When you create a new dynamic business rule, you can restrict records that are promoted in the target based on the user's navigation location:

- By checking **Restrict results to the active Navigation State**, you configure the rule with a *dynamic* target. The rule uses a combination of the specified target and a user's current navigation location to determine which records display. For example, if you want to promote dynamic results for wine Best Sellers, the record results vary if a user's navigation location is Country > France rather than Country > Australia. Records for Best Sellers from France display rather than Best Sellers from Australia.
- By unchecking **Restrict results to the active Navigation State**, you configure the rule with a *static* target. The rule uses only the specified target to determine which records to promote. The user's current navigation location is ignored. For example, suppose you are again promoting wine Best Sellers. The results consist of the same set of best seller wines no matter whether the user has searched for a term, navigated to White > Chardonnay, or navigated to 1998 > Italy > Rating 94-90.
- [Setting a rule's targets](#) on page 40
Setting the rule's targets is part of configuring a rule. You can specify any number of featured records or dimension values for a rule's target.
- [About rule triggers](#) on page 27
A trigger is a set of conditions that must exist in a query for a rule to fire.
- [About dimensions and dimension values](#) on page 191
Describes Endeca dimensions and dimension values.
- [About featured records](#) on page 192
Defines a featured record.

About rule properties

Rule properties let you associate additional information, such as images or banners with a rule. Rule properties can be based on a template.

Dynamic business rules can have associated rule properties. Rule properties are key/value pairs that are passed back to the application along with query results. They allow you to associate supplementary information, such as images or banners, with a rule. When a user triggers the rule, the application returns these properties in addition to any relevant record pages. You add rule properties on the **Advanced** tab of the **Edit Rule** page.

In some cases, pipeline developers working in Developer Studio create property templates that help ensure consistent property usage on shared projects. A property template establishes a key for the rule property, leaving you to specify the value. Property templates help you avoid common project-sharing mistakes such as misspelling or otherwise modifying existing property keys. For example, a pipeline developer can use Developer Studio to add a property template called WeeklyBannerAd and then make the project available to you in Merchandising Workbench. Once the project is loaded in Merchandising Workbench, a property template with a populated key called WeeklyBannerAd and an empty value appears in the **Rule Properties** list. You only need to type in the property value. Because rule properties and property templates are established on a per-style basis in Developer Studio, your Merchandising Workbench rule property display may vary for different styles in your application.

The images below illustrate the four possible configurations:

- You do not have the ability to add rule properties:

Rule Properties		
DELETE	KEY	VALUE

- You can add only template-based properties. That is, the key is already provided, and you add the value:

Rule Properties		
DELETE	KEY	VALUE
	<input checked="" type="checkbox"/> URL	www.test-endeca.com
	<input checked="" type="checkbox"/> Banner Text	This is a test Banner

- You can add only custom properties. In this case, you provide both the key and the value:

DELETE	KEY	VALUE

- You can add custom properties, but your application has also provided you with some property templates:

Rule Properties		
DELETE	KEY	VALUE
	<input checked="" type="checkbox"/> URL	www.test-endeca.com
	<input checked="" type="checkbox"/> Banner Text	This is a test Banner

- [Adding rule properties](#) on page 43
Rule properties are key/value pairs that are passed back to the application along with query results.
- [Symbols used in the Rule List](#) on page 31
Icons in the **Rule List** indicate if a rule is valid, not deployed, dynamic, static, has a trigger, has record(s).
- [Status messages for dynamic business rules](#) on page 48
When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Symbols used in the Rule List

Icons in the **Rule List** indicate if a rule is valid, not deployed, dynamic, static, has a trigger, has record(s).

The following symbols are used to define the status of rules in the **Rule List** on the **Rule Manager** page.

Symbol	Description
	The rule is not valid.

Symbol	Description
	The rule has not been deployed.
	The rule is evaluated at any state that contains these criteria.
	The rule is only evaluated at this specific location.
	The rule has a dynamic target.
	The rule has a static target.
	This rule has an associated time trigger.
	The rule has one or more featured records.

Tips about using dynamic business rules

This topic provides a list of tips to help you tune your dynamic business rules when implementing dynamic merchandising or Content Spotlighting features, including how to incrementally implement dynamic business rules, improve performance, promote a specific record, display editorial content with your rule, and apply relevance ranking to your rules.

In some cases, you may require the assistance of your technical team to implement these tips in your application.

Incremental implementation

Merchandising is a complex feature to implement, and the best approach for developing your dynamic business rules is to adopt an incremental perspective as you and your technical team coordinate tasks. Begin with a single, simple business rule to allow you and your technical team to become familiar with the core components of merchandising. Later, you can add more advanced elements, along with additional rules, rule groups, zones, and styles. As you build the complexity of your merchandising, you will have to coordinate the tasks your technical team performs in Developer Studio (for example, zone and style definitions) with the business rule work that you do in Merchandising Workbench.

It is also helpful to define the purpose of each dynamic business rule in the abstract (before implementing it in Merchandising Workbench) so that everyone knows what to expect when the rule is implemented. If rules are only loosely defined, they may have unexpected side effects when implemented.

Promoting a specific record

To promote a specific record, create a dynamic business rule whose target is a specific featured result. You can add any number of featured results to a rule. Using Developer Studio, your technical team can limit the number of featured results that are promoted and displayed for a style.

Displaying editorial content

To implement dynamic business rules that return editorial content in query results, add key/value properties to a rule's target. Editorial content is supplementary information that accompanies the record results. For example, you may want to display a banner advertisement or an additional text description

to a user along with a record. To display a banner ad, you could add a property with a key called "BannerURL" and a value that specifies the URL path to the image file for the banner.

Controlling maximum records returned

To prevent performance problems, you can control the maximum number of records that a dynamic business rule may return by setting a boundary value for the style associated with a rule. Your technical team sets this value when defining a style in Developer Studio. The value should not be an unnecessarily large number to prevent dynamic business rules from returning a large set of matching records, potentially overloading the system. For example, if the style uses a value such as 1000, then up to 1,000 records could be returned with each query, potentially causing significant performance degradation.

Relevance ranking

In some cases, you may want relevance ranking applied to a dynamic business rule's results for keyword searches. Relevance ranking controls the order in which the MDEX Engine returns query results to a user. There are many ways in which you can specify what makes a result more relevant. The MDEX Engine returns results that are evaluated to be more relevant before results that are less relevant. For example, one approach is to rank more relevant results by the number of keywords in a query that match in a record. Records with a higher number of matching keywords display before records with a lower number of matching search keywords.

In a wine example, suppose a user enters a query that contains three keywords "Mondavi reserve merlot." The MDEX Engine ranks results that match all three keywords (Mondavi, reserve, and merlot) at the top of the results list. After those results, the MDEX Engine ranks results that match two of the keywords (Mondavi and merlot). And lastly, the MDEX Engine ranks results that match one of the keywords (merlot).

Relevance ranking is set up by the technical team using Endeca Developer Studio.

How rules affect application performance

Because dynamic business rules are evaluated when a user makes a query, rules have a noticeable impact on the response time of your Endeca-enabled application.

Consider the following actions when evaluating the application performance in relation to dynamic business rules. You may want to:

- Monitor and limit the number of rules that would be evaluated for each query. The larger the number of rules, the longer the evaluation time.
- Edit rules to ensure that all of them have explicit triggers. Dynamic business rules without explicit triggers can adversely affect performance, because they are evaluated for every user query.
- Control the maximum number of records returned for a user query. Rules that return a large number of matching records slow down the response time of your application. When defining a style in Developer Studio, your technical team can set a value that controls the maximum number of records that can be returned.
- [About dynamic business rules](#) on page 23
A dynamic business rule describes the logic of how to promote records for display to application users.
- [Tips about using dynamic business rules](#) on page 32
This topic provides a list of tips to help you tune your dynamic business rules when implementing dynamic merchandising or Content Spotlighting features, including how to

incrementally implement dynamic business rules, improve performance, promote a specific record, display editorial content with your rule, and apply relevance ranking to your rules.

- [Configuring a new dynamic business rule](#) on page 35
You configure new dynamic business rules from the **Rule Manager** page in Merchandising Workbench.
- [Setting a rule's targets](#) on page 40
Setting the rule's targets is part of configuring a rule. You can specify any number of featured records or dimension values for a rule's target.
- [Symbols used in the Rule List](#) on page 31
Icons in the **Rule List** indicate if a rule is valid, not deployed, dynamic, static, has a trigger, has record(s).
- [Status messages for dynamic business rules](#) on page 48
When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Dynamic business rules and the Aggregated MDEX Engine

This topic applies only to users of the Aggregated MDEX Engine (Agraph).

If you perform an update for dynamic business rules on Dgraphs in Developer Studio or Merchandising Workbench, and a request comes to the Agraph while the update is in progress, the Agraph will issue a fatal error similar to the following:

```
[Thu Mar 24 16:26:29 2005] [Fatal] (merchbinsorter.cpp::276) - Dgraph 1 has fewer rules fired.
```

As long as the Agraph is running under the Endeca Application Controller, the EAC will automatically restart it. No data is lost. However, end-users will not receive a response to requests made during this short time.

This problem has little overall impact on the system, since business rule updates are quick and infrequent. Nonetheless, Endeca recommends that you shut down the Agraph during business rule updates.

- [About dynamic business rules](#) on page 23
A dynamic business rule describes the logic of how to promote records for display to application users.
- [Adding an Aggregated MDEX Engine to an application](#) on page 167
An Aggregated MDEX Engine (Agraph) runs the Agraph program, which defines and coordinates the activities of multiple, distributed MDEX Engines (Dgraphs).
- [Editing an Aggregated MDEX Engine](#) on page 168
An Aggregated MDEX Engine (Agraph) runs the Agraph program, which defines and coordinates the activities of multiple, distributed MDEX Engines (Dgraphs).
- [Deleting an Aggregated MDEX Engine from an application](#) on page 169
An Aggregated MDEX Engine (Agraph) runs the Agraph program, which defines and coordinates the activities of multiple, distributed MDEX Engines (Dgraphs).

Creating dynamic business rules

This section describes the procedures for configuring and implementing dynamic business rules.

Configuring a new dynamic business rule

You configure new dynamic business rules from the **Rule Manager** page in Merchandising Workbench.

To create a new business rule:

1. On the **Rule Manager** page, do one of the following:
 - If your application uses multiple rule groups, select the rule group in which you want to place the new rule.
 - If your application uses the single default rule group, skip to step 2.
2. In the **Rule List**, do one of the following:
 - Click **Add Rule** to create a new rule.
 - Click the **Copy** icon associated with an existing rule that you want to copy and modify. Copying a rule provides a convenient starting point to create a similar rule.
3. On the **General** tab, do the following:
 - a) Type a name for the new rule.
 - b) Select a zone and a style from the respective drop-down lists. Zones and styles are defined in Developer Studio. Contact your pipeline developer for information about the zones and styles available to your application.

 **Note:** Do not use zones that are reserved for **Page Builder** templates. If you are uncertain which zones are designed for business rules, contact your pipeline developer.

4. Set the triggers for your rule. Click the **Triggers** tab to add search terms and dimension values that will trigger your rule.
5. Set the targets for your rule. Click the **Target** tab to add the targets for your rule.
6. Specify the time when you want your rule to be triggered. Click the **When** tab.
7. Specify who sees the results of the rule. Click the **Who** tab.
8. On the **Advanced** tab, modify the result order and add rule properties.
9. Click **OK** to add the rule to the **Rule List**.
10. To activate the rule, click the **Active** checkbox for the rule.
11. Click **Save Changes**.



Note: You must activate a rule for it to fire in the preview application. (Optionally, you can create and save changes to a rule without activating it. In that case, the rule is inactive and will not fire in response to user queries.)

- [Setting a rule's targets](#) on page 40
Setting the rule's targets is part of configuring a rule. You can specify any number of featured records or dimension values for a rule's target.
- [About dynamic business rules](#) on page 23
A dynamic business rule describes the logic of how to promote records for display to application users.
- [Tips about using dynamic business rules](#) on page 32
This topic provides a list of tips to help you tune your dynamic business rules when implementing dynamic merchandising or Content Spotlighting features, including how to

incrementally implement dynamic business rules, improve performance, promote a specific record, display editorial content with your rule, and apply relevance ranking to your rules.

- [Symbols used in the Rule List](#) on page 31
Icons in the **Rule List** indicate if a rule is valid, not deployed, dynamic, static, has a trigger, has record(s).
- [Status messages for dynamic business rules](#) on page 48
When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.
- [Implementing merchandising with business rules](#) on page 36
The tasks involved in implementing merchandising require coordination between business users and developers.
- [About dynamic business rules](#) on page 23
A dynamic business rule describes the logic of how to promote records for display to application users.
- [Merchandising in action](#) on page 25
To see how merchandising looks in action, consider this example, based on a sample wine application.

Implementing merchandising with business rules

The tasks involved in implementing merchandising require coordination between business users and developers.

Before you implement merchandising, coordinate between you and your technical team:

- Do you need different groups of rules? Decide how many types of rules you need, for example, based on product categories. The technical team creates groups of rules.
- Where do you want to display the rules? The technical team defines the rule zones.
- What styles for rules will you be using? Decide which styles will be used for rules and coordinate this with the technical team.
- Plan to implement merchandising incrementally, in steps.

To implement merchandising with business rules:

1. Create zones, styles and rule groups with Endeca Developer Studio (performed by the technical team).
2. Create dynamic business rules with Endeca Merchandising Workbench (performed by business users).
3. Apply and test the rules in your preview application with Endeca Merchandising Workbench (performed by business users).

Example of how a business rule works

This example shows how a dynamic business rule works. This rule promotes the best-selling jeans when a user searches for or navigates to "jeans." Note that the following steps happen simultaneously in the application:

- A user makes a query for the term "jeans." The MDEX Engine returns the standard record results for jeans.
- Because the "Best Selling" business rule has a trigger of "jeans," the user's query triggers the rule. Therefore, in addition to the standard record results, the MDEX Engine also returns merchandising records for best-selling jeans.

- As part of the target results for the rule, there is also a rule property that displays a banner advertisement for ABC Jeans Company. If there is a large number of merchandising records, there may have a link reading "see all," "see more," or "see more ABC jeans."
- Clicking the "see all" link takes the user from seeing a subset of the best-selling jeans (and the standard jeans results), to seeing all the best-selling jeans.

After you implement one rule, test it, evaluate and proceed to implement other rules.

- [Configuring a new dynamic business rule](#) on page 35
You configure new dynamic business rules from the **Rule Manager** page in Merchandising Workbench.
- [About dynamic business rules](#) on page 23
A dynamic business rule describes the logic of how to promote records for display to application users.
- [Merchandising in action](#) on page 25
To see how merchandising looks in action, consider this example, based on a sample wine application.

About match mode for search terms that trigger rules

On the **Triggers** tab, you can specify different match modes for matching the search term that will be used to trigger your business rule.

There are three match modes:

- In **Match Phrase** mode (the default), all of the words of the trigger must match in the same order in the user's query for the rule to fire.
- In **Match All** mode, all of the words of the trigger must match (without regard for order in the user's query) for the rule to fire.
- In **Match Exact** mode, all the words of the trigger must exactly match a user's query for the redirect to fire. Unlike the other two modes, a user's query must exactly match the trigger in the number of words and cannot be a super set of the keywords.
- [Triggering a rule by allowing any dimension value](#) on page 37
You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.
- [Triggering a rule by adding only the root dimension value](#) on page 38
You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.
- [Triggering a rule by adding both search terms and dimension values](#) on page 39
You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.

Triggering a rule by allowing any dimension value

You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.

Adding search terms to a trigger is optional. You can create a trigger to fire a rule at any of the following locations:

- Any dimension value (no location specified)
- The root dimension value
- Any combination of search term and dimension value locations

If desired, you can set a time to trigger a rule, or select a user profile to control who sees the results of a rule. These steps typically occur after you specify the rule's targets.

To configure a rule to trigger at any dimension value:

1. Select the **Triggers** tab.
2. Leave the default settings in place under **Search Term** and **Navigation State**. In other words, do not specify any search terms or navigation states.
3. In the **Triggers** box on the right side of the page, make sure that "Applies only at this exact location" is not selected.
4. To proceed, specify the rule's targets.
 - *Triggering a rule by adding only the root dimension value* on page 38
You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.
 - *Triggering a rule by adding both search terms and dimension values* on page 39
You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.
 - *About match mode for search terms that trigger rules* on page 37
On the **Triggers** tab, you can specify different match modes for matching the search term that will be used to trigger your business rule.

Triggering a rule by adding only the root dimension value

You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.

Adding search terms to a trigger is optional. You can create a trigger to fire a rule at any of the following locations:

- Any dimension value (no location specified)
- The root dimension value
- Any combination of search term and dimension values locations

If desired, you can set a time to trigger a rule, or select a user profile to control who sees the results of a rule. These steps typically occur after you specify the rule's targets.

To configure a rule to trigger at only the root dimension value:

1. Select the **Triggers** tab.
2. Leave the default settings in place under **Search Term** and **Navigation State**. In other words, do not specify any search terms or navigation states.
3. In the **Triggers** box on the right side of the page, select "Applies only at this exact location."
4. To proceed, specify the rule's targets.
 - *Triggering a rule by allowing any dimension value* on page 37
You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.
 - *Triggering a rule by adding both search terms and dimension values* on page 39
You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.
 - *About match mode for search terms that trigger rules* on page 37
On the **Triggers** tab, you can specify different match modes for matching the search term that will be used to trigger your business rule.

Triggering a rule by adding both search terms and dimension values

You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.

Adding search terms to a trigger is optional. You can create a trigger to fire a rule at any of the following locations:

- Any dimension value (no location specified)
- The root dimension value
- Any combination of search term and dimension values locations

If desired, you can set a time to trigger a rule, or select a user profile to control who sees the results of a rule. These steps typically occur after you specify the rule's targets.

Note that search terms and dimension values interact when they trigger rules. See the "About rule triggers" topic for a description of how search terms and dimension values interact to trigger rules. When you create triggers that are made up of a combination of search terms and a navigation location, this affects when a rule gets fired. For example, each trigger can be made up of a set of search terms and navigation locations. For a trigger to fire a rule, both the search terms and the navigation locations must all be present in a user's query. For example, suppose Trigger A is made up of two search criteria: a search term, and a navigation location. The search term is "mango" and the location is "Wine Type > White > Chardonnay". To trigger this rule, a user query must contain both the term "mango" and the location Chardonnay. To summarize, a trigger is satisfied by a user's query only when all of its search terms and locations match the query.

To configure a rule to trigger based on a combination of search terms and dimension values:

1. Select the **Triggers** tab.
2. Type a search term in the **Search Term** box.
3. Select a match mode from the list to indicate how a search trigger must be matched from a user's record search query:
 - In **Match Phrase** mode (the default), all of the words of the trigger must match in the same order in the user's query for the rule to fire.
 - In **Match All** mode, all of the words of the trigger must match (without regard for order in the user's query) for the rule to fire.
 - In **Match Exact** mode, all the words of the trigger must exactly match a user's query for the rule to fire. Unlike the other two modes, a user's query must exactly match the trigger in the number of words and cannot be a super set of the triggers.
 - If you do not specify any search terms, the rule does not need any specific terms to qualify the rule for evaluation, but is still limited by other parameters of the rule.
4. Click **Add**.
A search term is added to a rule's trigger.
5. To add dimension values to a trigger, use the dimension tree, under **Navigation State**, to locate a dimension value. If the dimension tree contains more than 100 dimension values, click "next 100" to scroll through the dimensions.
6. Click **Add**.
A dimension value is added to a rule's trigger.
7. Click **Add Trigger**.
Merchandising Workbench appends any combination of search terms and dimension values together to create a trigger.
8. Select a location option for where the trigger applies:

- Select **Applies only at this exact location** to trigger a rule only at the exact location you specified. If a user submits a query from any other location, the trigger does not fire the rule.
- De-select this option to trigger the rule at any location in the data set that matches the trigger.

9. To add any number of additional triggers, repeat steps 2-8.

10. To proceed, specify the rule's targets.

- *Triggering a rule by allowing any dimension value* on page 37
You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.
- *Triggering a rule by adding only the root dimension value* on page 38
You add triggers to a rule (such as search term and dimension values) on the **Triggers** tab.
- *About match mode for search terms that trigger rules* on page 37
On the **Triggers** tab, you can specify different match modes for matching the search term that will be used to trigger your business rule.

Setting a rule's targets

Setting the rule's targets is part of configuring a rule. You can specify any number of featured records or dimension values for a rule's target.

You set a rule's targets on the **Target** tab of the **Edit Rule** page.

However, unlike a trigger, a target cannot contain multiple targets in the same way a trigger can have multiple triggers. This means if you click **Set Target** twice, you overwrite the first target with the value of the second target.

To set the target for a rule:

1. Click the **Target** tab of the **Edit Rule** page.
2. To add a featured record, either type in the record's ID and click **Add** or navigate to the desired record page in the preview application, and then click **Set from Preview App**.
3. To add dimension values to a target, use the dimension tree, under **Navigation State**, to locate a dimension value.
4. Click **Add**.
5. To include additional dimension values, repeat steps 3-4. The rule's target is the combination of these featured records and dimension values.
6. Click **Set Target**.
7. On the right side of the **Target** tab, enable or disable whether the rule restricts the promoted results based on the active navigation state:
 - Selecting **Restrict results to the active Navigation State**, you configure the rule with a *dynamic* target. The rule uses a combination of the specified target values and a user's current navigation state to determine which record pages display. For example, if you run a wine shop Web site and are promoting wine Best Sellers of 2003 (the target), the record page results are if a user's navigation state is Country > France rather than Country > Australia. In the former case, record pages of Best Sellers from France display; in the latter, Best Sellers from Australia.
 - De-selecting **Restrict results to the active Navigation State**, you configure the rule with a *static* target. The rule uses only the specified target values to determine which items display. The user's current navigation state is ignored. To continue the wine site example, suppose you are promoting Best Sellers of 2003, the record page results display the same set of bestseller wines no matter what the user's navigation state is.

8. To proceed, select the **When** tab.

- [Configuring a new dynamic business rule](#) on page 35
You configure new dynamic business rules from the **Rule Manager** page in Merchandising Workbench.
- [About dynamic business rules](#) on page 23
A dynamic business rule describes the logic of how to promote records for display to application users.
- [Tips about using dynamic business rules](#) on page 32
This topic provides a list of tips to help you tune your dynamic business rules when implementing dynamic merchandising or Content Spotlighting features, including how to incrementally implement dynamic business rules, improve performance, promote a specific record, display editorial content with your rule, and apply relevance ranking to your rules.
- [Symbols used in the Rule List](#) on page 31
Icons in the **Rule List** indicate if a rule is valid, not deployed, dynamic, static, has a trigger, has record(s).
- [Status messages for dynamic business rules](#) on page 48
When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.
- [About rule targets](#) on page 29
A target is a collection of one or more dimension values and one or more featured results that tells the MDEX engine which records you want to promote when your rule is evaluated for firing.
- [About dynamic business rules](#) on page 23
A dynamic business rule describes the logic of how to promote records for display to application users.

Specifying a time to trigger a rule

You can specify a time to associate with a dynamic business rule to control the point in time at which a rule can fire and the point in time after which it cannot fire.

You specify time values to associate with a rule in the **When** tab of the **Edit Rule** page. You can configure a rule to trigger within a specified range of dates.

To specify a time trigger for a rule:

1. Select the **When** tab.
2. In the **Activate this rule only during a specific time period?** line, click **Yes**.
3. In the **When should this rule start being active?** section, select a start date and start time for the rule.
4. In the right pane, in the **Does this rule expire?** line, click **Yes** or **No**. If you click **No**, the rule never expires; it can be active during an indefinite period of time.
5. If you chose **Yes**, select an expiration date and time.
6. To proceed with configuring your business rule, select the **Who** tab.

Example

For example, if a wine store wanted to promote the release of Beaujolais Nouveau on November 18, you could create a rule that would start being active after that date and then expire on January 1st.

- [About rule triggers](#) on page 27
A trigger is a set of conditions that must exist in a query for a rule to fire.
- [Status messages for dynamic business rules](#) on page 48
When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Specifying who sees the results of a rule

You can specify who sees the results of a rule by associating a previously created application-user profile with your rule.

Before you can do specify who sees the results of a rule, your technical team must create application-user profiles in Developer Studio and add the supporting code to your Web application. In Merchandising Workbench, you select the application-user profile and associate it with the rule.

Specifying or restricting who sees the results of your rule is part of creating a new dynamic business rule, or editing an existing rule.

You can restrict who sees the results of a rule by associating a previously created application-user profile with your dynamic business rule. Application-user profiles enable Endeca applications to display content to an end user based on that user's identity. An application-user profile is essentially a type of trigger for a rule.

To associate a rule with an application-user profile:

1. Select the **Who** tab of the **Edit Rule** page.
2. Select a user profile to associate with the dynamic business rule. Each business rule is allowed to have only one user profile associated with it.
3. To continue configuring your dynamic business rule, select the **Advanced** tab.

For example, red_wine_fan and premium_wine_buyer are possible user profiles. If a user with the profile premium_wine_buyer submits a query, the profile triggers a rule that promotes records for expensive vintage Bordeaux wines.

- [About dynamic business rules](#) on page 23
A dynamic business rule describes the logic of how to promote records for display to application users.
- [Symbols used in the Rule List](#) on page 31
Icons in the **Rule List** indicate if a rule is valid, not deployed, dynamic, static, has a trigger, has record(s).
- [Status messages for dynamic business rules](#) on page 48
When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Specifying how promoted results are ordered

In the **How are promoted results ordered?** section of the **Advanced** tab, you can tell the MDEX Engine to order the results for display.

For example, the promoted results can be displayed in a descending or ascending order, based on one of the properties or dimension values that you select. If you do not specify the order for displaying

results in this section, the results will be displayed in the default order that is set in the Endeca Developer Studio.

Specifying how the promoted results are ordered is part of configuring a dynamic business rule.

1. Select the **Advanced** tab of the **Edit Rule** page.
2. In the **How are promoted results ordered?** section, choose a property or dimension value from the **Sort By** list. For example, you may want to sort results by the **Name** property.
3. Check whether you want the results sorted in an ascending order. If unchecked, the result set is sorted in a descending order.
4. Click **OK** if you are finished configuring the dynamic business rule.
5. Click **Save Changes** on the **Rule List** page.
6. Click **Save**.
 - [About dynamic business rules](#) on page 23
A dynamic business rule describes the logic of how to promote records for display to application users.
 - [Symbols used in the Rule List](#) on page 31
Icons in the **Rule List** indicate if a rule is valid, not deployed, dynamic, static, has a trigger, has record(s).
 - [Status messages for dynamic business rules](#) on page 48
When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Adding rule properties

Rule properties are key/value pairs that are passed back to the application along with query results.

Dynamic business rules can have associated rule properties. They allow you to associate supplementary information, such as images or banners, with a rule. When a user triggers the rule, the application returns these properties in addition to any relevant record pages. You can associate template-based or custom properties with a rule. For example, you can associate an image or a banner with your rule.

Rule properties and property templates are established on a per-style basis in Developer Studio, therefore your Merchandising Workbench rule property display may vary for different styles in your application. Your view of the **Rule Properties** pane depends upon the configuration of style you have selected for the rule. For each style, the technical team at your site specified the set of template-based properties you can associate with that rule, as well as whether you can add your own custom properties.

To add properties for a rule:

1. In the **Rule Manager** page, select **Rule List** and select a rule for which you want to add properties.
2. Click the **Advanced** tab.
The **Rule Properties** pane displays.
3. Depending on how the style is configured for this rule, do the following to add properties to the rule:

Option	Description
If all the fields are grayed out	You cannot add rule properties to this rule, as its properties are specified by the technical team.
If the Key field is grayed out, but the URL value and Banner text value fields are enabled	Add the template-based properties to the URL and Banner text windows, based on the key that is configured in Developer Studio by the technical team.

Option	Description
If the Key field is enabled, and the URL value and Banner text value fields are enabled	Add custom properties to your rule, by providing both the key and its values for the URL and the banner text.
If the Key field is enabled for some values, and grayed out for other values	Add either custom properties to your rule by providing both the key and its values, or, optionally, add the URL value and the Banner text to your rule based on a template (key) specified by the technical team.

4. Click **OK**.
5. Click **Save Changes** on the **Rule List** page.
 - [About dynamic business rules](#) on page 23
A dynamic business rule describes the logic of how to promote records for display to application users.
 - [About rule properties](#) on page 30
Rule properties let you associate additional information, such as images or banners with a rule. Rule properties can be based on a template.
 - [Symbols used in the Rule List](#) on page 31
Icons in the **Rule List** indicate if a rule is valid, not deployed, dynamic, static, has a trigger, has record(s).
 - [Status messages for dynamic business rules](#) on page 48
When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Previewing dynamic business rules

This section introduces the preview application and auditing features to be used for testing, debugging, and previewing rules.

About the preview application

The Endeca-enabled application that appears in the **Preview** pane of the **Rule Manager** page is called the preview application.

You use the preview application to navigate to or search for specific locations in your data that then become the basis for dynamic business rules.

The preview application for the reference implementation appears in the **Preview** pane by default, when you first open your application in Merchandising Workbench. If you do not want the preview application to display, for example in cases when you did not set up the preview application for your own application, you can delete the entries for the **URL Mapping** fields in the **Preview App Settings** page. In this case, the preview application will not display, and all options that let you preview your rules will not display. To enable the display of the preview application, first set up your preview application and then enter the new **URL Mapping** values in the **Preview App Settings** page.

- [The Preview App Settings page](#) on page 20
The **Preview App Settings** page is where you set up communication between Merchandising Workbench and a preview application via URL Mapping values.

- [Testing dynamic business rules by using a preview application](#) on page 45
Merchandising Workbench lets you preview each dynamic business rule in a rule group.
- [Previewing rules](#) on page 47
Users who have Approve, Edit, or View permissions can preview rules.
- [Syntax of URL mapping in the preview application](#) on page 146
The **URL Mapping** fields allow you to define a generic syntax that describes to Merchandising Workbench how to build URLs.
- [Default values for the preview application URLs](#) on page 145
Once you first open your application in Merchandising Workbench, the **URL Mapping** values are filled in by default in Merchandising Workbench. This enables Merchandising Workbench to display the preview application for the reference implementation.
- [Specifying general preview application settings](#) on page 143
The **Preview App Settings** page allows you to specify parameters that enable the display of the preview application used by both the **Page Builder** and the **Rule Manager**.
- [Providing or confirming preview application URLs](#) on page 146
To enable communication between Merchandising Workbench and a preview application, you must specify **URL Mapping** values on the **Preview App Settings** page. The URLs contain variable mappings that describe to Merchandising Workbench how to build search and navigation URLs for your preview application.
- [Disabling the display of the preview application](#) on page 148
In general, the preview application displays by default in the **Preview** pane. You can tell Merchandising Workbench not to display the preview application in the **Preview** pane.
- [Enabling the display of the preview application](#) on page 149
The preview application displays by default in the **Preview** pane. However, if the preview application has been disabled from display, you cannot preview your rules or landing pages.
- [Default values for the preview application URLs](#) on page 145
Once you first open your application in Merchandising Workbench, the **URL Mapping** values are filled in by default in Merchandising Workbench. This enables Merchandising Workbench to display the preview application for the reference implementation.
- [Syntax of URL mapping in the preview application](#) on page 146
The **URL Mapping** fields allow you to define a generic syntax that describes to Merchandising Workbench how to build URLs.

Testing dynamic business rules by using a preview application

Merchandising Workbench lets you preview each dynamic business rule in a rule group.

A rule preview tells you why each rule fires or does not fire when you either click a trigger link or search and navigate in the preview application. Use a rule preview to test rules in your application and to better understand how rules behave.

Querying a location in the data set is made simple by the link in the **Trigger** column. This link provides a testing convenience to trigger the rule. Clicking the link displays the trigger's navigation state in the preview application.

To test dynamic business rules with the preview application:

1. Ensure that the preview application has all four **URL Mapping** values specified in order for it to display. By default, Merchandising Workbench contains these values and displays the preview application. However, if you remove the values for **URL Mapping** in the **Preview App Settings** page, the preview application does not interact with the **Rule Manager** page.

2. For each rule, ask an administrator to assign permission settings to the rule group (Approve, Edit or View).
3. Select **Preview** for each rule for each rule that you want to preview.
4. Specify the preview time. You can accept the current time, or you can specify a time in the future. Specifying a preview time lets you preview the results of the rules as if it were the preview time, rather than the time indicated by the system clock for the MDEX Engine.
5. To view the preview results, in the **Rule List** table, click the rule trigger and then click the **Preview** button.

A preview example

To illustrate previewing, here is an example that uses the sample wine application. If you want to know which rules fire when you navigate to Wine Type > Red and why the others do not fire, in the **Rule List** table, click the trigger Wine Type > Red and click **Preview**. The preview results display as shown:

DELETE	STATUS	NAME	MODIFIED	TRIGGER	TARGET
	Fired	<u>Recommended Merlots</u>	6/3/2008	Wine Type > Red	Wine Type > Red > Merlot, Designation > Highly Recommended
	Zone full	<u>Recommended Pinot Noirs</u>	6/3/2008	Wine Type > Red	Wine Type > Red > Pinot Noir, Designation > Highly Recommended
	Not considered	<u>Recommended Chardonnays</u>	5/28/2008	Wine Type > White	Wine Type > White > Chardonnay, Designation > Highly Recommended
	Fired	<u>Best Buys</u>	5/28/2008	(No location specified - this rule applies everywhere)	Designation > Best Buy
	Fired	<u>Highly Recommended</u>	5/28/2008	(No location specified - this rule applies everywhere)	Designation > Highly Recommended

The **Status** column indicates that three rules fired. Two rules fired because they apply everywhere. The "Recommended Merlots" rule fired because the user clicked the trigger Wine Type > Red. Note however that the "Recommended Pinot Noirs" rule did not fire with the trigger Wine Type > Red. The zone configuration allows a maximum of three rules to produce merchandising results; therefore, the "Recommended Pinot Noirs" rule indicates that the zone is full. Rules with a trigger that is not in the navigation state, such as "Wine Type > White," do not fire.

Examine the rows in the **Preview** and the **Status** column. The **Status** indicates why a rule does or does not fire.

- [Previewing rules](#) on page 47
Users who have Approve, Edit, or View permissions can preview rules.
- [About the preview application](#) on page 44
The Endeca-enabled application that appears in the **Preview** pane of the **Rule Manager** page is called the preview application.
- [The Preview App Settings page](#) on page 20
The **Preview App Settings** page is where you set up communication between Merchandising Workbench and a preview application via URL Mapping values.
- [Syntax of URL mapping in the preview application](#) on page 146
The **URL Mapping** fields allow you to define a generic syntax that describes to Merchandising Workbench how to build URLs.
- [Default values for the preview application URLs](#) on page 145
Once you first open your application in Merchandising Workbench, the **URL Mapping** values are filled in by default in Merchandising Workbench. This enables Merchandising Workbench to display the preview application for the reference implementation.

Previewing rules

Users who have Approve, Edit, or View permissions can preview rules.

While you are developing dynamic business rules against your preview application, it is important to test the rules to ensure they perform the task you intended. You can test rules using the preview feature available on either the **Rules** tab or the **Requests** tab of the **Rule Manager**.

Merchandising Workbench previews all rules from the application's home page. The rules on the **Rules** tab and the **Requests** tab display with color coding and additional status information (fired, not fired, etc.) as you search and navigate in the preview application.

1. On the **Rule Manager** page, select a rule group if you have not already.
2. Check **Preview** for each rule you want to preview.
3. Click the **Preview** button.
Merchandising Workbench is now in preview mode.
4. Specify a preview time by doing one of the following:
 - Accept the current time of the MDEX Engine as the preview time. (The current time is defined by the system clock of the host running the MDEX Engine for the preview application.)
 - Click the **Specify date** checkbox to enable the date/time selector and then specify date and time values. Using the calendar populates the date value.
5. To preview a specific rule, click a trigger value for a rule in the **Trigger** column. You can also search or navigate to any location in the application in order to preview which rules trigger.
6. Check the portion of your preview application reserved for promoted results to see if the intended target records appear. (Merchandising Workbench immediately refreshes the promoted results as you search and navigate in the preview application.)
7. After you are finished viewing the preview application, click **Stop Preview**.
8. Edit the rule if necessary, and repeat the steps above to achieve the intended results. In some cases, you may need to have your Endeca technical team modify zones, styles, or rule groups in Developer Studio.



Note:

- In some cases, the status information from previewing your rules may not match the merchandising results in your preview application. This apparent mismatch typically occurs when your technical team sets up your application to modify the merchandising results from the MDEX Engine before the results are displayed in the preview application. For more information, contact your technical team.
- Although you see previewing results for only the rule group you select, Merchandising Workbench previews all rules in the application. This means that other rule groups being previewed may affect the results of rules in the rule group you are viewing. You can minimize any confusion that may result from this interaction by previewing all rule groups at once and examining the results for the whole application. You do this by selecting **All Groups** on the **Rule Manager** page, choosing the appropriate navigation state, and then selecting **Preview**. Even in the **All Groups** page, you can only see groups if you have at least View permissions.
- [Testing dynamic business rules by using a preview application](#) on page 45
Merchandising Workbench lets you preview each dynamic business rule in a rule group.
- [About the preview application](#) on page 44
The Endeca-enabled application that appears in the **Preview** pane of the **Rule Manager** page is called the preview application.

- [The Preview App Settings page](#) on page 20

The **Preview App Settings** page is where you set up communication between Merchandising Workbench and a preview application via URL Mapping values.

- [Syntax of URL mapping in the preview application](#) on page 146

The **URL Mapping** fields allow you to define a generic syntax that describes to Merchandising Workbench how to build URLs.

- [Default values for the preview application URLs](#) on page 145

Once you first open your application in Merchandising Workbench, the **URL Mapping** values are filled in by default in Merchandising Workbench. This enables Merchandising Workbench to display the preview application for the reference implementation.

Status messages for dynamic business rules

When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

You use a rule preview to test your rules, and see if they fired or not. This table lists the **Status** messages and their descriptions.

Status Message	Status Description
Fired	The rule fired based on the user's navigation location or search term.
Trigger not met	The rule did not fire based on the user's navigation location or search term.
Navigation trigger not satisfied	This message is similar to "Trigger not met" but it is more specific: the trigger is a navigation location in the data set.
Search trigger not satisfied	This message is similar to "Trigger not met" but it is more specific: the trigger is a search term.
Not considered	The message is a generic description for any rule whose trigger does not apply. This message also describes rules that do not have "Preview" selected.
Zone full	The rule was evaluated but did not fire because the zone's rule suppression threshold was met by other rules that fired first. For example, if there are ten rules assigned to a zone and the zone's rule suppression threshold is set to two, only the first two rules that fire can promote results. When the remaining rules are considered, the zone is full. In such situations, a rule's priority rank in the rule list is important. Your technical team can modify a zone's threshold value using Developer Studio.
Rule not valid for search	The rule is not valid because its zone, and all the rules in the zone, are not enabled for search. Your technical team can modify this setting using Developer Studio.
Invalid navigation state	The combination of the rule's trigger and target values did not produce any merchandising results.
Empty navigation state	This message is similar to "Invalid navigation state." The combination of the rule's trigger and target values did not produce any merchandising results.
Insufficient records	The rule did not fire because it does not produce the minimum number of records necessary for display as defined for the rule's style. Your technical team can modify this setting using Developer Studio.

Status Message	Status Description
Insufficient unique records	This message is similar to "Insufficient records". The rule did not fire because it does not produce the minimum number of unique records necessary for display as defined for the zone. Your technical team can modify this setting using Developer Studio.
Empty results	The rule did not produce merchandising results. This can occur when the zone for a rule requires unique records and those records have already been promoted as part of another zone's merchandising results.

Managing the workflow of dynamic business rules

This section defines the user permission levels, describes their respective responsibilities, and details the procedures for each permission level for activating and deactivating rules.

Activating or deactivating a business rule

A user with Approve permissions can activate or deactivate a rule.

You activate a rule in order for it to fire in the preview application. You deactivate a rule that should no longer fire in the preview application.

To activate or deactivate a business rule:

1. On the **Rule Manager** page, select the rule group that contains a rule you want to activate or deactivate. (If you do not use rule groups, see step 2 or step 3).
The **Rule List** page displays.
2. To activate a rule, on the **Rule List** page, check the **Active** checkbox for a rule.
The rule **State** changes to Active.
3. To deactivate a rule, on the **Rule List** page, uncheck the **Active** checkbox for a rule.
The rule **State** changes to Inactive.
4. Click **Save Changes**. Rules with a **State** marked Active do not trigger until you save changes.
 - *Adding a note to a business rule and e-mailing change notification* on page 50
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 - *Canceling requests to activate or deactivate a rule* on page 57

A user who has Edit permission for a rule group can cancel requests to activate or deactivate a rule.

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When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Adding a note to a business rule and e-mailing change notification

You can add a note when you change a rule's workflow state. Adding a note, or an e-mail notification for a note is optional.

The Merchandising Workbench mail-to form uses the standard comma delimiter to separate multiple e-mail addresses. If you are using a mail client such as Microsoft Outlook, you may need to change the default delimiter in Outlook from semicolons to commas. See the Microsoft Outlook documentation for details.

The **Add a note** page appears after you change a rule's workflow state and click **Save Changes**. A state change occurs when you do any of the following to a rule: activate, deactivate, request activation, request deactivation, cancel a request for a rule, or reject a request. A note provides a simple way to describe changes you make while changing workflow states.

For example, a user with Edit permissions might modify a rule, make a request to activate the rule, and add a note to indicate "This rule now promotes Chardonnay wines for the July 4th weekend." This information is useful for a user with Approve permissions to understand what has changed before activating a rule. If either an approver or editor makes changes to multiple rules, Merchandising Workbench saves the note information for all rules that were modified. After you type a note and click **Add**, the note displays under **Rule History** on the **General** tab. There is no history tracking for note information. Previous notes are not stored.

Optionally, you can also e-mail a note along with change notification information for any rule that has been modified. In this case, you click **Add and Email** on the **Add a note** page. Merchandising Workbench creates an e-mail addressed to all approvers associated with a modified rule group. Merchandising Workbench also addresses the e-mail to the most recent editor of a rule if the rule has a pending request. The change notification information includes the new workflow state for a rule and the name of the rule that has been modified.



Note: Merchandising Workbench cannot send e-mails to users who do not have an e-mail address available. Merchandising Workbench uses the e-mail address listed for the user in the **User Management** page (for Merchandising Workbench users) or the e-mail address listed in LDAP (for LDAP users or groups). For more details about workflow in Merchandising Workbench with LDAP, see the *Endeca Administrator's Guide*.

To add a note:

1. Change a rule's workflow state (by activating, deactivating, requesting activation, requesting deactivation, cancelling a request for a rule, or rejecting a request).

2. Click **Save Changes**.

The **Add a note** page displays.

3. Do one of the following:

Action	Result
Leave the text box empty and click Add.	Your state change is recorded without an associated note.
Type a note in the text box and click Add.	The note you provide is saved and displayed on the General tab for the rule.
Type a note in the text box and click Add and Email.	The e-mail window displays. You can modify the list of recipients as needed before sending the e-mail. The note you provide is saved and displayed on the General tab for the rule.

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When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Requesting the activation of a rule

You need to request a rule activation if you have Edit permissions but not Approve permissions for the rule group.

A user who has Edit permissions, but not Approve permissions, has to request the activation of a rule before the rule can fire in the preview application. A rule with an open request for activation has a state of Inactive: Requested for Activation. A user who has Approve permissions evaluates the request and decides whether to activate the rule.

To request activation of a rule:

1. On the **Rule Manager** page, do one of the following:
 - If your application uses multiple rule groups, select the rule group that contains a rule you want to activate.
 - If your application uses the single default rule group, skip to step 2.
2. On the **Rule List** page, click the **Request Activation** checkbox for a rule.
3. Click **Save Changes**.

The rule for which you requested activation changes its state to Inactive: Requested for Activation.

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When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Requesting the deactivation of a rule

You need to request a rule deactivation if you have Edit permissions but not Approve permissions for the rule group.

A user who has Edit permissions, but not Approve permissions, has to request the deactivation of a rule before the rule is no longer available in the preview application. A rule with an open request for deactivation has a state of Active: Requested for Deactivation. Next, a user who has Approve permissions evaluates the request and decides whether to deactivate the rule.

To request deactivation of a rule:

1. On the **Rule Manager** page, do one of the following:
 - If your application uses multiple rule groups, select the rule group that contains a rule you want to deactivate.
 - If your application uses the single default rule group, skip to step 2.
2. On the **Rule List** page, click the **Request Deactivation** checkbox for a rule.
3. Click **Save Changes**.

The rule for which you requested the deactivation changes its state to Active: Requested for Deactivation.

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When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Managing requests for rule activation

The actions available on the **Requests** tab depend on the type of permissions you have.

To approve, reject, or pend requests for rule activation, you must have Approve permissions to the rule group. An administrator assigns these permissions on the **User Management** page of Merchandising Workbench.

- Users with Approve permissions (approvers) can approve, reject, or pend requests for rule activation. These actions have the following meaning:

Approving a request for activation	Changes the rule's state to Active and makes it available in the preview application.
Rejecting a request for activation	Changes the rule's state to Inactive: Request Not Approved. The rule is not available in the preview application.
Pending a request for activation	Lets you address the request later. Pending a request for activation has no effect on the rule's state or availability in the preview application.

- Users with Edit permissions (editors) for a rule group can view and cancel requests for rule activation. Cancelling a request removes the request from the system, and the rule reverts to its previous state. For example, suppose an editor creates a new rule with a state of Inactive: Draft. The editor wants to activate the rule and clicks **Request Activation**. The rule's state becomes Inactive: Requested For Activation. The rule now appears on the **Requests** tab under **Requested for Activation**. Suppose for some reason, the editor no longer wants to activate this rule. On the **Requests** tab, the editor clicks **Cancel**, and the request is removed from the system and the state reverts to Inactive: Draft.
- Users with View permissions see the same **Cancel** and **Status** controls as users with Edit permissions; however, the cancel checkbox is unavailable. Users with View permissions can only view pending requests for activation.

To manage requests for rule activation:

1. On the **Rule Manager** page, do one of the following:
 - If your application uses multiple rule groups, select the rule group that contains a rule with an open request for activation.
 - If your application uses the single default rule group, skip to step 2.
2. On the **Rule List** page, click the **Requests** tab.
3. Choose the rule you want to modify and select either **Approve**, **Reject**, or **Pending** as described above.
4. Click **Save Changes**.

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Managing requests for rule deactivation

The actions available on the **Requests** tab depend on the type of permissions you have.

To approve, reject or pend requests for rule deactivation, you must have Approve permissions to the rule group. An administrator assigns these permissions on the **User Management** page of Merchandising Workbench.

- Users with Approve permissions (approvers) can approve, reject, or pend requests for rule deactivation. These actions have the following meaning:

Approving a request for deactivation	Changes the rule's state to Inactive and makes it unavailable in the preview application.
Rejecting a request for deactivation	Changes the rule's state from Active to Active: Request Not Approved. The rule is still available in the preview application.
Pending a request for deactivation	Lets you address the request later. Pending a request for deactivation has no effect on the rule's state or availability in the preview application.

- Users with Edit permissions (editors) for a rule group can view and cancel requests for rule deactivation. Cancelling a request removes the request from the system, and the rule reverts to its previous state.
- Users with View permissions see the same **Cancel** and **Status** controls as users with Edit permissions; however, the cancel checkbox is unavailable. Users with View permissions can only view pending requests for deactivation.

To manage requests for rule deactivation:

1. On the **Rule Manager** page, do one of the following:
 - If your application uses multiple rule groups, select the rule group that contains a rule with an open request for deactivation.
 - If your application uses the single default rule group, skip to step 2.
2. On the **Rule List** page, click the **Requests** tab.
3. Choose the rule you want to modify and select either **Approve**, **Reject**, or **Pending** as described above.
4. Click **Save Changes**.

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Canceling requests to activate or deactivate a rule

A user who has Edit permission for a rule group can cancel requests to activate or deactivate a rule.

To cancel a request to activate or deactivate a rule:

1. On the **Rule Manager** page, do one of the following:

- If your application uses multiple rule groups, select the rule group that contains a rule with an open request for activation/deactivation.
- If your application uses the single default rule group, skip to step 2.

2. On the **Rule List** page, click the **Requests** tab.

3. Identify the request you want to cancel and click **Cancel**.

4. Click **Save Changes**.

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When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Managing dynamic business rules

This section describes procedures related to editing, deleting, and managing rules.

Copying a rule

You can copy a rule in order to create a new rule based on it.

The procedure for copying a rule varies slightly depending on whether you have Approve or Edit permissions. The differences are mentioned below. Users with View or None permissions for a rule group cannot copy rules.

To make a copy of a rule:

1. On the **Rule Manager** page, select the rule group that contains the rule you want to copy.
2. Click the **Copy** icon associated with the rule.
 - If you have Approve permissions, Merchandising Workbench makes a copy of the rule in Draft state.
 - If you have Edit permissions and want to copy an active rule that has no open requests, choose either **Copy** or **Modify**.

Choosing **Copy** makes a copy of the rule in Draft state (for users with Edit and Approve permissions). Choosing **Modify** makes a replacement for the original rule and initiates the workflow requests to the approver to replace the original with the duplicate.

3. On the **General** tab of the **Edit Rule** page, reconfigure the copied rule as necessary.
4. Click **OK**.
5. Click **Save Changes**.
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By editing a rule, you can change its triggers, targets, permissions, the time when the rule is planned to be fired, and other parameters.
 - [Deleting a rule](#) on page 60
You can delete a rule in Merchandising Workbench if it is no longer needed.
 - [Restoring a rule](#) on page 60
If a dynamic business rule has been marked for deletion, you can cancel your changes and restore it to the Rules List.
 - [Filtering rules](#) on page 61
You can filter dynamic business rules to locate a particular rule or a subset of rules based on its trigger, name, group name, zone, or on whether it is active or inactive.
 - [Changing the priority of a rule in a group](#) on page 63
Prioritizing rules affects the order in which the MDEX Engine evaluates the business rules.
 - [Reverting to applied rules](#) on page 64
Reverting to applied rules cancels changes that have not yet been applied (saved), and loads the last set of rules applied to the MDEX Engine.
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The **Rule Manager** page is where you create and modify rules, activate/deactivate rules, change their priority, and preview rules. However, your user permissions determine which of these actions you can perform.

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When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Editing a rule

By editing a rule, you can change its triggers, targets, permissions, the time when the rule is planned to be fired, and other parameters.

You must have Edit or Approve permissions for a rule group to edit a rule in the group.

To edit a business rule:

1. On the **Rule Manager** page, select the rule group that contains the rule.
2. In the **Rule List**, click the rule title. (Do not click the rule's trigger or target links: those links display the trigger or targets in the preview application.)
3. Modify the rule as necessary. See "Creating a new rule" for details about how to modify specific elements of a rule. To edit a trigger value, select the **Triggers** tab and click the underlined trigger link. This loads the trigger in the **Create New Trigger** box.
4. Click **OK** to return to the **Rule List**.

The **Status** column of the **Rule List** indicates the rule has been modified. Changes do not take effect in the application until you click **Save Changes**.

5. Click **Save Changes**.

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You can copy a rule in order to create a new rule based on it.

- [Deleting a rule](#) on page 60

You can delete a rule in Merchandising Workbench if it is no longer needed.

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If a dynamic business rule has been marked for deletion, you can cancel your changes and restore it to the Rules List.

- [Filtering rules](#) on page 61

You can filter dynamic business rules to locate a particular rule or a subset of rules based on its trigger, name, group name, zone, or on whether it is active or inactive.

- [Changing the priority of a rule in a group](#) on page 63

Prioritizing rules affects the order in which the MDEX Engine evaluates the business rules.

- [Reverting to applied rules](#) on page 64

Reverting to applied rules cancels changes that have not yet been applied (saved), and loads the last set of rules applied to the MDEX Engine.

- [About dynamic business rules](#) on page 23

A dynamic business rule describes the logic of how to promote records for display to application users.

- [The Rule Manager Page](#) on page 14

The **Rule Manager** page is where you create and modify rules, activate/deactivate rules, change their priority, and preview rules. However, your user permissions determine which of these actions you can perform.

- [Status messages for dynamic business rules](#) on page 48

When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Deleting a rule

You can delete a rule in Merchandising Workbench if it is no longer needed.

To delete a business rule:

1. In the **Rule List**, click the **Delete** icon for the rule you want to delete.
The rule is marked for deletion.
2. Click **Save Changes**.



Note: A rule is not deleted from the application until you save changes.

- [Copying a rule](#) on page 58
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- [Editing a rule](#) on page 59
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- [Restoring a rule](#) on page 60
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When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Restoring a rule

If a dynamic business rule has been marked for deletion, you can cancel your changes and restore it to the Rules List.

You can restore a rule only if you have not yet clicked **Apply Changes**.

Click **Reset Changes** on the Rule Manager page.

Any rule previously marked for deletion reappears in the Rules List and may be modified.

- [Copying a rule](#) on page 58
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When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Filtering rules

You can filter dynamic business rules to locate a particular rule or a subset of rules based on its trigger, name, group name, zone, or on whether it is active or inactive.

Filtering is useful if you have a long list of business rules and want to find a rule based on its trigger, target, name, group name, zone name, or active/inactive availability in your application. Merchandising Workbench uses an implied wildcard to filter. For example, filtering by "us" is equivalent to filtering by "*us*".

Merchandising Workbench checks all words in a rule's configuration when filtering. This means that if a rule has several dimension values or keywords in a trigger or target, Merchandising Workbench filters against each word in the trigger or target. The default view of the **Rule List** is not filtered.

Filtering applies only to the rules contained in the rule group you selected. In other words, a filter does not display rules that are contained in other rule groups.

To apply a filter to the rule list:

1. On the **Rule Manager** page, do one of the following:

- If your application uses multiple rule groups, select the rule group that you want to filter within.
- If your application uses the single default rule group, skip to step 2.

2. Select a state filter from the list:

State filter	Description
All States	Filters both Active and Inactive rules
Inactive	Filters rules that cannot be triggered by a user's query
Active	Filters rules that can be triggered by a user's query

3. Type a word, partial word, or letter by which you want to filter your rules.

4. Click **Filter**.

5. To restore the unfiltered view of the **Rule List**, click **Clear Filter**.

Example

For example, in the sample wine application, filtering for "rec" returns "Recommended Merlots", "Highly Recommended" and any other rules with "rec" in the rule's configuration. You could also select Active from the list and filter for "rec" to return only active rules that have "rec" in the rule's configuration.

- [Copying a rule](#) on page 58
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- [Editing a rule](#) on page 59
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- [Deleting a rule](#) on page 60
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- [Status messages for dynamic business rules](#) on page 48
When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Changing the priority of a rule in a group

Prioritizing rules affects the order in which the MDEX Engine evaluates the business rules.

The **Priority** column of the **Rule List** allows you to increase or decrease the priority of a dynamic business rule. Moving a rule toward the top of the **Rule List** causes the MDEX Engine to evaluate that rule before others lower in the list. Increasing a rule's priority in the list increases the likelihood that a rule is triggered before another.



Note: You can prioritize rules in Merchandising Workbench relative to other rules in the same rule group. Your technical team can use Developer Studio to change the priority of a rule group with respect to other rule groups. The **Rule Manager** tab of Merchandising Workbench displays the groups in their relative order of priority.

To change the priority of a rule within a rule group:

1. In the **Rule List**, select the group containing the rule whose priority you want to change (if your technical team created one or more rule groups).
The group of rules is highlighted.
2. Select the rule from the rule group.
The rule is highlighted.
3. In the **Priority** column for the rule you want to change, highlight the number in the text box and replace it with the new priority number. For example, if you want the rule to have the highest priority, type 1.
4. Click the **Priority** link to sort the column. (Sorting by **Priority** reorders the rules according to your changes.)
The rules are reordered according to your new priorities.
5. Click **Save Changes**.

Example

For example, a zone is configured to display results from a maximum of two rules. If you have ten possible rules available for the zone, the MDEX Engine evaluates the rules in the order they appear in the list, and then returns results from only the first two rules that have valid merchandising results.

- [Copying a rule](#) on page 58
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- [Editing a rule](#) on page 59
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Reverting to applied rules

Reverting to applied rules cancels changes that have not yet been applied (saved), and loads the last set of rules applied to the MDEX Engine.

To revert to applied rules:

1. On the **Rule Manager** page, click **Reset Changes**.
2. Click **OK** to acknowledge the cancellation.
Your modifications to the rule are not applied and the previously saved set of rules is loaded to the MDEX Engine.

- [Copying a rule](#) on page 58
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- [Status messages for dynamic business rules](#) on page 48
When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

About sorting data in the Rule Summary table

Once you create your business rules, you can sort most of the data displayed in the **Rule Summary** table.

To check if a column is sortable, in the **Rule Summary** table, move your cursor over the column heading. If the rule is sortable, the heading becomes a link and a mouse-over tip displays to explain the sort order. You can sort columns in both ascending and descending order. Any ties in a sort are broken by the priority value of a rule.

For example:

- To order rules alphabetically, sort them by the **Name** column.
- To see the most recent rule changes, sort them by the **Modified** column.

Columns are sorted in the following way:

Column title	Column description
Delete	Sorts the rules by whether a rule is pending deletion.
Status	Sorts the rules by whether a rule is pending deletion, and then performs a secondary sort by whether there are unsaved changes. If you are in Preview mode, the rules sort in the following order: Fired, Not Fired, Not Considered.
Name	Sorts the rules alphabetically by name.
Modified column	Sorts the rules by date. Rules that have no last modified date appear at the end of the sort.
Trigger	Sorts rules alphabetically by the first trigger value. All other trigger values are ignored for sorting. Rules with no location specified appear at the end of the sort.
Target	Sorts rules alphabetically by the first target value.
Zone	Sorts rules alphabetically by zone name.
State	Sorts rules alphabetically by state name.
Active	Sorts by whether a rule is active or not.
Request Activation	Sorts rules by whether the request is enabled or not.
Request Deactivation	Sorts rules by whether the request is enabled or not.

Column title	Column description
Preview	Sorts rules that are enabled for preview or not.
Copy	Not sortable.

- [About dynamic business rules](#) on page 23
A dynamic business rule describes the logic of how to promote records for display to application users.
- [Sorting data in the Rules table](#) on page 66
Links at the top of most columns in the **Rules** table on the **Rule List** page allow you to sort data.
- [Status messages for dynamic business rules](#) on page 48
When you preview rules, the **Status** column in the **Rule List** displays messages that explain why a particular rule did not fire.

Sorting data in the Rules table

Links at the top of most columns in the **Rules** table on the **Rule List** page allow you to sort data.

To sort business rules in Merchandising Workbench:

1. In the **Rules** table, choose one of the sortable columns.
2. Click the column heading. The data sorts, and a sort indicator (the arrow) appears indicating the sort order.



Note:

If you continue clicking the column heading, it toggles the sort order between ascending and descending.

- [About dynamic business rules](#) on page 23
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Once you create your business rules, you can sort most of the data displayed in the **Rule Summary** table.
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Copying post-Forge dimensions to Merchandising Workbench

In some cases, accessing the Rule Manager or Dimension Order pages of Merchandising Workbench may display an error about missing dimensions, such as: Could not find post-Forge dimensions in your instance configuration.

This error occurs when Merchandising Workbench refers to automatically generated dimensions that are not stored with the instance configuration in Merchandising Workbench. To solve this error, copy the post-Forge dimensions file to Merchandising Workbench using either of the following approaches:

- Run `emgr_update` with the `--action` parameter set to `set_post_forge_dims`.
- Provision and run the Endeca-provided baseline update script. For a list of prerequisites to use this script, see "About the Baseline Update Script" in the *Endeca Administrator's Guide*.

To avoid errors if you are using automatically generated dimensions, do one of the following:

1. Run `emgr_update` with an `--action` of `set_post_forge_dims`. For additional information about using `emgr_update`, see the *Endeca Administrator's Guide*. Specify the following values for parameters:

Parameter	What to specify
<code>--host</code>	The machine name and port for the machine running Merchandising Workbench
<code>--app_name</code>	The application name whose instance configuration you want to transfer the dimensions file to
<code>--post_forge_file</code>	The path and name of the file that contains the post-Forge dimensions

For example, specify:

```
emgr_update --host localhost:8888 --app_name TestApp --action
set_post_forge_dims --post_forge_file ../data/forge_output/TestApp.dimensions.xml
```

2. Provision and run the Endeca-provided baseline update script:
 - a) Open the baseline update script that Endeca provides. This is stored in `%ENDECA_ROOT%\bin\baseline-update.bat` on Windows and `$ENDECA_ROOT/bin/baseline-update.sh` on Unix.
 - b) Provision this script as appropriate for your Endeca application. For more information on provisioning, see "Provisioning an Implementation with the Endeca Application Controller" in the *Endeca Administrator's Guide*.
 - c) Set the instance configuration from Developer Studio to Merchandising Workbench.
 - d) Run the baseline-update script. (The script that Endeca provides calls `emgr_update` with the `set_post_forge_dims` parameter.)



Chapter 4

Working with landing pages

This section provides a comprehensive walkthrough of creating rich, data-driven landing pages with the Endeca **Page Builder**.

About the Endeca Page Builder

The Endeca **Page Builder** is a powerful template-based merchandising tool that enables rapid creation of rich, dynamic landing pages. The **Page Builder** gives the merchandiser unprecedented control over site content without the need for IT intervention.

Whether your visitors are directed from an external search engine or from on-site search and navigation, well-designed landing pages are integral to an engaging user experience. Presenting products and rich content in a targeted, relevant manner has been shown to significantly boost conversion rates and can increase the effectiveness of both paid and natural search campaigns.

With the Endeca **Page Builder**, merchandisers work from custom templates to create rich, data-driven landing pages easily. The **Page Builder** allows merchandisers to manage the placement and display of products, dimensions, promotions, rich media, and other forms of product and content spotlighting. Each landing page can be used in any number of locations across a site, decreasing the time and effort normally associated with the creation and maintenance of landing pages.

This ability to manipulate landing page content introduces merchandisers to a new level of control over style and brand conventions for landing pages within a site.

Overview of the Page Builder interface

This section describes each of the three main views in the **Page Builder** tool.

Group List View

The **Group List View** displays a list of all the landing page groups in your application.

If your application has more than one landing page group, the **Group List View** is the first page you see when you open the **Page Builder**. If your application has only one landing page group, the **Page Builder** opens straight to the **List View**.

The **Group** column lists all of the individual landing page groups and the **Permission** column provides you with information about your permission level for each group in the list.

To enter the **List View** of a particular landing page group, click on the name of that group from the **Group** column.

- [About Page Builder permissions](#) on page 94

With the **Page Builder** you create, modify, activate or deactivate, prioritize, and preview landing pages. However, your user permissions determine which of these actions you can perform.

List View

The **List View** is separated into two sections, the **Page List** table and the **Preview Pane**.

The Page List table

You can sort the **Page List** table by **Name**, date **Modified**, **State**, or **Priority** by clicking on one of these headings.

Column	Description
Status	This column only displays when you are in preview mode. It provides previewing information that briefly describes why each page does or does not display when you either click a location link or search and navigate in the preview application.
Name	This column displays the names of all the landing pages in the group.
Modified	This column lists the date and time of the last modification to a landing page.
Location	This column lists the locations where each landing page may appear.
State	This column contains information about the workflow state of the landing page. Landing pages can be Active , Inactive , Pending Activation , or Pending Deactivation . Each workflow state is associated with an icon, and these icons are explained in a legend at the top of the page.
Action	This column enables workflow actions for landing pages. It only displays actions appropriate for your permission level and automatically updates each time the state of a rule is changed. For example, if a landing page is Inactive , an Editor is given the option to Request Activation . If an Approver views

	<p>a page that is Pending Activation, he or she is given the option to Approve or Reject the request.</p> <p>The Action column does not display in preview mode.</p>
Preview	<p>This column contains a Preview checkbox for each landing page in the table. Select the checkbox to evaluate a landing page with the preview application. If you de-select this checkbox for a landing page, it will not be evaluated.</p>
Priority	<p>This column lists the Priority level of each page. The page with the highest priority is given the lowest number. Use the text boxes in this column to increase or decrease the priority of landing pages.</p>
Copy	<p>Use the Copy icons in this column to copy a landing page. Copying a landing page provides a convenient starting point for creating similar pages.</p> <p>The Copy column does not display in preview mode.</p>
Delete	<p>Use the Delete icons in this column to delete landing pages.</p> <p>The Delete column does not display in preview mode.</p>

The Preview Pane

If your technical team has configured a preview application, it displays in the **Preview Pane** at the bottom of the **List View**. You can use the **Preview Pane** to search and navigate through your preview application to view and debug your landing pages.

If a preview application has not been enabled, the **Preview Pane** still displays, but does not contain a visual representation of your application or landing pages. Instead of showing the page that displays at a location in the application, the location is displayed as breadcrumb text at the top of the pane.

- [About previewing landing pages](#) on page 90
You use the **Preview pane** to navigate to or search for specific locations in your application. This is useful for debugging and testing your landing pages.
- [About previewing without a preview application](#) on page 91
If you do not have a preview application enabled, you can still test your landing pages to see whether or not they fire in a specific location by using the color coding and status messages on the **Page List** table.
- [Troubleshooting pages](#) on page 103
If page templates or cartridges have been removed from the Page Builder, or if a page template is invalid, you will receive an error message.

Edit View

You configure and modify landing pages in the **Edit View** of the **Page Builder**.

The **Edit View** is separated into two sections, the **Page Summary Pane** and the **Content Editor Pane**.

The Page Summary Pane

Field	Description
Name	This text box displays the name of the landing page. You can specify or change the name of a landing page by editing the text.
State	The top right corner contains information about the workflow state of a landing page and provides options to change the workflow state of a landing page. Landing pages can be Active , Inactive , Inactive: Activation Requested , or Active: Deactivation Requested . Only actions appropriate for your permission level are displayed and the options are automatically updated each time the state of a rule is changed. For example, if a landing page is Inactive , an Editor is given the option to Request Activation . If an Approver views a page that is Pending Activation , he or she is given the option to Approve or Reject the request.
Location	This space displays all of the locations that are associated with a landing page. Add a location by clicking the Add Location button. Click on an existing location to modify it, and delete a location by clicking the X icon associated with it.
Template	This space displays the name of the template that a landing page is based on. Choose or change a template by clicking Select Template .
User Profile	This drop-down menu contains a list of all the user profile groups defined in your application. To associate a user profile with a landing page, select an option from the drop-down menu.
	 Note: Not all applications will have user profiles. User profiles are configured by your technical team in Developer Studio.

Select Time

This space contains information about the dates during which a landing page is active. To activate a landing page only during a specific time period, click **Select Time**.

The Content Editor Pane

The **Content Editor Pane** is separated into two sections, the **Content Tree** on the left and the **Content Detail Panel** on the right. Use the **Content Tree** to navigate through the sections and cartridges of your landing page. Use the **Content Detail Panel** to configure cartridges.

Basics of landing pages

This section provides high-level conceptual information about **Page Builder** landing pages.

Components of landing pages

Templates, sections, and cartridges are the core components of the landing pages you create with the **Page Builder**.

Templates

Page templates define overall page layout and style for a landing page. In general, page templates are created by developers to reflect samples designed by the creative team. The resulting documents are uploaded into the **Page Builder** tool and serve as a framework for you to build upon and customize.

Sections

Templates contain sections that serve as placeholders for the display of products, dimensions, promotions, rich media and other forms of content. Each section is configured by developers to accept certain types of content in the form of a cartridge.

Cartridges

Cartridges are essentially mini-templates that you plug into sections and then configure to contain the content you want to display on your landing page. Each cartridge might have several fields to configure, and may even contain additional cartridges. Depending on the cartridge you have selected, you may be asked to specify a path to an image or flash file, a title, rollover text, or additional cartridges. The simplest cartridges may need no configuration.

Templates and cartridges are custom-built by developers, so each may have a unique set of options for configuration.

About using templates and cartridges

By combining templates and cartridges, you control the elements that make up a landing page.

For example, you need to create a landing page for the search term "HDTV":

You log into the **Page Builder** tool and create a new landing page. You have three options for a template:

- LargeSplash
- BrandPage
- SearchResults

You choose the LargeSplash template. This template has a section called "top" and you are presented with three "LargeSpotlight" cartridge options for filling it:

- ImageBanner
- FlashBanner
- Rotational

You choose the ImageBanner cartridge. There are three fields that you are required to fill in:

- Image source path
- Title
- Rollover text

You specify the path to the image

"C:\myapps\landingpagecontent\images\hdtvbanner1.jpg", a title "Save an Extra 10% on TVs," and provide rollover text "10% off Brand Name HDTVs."

This is a very simple example of how templates and cartridges interact to create rich, data-driven landing pages.

About controlling the display of landing pages

Landing pages only display in your application if a specified set of search and navigation conditions exist in the application. These conditions are known as triggers.

Once you have created a new landing page, you can set it to display at a specific location in your application. The location of a landing page is defined by a particular set of refinements or search terms that trigger the page to display.

There are also triggers to control who sees a landing page, as well as triggers to specify the times and dates when pages are active.

By default, a new landing page has no trigger until you add one. You can choose not to add any specific location and instead allow the page to display at every location in your Web application. This means that the landing page displays with any query a user makes—with any search term or refinement state. It also means that anyone can see it, and it is not constrained by a time frame.



Note: If you choose not to add any locations to your landing page, assign it a low priority. If you don't assign it a low priority, it will take precedence over pages designed specifically for certain locations and prevent them from displaying.

Refinement trigger

A collection of one or more refinements can trigger a landing page if a user navigates to a location that contains those refinement states.

For example, if your landing page location is set to trigger on the refinement state Wine Type > White > Chardonnay, and a user navigates to Wine Type > White and then to Chardonnay, your landing page displays. The page does not display if the user only navigates to Wine Type > White.

Search term trigger

One or more search terms can trigger a landing page if a user's query includes the terms. You can specify one or more search terms, and the match mode for the search terms. While you can only specify one search term or search term phrase per location, you can specify several locations for a single landing page.

For example, if your landing page location is set to trigger on the search term "Sauvignon Blanc," and a user searches for "Sauvignon Blanc," your landing page displays.

Combination triggers

You can specify both a search term trigger and a refinement trigger for a landing page. If a location contains both a search term and a refinement state, both sets of criteria must be met in order for the page to display.

For example, if your landing page location is set to trigger on the refinement state Wine Type > White and the search term "Apple," a user must search for the term "Apple" from the Wine Type > White refinement state in order for the page to display.

User profile triggers

You can control who sees your landing page by associating the page with a user profile. User profiles enable Endeca applications to display content to an end user based on that user's identity.

For example, if you have a "Free Shipping" promotion on a landing page but only "Members" are eligible, you would select the "Members" profile so that users identified as non-members would never see the page.



Note: Your technical team creates user profiles in Developer Studio.

Date and time triggers

If you create a landing page and only want it to run within a specific time frame, you can trigger it to display only during that time frame by specifying start and end dates as well as start and end times. Only during the active dates will the page display to end users in the application.

For example, if you create a landing page for a White Wine promotion that only runs between April 3 and May 6, you can set the page to automatically activate and deactivate on those dates.

- [About landing page priority](#) on page 88

Landing pages are prioritized numerically, with the lowest numbers given the highest priority. By increasing the priority of a landing page, you increase the likelihood that a page is displayed if there are other pages with overlapping trigger criteria.

- [Controlling when a landing page displays](#) on page 81

If you create a landing page and only want it to display within a specific time frame, you can specify a date range using the **Page Builder**.

- [Controlling who sees a landing page](#) on page 81

You can restrict who sees your landing page by associating the page with a user profile.

- [Triggering based on refinements](#) on page 79

You can set a landing page to display when a user navigates to a specific set of refinements in your application.

- [Deleting a landing page location](#) on page 101
If necessary, you can remove locations from landing pages.
- [Triggering based on search terms](#) on page 78
You can set a landing page to display when a user searches for specific terms.
- [About multiple triggers](#) on page 80
If you want a landing page to display in more than one location in an application, you can specify multiple triggers.

About applying one dynamic page to multiple locations

Typically, there will be many locations deep within your catalog that do not have, or do not need, highly specialized landing pages. These lower-traffic locations can still benefit from a common, stylized design and data-driven content and product spotlighting.

These deep low-traffic locations are called "long tail" pages because they represent the tail of a demand curve. While the more popular, high-traffic locations tend to see higher conversion rates individually, the long tails of catalogs have been shown to be worth more collectively. Because of this, creating dynamic pages to cover the long tail products of your catalog can significantly boost overall conversion rates for your Web site.

With the Page Builder, you can create one dynamic page, populate it with dynamic cartridges, and apply it to many different locations in your application. This simultaneously decreases the investment of time and effort, and increases the value of each of the long tail pages.

For example, you realize that your television category is performing poorly, and you decide to address the issue by creating a dynamic experience to help guide customers to the right television. It would take an enormous amount of time and effort to individually create unique landing pages for every possible location in a category, so instead you choose to create a single dynamic page that will update and adjust as a user navigates through the application.

For this new landing page, you choose a cartridge called "BestSellers." You click **Select Records** to choose products for that cartridge, but instead of selecting records by ID, you want to populate the cartridge with a dynamic set of records that will update and adjust as the user navigates through the application. In order to do that, you select the **Select Dynamic Records** option from the **Select Records** dialog box, and then choose refinements:

- Select the refinement Televisions > Best Sellers.
- Select the **Restrict to Refinement State** checkbox.

By selecting to restrict the results to the user's refinement state, you create a product spotlight that updates with relevant results every time a user navigates to a new location. This means that when the user is at Televisions > HDTV, the products that display in the spotlight are best-selling HDTVs. Then, if the user navigates to Televisions > HDTV > Sony, the products that display in the spotlight are best-selling Sony HDTVs.

By populating a landing page dynamically instead of using static content, you've effectively created a relevant, engaging experience for all of the locations in your television category.



Note: You can only choose refinements that exist in your application. If your application developer has not defined the refinement set "Best Sellers," it does not display as an option in the **Page Builder**.

- [Specifying dynamic records for a cartridge](#) on page 86

Some types of cartridges enable you to spotlight a set of records that are contextually relevant to your landing page. You can configure a cartridge to display records based on specified refinements.

Creating landing pages

This section details how to create, save, configure, and display a landing page.

Overview of creating a landing page

With the **Page Builder**, you create a new landing page, specify when and where it is displayed, choose a template, and designate content for each section.

The following describes the process for creating a landing page with the Endeca **Page Builder**:

1. From the **Group List View**, do one of the following:
 - If your application uses multiple landing page groups, select the group in which you want to create the new page.
 - If your application uses a single default landing page group, skip to step 2.
2. From the **List View**, do one of the following:
 - Click **New Landing Page** to create a new page.
 - Click the **Copy** icon associated with an existing landing page in order to copy that page and then modify it. Copying a page provides a convenient starting point for creating similar pages.
3. From the **Edit View**:
 - Set a location for your landing page.
 - Specify active dates and times (optional).
 - Select a **User Profile** to restrict who sees your landing page (optional).
 - Choose a template.
 - Configure landing page content.
 - Choose a cartridge.
 - Configure the cartridge.
 - Check **Activate** or **Request Activation**.
 - Click **OK** to add the page to the **List View**.
4. From the **List View**, set the priority of the page.
5. Click **Save All Changes**.

Creating a landing page

You create a new landing page from the **List View** of the **Page Builder**.

To create a new landing page:

1. From the **List View** of the **Page Builder**, click **New Landing Page**.

The **Edit View** displays.

2. In the **Name** text box, specify a name for your new landing page.
3. Click **OK** to return to the **List View**.
4. Click **Save All Changes**.

You still need to choose a template, designate content for the page, and determine when and where it displays.

- [Choosing a page template](#) on page 82
Templates are the starting point for building dynamic landing pages with the Endeca **Page Builder**.
- [Deleting a landing page](#) on page 103
You can delete a landing page from your application from the **List View** of the **Page Builder**.
- [Saving a landing page](#) on page 87
You should always save your changes before exiting the **Page Builder**.
- [About controlling the display of landing pages](#) on page 74
Landing pages only display in your application if a specified set of search and navigation conditions exist in the application. These conditions are known as triggers.
- [Troubleshooting pages](#) on page 103
If page templates or cartridges have been removed from the Page Builder, or if a page template is invalid, you will receive an error message.
- [Overview of creating a landing page](#) on page 77
With the **Page Builder**, you create a new landing page, specify when and where it is displayed, choose a template, and designate content for each section.
- [Troubleshooting pages](#) on page 103
If page templates or cartridges have been removed from the Page Builder, or if a page template is invalid, you will receive an error message.

Triggering based on search terms

You can set a landing page to display when a user searches for specific terms.

For example, if you create a landing page for Merlot wines, you might want it to display when a user searches for the term "Merlot." You can accomplish this by setting the term "Merlot" as a search term trigger.

To trigger based on a search term:

1. From the **Edit View** of the **Page Builder**, click **Add Location**.
The **Add/Modify Location** dialog box displays.
2. In the **Search Term** text box, type a search term or phrase.
3. Select a match mode from the drop-down list:
 - In **Match Phrase** mode (the default), all of the words in the user's query must match in the same order as the search term location for the page to display.
 - In **Match All** mode, all of the words of the user's query must match (without regard for order) the search term location for the page to display.
 - In **Match Exact** mode, all the words of the user's query exactly match a the search term location for the page to display. Unlike the other two modes, a user's query must exactly match the search term location in the number of words and cannot include any extra words.
4. Click **Set** to copy the search term location to the **Location Settings** list.

5. Click **OK**.
6. From the **Edit View**, click **OK** to return to the **List View**.
7. Click **Save All Changes**.

To specify multiple search term locations, repeat the steps above. To add a refinement trigger, follow the steps for triggering based on refinements.

- [Deleting a landing page location](#) on page 101
If necessary, you can remove locations from landing pages.
- [About controlling the display of landing pages](#) on page 74
Landing pages only display in your application if a specified set of search and navigation conditions exist in the application. These conditions are known as triggers.
- [Triggering based on refinements](#) on page 79
You can set a landing page to display when a user navigates to a specific set of refinements in your application.
- [Deleting a landing page location](#) on page 101
If necessary, you can remove locations from landing pages.

Triggering based on refinements

You can set a landing page to display when a user navigates to a specific set of refinements in your application.

For example, if you create a landing page for Merlot wines, you might want it to display when a user navigates to Wine Type > Red > Merlot. You can set the landing page to display at that location by specifying a trigger based on the refinement state Wine Type > Red > Merlot.

To trigger based on a refinement state:

1. From the **Edit View** of the **Page Builder**, click **Add Location**.
The **Add/Modify Location** dialog box displays.
2. From the dimension tree under **Refinements** on the left, select the location where you want your landing page to display.
3. Click **Add Location** to copy the location into the **Location Settings** list.
4. Select a location option for where the page displays:
 - Select **Apply only at this exact location** to display the page only at the exact location you specified. If a user submits a query from any other location, the landing page does not display. For example, if the refinement state you specify is Wine Type > Red, the page will only display at Wine Type > Red and not at Wine Type > Red > Merlot or anywhere else that Wine Type > Red appears.
 - De-select **Apply only at this exact location** to display the page at any location in the data set that matches the refinements specified. For example, if you specify the refinement state Wine Type > Red, the page will also display at Wine Type > Red > Merlot and anywhere else that Wine Type > Red appears.
5. Click **OK**.
6. From the **Edit View**, click **OK** to return to the **List View**.
7. Click **Save All Changes**.

To specify multiple refinement triggers, repeat the steps above. To add a search term trigger, follow the steps for triggering based on search terms.

- [Deleting a landing page location](#) on page 101
If necessary, you can remove locations from landing pages.
- [About controlling the display of landing pages](#) on page 74
Landing pages only display in your application if a specified set of search and navigation conditions exist in the application. These conditions are known as triggers.
- [Deleting a landing page location](#) on page 101
If necessary, you can remove locations from landing pages.
- [Triggering based on search terms](#) on page 78
You can set a landing page to display when a user searches for specific terms.

Setting a home page location

You can create a landing page that displays at the root location of your application. Typically, the root location for an application is the home page.

To set a landing page as a home page:

1. From the **Edit View** of the **Page Builder**, click **Add Location**.
The **Add/Modify Locations** dialog box displays.
2. Select **Make this page the site's home page**.
3. Click **OK**.
4. From the **Edit View**, click **OK** to return to the **List View**.
5. Click **Save All Changes**.

- [Deleting a landing page location](#) on page 101
If necessary, you can remove locations from landing pages.

About multiple triggers

If you want a landing page to display in more than one location in an application, you can specify multiple triggers.

For a single trigger to display a landing page, the user's query must meet all of the trigger's criteria. This means that all of the search terms and refinement states that you specified for the location must be present in the query. For example, if a page is set to the location Wine Type > White with the search term "Apple," then the user must specify both the search term and the refinement state in order for the page to display.

If your landing page has more than one location, it displays at each of those locations as long as the conditions for the individual location are met. For example, if you have two locations:

- Wine Type > White with the search term "Apple"
- Search term "Apple"

both display the landing page as long as all of their individual criteria are met. The page displays at the location "Apple" as well as at Wine Type > White with the search term "Apple."

To specify multiple locations, repeat the steps provided for triggering based on refinements and triggering based on search terms as many times as necessary.



Note: If you have specified a date range for a landing page or associated a landing page with a user profile, those conditions must also be met for the landing page to display.

- [Deleting a landing page location](#) on page 101
If necessary, you can remove locations from landing pages.
- [About controlling the display of landing pages](#) on page 74
Landing pages only display in your application if a specified set of search and navigation conditions exist in the application. These conditions are known as triggers.

Controlling who sees a landing page

You can restrict who sees your landing page by associating the page with a user profile.

User profiles enable Endeca applications to display content to an end user based on that user's identity. When you associate a landing page with a user profile, that user profile becomes another trigger for your landing page. For example, if you have two user profiles, "members" and "non-members," and you create a landing page that contains a membership promotion, you may only want "non-members" to view it. In order to ensure that only users profiled as "non-members" view the page, you must associate that landing page with the "non-member" user profile.



Note: Your technical team creates user profiles in Developer Studio.

To associate a landing page with a user profile:

1. From the **List View** of the **Page Builder**, select the landing page you need to edit.
2. From the **Edit View** of the **Page Builder**, select a profile from the **User Profile** drop-down list.
3. Click **OK** to return to the **List View**.
4. Click **Save All Changes**.

- [Deleting a landing page location](#) on page 101
If necessary, you can remove locations from landing pages.
- [About controlling the display of landing pages](#) on page 74
Landing pages only display in your application if a specified set of search and navigation conditions exist in the application. These conditions are known as triggers.

Controlling when a landing page displays

If you create a landing page and only want it to display within a specific time frame, you can specify a date range using the **Page Builder**.

For example, if you create a landing page for a Back to School promotion, you can set the page to automatically activate on August 15 and automatically deactivate on September 8.

To specify landing page activation dates:

1. From the **Edit View** of the **Page Builder**, click **Select Time**.
The **Landing Page Schedule** dialog box displays.
2. Select the **Activate this rule only during a specific time** checkbox.
3. Select a start date and start time for the rule.
4. Optionally, you can set an expiration date.
If you choose not to specify an expiration date the rule remains active until manually deactivated.
 - a) Select the **Rule Expires** checkbox.
 - b) Specify an expiration date and time.

5. Click **OK**.
6. From the **Edit View**, click **OK** to return to the **List View**.
7. Click **Save All Changes**.

The landing page schedule is set and the active dates display on the **Edit View** of the **Page Builder**.

- [Deleting a landing page location](#) on page 101
If necessary, you can remove locations from landing pages.
- [About controlling the display of landing pages](#) on page 74
Landing pages only display in your application if a specified set of search and navigation conditions exist in the application. These conditions are known as triggers.

Choosing a page template

Templates are the starting point for building dynamic landing pages with the Endeca **Page Builder**.

To choose a template for a new page, or to change the template for an existing page:

1. From the **Edit View** of the **Page Builder**, click **Select Template**.
The **Select Template** dialog displays.
2. From the **Select Template** menu choose a template appropriate for your page.
3. Click **OK**.
4. From the **Edit View**, click **OK** to return to the **List View**.
5. Click **Save All Changes**.

You can now choose cartridges and designate content for each section in your template.



Note: If you change the template on an existing page, any content configured prior to the change is lost.

- [About configuring page sections](#) on page 82
Page templates consist of configurable sections that serve as placeholders for the display of products, dimensions, promotions, rich media, and other forms of content. Typically, these sections are empty until you designate content for them.
- [Selecting a cartridge](#) on page 83
You designate the content of each page section by selecting and configuring cartridges.
- [Troubleshooting pages](#) on page 103
If page templates or cartridges have been removed from the Page Builder, or if a page template is invalid, you will receive an error message.

About configuring page sections

Page templates consist of configurable sections that serve as placeholders for the display of products, dimensions, promotions, rich media, and other forms of content. Typically, these sections are empty until you designate content for them.

Template sections are designed to accept dynamic content types called cartridges. Cartridges are essentially mini-templates that you plug into sections and then configure to contain the content you want to display on your landing page.

Because templates and cartridges are custom-built by developers, each section and cartridge may have a unique set of options for configuration.

- [Selecting a cartridge](#) on page 83
You designate the content of each page section by selecting and configuring cartridges.
- [Configuring a cartridge](#) on page 84
You can configure cartridges to contain information appropriate for each page section.
- [Selecting a cartridge](#) on page 83
You designate the content of each page section by selecting and configuring cartridges.
- [Specifying dynamic records for a cartridge](#) on page 86
Some types of cartridges enable you to spotlight a set of records that are contextually relevant to your landing page. You can configure a cartridge to display records based on specified refinements.
- [Specifying featured records for a cartridge](#) on page 85
Some types of cartridges enable you to specify records to spotlight on your landing page.

Selecting a cartridge

You designate the content of each page section by selecting and configuring cartridges.

Every page section is designed to accept a certain type of content in the form of a cartridge. For each page section, you are presented with a set of cartridges to choose from. Once you select a cartridge, you can configure it to include the content you need to display within that page section.

To select a cartridge for a section:

1. From the **Edit View** of the **Page Builder**, identify the page section you need to configure.
 - Use the **Content Tree** on the left to select a page section and open it for editing in the **Content Detail Panel**.
 - Use the **Content Detail Panel** on the right to locate and open a page section.
2. From the **Content Detail Panel**, click the cartridge **Add** button.
The **Select Cartridge** dialog displays.
3. Choose a cartridge from the list.
4. Click **OK**.
5. From the **Edit View**, click **OK** to return to the **List View**.
6. Click **Save All Changes**.

Once you have selected a cartridge for a section, you must configure it to display content appropriate for your landing page.

- [About configuring page sections](#) on page 82
Page templates consist of configurable sections that serve as placeholders for the display of products, dimensions, promotions, rich media, and other forms of content. Typically, these sections are empty until you designate content for them.
- [Configuring a cartridge](#) on page 84
You can configure cartridges to contain information appropriate for each page section.
- [Changing a cartridge](#) on page 102
You can replace an existing cartridge using the **Content Tree** or the **Content Detail Panel**.
- [Ejecting a cartridge](#) on page 102

You can remove a cartridge from a section using the **Content Tree** or the **Content Detail Panel**.

- [Configuring a cartridge](#) on page 84
You can configure cartridges to contain information appropriate for each page section.
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Some types of cartridges enable you to spotlight a set of records that are contextually relevant to your landing page. You can configure a cartridge to display records based on specified refinements.
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- [About configuring page sections](#) on page 82
Page templates consist of configurable sections that serve as placeholders for the display of products, dimensions, promotions, rich media, and other forms of content. Typically, these sections are empty until you designate content for them.

Configuring a cartridge

You can configure cartridges to contain information appropriate for each page section.

Cartridges are the pieces of your landing page that contain the information displayed to users. By configuring cartridges, you can control the placement and display of products, dimensions, promotions, rich media and other forms of content on your landing page.

To configure a cartridge:

1. From the **Edit View** of the **Page Builder**, identify the cartridge you need to configure.
 - Use the **Content Tree** on the left to select a cartridge and open it for editing in the **Content Detail Panel**.
 - Use the **Content Detail Panel** on the right to locate and open a cartridge.
2. Fill in all required fields.
Depending on the cartridge you have selected, you may be asked to specify a path to an image or flash file, a title, featured records, rollover text, or additional cartridges.
3. From the **Edit View**, click **OK** to return to the **List View**.
4. Click **Save All Changes**.



Note: The simplest cartridges may need no configuration or require only that you fill in text fields. Other cartridges may need additional configuration.

- [About configuring page sections](#) on page 82
Page templates consist of configurable sections that serve as placeholders for the display of products, dimensions, promotions, rich media, and other forms of content. Typically, these sections are empty until you designate content for them.

- [Selecting a cartridge](#) on page 83
You designate the content of each page section by selecting and configuring cartridges.
- [Changing a cartridge](#) on page 102
You can replace an existing cartridge using the **Content Tree** or the **Content Detail Panel**.
- [Ejecting a cartridge](#) on page 102
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- [Selecting a cartridge](#) on page 83
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Some types of cartridges enable you to spotlight a set of records that are contextually relevant to your landing page. You can configure a cartridge to display records based on specified refinements.
- [Specifying featured records for a cartridge](#) on page 85
Some types of cartridges enable you to specify records to spotlight on your landing page.

Specifying featured records for a cartridge

Some types of cartridges enable you to specify records to spotlight on your landing page.

If you want to spotlight specific records from your catalog, use the featured records option on the **Select Records** dialog box. If you want to dynamically spotlight a set of records, use the dynamic records option.

For example, if you are creating a landing page to promote a sale on Australian white wines from 2008, you can handpick a selection of Australian white wines and configure a cartridge to spotlight them.



Note: Not all templates and cartridges are designed to spotlight records.

To add a featured record to a cartridge:

1. Select a cartridge from the **Content Tree** on the left.
2. From the **Content Details Panel**, click **Select Records**.
3. In the top panel of the dialog box, select **Featured Records**.
When this button is selected, the top panel becomes editable and the bottom panel dims out.
4. Specify a record in the **Record ID** text box.



Note: Application developers assign IDs to each record.

5. Click **Add** to copy the record into the **Records** list.
6. Optionally, repeat steps four and five to add additional records to the cartridge.
Cartridges are configured to spotlight only a certain number of records. You can add additional records until you reach the maximum number.
7. Optionally, drag and drop records in the **Records** list to change the order in which they display.
8. Click **OK**.
9. From the **Edit View**, click **OK** to return to the **List View**.
10. Click **Save All Changes**.

To add dynamic records to a cartridge, follow the steps for specifying dynamic records for a cartridge.

- [Selecting a cartridge](#) on page 83
You designate the content of each page section by selecting and configuring cartridges.
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- [About configuring page sections](#) on page 82
Page templates consist of configurable sections that serve as placeholders for the display of products, dimensions, promotions, rich media, and other forms of content. Typically, these sections are empty until you designate content for them.

Specifying dynamic records for a cartridge

Some types of cartridges enable you to spotlight a set of records that are contextually relevant to your landing page. You can configure a cartridge to display records based on specified refinements.

If you want to dynamically spotlight a set of records from your catalog, use the dynamic records option on the **Select Records** dialog box. If you want to spotlight specific records, use the featured records option.

For example, if you create a landing page for wines bottled in 2008, you can configure a cartridge to display a dynamic set of best selling wines from that year without having to pick specific records.



Note: Not all templates and cartridges are designed to spotlight records.

To specify dynamic records for a cartridge:

1. Select a cartridge from the **Content Tree** on the left.
2. From the **Content Details Panel**, click **Select Records**.
3. In the bottom panel of the **Select Records** dialog box, select **Select Dynamic Records**.
When this button is selected, the bottom panel of the dialog box becomes editable and the top panel dims out.
4. Select one or more refinements:
 - Type the name of a refinement in the **Query** box.
 - Locate a refinement in the tree.
5. Copy the refinements into the **Query Settings** box:
 - Drag the refinement into the **Query Settings** box.
 - Click the **Add** button.
6. Optionally, you can choose a sorting method from the **Sort By** drop-down box.

7. Optionally, you can choose to select a maximum number of records to display using the **Max Records** slider.
8. Optionally, you can choose to restrict the record results to the current refinement state by selecting **Restrict to Refinement State**.
 - Selecting **Restrict to Refinement State** uses a combination of the specified refinements and a user's current refinement state to determine which records to display. For example, if you are promoting Best Selling Wines of 2008, the record results will vary based on a user's refinement state. If the user has browsed to Country > France, then only Best Selling Wines of 2008 that are from France display. If the user is viewing Country > Australia, then only Best Selling Wines of 2008 from Australia display.
 - De-selecting **Restrict to Refinement State** uses only the specified refinements to determine which records display. The user's current refinement state is ignored. For example, if you are promoting Best Selling Wines of 2008, the record results display the same set of bestselling wines no matter what the user's refinement state is.
9. Click **OK**.
10. From the **Edit View**, click **OK** to return to the **List View**.
11. Click **Save All Changes**.

To add featured records to a cartridge, follow the steps for specifying featured records for a cartridge.



Note: You can only choose refinements that exist in your application. If your application developer has not defined the refinement set "Best Sellers," it does not display as an option in the **Page Builder**.

- [Selecting a cartridge](#) on page 83
You designate the content of each page section by selecting and configuring cartridges.
- [Configuring a cartridge](#) on page 84
You can configure cartridges to contain information appropriate for each page section.
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- [About configuring page sections](#) on page 82
Page templates consist of configurable sections that serve as placeholders for the display of products, dimensions, promotions, rich media, and other forms of content. Typically, these sections are empty until you designate content for them.

Saving a landing page

You should always save your changes before exiting the **Page Builder**.

To save a landing page:

1. From the **Edit View**, click **OK** to return to the **List View**.
2. From the **List View**, click **Save All Changes**.

All pages with edits are saved.

Prioritizing landing pages

This section explains the concept of landing page priority, details how to prioritize pages, and provides a tips and troubleshooting section for the development of best practices.

About landing page priority

Landing pages are prioritized numerically, with the lowest numbers given the highest priority. By increasing the priority of a landing page, you increase the likelihood that a page is displayed if there are other pages with overlapping trigger criteria.

You modify the relative priority of a rule by moving it up or down in the **List View**.

For example, say you have two landing pages:

- A "Red Wines" page that is set to trigger at the refinement state Wine Type > Red and allowed to display at any location that matches Wine Type > Red
- A "Red Wines from Sonoma Valley" page that is set to trigger at the refinement state Wine Type > Red > Region > Sonoma and restricted to display at only that exact location

If you prioritize "Red Wines from Sonoma Valley" as a "1," and "Red Wines" as a "2," then "Red Wines from Sonoma Valley" will always be evaluated first. That means that even though both pages *could* display to a user who navigated to Wine Type > Red > Region > Sonoma, only "Red Wines from Sonoma Valley" will display. The "Red Wines" page still displays at any other location where a user navigates to Wine Type > Red, but it will always be evaluated after the more specific "Red Wines from Sonoma Valley" page.

However, if you were to prioritize "Red Wines" before "Red Wines from Sonoma Valley," then the landing page "Red Wines from Sonoma Valley" would never display in your application. It is important to make sure that more specific landing pages (pages with more complex triggering criteria) are given high priority to prevent them from being blocked by more general pages.

- [Prioritizing landing pages](#) on page 88
New landing pages are automatically listed with the lowest priority. You need to manually assign the appropriate priority number to each new landing page you create.
- [Tips and troubleshooting for landing page priority](#) on page 89
It is important to make sure that more specific landing pages (pages with more complex triggering criteria) are given high priority to prevent them from being blocked by more generic pages.

Prioritizing landing pages

New landing pages are automatically listed with the lowest priority. You need to manually assign the appropriate priority number to each new landing page you create.

The **Priority** column of the **List View** table allows you to increase or decrease the priority of a landing page.

To assign or change the priority of a landing page:

1. From the **List View** of the **Page Builder**, locate the page you need to modify.
2. In the **Priority** column, highlight the number in the text box and replace it with the new priority number. For example, if you want the page to have the highest priority, type 1.

3. Click **Save All Changes**.

- [About landing page priority](#) on page 88
Landing pages are prioritized numerically, with the lowest numbers given the highest priority. By increasing the priority of a landing page, you increase the likelihood that a page is displayed if there are other pages with overlapping trigger criteria.
- [Tips and troubleshooting for landing page priority](#) on page 89
It is important to make sure that more specific landing pages (pages with more complex triggering criteria) are given high priority to prevent them from being blocked by more generic pages.

Tips and troubleshooting for landing page priority

It is important to make sure that more specific landing pages (pages with more complex triggering criteria) are given high priority to prevent them from being blocked by more generic pages.

- If you have a home page landing page, or pages that are not constrained by the **Apply only at this exact location** setting (from the **Add/Modify location** dialog on the **Edit View**), make sure that they are prioritized near the bottom of the landing page list. They may be blocking other pages from displaying.
- Make sure that pages with more complex triggering criteria are placed higher on the list. For example, you should place a page set to the location Wine Type > Red > Merlot higher than a page set to the location Wine Type > Red.
- Other landing page groups may affect the results of the group you are viewing.
- If rules from the **Rule Manager** are inadvertently assigned a "zone" that is reserved for landing pages, the rules will compete with **Page Builder** landing pages for priority. For example, if you have a landing page set to the location Wine Type > Red > Merlot that is prioritized as a 1, it could still be blocked from display by a rule from the **Rule Manager**. If you suspect this to be the problem, contact your application developer.



Note: Zones are set by your technical team in Developer Studio and assigned to templates before they become available in the **Page Builder**.

- [Prioritizing landing pages](#) on page 88
New landing pages are automatically listed with the lowest priority. You need to manually assign the appropriate priority number to each new landing page you create.
- [About landing page priority](#) on page 88
Landing pages are prioritized numerically, with the lowest numbers given the highest priority. By increasing the priority of a landing page, you increase the likelihood that a page is displayed if there are other pages with overlapping trigger criteria.

Previewing landing pages

This section contains information about the preview application, provides instructions for previewing pages with or without a preview application, and includes a reference section for understanding preview status messages.

About previewing landing pages

You use the **Preview pane** to navigate to or search for specific locations in your application. This is useful for debugging and testing your landing pages.

The **Page Builder** provides previewing information about each landing page in a group. Previewing information briefly describes why each page does or does not display when you either click a location link or search and navigate in the preview application. With the preview information, you can better understand how landing pages behave by testing them in your application.

Querying a location in the data set is simplified by the link in the **Location** column. This link provides a testing convenience to trigger the page. Clicking the link displays the trigger's refinement state and evaluates all pages included in the preview.

For example, a **Page Builder** user wants to know which page displays when he or she navigates to Wine Type > Red and why the others do not display. From the **List View**, the user clicks **Preview** and then clicks the location Wine Type > Red from the **Location** column.

Once you click **Preview**, the **Page List** table displays status messages to explain why pages did or did not display. The status messages are updated each time you query a location, and your location is displayed as breadcrumb text in the **Preview pane**.

STATUS	NAME	MODIFIED
 Fired	Red Wines Promotion	06/10/2008 12:05 PM
Zone full	Red Wine splash page	06/10/2008 11:52 AM
Navigation trigger not satisfied	Vintage Red Wines	06/10/2008 11:52 AM
<i>Not considered</i>	French and Fruity	06/10/2008 11:54 AM
<i>Not considered</i>	Home page	06/10/2008 11:54 AM

If a page displays with the message **Fired**, then it successfully displayed at the preview location. For detailed descriptions on all other status messages, refer to the reference table for preview status messages.



Note: Preview applications are configured by your technical team. If a preview application is not enabled, you can still test your landing pages to see how they behave in your application by using the color coding and status messages on the **Page List** table.

- [Previewing a landing page](#) on page 91
While you are developing landing pages, it is important to test them and ensure that they are performing and displaying as you intended.
- [Preview status message reference](#) on page 92
When you preview landing pages, the **Status** column in the **Page List** table displays messages that explain why a particular page did not display.

- [Previewing a landing page](#) on page 91
While you are developing landing pages, it is important to test them and ensure that they are performing and displaying as you intended.
- [Disabling the display of the preview application](#) on page 148
In general, the preview application displays by default in the **Preview** pane. You can tell Merchandising Workbench not to display the preview application in the **Preview** pane.
- [Enabling the display of the preview application](#) on page 149
The preview application displays by default in the **Preview** pane. However, if the preview application has been disabled from display, you cannot preview your rules or landing pages.
- [About previewing without a preview application](#) on page 91
If you do not have a preview application enabled, you can still test your landing pages to see whether or not they fire in a specific location by using the color coding and status messages on the **Page List** table.
- [Preview status message reference](#) on page 92
When you preview landing pages, the **Status** column in the **Page List** table displays messages that explain why a particular page did not display.

About previewing without a preview application

If you do not have a preview application enabled, you can still test your landing pages to see whether or not they fire in a specific location by using the color coding and status messages on the **Page List** table.

The procedure for previewing is the same whether or not you have a preview application set up. However, without an application enabled there is no visual representation of your landing pages, so you must rely solely on the auditing feature of the **Page List** table for information about landing page behavior.

Once you click **Preview**, the **Page List** table displays status messages to explain why pages did or did not display. The status messages are updated each time you query a location, and your location is displayed as breadcrumb text in the **Preview pane**.

- [About previewing landing pages](#) on page 90
You use the **Preview pane** to navigate to or search for specific locations in your application. This is useful for debugging and testing your landing pages.
- [Preview status message reference](#) on page 92
When you preview landing pages, the **Status** column in the **Page List** table displays messages that explain why a particular page did not display.

Previewing a landing page

While you are developing landing pages, it is important to test them and ensure that they are performing and displaying as you intended.

Only users with Approve, Edit, and View permissions are able to view landing pages in the preview application.

You can test pages using the preview feature available on the **List View** of the **Page Builder**. The pages on the **List View** table display with status information (fired, not fired, etc.) as you search and navigate through the preview application.

1. From the **List View**, select the **Preview** checkbox for each rule you want to include in preview.

2. Click **Preview**.

The **Page Builder** is now in preview mode.

3. Specify a preview time by doing one of the following:

- Accept the current time as the preview time.
- Click the **Specify date** checkbox to enable the date/time selector and then specify date and time values. This is helpful for previewing landing pages that are not yet scheduled to activate.

4. To preview a specific page, click a location value for a page in the **Location** column.

You can also search or navigate to any location in the **Preview pane** in order to preview which page displays. However, the status messages only update if this feature is enabled for your preview application.

5. Check the **Status** column of the **Page List** table for status messages explaining why each landing page displayed or did not display.
6. After you are finished viewing the preview application, click **Stop Preview**.
7. Edit the landing pages if necessary, and then repeat the steps above until you achieve the intended results.



Note: Although you see previewing results for only the landing page group you are working in, the **Page Builder** previews *all* pages in the application. This means that other landing page groups may affect the results of the group you are viewing.

- [About previewing landing pages](#) on page 90

You use the **Preview pane** to navigate to or search for specific locations in your application. This is useful for debugging and testing your landing pages.

- [Preview status message reference](#) on page 92

When you preview landing pages, the **Status** column in the **Page List** table displays messages that explain why a particular page did not display.

- [Disabling the display of the preview application](#) on page 148

In general, the preview application displays by default in the **Preview** pane. You can tell Merchandising Workbench not to display the preview application in the **Preview** pane.

- [Enabling the display of the preview application](#) on page 149

The preview application displays by default in the **Preview** pane. However, if the preview application has been disabled from display, you cannot preview your rules or landing pages.

- [About previewing landing pages](#) on page 90

You use the **Preview pane** to navigate to or search for specific locations in your application. This is useful for debugging and testing your landing pages.

Preview status message reference

When you preview landing pages, the **Status** column in the **Page List** table displays messages that explain why a particular page did not display.

This table lists the **Status** messages and their descriptions.

Status Message	Status Description
Fired	The page fired based on the user's refinement state or search term.
Trigger not met	The page did not fire based on the user's refinement state or search term.

Status Message	Status Description
Navigation trigger not satisfied	This message is similar to "Trigger not met" but it is more specific: the trigger not satisfied is a refinement location.
Search trigger not satisfied	This message is similar to "Trigger not met" but it is more specific: the trigger not satisfied is a search term location.
Not considered	The message is a generic description for any page whose trigger does not apply. This message also describes pages that do not have "Preview" selected.
Zone full	The page was evaluated but did not fire because another page took priority. For example, if there are two pages designed to trigger on "Wine Type > Merlot," only the first page (the highest priority) displays. In such situations, a page's priority rank in the List View is important.
Page not valid for search	The page is not valid because it is not enabled for search. Your technical team can modify this setting using Developer Studio.
Invalid navigation state	The combination of the page's trigger and target values did not produce any merchandising results.
Empty navigation state	This message is similar to "Invalid refinement state." The combination of the page's trigger and target values did not produce any merchandising results.
Insufficient records	The page did not fire because it does not produce the minimum number of records necessary for display as defined for the page template. Your technical team can modify this setting using Developer Studio.
Insufficient unique records	This message is similar to "Insufficient records." The page did not fire because it does not produce the minimum number of unique records necessary for display as defined for the page template. Your technical team can modify this setting using Developer Studio.

- [Previewing a landing page](#) on page 91

While you are developing landing pages, it is important to test them and ensure that they are performing and displaying as you intended.
- [About previewing landing pages](#) on page 90

You use the **Preview pane** to navigate to or search for specific locations in your application. This is useful for debugging and testing your landing pages.
- [About previewing landing pages](#) on page 90

You use the **Preview pane** to navigate to or search for specific locations in your application. This is useful for debugging and testing your landing pages.
- [About previewing without a preview application](#) on page 91

If you do not have a preview application enabled, you can still test your landing pages to see whether or not they fire in a specific location by using the color coding and status messages on the **Page List** table.

Managing the workflow of landing pages

This section provides detailed conceptual and instructional information about the workflow of landing pages and explains how the workflow process and available options differ for each user permission level.

About Page Builder permissions

With the **Page Builder** you create, modify, activate or deactivate, prioritize, and preview landing pages. However, your user permissions determine which of these actions you can perform.

If you have Approve permissions for a landing page group, you can do any of the following:

- Create new landing pages.
- Copy existing landing pages.
- Edit both active and inactive landing pages.
- Activate and deactivate landing pages.
- Prioritize landing pages.
- Preview landing pages in the preview application.

If you have Edit permissions for a landing page group, you can do any of the following:

- Create new landing pages (new pages begin in an inactive state).
- Copy existing landing pages.
- Edit inactive landing pages.
- Make requests to activate and deactivate landing pages.
- Prioritize landing pages.
- Preview landing pages in the preview application.

If you have View permissions for a landing page group, you can view and preview, but you cannot modify, prioritize, activate, or deactivate pages.

If you have the None permission for a landing page group, you have no permissions for viewing, previewing, prioritizing, copying, editing, activating, or deactivating.

Activating a landing page

New or inactive landing pages do not display in your application until they have been activated in the **Page Builder**.

Only users with Approve permissions can activate landing pages. If you only have Edit permissions, you must request approval for activation of a landing page.

You can activate pages from the **Edit View** or from the **List View** of the **Page Builder**.

To activate a landing page:

1. In the **List View**, locate the landing page you need to activate.
2. Optionally, click on the landing page to enter the **Edit View** and see content details.
3. Activate the page:
 - On the **List View**, click **Activate** from the **Action** column of the **Page List** table.
 - From the **Page Summary pane** on the **Edit View**, click **Activate**.

4. Save your changes.
 - a) If you are in the **Edit View**, click **OK** to exit to the **List View**.
 - b) From the **List View**, click **Save All Changes**.

- *Requesting activation of a landing page* on page 96
If you only have Edit permissions, you can create and edit landing pages but you cannot activate or deactivate them. You must request approval for activation before your changes display to the end user in your Web application.
- *Requesting deactivation of a landing page* on page 97
If you have Edit permissions, you can create and edit landing pages but you cannot activate or deactivate them. You must submit a request for deactivation before your page can be removed from the application.
- *Managing requests for landing page activation* on page 98
Only users with the Approve permission can evaluate requests for the activation of landing pages.
- *Managing requests for landing page deactivation* on page 99
Only users with the Approve permission can evaluate requests for the deactivation of landing pages.

Deactivating a landing page

Active landing pages continue to display in your application until they are deactivated in the **Page Builder**.

Only users with Approve permissions can deactivate landing pages. If you only have Edit permissions, you must request approval for deactivation of a landing page.

You can deactivate pages from the **Edit View** or from the **List View** of the **Page Builder**.

To deactivate a landing page:

1. In the **List View**, locate the landing page you need to deactivate.
2. Optionally, click on the landing page to enter the **Edit View** and see content details.
3. Deactivate the page:
 - On the **List View**, click **Deactivate** from the **Action** column of the **Page List** table.
 - From the **Page Summary pane** on the **Edit View**, click **Deactivate**.
4. Save your changes.
 - a) If you are in the **Edit View**, click **OK** to exit to the **List View**.
 - b) From the **List View**, click **Save All Changes**.

- *Requesting activation of a landing page* on page 96
If you only have Edit permissions, you can create and edit landing pages but you cannot activate or deactivate them. You must request approval for activation before your changes display to the end user in your Web application.
- *Requesting deactivation of a landing page* on page 97
If you have Edit permissions, you can create and edit landing pages but you cannot activate or deactivate them. You must submit a request for deactivation before your page can be removed from the application.
- *Managing requests for landing page activation* on page 98

Only users with the Approve permission can evaluate requests for the activation of landing pages.

- [Managing requests for landing page deactivation](#) on page 99

Only users with the Approve permission can evaluate requests for the deactivation of landing pages.

Requesting activation of a landing page

If you only have Edit permissions, you can create and edit landing pages but you cannot activate or deactivate them. You must request approval for activation before your changes display to the end user in your Web application.

Once the request is submitted, the landing page will be reviewed and evaluated by a manager with Approve permissions. The status of a landing page is displayed on the **Edit View** and **List view** of the **Page Builder**.

You can request activation from the **Edit View** or from the **List View** of the **Page Builder**.

To request activation for a landing page:

1. In the **List View**, locate the landing page you need to activate.
2. Optionally, click on the landing page to enter the **Edit View** and see content details.
3. Request activation for the page:
 - On the **List View**, click **Request Activation** from the **Action** column of the **Page List** table.
 - From the **Page Summary pane** on the **Edit View**, click **Request Activation**.
4. Save your changes.
 - a) If you are in the **Edit View**, click **OK** to exit to the **List View**.
 - b) From the **List View**, click **Save All Changes**.

Your landing page has been submitted for activation. Once the request is approved, the landing page will display in the application.

- [Canceling activation or deactivation requests](#) on page 97

You can cancel requests for landing page activation or deactivation before they are evaluated by a manager.

- [Requesting deactivation of a landing page](#) on page 97

If you have Edit permissions, you can create and edit landing pages but you cannot activate or deactivate them. You must submit a request for deactivation before your page can be removed from the application.

- [Activating a landing page](#) on page 94

New or inactive landing pages do not display in your application until they have been activated in the **Page Builder**.

- [Deactivating a landing page](#) on page 95

Active landing pages continue to display in your application until they are deactivated in the **Page Builder**.

Requesting deactivation of a landing page

If you have Edit permissions, you can create and edit landing pages but you cannot activate or deactivate them. You must submit a request for deactivation before your page can be removed from the application.

Once you submit a request for deactivation, the page will be reviewed by a manager with Approve permissions. The status of a landing page is displayed on the **Edit View** and **List View** of the **Page Builder**.

You can request deactivation from the **Edit View** or from the **List View** of the **Page Builder**.

To request deactivation for a landing page:

1. In the **List View**, locate the landing page you need to deactivate.
2. Optionally, click on the landing page to enter the **Edit View** and see content details.
3. Request deactivation for the page:
 - On the **List View**, click **Request Deactivation** from the **Action** column of the **Page List** table.
 - From the **Page Summary pane** on the **Edit View**, click **Request Deactivation**.
4. Save your changes.
 - a) If you are in the **Edit View**, click **OK** to exit to the **List View**.
 - b) From the **List View**, click **Save All Changes**.

Your landing page has been submitted for deactivation. Once the request is approved, the landing page will be removed from the application.

- [*Canceling activation or deactivation requests*](#) on page 97
You can cancel requests for landing page activation or deactivation before they are evaluated by a manager.
- [*Requesting activation of a landing page*](#) on page 96
If you only have Edit permissions, you can create and edit landing pages but you cannot activate or deactivate them. You must request approval for activation before your changes display to the end user in your Web application.
- [*Activating a landing page*](#) on page 94
New or inactive landing pages do not display in your application until they have been activated in the **Page Builder**.
- [*Deactivating a landing page*](#) on page 95
Active landing pages continue to display in your application until they are deactivated in the **Page Builder**.

Canceling activation or deactivation requests

You can cancel requests for landing page activation or deactivation before they are evaluated by a manager.

Only users with Edit permission are able to cancel requests.

You can cancel requests from the **Edit View** or from the **List View** of the **Page Builder**.

To cancel a request for landing page activation or deactivation:

1. In the **List View**, locate the landing page you need to deactivate.

2. Optionally, click on the landing page to enter the **Edit View** and see content details.
3. Deactivate the page:
 - On the **List View**, click **Cancel Request** from the **Action** column of the **Page List** table.
 - From the **Page Summary pane** on the **Edit View**, click **Deactivate**.
4. Save your changes.
 - a) If you are in the **Edit View**, click **OK** to exit to the **List View**.
 - b) From the **List View**, click **Save All Changes**.

About managing activation and deactivation requests

Only users with Approve permissions can approve or reject landing page requests.

There are two options presented to users with the Approve permission:

- Approve
- Reject

Approving a request for activation changes its state from inactive to active and makes it available in the Preview Application of the **Page Builder**. Approving a request for deactivation of a landing page changes its state from active to inactive and removes it from the Preview Application of the **Page Builder**.

Rejecting a request for activation of a landing page does not change its state from inactive to active, and the landing page remains unavailable in the Preview Application. Rejecting a request for deactivation of a landing page does not change its state from active to inactive, and the landing page remains available in the Preview Application.

The status of each landing page displays on the **Edit View** and **List View** of the **Page Builder**.

- *Managing requests for landing page activation* on page 98
Only users with the Approve permission can evaluate requests for the activation of landing pages.
- *Managing requests for landing page deactivation* on page 99
Only users with the Approve permission can evaluate requests for the deactivation of landing pages.

Managing requests for landing page activation

Only users with the Approve permission can evaluate requests for the activation of landing pages.

Approving a request for activation changes the workflow state of the page from inactive to active and makes it available in the Preview Application. Rejecting the requests does not change the workflow state and does not make the page available in the Preview Application.

You can manage requests from the **Edit View** or from the **List View** of the **Page Builder**.

To evaluate a landing page for activation:

1. In the **List View**, locate the landing page you need to activate.
2. Optionally, click on the landing page to enter the **Edit View** and see content details.
3. Evaluate the request:
 - On the **List View**, click **Approve** or **Reject** in the **Action** column of the **Page List** table.

- From the **Page Summary pane** on the **Edit View**, click **Approve** or **Reject**.

4. Save your changes.
 - a) If you are in the **Edit View**, click **OK** to exit to the **List View**.
 - b) From the **List View**, click **Save All Changes**.

- *Managing requests for landing page deactivation* on page 99
Only users with the Approve permission can evaluate requests for the deactivation of landing pages.
- *About managing activation and deactivation requests* on page 98
Only users with Approve permissions can approve or reject landing page requests.
- *Deactivating a landing page* on page 95
Active landing pages continue to display in your application until they are deactivated in the **Page Builder**.
- *Activating a landing page* on page 94
New or inactive landing pages do not display in your application until they have been activated in the **Page Builder**.

Managing requests for landing page deactivation

Only users with the Approve permission can evaluate requests for the deactivation of landing pages.

Approving a deactivation request for a landing page changes its workflow state from active to inactive and removes the page from the Preview Application. Rejecting a request has no affect on the workflow state or on the page's availability in the Preview Application.

You can manage requests from the **Edit View** or from the **List View** of the **Page Builder**.

To evaluate a landing page for deactivation:

1. In the **List View**, locate the landing page you need to deactivate.
2. Optionally, click on the landing page to enter the **Edit View** and see content details.
3. Evaluate the request:
 - On the **List View**, click **Approve** or **Reject** in the **Action** column of the **Page List** table.
 - From the **Page Summary pane** on the **Edit View**, click **Approve** or **Reject**.
4. Save your changes.
 - a) If you are in the **Edit View**, click **OK** to exit to the **List View**.
 - b) From the **List View**, click **Save All Changes**.

- *Managing requests for landing page activation* on page 98
Only users with the Approve permission can evaluate requests for the activation of landing pages.
- *About managing activation and deactivation requests* on page 98
Only users with Approve permissions can approve or reject landing page requests.
- *Deactivating a landing page* on page 95
Active landing pages continue to display in your application until they are deactivated in the **Page Builder**.
- *Activating a landing page* on page 94

New or inactive landing pages do not display in your application until they have been activated in the **Page Builder**.

Managing landing pages

This section contains instructions for modifying existing landing pages.

Copying an existing landing page

Copying a landing page provides a convenient starting point for creating similar pages.

Users with View or None permissions cannot copy landing pages.

To copy a landing page:

1. From the **List View** of the **Page Builder**, click the **Copy** icon that corresponds to the landing page you want to copy.

The **Page Builder** makes a copy of the landing page.

2. From the **Edit View**, modify the content of the new page as necessary.
3. Click **OK** to return to the **List View**.
4. Click **Save All Changes**.

- [Deleting a landing page](#) on page 103

You can delete a landing page from your application from the **List View** of the **Page Builder**.

- [Saving a landing page](#) on page 87

You should always save your changes before exiting the **Page Builder**.

- [Modifying a landing page](#) on page 100

Users with Edit permission cannot directly modify active pages.

- [Modifying a landing page](#) on page 100

Users with Edit permission cannot directly modify active pages.

Modifying a landing page

Users with Edit permission cannot directly modify active pages.

Because the Edit permission does not enable you to modify active pages, there are some additional steps involved if you need to edit an active page.

To modify an active landing page:

1. From the **List View** of the **Page Builder**, copy the landing page you need to modify.
2. From the **Edit View**, make the necessary modifications to the new copy of your landing page.
3. Click **OK** to return to the **List View**.
4. Request activation for the new landing page.
5. Request deactivation for the old landing page.
6. Click **Save All Changes**.

Once the requests are approved, the modified landing page will replace the old page.

- [Requesting activation of a landing page](#) on page 96
If you only have Edit permissions, you can create and edit landing pages but you cannot activate or deactivate them. You must request approval for activation before your changes display to the end user in your Web application.
- [Requesting deactivation of a landing page](#) on page 97
If you have Edit permissions, you can create and edit landing pages but you cannot activate or deactivate them. You must submit a request for deactivation before your page can be removed from the application.
- [Troubleshooting pages](#) on page 103
If page templates or cartridges have been removed from the Page Builder, or if a page template is invalid, you will receive an error message.
- [Copying an existing landing page](#) on page 100
Copying a landing page provides a convenient starting point for creating similar pages.

Modifying a landing page location

If necessary, you can change the location of a landing page.

To modify a landing page location:

1. From the **List View** of the **Page Builder**, select the landing page you need to edit.
2. From the **Page Summary pane** on the **Edit View**, select the location you need to edit.
The **Add/Modify Location** dialog box displays.
3. Modify the location.
4. Click **OK**.
5. From the **Edit View**, click **OK** to return to the **List View**.
6. Click **Save All Changes**.

Deleting a landing page location

If necessary, you can remove locations from landing pages.

To delete a landing page location:

1. From the **List View** of the **Page Builder**, select the landing page you need to edit.
2. From the **Edit View** of the **Page Builder**, click the X icon next to the **Location** you need to remove.
3. Click **OK** to return to the **List View**.
4. Click **Save All Changes**.

The landing page is no longer displayed at that location.

- [About controlling the display of landing pages](#) on page 74
Landing pages only display in your application if a specified set of search and navigation conditions exist in the application. These conditions are known as triggers.
- [Triggering based on refinements](#) on page 79
You can set a landing page to display when a user navigates to a specific set of refinements in your application.
- [Triggering based on search terms](#) on page 78
You can set a landing page to display when a user searches for specific terms.

Changing a cartridge

You can replace an existing cartridge using the **Content Tree** or the **Content Detail Panel**.

To change a cartridge:

1. From the **Edit View** of the **Page Builder**, identify the cartridge you need to change.
 - Use the **Content Tree** on the left to select a cartridge and open it for editing in the **Content Detail Panel**.
 - Use the **Content Detail Panel** on the right to locate and open a cartridge.
2. Change the cartridge.
 - From the **Content Tree**, right-click the cartridge and choose **Change**.
 - In the **Content Detail Panel**, click the **Change** button associated with the cartridge you need to replace.

The **Select Cartridge** dialog displays.

3. Select a new cartridge.
4. Click **OK**.
5. From the **Edit View**, click **OK** to return to the **List View**.
6. Click **Save All Changes**.
 - [Selecting a cartridge](#) on page 83
You designate the content of each page section by selecting and configuring cartridges.
 - [Configuring a cartridge](#) on page 84
You can configure cartridges to contain information appropriate for each page section.
 - [Ejecting a cartridge](#) on page 102
You can remove a cartridge from a section using the **Content Tree** or the **Content Detail Panel**.

Ejecting a cartridge

You can remove a cartridge from a section using the **Content Tree** or the **Content Detail Panel**.

To eject a cartridge from a section:

1. From the **Edit View** of the **Page Builder**, identify the cartridge you need to remove.
 - Use the **Content Tree** on the left to select a cartridge and open it for editing in the **Content Detail Panel**.
 - Use the **Content Detail Panel** on the right to locate and open a cartridge.
2. Eject the cartridge.
 - From the **Content Tree**, right-click the cartridge and choose **Remove**.
 - In the **Content Detail Panel**, click the **X** button next to the cartridge you need to remove.
3. Click **OK** to return to the **List View**.
4. Click **Save All Changes**.
 - [Selecting a cartridge](#) on page 83
You designate the content of each page section by selecting and configuring cartridges.
 - [Configuring a cartridge](#) on page 84

You can configure cartridges to contain information appropriate for each page section.

- [Changing a cartridge](#) on page 102

You can replace an existing cartridge using the **Content Tree** or the **Content Detail Panel**.

Deleting a landing page

You can delete a landing page from your application from the **List View** of the **Page Builder**.

Users with Edit permissions cannot delete active pages.

To delete a landing page:

1. From the **List View** of the **Page Builder**, click the **Delete** icon that corresponds to the landing page you need to delete.
The landing page is marked for deletion.
2. Click **Save All Changes**.
The landing page is not deleted until you click **Save All Changes**.

Troubleshooting pages

If page templates or cartridges have been removed from the Page Builder, or if a page template is invalid, you will receive an error message.

Error message	Description
Invalid Pages	If a landing page is created with an invalid template, or if a template is invalidated after it has been used for a landing page, the page becomes invalid. Invalid pages display in the Page List table with a warning icon. If a landing page displays with this icon, its template is invalid and you must contact your application developer.
Page template "TemplateName" has been removed from the Page Builder.	If this message displays on the Content Detail Panel in the Edit View , then the template used by the page is no longer available. You can still edit the cartridges inside the page, but you cannot edit the global page content. If you need to edit the page, you can choose a new template and re-configure the content or contact your application developer.
Cartridge "CartridgeName" has been removed from the Page Builder.	If this message displays on the Content Detail Panel in the Edit View , then the cartridge is no longer available. If you need to edit the cartridge, you can choose a new cartridge and re-configure the content or contact your application developer.

Error message	Description
Some fields or cartridges in this template may have been updated or removed. Your content has been converted to the new template.	If this message displays on the Content Detail Panel in the Edit View , then the template used by the page has been updated. Some of the fields or cartridges within the page may have been changed or removed by your application developer. Once you have identified and evaluated the changes, you can choose to accept them by clicking OK , or reject them by clicking Cancel .
Some fields or cartridges within this cartridge may have been updated or removed. Your content has been converted to the new cartridge.	If this message displays on the Content Detail Panel in the Edit View , then the cartridge has been updated. Some of the fields or cartridges within the cartridge may have been changed or removed by your application developer. Once you have identified and evaluated the changes, you can choose to accept them by clicking OK , or reject them by clicking Cancel .



Chapter 5

Working with keyword redirects

This section introduces the concept of a keyword redirect and explains how to create, modify, delete, and view them with the **Keyword Redirect** component of Merchandising Workbench.

About keyword redirects

Keyword redirects are used to redirect a user's search to a Web page (that is, a URL).

Conceptually, keyword redirects are similar to dynamic business rules in that both have trigger and target values. The trigger of a keyword redirect is one or more search terms; the target of a keyword redirect is a URL. If users search with the particular keyword, the redirect URL displays in the application. For example, you can set up a keyword redirect with a keyword of "delivery" and a redirect URL of <http://shipping.acme.com>. Or you might create a keyword redirect with a keyword of "stores" and a redirect URL of http://www.acme.com/store_finder.htm.

Your technical team must modify your application code to display the Web page you specify in a keyword redirect. This is described in "Implementing Merchandising and Content Spotlighting" of the *Endeca Developer's Guide*. Contact your technical team for details.

Multiple keyword entries

If a keyword redirect has more than one keyword entry, then all the keywords must be present in a user's query for the redirect to fire. The search terms do not all need to match a keyword, that is, the search terms can be a superset of the keywords. Each keyword entry has a match mode to indicate how the search terms in a user's query must match your specified keyword(s) in order for the redirect to fire. The match modes are described in the procedure to create redirects.

Keyword redirect groups

A keyword redirect belongs to a keyword redirect group. If you are familiar with dynamic business rule groups, it helps to compare those to keyword redirect groups. Both types of groups work the same way and serve the same two functions. Groups provide a means to logically organize keyword redirects, and groups allow multiple business users to access the **Keyword Redirects** page simultaneously.

A keyword redirect group provides a means to organize a large number of keyword redirects into smaller logical categories which usually affect distinct (non-overlapping) parts of a Web site. For example, a retail application might organize keyword redirects that affect the shipping and customer service portions of a Web site into a group for Shipping and Service and organize another group for Weekly Promotions. If you were to select Shipping and Service on the **Keyword Redirects** page, you would access all the keyword redirects in that group but none of the Weekly Promotions redirects.

A keyword redirect group also enables multiple business users to access the **Keyword Redirects** page simultaneously. From the **Keyword Redirects** page, you can access a single group at a time. Once you select a group that contains the redirects you want to modify, Merchandising Workbench prevents other users from editing that group until you return to the selection list or close your browser.

Keyword redirects in a single group appear on the **Keyword Redirects** page as a single list.

Your Endeca technical team creates keyword redirect groups for you using Developer Studio.

- [About dynamic business rules](#) on page 23
A dynamic business rule describes the logic of how to promote records for display to application users.
- [The Keyword Redirects page](#) on page 15
The **Keyword Redirects** page is where you create and modify keyword redirects.
- [Creating keyword redirects](#) on page 106
The **Keyword Redirects** page allows you to create, modify, and delete keyword redirects in your application.
- [Modifying keyword redirects](#) on page 107
The **Keyword Redirects** page allows you to create, modify, and delete keyword redirects in your application.
- [Deleting keyword redirects](#) on page 108
You can delete a keyword redirect if it is no longer needed or desired.
- [Filtering your view of keyword redirects](#) on page 109
Filtering your view of keyword redirects provides a way to simplify the view of a large list. You can filter by keyword, partial word, or letter.

Creating keyword redirects

The **Keyword Redirects** page allows you to create, modify, and delete keyword redirects in your application.

A keyword redirect may have one or more keywords. If a keyword redirect has more than one keyword, then all of the keywords must be present in a user's query for the trigger to fire.

To create a keyword redirect:

1. If your technical team created more than one keyword redirect group for your project, select the group in which you want to create a new keyword redirect.
2. On the **Keyword Redirects** page, click **Add Keyword Redirect**.
3. Specify a **Redirect Link**. This is the URL that loads in a user's browser if a user searches for the associated keyword(s).
4. In the **Keyword** field, type one or more keywords.
5. Select a **Match Mode** from the list to indicate how keywords must be matched from a user's record search query in order to fire the redirect.
 - In **Match Phrase** mode (the default), all of the keywords must match in the same order in the user's query for the redirect to fire.
 - In **Match All** mode, all of the keywords must match (without regard for order in the user's query) for the redirect to fire.

- In **Match Exact** mode, all of the keywords must exactly match a user's query for the redirect to fire. Unlike the other two modes, a user's query must exactly match the keyword in the number of words and cannot be a super set of the keywords.

6. Click **Add**. If more than one keyword is necessary, repeat steps 4- 6.
7. Click **OK**.
Merchandising Workbench returns to the **Keyword Redirects** page.
8. Click **Save Changes**.

The changes immediately take effect in your application.

- [Modifying keyword redirects](#) on page 107
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- [Deleting keyword redirects](#) on page 108
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The **Keyword Redirects** page is where you create and modify keyword redirects.

Modifying keyword redirects

The **Keyword Redirects** page allows you to create, modify, and delete keyword redirects in your application.

A keyword redirect may have one or more keywords. If a keyword redirect has more than one keyword, then all of the keywords must be present in a user's query for the trigger to fire.

To modify a keyword redirect:

1. If your technical team created more than one keyword redirect group for your project, select the group that contains the keyword redirect that you want to modify.
2. On the **Keyword Redirects** page, click an underlined keyword or set of keywords.
3. On the **Keyword Redirect Entry** page, modify the keyword(s) or associated redirect link as necessary.
4. Click **OK**.
Merchandising Workbench returns to the **Keyword Redirects** page.
5. Click **Save Changes**.

The changes immediately take effect in your application.

- [Creating keyword redirects](#) on page 106

The **Keyword Redirects** page allows you to create, modify, and delete keyword redirects in your application.

- [Deleting keyword redirects](#) on page 108
You can delete a keyword redirect if it is no longer needed or desired.
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The **Keyword Redirects** page is where you create and modify keyword redirects.

Deleting keyword redirects

You can delete a keyword redirect if it is no longer needed or desired.

To delete a keyword redirect:

1. On the **Keyword Redirects** page, click the delete icon for the keyword redirect you want to remove.
2. Click **Save Changes**.

The changes immediately take effect in your application.

- [Creating keyword redirects](#) on page 106
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Filtering your view of keyword redirects

Filtering your view of keyword redirects provides a way to simplify the view of a large list. You can filter by keyword, partial word, or letter.

The filter examines the first word of multi-word redirects. You cannot filter by the redirect URL. Merchandising Workbench uses an implied wildcard when filtering. For example, filtering by "t" is equivalent to filtering by "t*". All keywords beginning with t display. Merchandising Workbench stores keyword redirects in lower case regardless of how you added them. For example, if you type the keyword "JEANS". Merchandising Workbench stores it as "jeans". Consequently, you must provide filtering terms or characters in lower case. If you want to filter for the phrase "jeans", you might enter "j" or "je". Filtering for "J" or "JE" would not return the keyword redirect.

1. Enter a filtering keyword or character in the **Filter** field.
2. Click **Filter**.
3. To restore the full list of keyword redirects, click **Clear Filter**.

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Chapter 6

Specifying search configuration

This section introduces the **Thesaurus**, **Phrases**, and **Stop Words** sections of Merchandising Workbench, and details their use in an application for search configuration purposes.

Working with thesaurus entries

This section introduces the **Thesaurus** page of Merchandising Workbench, and details how to create, manage, and troubleshoot thesaurus entries.

About the thesaurus

Thesaurus entries provide a means to account for alternate forms of a user's query.

On the **Thesaurus** page, you create the synonyms that capture other ways of expressing queries relevant to your application. These entries provide concept-level mappings between words and phrases. For example, if users enter the search term "cab" to search for "cabernet sauvignon," you could create a thesaurus entry to equate "cab" with "cabernet sauvignon."

You can add two kinds of entries to your Endeca thesaurus:

- One-way thesaurus entries establish an equivalence between words or phrases that applies in a single direction only. For example, you could define a one-way mapping so that all queries for "Red Wine" would also return matches containing "Zinfandel," but queries for "Zinfandel" would not return results for the more general "Red Wine." You can add an unlimited number of synonyms to a one-way entry, and the application expands the query to search for each search term with the same one-way relationship. For example, you could add additional synonyms to the "Red Wine" entry to expand the search to "Merlot," "Shiraz," and "Bordeaux."
- Two-way thesaurus entries establish a mutual equivalence relationship between words or phrases. For example, an equivalence might specify that the phrase "rose" is interchangeable with the phrase "blush."

You may find it useful to examine reporting data for your application when creating thesaurus entries. If you find that users frequently search for a term you had not expected, you can create a form equivalence mapping in your thesaurus.

- *Thesaurus tips* on page 115
The thesaurus feature is very powerful, and poorly-conceived entries can be expensive and not useful.
- *The Thesaurus page* on page 17

The **Thesaurus** page is where you add and edit synonyms used for searching.

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- [Creating two-way thesaurus entries](#) on page 113
You create two-way thesaurus entries on the **Thesaurus** page of Merchandising Workbench.
- [Editing thesaurus entries](#) on page 113
You can revise your thesaurus entries as you gain a better understanding of what search terms users are searching for.
- [Filtering your view of thesaurus entries](#) on page 114
Filtering your thesaurus entries provides a way to simplify the view of a large list of entries or locate a particular entry.
- [Deleting thesaurus entries](#) on page 115
You can delete a thesaurus if it is no longer needed or desired.

Creating one-way thesaurus entries

You create one-way thesaurus entries on the **Thesaurus** page of Merchandising Workbench.

To create a one-way thesaurus entry:

1. On **Thesaurus** page, click **Add One-Way Entry**.
2. In the **Source Phrase** text box, type the source term in the first field.
3. Enter a synonym for the source term in the **Synonyms** text box.
4. Click **Add**.
5. Repeat these steps to create additional synonym mappings. You can create multiple synonyms for a single thesaurus entry.
6. Click **OK**.
7. Click **Save Changes**.

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Creating two-way thesaurus entries

You create two-way thesaurus entries on the **Thesaurus** page of Merchandising Workbench.

To create a two-way thesaurus entry:

1. On **Thesaurus** page, click **Add Two-Way Entry**.
2. Type a word or phrase in the **Synonyms** text box.
3. Click **Add**.
4. Type a synonymous word or phrase in the **Synonyms** text box.
5. Click **Add**.
6. Repeat steps 4 and 5 to create additional synonym mappings. You can create an unlimited number of synonyms for a single thesaurus entry.
7. Click **OK**.
8. Click **Save Changes**.

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Editing thesaurus entries

You can revise your thesaurus entries as you gain a better understanding of what search terms users are searching for.

To edit an entry:

1. On the **Thesaurus** page, click the entry you want to modify.
2. Add, remove, or change terms as desired.
3. Click **OK**.

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Filtering your view of thesaurus entries

Filtering your thesaurus entries provides a way to simplify the view of a large list of entries or locate a particular entry.

For example, suppose you want to locate synonyms you previously associated with "US." You filter for "us" and see an entry with the synonyms "american, united states, us." You can filter by word, partial word, or letter. Merchandising Workbench uses an implied wildcard to filter entries. For example, filtering by "u" is equivalent to filtering by "u*". All entries beginning with u display. Merchandising Workbench is case insensitive when filtering thesaurus entries.

To filter thesaurus entries:

1. On the **Thesaurus** page, enter a filtering term or character in the **Filter** field.
2. Click **Filter**.
3. To clear the filter, click **Clear Filter** on the **Thesaurus** page.

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The **Thesaurus** page is where you add and edit synonyms used for searching.

Deleting thesaurus entries

You can delete a thesaurus if it is no longer needed or desired.

To delete a thesaurus entry:

1. Click on the **Thesaurus** page.
2. Click the **Delete** icon for the entry you want to remove.
3. Click **Save Changes**.

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Thesaurus tips

The thesaurus feature is very powerful, and poorly-conceived entries can be expensive and not useful.

To maximize the potential of this feature, keep the following suggestions in mind:

- Do not create a two-way thesaurus entry for a word with multiple meanings. For example, khaki can refer to a color as well as to a style of pants. If you create a two-way thesaurus entry for khaki = pants, then a user's search for khaki towels could return irrelevant results for pants.
- Do not create a two-way thesaurus entry between a general and several more specific terms, such as top = shirt = sweater = vest. This increases the number of results the user has to go through while reducing the overall accuracy of the items returned. In this instance, better results are attained by creating individual one-way thesaurus entries between the general term top and each of the more-specific terms.
- A thesaurus entry should never include a term that is a substring of another term in the entry. For example, consider a two-way equivalency between Adam and Eve and Eve. If users type Eve, they get results for Eve or (Adam and Eve) (that is, the same results they would have gotten for Eve without the thesaurus). If users type Adam and Eve, they get results for (Adam and Eve) or Eve, causing the Adam and part of the query to be ignored.
- Stop words such as "and" or "the" should not be used in single-word thesaurus forms. For example, if the has been configured as a stop word, an equivalency between thee and the is not useful. You can use stop words in multi-word thesaurus forms, because multi-word thesaurus forms are handled as phrases. In phrases, a stop word is treated as a literal word and not a stop word.

- Avoid multi-word thesaurus forms where single-word forms are appropriate. In particular, avoid multi-word forms that are not phrases that users are likely to type, or to which phrase expansion is likely to provide relevant additional results. For example, the two-way thesaurus entry Aethelstan, King Of England (D. 939) = Athelstan, King Of England (D. 939) should be replaced with the single-word form Aethelstan= Athelstan.
- Thesaurus forms should not use non-searchable characters. For example, the two-way thesaurus entry Pikes Peak = Pike's Peak should only be used if apostrophe (') is enabled as a search character. (To add a search character, contact an Endeca Developer Studio user at your site.)
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Working with automatic phrases

This section introduces the **Phrases** page of Merchandising Workbench, and explains how to create and manage automatic phrases with the tool.

About automatic phrases

When an application user provides several search terms in a query, the automatic phrasing feature groups certain terms into a search phrase and returns query results for the phrase.

Automatic phrasing is similar to placing quotes around search terms before submitting them in a query, for example "my search terms" is the phrased version of the query my search terms. However, automatic phrasing removes the need for application users to place quotes around search phrases to get phrased results.

In Merchandising Workbench, business users can create, modify, and remove phrases. In addition, business users can view dimensions that have been enabled for phrasing in Developer Studio.

A front-end developer must add presentation API code to support automatic phrasing in an Endeca application. Coordinate with your technical team to ensure that all the required aspects of the feature are implemented in your Endeca application. For more information, see "Using automatic phrasing" in the Endeca Developer's Guide.

Automatic phrases based on dimension values

In Developer Studio, your pipeline developer can select dimensions to enable the dimension values as automatic phrases. For example, if a pipeline developer selects the Wine Type dimension for automatic phrasing, dimension values such as "Pinot Noir" and "Cabernet Sauvignon" become automatic phrases. On the **Phrases** page of Merchandising Workbench, you can view the dimensions that a pipeline developer selected for automatic phrasing. However, you cannot use Merchandising Workbench to add or modify the dimensions selected for automatic phrasing, and you cannot view the list of dimension values that are automatic phrases.

- [The Phrases page](#) on page 15
The **Phrases** page is where you add, edit, or remove multi-word search terms that are available for automatic phrasing in your Endeca-enabled application.
- [Creating automatic phrases](#) on page 117
The **Phrases** page allows you to create, modify, or remove phrases from your application.
- [Modifying automatic phrases](#) on page 118
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Filtering your automatic phrases provides a way to simplify the view of a large list of phrases or locate a particular phrase.

Creating automatic phrases

The **Phrases** page allows you to create, modify, or remove phrases from your application.

To add a new automatic phrase:

1. On the **Phrases** page, click **Add Phrase**.
2. Type a phrase in the **Phrase** field.
3. Click **OK**.
4. Click **Save Changes**.

The phrase is committed to your application immediately. No baseline update is required.

- [Modifying automatic phrases](#) on page 118
The **Phrases** page allows you to create, modify, or remove phrases from your application.
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Modifying automatic phrases

The **Phrases** page allows you to create, modify, or remove phrases from your application.

To modify a phrase:

1. On the **Phrases** page, click an underlined phrase.
2. Modify the phrase as necessary.
3. Click **OK**.
4. Click **Save Changes**.

The modified phrase is committed to your application immediately. No baseline update is required.

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The **Phrases** page allows you to create, modify, or remove phrases from your application.

- *Deleting automatic phrases* on page 118

The **Phrases** page allows you to create, modify, or remove phrases from your application.

- *Filtering your view of automatic phrases* on page 119

Filtering your automatic phrases provides a way to simplify the view of a large list of phrases or locate a particular phrase.

- *About automatic phrases* on page 116

When an application user provides several search terms in a query, the automatic phrasing feature groups certain terms into a search phrase and returns query results for the phrase.

- *The Phrases page* on page 15

The **Phrases** page is where you add, edit, or remove multi-word search terms that are available for automatic phrasing in your Endeca-enabled application.

Deleting automatic phrases

The **Phrases** page allows you to create, modify, or remove phrases from your application.

To delete an automatic phrase:

1. On the **Phrases** page, click the delete icon for the phrase you want to remove.
2. Click **Save Changes**.

- *Creating automatic phrases* on page 117

The **Phrases** page allows you to create, modify, or remove phrases from your application.

- *Modifying automatic phrases* on page 118

The **Phrases** page allows you to create, modify, or remove phrases from your application.

- *Filtering your view of automatic phrases* on page 119

Filtering your automatic phrases provides a way to simplify the view of a large list of phrases or locate a particular phrase.

- *About automatic phrases* on page 116

When an application user provides several search terms in a query, the automatic phrasing feature groups certain terms into a search phrase and returns query results for the phrase.

- *The Phrases page* on page 15

The **Phrases** page is where you add, edit, or remove multi-word search terms that are available for automatic phrasing in your Endeca-enabled application.

Filtering your view of automatic phrases

Filtering your automatic phrases provides a way to simplify the view of a large list of phrases or locate a particular phrase.

You can filter by word, partial word, or letter. Merchandising Workbench uses an implied wildcard to filter entries. For example, filtering by "t" is equivalent to filtering by "t*". All phrases beginning with t display. Merchandising Workbench stores automatic phrase in lower case regardless of how you added them. For example, if you type the phrase "BLUE JEANS". Merchandising Workbench stores it as "blue jeans". Consequently, you must provide filtering terms or characters in lower case. If you want to filter for the phrase "blue jeans", you might enter "b" or "bl". Filtering for "B" or "BL" would not return the phrase.

To filter phrases:

1. On the **Phrases** page, enter a filtering term or character in the **Filter** field.
2. Click **Filter**.
3. To clear the filter, click **Clear Filter** on the **Phrases** page.

- *Creating automatic phrases* on page 117

The **Phrases** page allows you to create, modify, or remove phrases from your application.

- *Modifying automatic phrases* on page 118

The **Phrases** page allows you to create, modify, or remove phrases from your application.

- *Deleting automatic phrases* on page 118

The **Phrases** page allows you to create, modify, or remove phrases from your application.

- *About automatic phrases* on page 116

When an application user provides several search terms in a query, the automatic phrasing feature groups certain terms into a search phrase and returns query results for the phrase.

- *The Phrases page* on page 15

The **Phrases** page is where you add, edit, or remove multi-word search terms that are available for automatic phrasing in your Endeca-enabled application.

Working with stop words

This section introduces the **Stop Words** page of Merchandising Workbench, and explains how to create and manage stop words to improve the search capabilities of your application.

About stop words

Stop words are words that are ignored if an application user includes them as part of search.

Typically, common words like "the", "and", "a" and so on are included in the stop word list. For example, if a user searches for the phrase "the Gutenberg Bible", the application ignores "the" and searches for "Gutenberg Bible".

When adding stop words to your application, you want to add terms that are common in your data set. For example, if your data consists of lists of books, you might want to add the word "book" to the stop word list, because a search on that word would return an impractically large set of records.

Words added to the stop word list are not expanded by other Endeca features like stemming and thesaurus. That means that if you set the word "item" as a stop word, its plural form "items" will not

be marked automatically as a stop word. If you want both forms to be on the stop word list, you must add them individually. An administrator must run a baseline update for stop word changes to take effect in an application. Running a baseline update requires a user role that has access to the Administration page.

Stop words must be single words only, and cannot contain any non-searchable characters. If more than one word is entered as a stop word, neither the individual words nor the combined phrase will act as a stop word. Non-searchable characters within a stop word will also cause this behavior. Entering "full-bodied" as a stop word acts just as if you had entered "full bodied", and does not have any effect on searches.

- [The Stop Words page](#) on page 16
The **Stop Words** page is where you add, edit, or remove words that are excluded from searching.
- [Creating stop words](#) on page 120
The **Stop Words** page allows you to create, modify, or remove stop words from your application.
- [Modifying stop words](#) on page 121
The **Stop Words** page allows you to create, modify, or remove stop words from your application.
- [Deleting stop words](#) on page 121
The **Stop Words** page allows you to create, modify, or remove stop words from your application.
- [Filtering your view of stop words](#) on page 122
Filtering your view of stop words provides a way to simplify the view of a largelist of stop words.

Creating stop words

The **Stop Words** page allows you to create, modify, or remove stop words from your application.

See the *Endeca Developer's Guide* for a list of recommended stop words.

To add a new stop word:

1. On the **Stop Words** page, click **Add Stop Word**.
2. Type a stop word.
3. Click **OK**.
4. Click **Save Changes**.

An administrator must run a baseline update for stop word changes to take effect in an application.

- [Modifying stop words](#) on page 121
The **Stop Words** page allows you to create, modify, or remove stop words from your application.
- [Deleting stop words](#) on page 121
The **Stop Words** page allows you to create, modify, or remove stop words from your application.
- [Filtering your view of stop words](#) on page 122
Filtering your view of stop words provides a way to simplify the view of a largelist of stop words.

- [About stop words](#) on page 119
Stop words are words that are ignored if an application user includes them as part of search.
- [The Stop Words page](#) on page 16
The **Stop Words** page is where you add, edit, or remove words that are excluded from searching.

Modifying stop words

The **Stop Words** page allows you to create, modify, or remove stop words from your application.

See the *Endeca Developer's Guide* for a list of recommended stop words.

To modify a stop word:

1. On the **Stop Words** page, click an underlined word.
2. Modify the word as necessary.
3. Click **OK**.
Merchandising Workbench returns to the **Stop Word** page.
4. Click **Save Changes**.

An administrator must run a baseline update for stop word changes to take effect in an application.

- [Creating stop words](#) on page 120
The **Stop Words** page allows you to create, modify, or remove stop words from your application.
- [Deleting stop words](#) on page 121
The **Stop Words** page allows you to create, modify, or remove stop words from your application.
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Filtering your view of stop words provides a way to simplify the view of a largelist of stop words.
- [About stop words](#) on page 119
Stop words are words that are ignored if an application user includes them as part of search.
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The **Stop Words** page is where you add, edit, or remove words that are excluded from searching.

Deleting stop words

The **Stop Words** page allows you to create, modify, or remove stop words from your application.

See the *Endeca Developer's Guide* for a list of recommended stop words.

To delete a stop word:

1. On the **Stop Words** page, click the delete icon for the stop word you want to remove. The changes immediately take effect in your application.
2. Click **Save Changes**.

- [Creating stop words](#) on page 120
The **Stop Words** page allows you to create, modify, or remove stop words from your application.

- [Modifying stop words](#) on page 121
The **Stop Words** page allows you to create, modify, or remove stop words from your application.
- [Filtering your view of stop words](#) on page 122
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- [About stop words](#) on page 119
Stop words are words that are ignored if an application user includes them as part of search.
- [The Stop Words page](#) on page 16
The **Stop Words** page is where you add, edit, or remove words that are excluded from searching.

Filtering your view of stop words

Filtering your view of stop words provides a way to simplify the view of a largelist of stop words.

You can filter by word, partial word, or letter. Merchandising Workbench uses an implied wildcard to filter stop words that contain the filter criteria. For example, filtering by "t" is equivalent to filtering by "*t*". All stop words that contain "t" display.

To filter stop words:

1. On the **Stop Words** page, enter a filtering term or character in the Filter field.
2. Click **Filter**.
3. To clear the filter, click **Clear Filter** on the **Stop Words** page.

- [Creating stop words](#) on page 120
The **Stop Words** page allows you to create, modify, or remove stop words from your application.
- [Modifying stop words](#) on page 121
The **Stop Words** page allows you to create, modify, or remove stop words from your application.
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- [About stop words](#) on page 119
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Chapter 7

Specifying the presentation order of dimensions

This section explains how to configure the order in which dimensions and dimensions groups appear to the end-user in your Endeca application.

About dimension reordering

On the **Dimension Order** page, you can modify the order in which dimension groups, dimensions, and dimension values are presented in your application.

The order in which a dimension or dimension group appears in the **Dimension List** controls the order in which the dimension or dimension group appears in your Endeca application. In addition to reordering items on the **Dimension Order** page, you can select any underlined item and drill down to reorder its child dimensions and dimension values.

Before you can select and reorder dimensions, an administrator must run an initial baseline update.

Note that if an update is running while you are reordering dimensions, the dimensions may be changed before you save your reordering changes. (Recall that an update can add, remove, or modify dimensions and dimension values.) The **Dimension Order** page and its subpages automatically update with the current dimensions and dimension values when you load or reload the page.

Optionally, you can preview your reordering changes.

To commit reordering changes in your application, save your changes and run a baseline update.

Dimension groups and dimensions

In applications that use a combination of dimension groups and dimensions, all dimensions within a group have the same presentation order as the group itself. For example, if dimension group A is ordered before dimension D, and dimension E, the dimensions in group A are ordered before dimensions D and E.

- *The Dimension Order page* on page 16

The **Dimension Order** page is where you can change the presentation order of dimension groups, dimensions, and dimension values in your application.

- *Reordering the presentation of dimension groups, dimensions, and dimension values* on page 124

You can reorder the presentation of any underlined dimension group, dimension, or dimension value.

Reordering the presentation of dimension groups, dimensions, and dimension values

You can reorder the presentation of any underlined dimension group, dimension, or dimension value.

To reorder the presentation order of dimension groups, dimension, or dimension values:

1. Select the **Dimension Order** page.
2. You can click **Edit Order** to reorder the top level of your data hierarchy, or you can select any underlined item on the page to modify its presentation order.
3. Navigate to the level in your data set that you want to modify and click **Edit Order**.
4. In the **Order** column, provide new values indicating the order in which you want the items to appear. Items appear in your application in descending order.
5. Optional. Click **Preview Order** to view the new presentation order before saving changes. Previewing does not save changes.
6. Click **Save Changes**.
7. To reorder other levels in the data set, navigate the data set using the bread crumbs at the top of the page and repeat steps 2-6.

For changes to take effect in your application, an administrator must run a baseline update.

- [*About dimension reordering* on page 123](#)
On the **Dimension Order** page, you can modify the order in which dimension groups, dimensions, and dimension values are presented in your application.
- [*The Dimension Order page* on page 16](#)
The **Dimension Order** page is where you can change the presentation order of dimension groups, dimensions, and dimension values in your application.



Chapter 8

Working with Endeca reports

This section introduces Merchandising Workbench reporting capabilities and explains how to configure and view them.

About reports

Reports allow you to look at what has happened on your site over the last day or week.

Depending on how you configure your reports, you can answer questions like these:

- How much traffic is my site getting?
- How are visitors searching and browsing the site?
- How effective are their searching and browsing techniques?

Depending upon how it is configured, the Merchandising Workbench **View Reports** page can display a single daily or weekly report or allow you to browse and view historical report archives.

To get valid and useful end-user data, your Endeca reports should be run using the production version of your Endeca application. Your technical staff may either provide you with a separate login to view production reports, or they may copy these reports to your Merchandising Workbench machine.

- [Logging and reporting in Merchandising Workbench](#) on page 140
You can control the Log Server and Report Generator from Merchandising Workbench to provide your business users with Endeca reports.
- [The Reporting page](#) on page 19
The **Reporting** page is where you view reporting data for your Endeca application.
- [Viewing reports](#) on page 126
The reports that are visible to you depend upon how Merchandising Workbench is configured. If you need to include or exclude different reports or reporting information, or if reporting information does not appear, contact your Endeca technical team.
- [Configuring report generation](#) on page 141
In order to enable Merchandising Workbench to display reports on the **View Reports** page, you must configure report generation.
- [Accessing production reports](#) on page 142
Most business users work on a staging implementation of Merchandising Workbench, but want to see reports based on the production system.

Viewing reports

The reports that are visible to you depend upon how Merchandising Workbench is configured. If you need to include or exclude different reports or reporting information, or if reporting information does not appear, contact your Endeca technical team.

You need user permissions to access the **View Reports** page.

To view reports in Merchandising Workbench:

1. In the navigation menu, click **View Reports**.
2. In the submenu that appears below **View Reports**, click one of the following:
 - Current (daily) displays the latest report with a daily timeframe.
 - Current (weekly) displays the latest report with a weekly timeframe.
 - Daily displays a list of archived daily reports by date in the main page. Click on any date in the list to display the corresponding report.
 - Weekly displays a list of archived weekly reports by date in the main page. Click on any date in the list to display the corresponding report.
- *Configuring report generation* on page 141
In order to enable Merchandising Workbench to display reports on the **View Reports** page, you must configure report generation.
- *Accessing production reports* on page 142
Most business users work on a staging implementation of Merchandising Workbench, but want to see reports based on the production system.
- *About reports* on page 125
Reports allow you to look at what has happened on your site over the last day or week.
- *Logging and reporting in Merchandising Workbench* on page 140
You can control the Log Server and Report Generator from Merchandising Workbench to provide your business users with Endeca reports.
- *The Reporting page* on page 19
The **Reporting** page is where you view reporting data for your Endeca application.



Chapter 9

Specifying application settings

The following sections introduce Merchandising Workbench application settings and explain in detail how to specify and configure each setting.

Managing users

This section introduces user management and details how to add and manage users in Merchandising Workbench.

About user management

An administrator must create users with a user name, password, identity information, and set of roles (permissions) to log in to Merchandising Workbench. A user can be configured manually in Merchandising Workbench or set up through LDAP.

Each business user profile is associated with a specific application and a business user profile cannot span applications. If necessary, an administrator can create a number of identical business user profiles for any number of applications. Administrators, on the other hand, span applications across Merchandising Workbench.

Each role an administrator selects allows a business user access to a specific page in Merchandising Workbench. For example, selecting the **rules** role allows a user to access the **Rule Manager** page. After adding a new user to Merchandising Workbench, an administrator can modify user name, password, identity information, and roles as necessary. The user can also modify his or her own password as necessary.

See the *Endeca Administrator's Guide* for information about the default admin user and available user roles.

- [The User Management page](#) on page 18
The **User Management** page is where an administrator adds and removes users and modifies their page access and rule group permissions.
- [Adding business users to Merchandising Workbench](#) on page 128
Administrators and users with the settings role can configure users on the **User Management** page.
- [Adding administrators to Merchandising Workbench](#) on page 130
Administrators can configure other administrators on the **User Management** page.

- [Modifying a user's profile](#) on page 132
Administrators and users with the settings role can modify aspects of a user profile including password, identity information, roles, and rule group permissions.
- [Modifying your password](#) on page 133
A business user can modify his or her password as necessary by accessing the **User Settings** page.
- [Filtering rule group permissions by rule group name](#) on page 134
Filtering on the **User Management** page provides a way to locate rule group permissions that are assigned to a particular user or user group.

Adding business users to Merchandising Workbench

Administrators and users with the settings role can configure users on the **User Management** page.

You can add a user in one of three ways:

- Add a user manually in Merchandising Workbench.
- Add a user that is stored in LDAP.
- Add a group that is stored in LDAP and assign roles and permissions to the group as a whole.

The second two options are only available if you have configured Merchandising Workbench to use LDAP for user authentication. For more information about using Merchandising Workbench with LDAP, see the *Endeca Administrator's Guide*.

To add a user to Merchandising Workbench:

1. On the **Application Settings > User Management** page, click **Add User**.
2. Select a **Login Type**.

If you want	Select this Login Type
to add a user manually in Merchandising Workbench	Merchandising Workbench User
to add a user that is stored in LDAP	LDAP User
to add a group that is stored in LDAP	LDAP Group

3. Provide login and identity information for the type of user you are adding.

Login Type	Required information
For a Merchandising Workbench User	<ol style="list-style-type: none"> 1. Provide a Username. 2. Provide a Password and confirm it. 3. Provide First Name, Last Name, and an Email Address for the user.
For an LDAP User	<ol style="list-style-type: none"> 1. Provide a Username. This is the id of the user in the LDAP directory. 2. Optionally, click Check Name to look up the user in the LDAP directory and confirm that the name is correct. 3. By default, the user inherits roles and permissions from any LDAP groups that have a profile defined in the Merchandising Workbench of which the user is a member. Any roles and permissions you select for this user are assigned in addition to the inherited roles and permissions. If you want the user to have only the roles and permissions you select (that

Login Type	Required information
	<p>is, the user will not inherit any roles or permissions from LDAP groups), select Override LDAP Group Permissions.</p>
For an LDAP Group	<ol style="list-style-type: none"> 1. Provide a Group Name. This is the name of the group as defined in the LDAP directory. 2. Optionally, click Check Name to look up the group in the LDAP directory and confirm that the name is correct. <ol style="list-style-type: none"> 4. In the Page Access section, select each page that you want to allow the user or group to access. 5. Filter the rule group permissions, if necessary, to locate a rule group. 6. For a rule group, select one of the following options: <ul style="list-style-type: none"> • Approve - The user or group has permission to view, edit, and approve rules in the group. • Edit - The user or group has permission to view and edit rules but no permission to approve rules in the group. • View - The user or group has permission to view rules but no permission to edit or approve rules in the group. • None - The user or group has no permission to view, edit, or approve rules in the group. 7. Repeat the above step as necessary to assign additional permissions. 8. Click OK. 9. Click Save Changes.

The new user or group profile displays on the **User Management** page for the application in which it was created.

- [Adding administrators to Merchandising Workbench](#) on page 130
Administrators can configure other administrators on the **User Management** page.
- [Modifying a user's profile](#) on page 132
Administrators and users with the settings role can modify aspects of a user profile including password, identity information, roles, and rule group permissions.
- [Modifying your password](#) on page 133
A business user can modify his or her password as necessary by accessing the **User Settings** page.
- [Filtering rule group permissions by rule group name](#) on page 134
Filtering on the **User Management** page provides a way to locate rule group permissions that are assigned to a particular user or user group.
- [About user management](#) on page 127
An administrator must create users with a user name, password, identity information, and set of roles (permissions) to log in to Merchandising Workbench. A user can be configured manually in Merchandising Workbench or set up through LDAP.
- [The User Management page](#) on page 18
The **User Management** page is where an administrator adds and removes users and modifies their page access and rule group permissions.
- [About checking user and group names in LDAP](#) on page 131
If you have LDAP authentication enabled, you can look up users and groups in the LDAP directory by clicking **Check Name** before you add them to Merchandising Workbench.

Adding administrators to Merchandising Workbench

Administrators can configure other administrators on the **User Management** page.

You can add an administrator in one of three ways:

- Add an administrator manually through Merchandising Workbench.
- Add a user that is stored in LDAP as an administrator.
- Add a group that is stored in LDAP as an administrator.

To add an administrator to Merchandising Workbench:

1. Log in to Merchandising Workbench as an administrator. Only administrators can create other administrators.

2. On the **Application Settings > User Management** page, click **Add Administrator**.

3. Select a **Login Type**.

If you want	Select this Login Type
to add an administrator manually in Merchandising Workbench	Merchandising Workbench User
to add a user that is stored in LDAP as an administrator	LDAP User
to add a group that is stored in LDAP as an administrator	LDAP Group

4. Provide login and identity information for the type of user you are adding.

Login Type	Required information
For a Merchandising Workbench User	<ol style="list-style-type: none"> 1. Provide a Username. 2. Provide a Password and confirm it. 3. Provide First Name, Last Name, and an Email Address for the administrator.
For an LDAP User	<ol style="list-style-type: none"> 1. Provide a Username. This is the id of the user in the LDAP directory. 2. Optionally, click Check Name to look up the user in the LDAP directory and confirm that the name is correct.
For an LDAP Group	<ol style="list-style-type: none"> 1. Provide a Group Name. This is the name of the group as defined in the LDAP directory. 2. Optionally, click Check Name to look up the group in the LDAP directory and confirm that the name is correct.

5. Click **OK**.

6. Click **Save Changes**.

The new administrator's profile displays on the **User Management** page and is available in every application in Merchandising Workbench.

- *Adding business users to Merchandising Workbench* on page 128
Administrators and users with the settings role can configure users on the **User Management** page.

- [Modifying a user's profile](#) on page 132
Administrators and users with the settings role can modify aspects of a user profile including password, identity information, roles, and rule group permissions.
- [Modifying your password](#) on page 133
A business user can modify his or her password as necessary by accessing the **User Settings** page.
- [Filtering rule group permissions by rule group name](#) on page 134
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- [About user management](#) on page 127
An administrator must create users with a user name, password, identity information, and set of roles (permissions) to log in to Merchandising Workbench. A user can be configured manually in Merchandising Workbench or set up through LDAP.
- [The User Management page](#) on page 18
The **User Management** page is where an administrator adds and removes users and modifies their page access and rule group permissions.
- [About checking user and group names in LDAP](#) on page 131
If you have LDAP authentication enabled, you can look up users and groups in the LDAP directory by clicking **Check Name** before you add them to Merchandising Workbench.

About checking user and group names in LDAP

If you have LDAP authentication enabled, you can look up users and groups in the LDAP directory by clicking **Check Name** before you add them to Merchandising Workbench.

After entering the name of an LDAP user or group in the **Add User** page, you can click **Check Name** to look up the user or group in the LDAP directory and confirm that the name is correct. If the user or group is found, any identity information such as name and email address that Merchandising Workbench can retrieve from LDAP is filled in on the **Add User** page.

In addition, clicking **Check Name** retrieves the exact (case-sensitive) name of the user or group as specified in the LDAP directory and corrects the case in the user or group name field if necessary, so that the user name specified in Merchandising Workbench matches the user name in the LDAP directory.

Note that if you do not use **Check Name**, it is possible to add a profile in Merchandising Workbench for an LDAP user or LDAP group that does not exist in the LDAP directory.

When you edit the profile for an existing LDAP user or group, Merchandising Workbench looks up the user or group to confirm that it still exists in the LDAP directory and fills in the identity fields if the information is found. However, the user or group name field is read-only and cannot be changed.

- [Adding business users to Merchandising Workbench](#) on page 128
Administrators and users with the settings role can configure users on the **User Management** page.
- [Adding administrators to Merchandising Workbench](#) on page 130
Administrators can configure other administrators on the **User Management** page.

Modifying a user's profile

Administrators and users with the settings role can modify aspects of a user profile including password, identity information, roles, and rule group permissions.

You must have the settings role to modify the profile of a user or group. Only administrators can modify the profiles of other administrators.



Note: You cannot change the user or group name once the profile has been created. To change a user or group name, create a new profile with the new name and the same roles and rule group permissions, then delete the existing user or group profile.

To modify a user or group profile:

1. On the **User Management** page, click the **User / Group Name** of the user or group whose profile you want to modify.
2. Modify the password as necessary.



Note: You cannot modify the password of an LDAP user in Merchandising Workbench.

3. Modify the identity information as necessary. Merchandising Workbench user cannot have a blank name.



Note: You cannot change the name or email information for an LDAP user or group in Merchandising Workbench.

4. Select or deselect each role as necessary.



Note: Administrators are automatically assigned all roles.

5. In the **Rule Group Permissions** section, select the permissions you want to associate with the user or group.



Note: Administrators are automatically assigned the Approve permission for all rule groups.

6. Click **OK**.

7. Click **Save Changes**.

- [Adding business users to Merchandising Workbench](#) on page 128
Administrators and users with the settings role can configure users on the **User Management** page.
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A business user can modify his or her password as necessary by accessing the **User Settings** page.
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- [About user management](#) on page 127

An administrator must create users with a user name, password, identity information, and set of roles (permissions) to log in to Merchandising Workbench. A user can be configured manually in Merchandising Workbench or set up through LDAP.

- [The User Management page](#) on page 18

The **User Management** page is where an administrator adds and removes users and modifies their page access and rule group permissions.

Modifying your password

A business user can modify his or her password as necessary by accessing the **User Settings** page.

You can only modify your password if your user profile was added manually in Merchandising Workbench. If the **User Settings** option does not display in the navigation menu, check with your Merchandising Workbench administrator.

If you have the settings role, you can modify your profile in the **User Management** page.

To modify your password as a non-admin user:

1. On the **User Settings** page, modify the password as necessary. You cannot have a blank password.

2. Click **OK**.

3. Click **Save Changes**.

- [Adding business users to Merchandising Workbench](#) on page 128

Administrators and users with the settings role can configure users on the **User Management** page.

- [Adding administrators to Merchandising Workbench](#) on page 130

Administrators can configure other administrators on the **User Management** page.

- [Modifying a user's profile](#) on page 132

Administrators and users with the settings role can modify aspects of a user profile including password, identity information, roles, and rule group permissions.

- [Filtering rule group permissions by rule group name](#) on page 134

Filtering on the **User Management** page provides a way to locate rule group permissions that are assigned to a particular user or user group.

- [About user management](#) on page 127

An administrator must create users with a user name, password, identity information, and set of roles (permissions) to log in to Merchandising Workbench. A user can be configured manually in Merchandising Workbench or set up through LDAP.

- [The User Management page](#) on page 18

The **User Management** page is where an administrator adds and removes users and modifies their page access and rule group permissions.

Deleting users from Merchandising Workbench

An administrator can delete users and groups from Merchandising Workbench.

There are two restrictions on deleting users:

- You cannot delete yourself.

- There must be at least one administrator in the system who is a Merchandising Workbench user. If you attempt to delete the last existing Merchandising Workbench administrator, an error message will display.

To delete a user from Merchandising Workbench:

1. On the **Application Settings > User Management** page, click the **Delete** icon for the user or group that you want to remove.
2. Click **Save Changes**.

Filtering rule group permissions by rule group name

Filtering on the **User Management** page provides a way to locate rule group permissions that are assigned to a particular user or user group.

Filtering is useful if you have a long list of Merchandising Workbench rule groups, and you want to find a particular rule group permission to modify. The feature identifies rule groups by filtering against information stored in the **Rule Group** value. The default view of the **Rule Group Permissions** pane is not filtered. Merchandising Workbench uses an implied wildcard to filter the Rule Group value. For example, this means that filtering for the characters "se" is equivalent to filtering for "*se*".

To filter rule group permissions by rule group name:

1. On the **User Management** page, select the name of the user or user group whose rule group permissions you want to examine.
2. In the **Rule Group Permissions** pane, select a permission filter from the list:

Option	Description
All Permissions	Filters for users who have any permissions including Approve, Edit, View, and None.
Approve	Filters for users who have only the Approve permission.
Edit	Filters for users who have only the Edit permission.
View	Filters for users who have only the View permission.
None	Filters for users who have no permissions assigned.

As soon as you select an option from the list, the permissions get filtered based on your choice.

3. Type a rule group name, partial rule group name, or letter within a rule group name to filter for.
4. Click **Filter**.
5. To restore the unfiltered view of the **Rule Group Permissions** pane, click **Clear Filter**.

- [Adding business users to Merchandising Workbench](#) on page 128
Administrators and users with the settings role can configure users on the **User Management** page.
- [Adding administrators to Merchandising Workbench](#) on page 130
Administrators can configure other administrators on the **User Management** page.
- [Modifying a user's profile](#) on page 132
Administrators and users with the settings role can modify aspects of a user profile including password, identity information, roles, and rule group permissions.
- [Modifying your password](#) on page 133

A business user can modify his or her password as necessary by accessing the **User Settings** page.

- [About user management](#) on page 127

An administrator must create users with a user name, password, identity information, and set of roles (permissions) to log in to Merchandising Workbench. A user can be configured manually in Merchandising Workbench or set up through LDAP.

- [The User Management page](#) on page 18

The **User Management** page is where an administrator adds and removes users and modifies their page access and rule group permissions.

Assigning rule group permissions

This section provides basic information about rule group permissions and describes the procedures for assigning permissions, setting default permissions, and filtering rule group permissions by a user name.

About rule group permissions

Rule group permissions control how users access rule groups and the rules contained in the groups.

Rule group permissions also specify which users participate in the workflow of dynamic business rules. An administrator assigns rule group permissions in one of two ways:

- Assign by rule group on the **Rule Group Permissions** page.
- Assign by user or user group name on the **User Management** page.

There are four user permissions available as part of managing the workflow of dynamic business rules -- Approve, Edit, View, and None. You assign permissions for each rule group. A user may have one of the following permissions, for each rule group:

Approve

The Approve permission can also be assigned to all users in cases where workflow is not necessary. The typical role of a user with Approve permissions is to approve or reject activation requests made by a user with Edit permissions. If you have Approve permissions for a rule group, you can do any of the following:

- Create new rules (new rules begin with a state of Inactive: Draft).
- Copy rules.
- Edit both inactive and active rules.
- Activate and deactivate rules.

Edit

If you have Edit permissions for a rule group, you can do any of the following:

- Create new rules (new rules begin with a state of Inactive: Draft).
- Copy rules.
- Edit inactive rules.
- Make requests to activate and deactivate a rule.

An editor cannot edit an active rule, activate a rule, or make an active rule inactive.

View

If you have View permissions for a rule group, you can view but not modify or activate/deactivate rules.

None

If you have None permissions for a rule group, you cannot approve, edit, or view rules in a group. Users who have this permission for a rule group do not see the rule group displayed in Merchandising Workbench.

New rule groups created with Developer Studio get the same default value that you specify in Merchandising Workbench. Merchandising Workbench applies the default permissions after you **Set Instance Configuration** from Developer Studio. If you happen to be using Developer Studio in stand-alone mode, Developer Studio does not create permissions for rule groups. Also, renaming a rule group preserves its associated permissions. In other words, if Rule Group A has Approve permissions and you rename it to Rule Group B, then Rule Group B has Approve permissions.

- [The Rule Group Permissions page](#) on page 19
The **Rule Group Permissions** page is where an administrator controls how users access rule groups and the rules contained in the groups.
- [Assigning rule group permissions by rule group](#) on page 136
Once you create different rule groups, you may want to assign permissions to them for approving, editing and viewing rules.
- [Setting default permissions for new users and rule groups](#) on page 137
On the **Rule Group Permissions** pane on the **User Management** page, an administrator specifies the default permission that controls how users may access rule groups. This is a system-wide default that affects new users, existing users, new rule groups, and existing rule groups.
- [Filtering rule group permissions by user name](#) on page 138
Filtering on the **Rules Group Permissions** page lets you identify users and user groups that have rule group permissions.

Assigning rule group permissions by rule group

Once you create different rule groups, you may want to assign permissions to them for approving, editing and viewing rules.

To assign rule group permissions to a rule group:

1. On the **Rule Group Permission** page, do one of the following:
 - If your application uses a single rule group, skip to step 2.
 - If your application uses multiple rule groups, select a rule group whose permissions you want to modify.
2. On the **Rule Group** page, filter the list, if necessary to locate a user name.
3. For a user and rule group combination (a row), select one of the following options:

Permission	Description
Approve	The user has permission to view, edit, and approve rules in the group.
Edit	The user has permission to view and edit rules but no permission to approve rules in the group.

Permission	Description
View	The user has permission to view rules but no permission to edit or approve rules in the group.
None	The user has no permission to view, edit, or approve rules in the group. Users with this permission will not see the rule group displayed in Merchandising Workbench.

4. Repeat the above step as necessary to assign additional permissions.
5. Click **Save Changes**.
6. Click **Save**.

- [Setting default permissions for new users and rule groups](#) on page 137
On the **Rule Group Permissions** pane on the **User Management** page, an administrator specifies the default permission that controls how users may access rule groups. This is a system-wide default that affects new users, existing users, new rule groups, and existing rule groups.
- [Filtering rule group permissions by user name](#) on page 138
Filtering on the **Rules Group Permissions** page lets you identify users and user groups that have rule group permissions.
- [About rule group permissions](#) on page 135
Rule group permissions control how users access rule groups and the rules contained in the groups.
- [The Rule Group Permissions page](#) on page 19
The **Rule Group Permissions** page is where an administrator controls how users access rule groups and the rules contained in the groups.

Setting default permissions for new users and rule groups

On the **Rule Group Permissions** pane on the **User Management** page, an administrator specifies the default permission that controls how users may access rule groups. This is a system-wide default that affects new users, existing users, new rule groups, and existing rule groups.

To set default rule group permissions:

1. Select the **User Management** page.
2. Under the **Rule Group Permissions** pane, select one of the options:

Permission	Description
Approve	New users and user groups have permission to view, edit, and approve rules.
Edit	New users and user groups have permission to view and edit rules but no permission to approve rules.
View	New users and user groups have permission to view rules but no permission to edit or approve rules.
None	New users and user groups have no permissions to view, edit, or approve rules. Users with this permission will not see the rule group displayed in Merchandising Workbench.

3. Click **Save Changes**.

An administrator assigns more granular permissions for any particular rule group on the **Rule Group Permissions** page.

- [Assigning rule group permissions by rule group](#) on page 136
Once you create different rule groups, you may want to assign permissions to them for approving, editing and viewing rules.
- [Filtering rule group permissions by user name](#) on page 138
Filtering on the **Rules Group Permissions** page lets you identify users and user groups that have rule group permissions.
- [About rule group permissions](#) on page 135
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- [The Rule Group Permissions page](#) on page 19
The **Rule Group Permissions** page is where an administrator controls how users access rule groups and the rules contained in the groups.

Filtering rule group permissions by user name

Filtering on the **Rules Group Permissions** page lets you identify users and user groups that have rule group permissions.

Filtering is useful if you have a long list of users, and you want to find a particular user and his or her associated rule group permissions. You can find different types of rule users by filtering against information stored in the **Username**, **First Name**, and **Last Name** values. Merchandising Workbench uses an implied wildcard to filter the **Username**, **First Name**, and **Last Name** values. This means that filtering for the characters "se" is equivalent to filtering for "*se*".

The default view of **Rule Group Permissions** is not filtered. Also, filtering applies only to the users who have permissions for the rule group you selected.

1. On the **Rule Group Permissions** page, select **All Groups** or the rule group within which you want to perform the filtering by user name.
2. Select a permission filter from the list:

Option	Description
All Permissions	Filters for users who have any permissions including Approve, Edit, View, and None.
Approve	Filters for users who have only the Approve permission.
Edit	Filters for users who have only the Edit permission.
View	Filters for users who have only the View permission.
None	Filters for users who have no permissions assigned.

As soon as you select an option from the list, the permissions get filtered, based on your choice.

3. Type a name, partial name, or letter within a name to filter for.
4. Click **Filter**.
5. To restore the unfiltered view of the **Rule Group Permission** page, click **Clear Filter**.

- [Assigning rule group permissions by rule group](#) on page 136
Once you create different rule groups, you may want to assign permissions to them for approving, editing and viewing rules.

- [Setting default permissions for new users and rule groups](#) on page 137
On the **Rule Group Permissions** pane on the **User Management** page, an administrator specifies the default permission that controls how users may access rule groups. This is a system-wide default that affects new users, existing users, new rule groups, and existing rule groups.
- [About rule group permissions](#) on page 135
Rule group permissions control how users access rule groups and the rules contained in the groups.
- [The Rule Group Permissions page](#) on page 19
The **Rule Group Permissions** page is where an administrator controls how users access rule groups and the rules contained in the groups.

Managing resource locks

This section contains information about resource locks and describes the procedure for breaking them.

About resource locks

A resource corresponds to a page in Merchandising Workbench, such as the **Thesaurus** page, **Rule Manager** page, or a rule group on the **Rule Manager** page. A user acquires a resource lock by selecting a page, rule group, or redirect group that the user has permission to access.

On the **Resource Locks** page, an administrator can view or break resource locks that users have acquired during their Merchandising Workbench session. There is no limit to the number of page locks a user may lock during a session. A user can lock only one rule group or keyword redirect group at a time.

While one user has a resource locked, no other user can select the resource without getting an error such as "This component is currently in use by another application or user". Resource locking protects a project from multiple users making conflicting changes at the same time.

Not all pages (resources) in the navigation pane of Merchandising Workbench can be locked. Merchandising Workbench locks the following pages when a user selects them: **Thesaurus** page, **Rule Manager** page, **Phrases** page, **Stop Words** page, and **Dimension Order** page. In addition, if an application uses rule groups on the **Rule Manager** page or redirect groups on the **Redirect List** page, then Merchandising Workbench treats each group as a separate resource and locks the group when a user selects it. The **View Reports** page is not locked if a user selects it.

Merchandising Workbench releases a resource lock in the following ways:

- When a user logs out by clicking the **Logout** link.
- When Merchandising Workbench ends a user's session by timing out. Merchandising Workbench ends a session after 20 minutes of inactivity.
- When an administrator breaks a resource lock on the **Resource Locks** page.
- When a user clicks a rule group on the **Rule Manager** page or clicks a keyword redirect group on the **Redirect List** page. Each rule group or redirect group is locked individually and the lock is broken individually when a user selects a different group.
- [The Resource Locks page](#) on page 18
On the **Resource Locks** page, an administrator can view or break resource locks that users have acquired during their Merchandising Workbench session.
- [Breaking a resource lock](#) on page 140

An administrator can break the resource locks of any user logged in to Merchandising Workbench. After breaking a lock, the resources (Merchandising Workbench pages or groups) will be available to other users. Note that breaking a user's lock causes that user to lose any unsaved changes.

Breaking a resource lock

An administrator can break the resource locks of any user logged in to Merchandising Workbench. After breaking a lock, the resources (Merchandising Workbench pages or groups) will be available to other users. Note that breaking a user's lock causes that user to lose any unsaved changes.

To break a lock:

1. On the **Resource Locks** page, click the delete icon associated with the lock you want to release.
2. Click **Break lock**.
 - [About resource locks](#) on page 139
A resource corresponds to a page in Merchandising Workbench, such as the **Thesaurus** page, **Rule Manager** page, or a rule group on the **Rule Manager** page. A user acquires a resource lock by selecting a page, rule group, or redirect group that the user has permission to access.
 - [The Resource Locks page](#) on page 18
On the **Resource Locks** page, an administrator can view or break resource locks that users have acquired during their Merchandising Workbench session.

Report configuration

This section contains information about logging and reporting in Merchandising Workbench.

Logging and reporting in Merchandising Workbench

You can control the Log Server and Report Generator from Merchandising Workbench to provide your business users with Endeca reports.

For an overview of Endeca logging and reporting, see the *Endeca Administrator's Guide*.

- On the **EAC Administration > EAC Admin Console** page, you can add a Log Server and a Report Generator to your system.
- On the **Application Settings > Report Generation** page, you specify the kind of reports you want to generate as well as their size.
- On the **EAC Administration > EAC Administration Console** page, you can start and stop the Log Server, as well as check the status of reporting components.

For more details about configuring logging and reporting for your users in Merchandising Workbench, see the *Endeca Administrator's Guide*.

- [About reports](#) on page 125
Reports allow you to look at what has happened on your site over the last day or week.
- [The Reporting page](#) on page 19
The **Reporting** page is where you view reporting data for your Endeca application.

- [Viewing reports](#) on page 126
The reports that are visible to you depend upon how Merchandising Workbench is configured. If you need to include or exclude different reports or reporting information, or if reporting information does not appear, contact your Endeca technical team.
- [Configuring report generation](#) on page 141
In order to enable Merchandising Workbench to display reports on the **View Reports** page, you must configure report generation.
- [Accessing production reports](#) on page 142
Most business users work on a staging implementation of Merchandising Workbench, but want to see reports based on the production system.

Configuring report generation

In order to enable Merchandising Workbench to display reports on the **View Reports** page, you must configure report generation.

Before you configure report generation, ensure that you have already provisioned the Log Server and the Report Generator.

Daily reports run from 12 a.m. to 11:59:59 p.m. Weekly reports also begin at 12 a.m. and you can specify the day that begins a weekly report. For example, your weekly report can run from 12 am on Monday to 11:59:59 p.m. on the following Sunday. Reports are automatically written to the EAC directory `/workspace/working/reports/application_name` on UNIX and `\workspace\working\reports\application_name` on Windows. You cannot specify an alternate reports directory.

To enable Merchandising Workbench to display reports on the **View Reports** page:

1. Under **Application Settings**, select the **Report Generation** page.
2. Check one or both of the following:
 - Check **Daily Reports** if you want reports generated once a day.
 - Check **Weekly Reports** if you want reports generated weekly. Then select the day of the week from the drop-down list, to indicate on which day of the week you want your reports to be generated.
3. Click **OK**.
- [Viewing reports](#) on page 126
The reports that are visible to you depend upon how Merchandising Workbench is configured. If you need to include or exclude different reports or reporting information, or if reporting information does not appear, contact your Endeca technical team.
- [Accessing production reports](#) on page 142
Most business users work on a staging implementation of Merchandising Workbench, but want to see reports based on the production system.
- [About reports](#) on page 125
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- [Logging and reporting in Merchandising Workbench](#) on page 140
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- [The Reporting page](#) on page 19
The **Reporting** page is where you view reporting data for your Endeca application.

Accessing production reports

Most business users work on a staging implementation of Merchandising Workbench, but want to see reports based on the production system.

To access production reports in Merchandising Workbench:

You may choose to do one of the following:

- Provide them with two Merchandising Workbench logins: one with read/write privileges on several tabs for the Merchandising Workbench instance that is running the preview application, and one with read-only privileges on the **View Reports** page for the instance that is running the production application. That way, business users cannot inadvertently destabilize the production application with inappropriate changes.
- Copy reports generated on the production system into the appropriate daily or weekly subdirectories in the reports directory created by the Report Generator in its working directory.

See the *Endeca Administrator's Guide* for details.

- [Viewing reports](#) on page 126

The reports that are visible to you depend upon how Merchandising Workbench is configured. If you need to include or exclude different reports or reporting information, or if reporting information does not appear, contact your Endeca technical team.

- [Configuring report generation](#) on page 141

In order to enable Merchandising Workbench to display reports on the **View Reports** page, you must configure report generation.

- [About reports](#) on page 125

Reports allow you to look at what has happened on your site over the last day or week.

- [Logging and reporting in Merchandising Workbench](#) on page 140

You can control the Log Server and Report Generator from Merchandising Workbench to provide your business users with Endeca reports.

- [The Reporting page](#) on page 19

The **Reporting** page is where you view reporting data for your Endeca application.

Downloading the instance configuration

This section provides information about the instance configuration and describes the procedure for downloading the instance configuration files.

About the instance configuration

An instance configuration is the set of XML files that describe all the configuration settings of your application.

Each file in an instance configuration, and information about the file, is listed on the **Instance Configuration** page. You can download a zip file of the entire instance configuration. These files can be used for debugging and support purposes.

- [Downloading the instance configuration](#) on page 143

You download the instance configuration files in a single archive called `instconfig.zip`.

Downloading the instance configuration

You download the instance configuration files in a single archive called `instconfig.zip`.

The project file (.esp extension) used by Developer Studio is not included in `instconfig.zip`.

To download the instance configuration:

1. In the **Instance Configuration** page, click **Download**.
2. In the file download dialog box, choose **Save**.
3. In the **Save As** dialog box, browse to the location where you want to save `instconfig.zip`.
4. Click **Save**.

- *The Instance Configuration page* on page 17
The **Instance Configuration** page displays the list of XML files that describe the all the configuration settings of your application.
- *About the instance configuration* on page 142
An instance configuration is the set of XML files that describe all the configuration settings of your application.

Specifying preview application settings

This section provides reference material for the preview application and describes the procedures for provisioning, enabling, and disabling the preview application.

Specifying general preview application settings

The **Preview App Settings** page allows you to specify parameters that enable the display of the preview application used by both the **Page Builder** and the **Rule Manager**.

On the **Preview App Settings** page you specify the following:

- the Javascript domain
- the encoding for the preview application
- the URL Mapping settings for your preview application

In general, Merchandising Workbench communicates with and controls the embedded preview application via Javascript:

- If Merchandising Workbench and the preview application are running on *different machines*, you must specify a Javascript domain. Merchandising Workbench and the preview application that are running on different machines must have the same Javascript domain property. The Javascript domain property provides security for Javascript applications that need to communicate with one another but that run in different browser windows, or in this case, run in different frames of a browser.
- If Merchandising Workbench and the preview application are running on *the same machine*, a Javascript domain property is not necessary.

To specify general preview application settings:

1. In the **General** section of the **Preview App Settings** page, do one of the following:

If the preview application and Merchandising Workbench are installed on different machines

Enter a Javascript domain in the **Javascript Domain** field. (This is equivalent to declaring the domain in your Javascript headers.) If the Web server is not using port 8888, enter a Javascript domain consisting of Domain name:Web server port.

If the applications are installed on the same machine and the Web server is using port 8888

Leave the **Javascript Domain** field empty.

2. In the **Encoding** field, enter the name of a character set. This character set will be used primarily in the **Rules Manager** page to encode some of the keywords within a URL. If the Encoding field is not modified, it defaults to UTF-8.

Some examples of encodings are:

- ISO8859-1 (Latin-1)
- ISO8859-15 (Latin-9)
- CP1252 (WINDOWS-1252)
- ASCII
- UTF-8

Example: when to specify the Javascript domain

Suppose hostA.endeca.com is running Merchandising Workbench and hostB.endeca.com is running the preview application. The Javascript domain is endeca.com. In addition, if a business user wants to create rules in the **Rule Manager**, and that user's Web server is using a port other than 8888, you must add the port number to the Javascript domain.

- *Providing or confirming preview application URLs* on page 146
To enable communication between Merchandising Workbench and a preview application, you must specify **URL Mapping** values on the **Preview App Settings** page. The URLs contain variable mappings that describe to Merchandising Workbench how to build search and navigation URLs for your preview application.
- *Disabling the display of the preview application* on page 148
In general, the preview application displays by default in the **Preview** pane. You can tell Merchandising Workbench not to display the preview application in the **Preview** pane.
- *Enabling the display of the preview application* on page 149
The preview application displays by default in the **Preview** pane. However, if the preview application has been disabled from display, you cannot preview your rules or landing pages.
- *About the preview application* on page 44
The Endeca-enabled application that appears in the **Preview** pane of the **Rule Manager** page is called the preview application.
- *Default values for the preview application URLs* on page 145
Once you first open your application in Merchandising Workbench, the **URL Mapping** values are filled in by default in Merchandising Workbench. This enables Merchandising Workbench to display the preview application for the reference implementation.
- *Syntax of URL mapping in the preview application* on page 146
The **URL Mapping** fields allow you to define a generic syntax that describes to Merchandising Workbench how to build URLs.

Default values for the preview application URLs

Once you first open your application in Merchandising Workbench, the **URL Mapping** values are filled in by default in Merchandising Workbench. This enables Merchandising Workbench to display the preview application for the reference implementation.

You can either provide your own URL values or disable the display of the preview application. If you prefer that Merchandising Workbench does not display the preview application, you can clear out the default values. If you delete the default URL values, the preview application does not display and the options for previewing rules do not display.

If you delete the default URL values and later on decide that you want to display the preview application, you will need to add the URL values. Use the examples below when adding your own URL values to these fields. The default values for the URLs point to the reference application, as follows:

- The host points by default to the host of Merchandising Workbench.
- The port points by default to the Merchandising Workbench port.
- The `eneHost` value in the query string points by default to the host of the first MDEX Engine found on the Central Server.
- The `enePort` value in the query string points by default to the port of the first MDEX Engine found on the Central Server.
- The values for the URLs point by default to the JSP reference application.

Here is an example of values that display in the URL Mapping panel by default:

Search URL	<code>http://localhost:8888/endeca_jspref/controller.jsp?ene-Host=local-Host&enePort=8000&N=\${nav}&Ntt=\${terms}&Nx=matchall&Npt=\${previewtime}&Nmrf=\${rulefilter}</code>
Navigation URL	<code>http://localhost:8888/endeca_jspref/controller.jsp?ene-Host=localhost&enePort=8000&N=\${nav}&Npt=\${previewtime}&Nmrf=\${rulefilter}</code>
Search and Navigation URL	<code>http://localhost:8888/endeca_jspref/controller.jsp?ene-Host=local-Host&enePort=8000&N=\${nav}&Ntk=\${key}&Ntt=\${terms}&Nx=mode+matchall&Npt=\${previewtime}&Nmrf=\${rulefilter}</code>
Record URL	<code>http://localhost:8888/endeca_jspref/controller.jsp?ene-Host=localhost&enePort=8000&R=\${record}</code>

- [Specifying general preview application settings](#) on page 143

The **Preview App Settings** page allows you to specify parameters that enable the display of the preview application used by both the **Page Builder** and the **Rule Manager**.

- [Providing or confirming preview application URLs](#) on page 146

To enable communication between Merchandising Workbench and a preview application, you must specify **URL Mapping** values on the **Preview App Settings** page. The URLs contain variable mappings that describe to Merchandising Workbench how to build search and navigation URLs for your preview application.

- [Disabling the display of the preview application](#) on page 148

In general, the preview application displays by default in the **Preview** pane. You can tell Merchandising Workbench not to display the preview application in the **Preview** pane.

- [Enabling the display of the preview application](#) on page 149

The preview application displays by default in the **Preview** pane. However, if the preview application has been disabled from display, you cannot preview your rules or landing pages.

- [About the preview application](#) on page 44

The Endeca-enabled application that appears in the **Preview** pane of the **Rule Manager** page is called the preview application.

Syntax of URL mapping in the preview application

The **URL Mapping** fields allow you to define a generic syntax that describes to Merchandising Workbench how to build URLs.

For example: `http://mycompany.com:8888/myapp/controller.jsp?eneHost=local-host&enePort=8000&N=${nav}&Ntk=${key}&Ntt=${terms}&Nmpt=${previewtime}&Nmrf=${rulefilter}&R=${record}`. The generic syntax uses several variables:

Variable	Description
<code> \${terms}</code>	Denotes the search term
<code> \${key}</code>	Denotes the search key (property or dimension name)
<code> \${nav}</code>	Denotes the navigation parameter
<code> \${previewtime}</code>	Denotes the merchandising preview time parameter
<code> \${rulefilter}</code>	Denotes the merchandising rule filter parameter
<code> \${record}</code>	Denotes the record for a featured result

- [Specifying general preview application settings](#) on page 143

The **Preview App Settings** page allows you to specify parameters that enable the display of the preview application used by both the **Page Builder** and the **Rule Manager**.

- [Providing or confirming preview application URLs](#) on page 146

To enable communication between Merchandising Workbench and a preview application, you must specify **URL Mapping** values on the **Preview App Settings** page. The URLs contain variable mappings that describe to Merchandising Workbench how to build search and navigation URLs for your preview application.

- [Disabling the display of the preview application](#) on page 148

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- [Enabling the display of the preview application](#) on page 149

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- [About the preview application](#) on page 44

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Providing or confirming preview application URLs

To enable communication between Merchandising Workbench and a preview application, you must specify **URL Mapping** values on the **Preview App Settings** page. The URLs contain variable mappings that describe to Merchandising Workbench how to build search and navigation URLs for your preview application.

- Under the **Application Settings** section of Merchandising Workbench, select the **Preview App Settings** page.
- In the **Search URL** field, enter or confirm that there is a URL for search-only parameters. This URL must contain the preview application's server name, port number, URL path, preview application's primary navigation parameter, search parameters, and the Nmpt and Nmrf parameters for rule filtering.
For example, the JSP reference implementation uses the following:
`http://hostname:port/endeca_jspref/controller.jsp?eneHost=local-host&enePort=8000&N=0&Ntk=${key}&Ntt=${terms}&Nmpt=${previewtime}&Nmrf=${rulefilter}&[Other search parameters such as nty, ntx, and so on]`
- In the **Navigation URL** field, enter or confirm a URL for navigation-only parameters. This URL must contain the N navigation parameter for the preview application and the Nmpt and Nmrf parameters for rule filtering.
For example, the JSP reference implementation uses the following:
`http://hostname:port/endeca_jspref/controller.jsp?eneHost=local-host&enePort=8000&N=${nav}&Nmpt=${previewtime}&Nmrf=${rulefilter}`
- In the **Search and Navigation URL** field, enter or confirm a URL for both search and navigation parameters. This URL must contain both the N navigation parameter and search parameters for the preview application and the Nmpt and Nmrf parameters for rule filtering.
For example, the JSP reference implementation uses the following:
`http://hostname:port/endeca_jspref/controller.jsp?eneHost=local-host&enePort=8000&N=${nav}&Ntk=${key}&Ntt=${terms}&Nmpt=${previewtime}&Nmrf=${rulefilter}&[Other search parameters such as nty, ntx, and so on]`
- In the **Record URL** field, enter or confirm a URL for the featured results parameter. This URL must contain the N navigation parameter, the R record parameter, and the Nmpt and Nmrf parameters for rule filtering.
For example, the JSP reference implementation uses the following:
`http://hostname:port/endeca_jspref/controller.jsp?eneHost=local-host&enePort=8000&N=${nav}&Ntk=${key}&Ntt=${terms}&Nmpt=${previewtime}&Nmrf=${rulefilter}&R=${record}&[Other search parameters such as nty, ntx, and so on]`
- Specify a **Default Search Key**. This search key affects how Merchandising Workbench builds the preview application URLs when communicating between the **Rule List** portion of Merchandising Workbench and the preview application itself. Typically, the default search key corresponds to your global search interface (specified in Developer Studio).
For example, in the sample wine application the global search interface is named "all".
- If necessary, de-select **Application Instrumented**. This option is selected by default. Selecting the **Application Instrumented** option means that the preview application is instrumented and available to set triggers and targets using the preview application. Business users can search and navigate in the preview application within the **Rule Manager** page and set triggers, display triggers, and preview rule results. These actions are reflected in the **Rule Manager** list. De-selecting the **Application Instrumented** option disconnects the preview application from interacting with features on the **Rule Manager** page. In other words, searching and navigating in the preview application does not affect the **Rule List** in any way. However, de-selecting this option still allows business users to click triggers and view the preview status in the **Rule List**.
- Click **OK** to apply your changes.
 - Specifying general preview application settings* on page 143
The **Preview App Settings** page allows you to specify parameters that enable the display of the preview application used by both the **Page Builder** and the **Rule Manager**.
 - Disabling the display of the preview application* on page 148

In general, the preview application displays by default in the **Preview** pane. You can tell Merchandising Workbench not to display the preview application in the **Preview** pane.

- [Enabling the display of the preview application](#) on page 149
The preview application displays by default in the **Preview** pane. However, if the preview application has been disabled from display, you cannot preview your rules or landing pages.
- [About the preview application](#) on page 44
The Endeca-enabled application that appears in the **Preview** pane of the **Rule Manager** page is called the preview application.
- [Default values for the preview application URLs](#) on page 145
Once you first open your application in Merchandising Workbench, the **URL Mapping** values are filled in by default in Merchandising Workbench. This enables Merchandising Workbench to display the preview application for the reference implementation.
- [Syntax of URL mapping in the preview application](#) on page 146
The **URL Mapping** fields allow you to define a generic syntax that describes to Merchandising Workbench how to build URLs.

Disabling the display of the preview application

In general, the preview application displays by default in the **Preview** pane. You can tell Merchandising Workbench not to display the preview application in the **Preview** pane.

Only Merchandising Workbench administrators can enable or disable display of the preview application.

It can be useful to disable this feature when you choose not to set up a preview application. For example, if you need to perform quick configuration changes to your real application in a staging environment, you may not need to see any application previews. In this case, you can tell Merchandising Workbench not to display the preview application for your current application. At a later stage, you can set up your preview application and decide to display it as well. When you first open your application in Merchandising Workbench, the **Application Settings > Preview App Settings** page contains URL mapping values for the reference implementation. This enables the display of the preview application for the reference implementation. If you clear out the values in the URL fields, the preview application will not display.

To disable the display of a preview application in Merchandising Workbench:

1. Log in to Merchandising Workbench as an administrator.
2. Select **Application Settings > Preview App Settings**.
3. In the **URL Mapping** panel, clear the entries for all four fields: **Search URL**, **Navigation URL**, **Search and Navigation URL** and **Record URL**.
4. Click **OK**.

The preview for the application does not display in the **Preview** pane of the **Rule Manager** or the **Page Builder**.

- [Specifying general preview application settings](#) on page 143
The **Preview App Settings** page allows you to specify parameters that enable the display of the preview application used by both the **Page Builder** and the **Rule Manager**.
- [Providing or confirming preview application URLs](#) on page 146
To enable communication between Merchandising Workbench and a preview application, you must specify **URL Mapping** values on the **Preview App Settings** page. The URLs contain variable mappings that describe to Merchandising Workbench how to build search and navigation URLs for your preview application.

- [Enabling the display of the preview application](#) on page 149
The preview application displays by default in the **Preview** pane. However, if the preview application has been disabled from display, you cannot preview your rules or landing pages.
- [About the preview application](#) on page 44
The Endeca-enabled application that appears in the **Preview** pane of the **Rule Manager** page is called the preview application.
- [Default values for the preview application URLs](#) on page 145
Once you first open your application in Merchandising Workbench, the **URL Mapping** values are filled in by default in Merchandising Workbench. This enables Merchandising Workbench to display the preview application for the reference implementation.
- [Syntax of URL mapping in the preview application](#) on page 146
The **URL Mapping** fields allow you to define a generic syntax that describes to Merchandising Workbench how to build URLs.
- [Previewing a landing page](#) on page 91
While you are developing landing pages, it is important to test them and ensure that they are performing and displaying as you intended.
- [Enabling the display of the preview application](#) on page 149
The preview application displays by default in the **Preview** pane. However, if the preview application has been disabled from display, you cannot preview your rules or landing pages.
- [About previewing landing pages](#) on page 90
You use the **Preview pane** to navigate to or search for specific locations in your application. This is useful for debugging and testing your landing pages.

Enabling the display of the preview application

The preview application displays by default in the **Preview** pane. However, if the preview application has been disabled from display, you cannot preview your rules or landing pages.

Only Merchandising Workbench administrators can enable or disable display of the preview application.

To enable the display of a preview application in Merchandising Workbench:

1. Log in to Merchandising Workbench as an administrator.
2. Select **Application Settings > Preview App Settings**.
3. In the **URL Mapping** panel, fill in the entries for all four fields: **Search URL**, **Navigation URL**, **Search and Navigation URL** and **Record URL**.
4. If your preview application is instrumented, select **Application Instrumented**.
5. Click **OK**.

The preview for the application displays in the **Preview** pane of the **Rule Manager** and the **Page Builder**.

- [Specifying general preview application settings](#) on page 143
The **Preview App Settings** page allows you to specify parameters that enable the display of the preview application used by both the **Page Builder** and the **Rule Manager**.
- [Providing or confirming preview application URLs](#) on page 146
To enable communication between Merchandising Workbench and a preview application, you must specify **URL Mapping** values on the **Preview App Settings** page. The URLs contain variable mappings that describe to Merchandising Workbench how to build search and navigation URLs for your preview application.

- [*Disabling the display of the preview application*](#) on page 148
In general, the preview application displays by default in the **Preview** pane. You can tell Merchandising Workbench not to display the preview application in the **Preview** pane.
- [*About the preview application*](#) on page 44
The Endeca-enabled application that appears in the **Preview** pane of the **Rule Manager** page is called the preview application.
- [*Default values for the preview application URLs*](#) on page 145
Once you first open your application in Merchandising Workbench, the **URL Mapping** values are filled in by default in Merchandising Workbench. This enables Merchandising Workbench to display the preview application for the reference implementation.
- [*Syntax of URL mapping in the preview application*](#) on page 146
The **URL Mapping** fields allow you to define a generic syntax that describes to Merchandising Workbench how to build URLs.
- [*Previewing a landing page*](#) on page 91
While you are developing landing pages, it is important to test them and ensure that they are performing and displaying as you intended.
- [*Disabling the display of the preview application*](#) on page 148
In general, the preview application displays by default in the **Preview** pane. You can tell Merchandising Workbench not to display the preview application in the **Preview** pane.
- [*About previewing landing pages*](#) on page 90
You use the **Preview pane** to navigate to or search for specific locations in your application. This is useful for debugging and testing your landing pages.



Chapter 10

Administrating an Endeca application

The following sections provide system administrators and application developers with information and instructions for provisioning, administrating, monitoring, and managing an Endeca application.

About administration tasks

The tasks described in "Administering an Endeca application" are intended for system administrators.

Users who do not have administrator privileges do not have access to the functionality described in this section. Additional information can be found in the *Endeca Administrator's Guide*.

You can use Merchandising Workbench to perform the following system administration tasks:

- System provisioning
- System operations

System provisioning describes the operations necessary to assign resources available to a new Endeca application, and it describes modifying the resources in an existing application. You provision an application on the **EAC Admin Console** page. Typically, you provision an application in the following order:

1. Create or delete an Endeca application.
2. Add or remove hosts from the application.
3. Add, remove, or configure Endeca components on one or more hosts. Endeca components include Forge, the Indexer, Aggregated Indexer, MDEX Engine, Aggregated MDEX Engine, Log Server, and Report Generator.
4. Add or remove an EAC script.

System operations describe how to run the Endeca components and the EAC scripts involved in an Endeca application. On the **EAC Admin Console** page, you can do the following:

- Start and stop the Endeca components you provision.
- Start and stop the EAC scripts you provision. These scripts perform typically baseline updates.
- Monitor the status of Endeca components.

• [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

• [The EAC Administration Console page](#) on page 21

The **EAC Admin Console** page provides a graphical representation of an Endeca implementation.

- [Starting an Endeca component in Merchandising Workbench](#) on page 184
After you provision an Endeca component (i.e. Forge, the Indexer, MDEX Engine and so on), it is available to start or stop.
- [Stopping an Endeca component in Merchandising Workbench](#) on page 184
After you provision an Endeca component (i.e. Forge, the Indexer, MDEX Engine and so on), it is available to start or stop.

About Endeca components

On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

These components include:

- **Forge** - processes your source data into Endeca records.
- The **Indexer** (or Dgidx) - indexes the Endeca records.
- The **MDEX Engine** (or Dgraph) - processes user queries.
- The **Aggregated MDEX Engine** (or Agraph) - coordinates the activities of multiple instances of Dgidx and the MDEX Engine running on distributed processors.
- The **Log Server** - captures application logging requests and translates them into a format that the Report Generator can process.
- The **Report Generator** - processes the log files generated by the Log Server into XML reports that you can view in Merchandising Workbench.
- [Endeca MDEX Engine](#) on page 163
The Endeca MDEX Engine is the search engine that powers Endeca-enabled applications.
- [Adding Forge to an application](#) on page 156
You add a Forge component to an application using Merchandising Workbench, as part of provisioning.
- [Adding an Indexer to an application](#) on page 158
An Indexer component (Dgidx) takes the data prepared by Forge and generates the proprietary indices for an MDEX Engine.
- [Adding an MDEX Engine to an application](#) on page 163
An MDEX Engine component launches the Dgraph (MDEX Engine) software and processes queries against the indexed Endeca records.

Provisioning an application

This section contains detailed instructions for each of the tasks involved in provisioning an application.

Adding an application to the Central Server

Adding an application to the Central Server adds the provisioning information for an application to the Central Server.

You can add more than one application to the Central Server in Merchandising Workbench, and administer each of them separately, by logging in to a particular application. In addition to provisioning your application in Merchandising Workbench, you can also write your own provisioning file and use it to create an application. For information on this type of provisioning, see the *Endeca Administrator's Guide*. For each application that you provision in Merchandising Workbench, you can also add: hosts, Endeca components (such as Forge, Indexer, MDEX Engine Log Server, and Report Generator), and EAC scripts.

To add an application to the system:

1. Under the **EAC Administration** section of Merchandising Workbench, select the **EAC Admin Console** page.
2. Click **New**.
3. Type the name of the application.
4. Click **Create New Application**.
5. Proceed with adding hosts, components, and scripts to your application.
 - [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
 - [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.
 - [Specifying the EAC Central Server](#) on page 186
On the **EAC Settings** page, you specify the host and port for the EAC Central Server. These settings control which machine Merchandising Workbench communicates with when making requests to the Central Server.
 - [Deleting an application from the Central Server](#) on page 153
Deleting an application from the Central Server removes the provisioning information for an application from the Central Server.
 - [The EAC Settings page](#) on page 20
The **EAC Settings** page is where you specify the host and port for the EAC Central Server.
 - [The EAC Administration Console page](#) on page 21
The **EAC Admin Console** page provides a graphical representation of an Endeca implementation.

Deleting an application from the Central Server

Deleting an application from the Central Server removes the provisioning information for an application from the Central Server.

To delete an application from the Central Server:

1. Under the **EAC Administration** section of Merchandising Workbench, select the **EAC Admin Console** page.
2. In the **Application** field, select the application you want to delete.
3. Click **Delete**.
The Merchandising Workbench message displays: "Are you sure you want to delete the application named *application-name*?"
4. Click **Delete**.

The application's provisioning information is removed from the Central Server.

To completely remove an application from the Endeca IAP, first use the above procedure to delete the application's provisioning information from the Central Server. Second, run the emgr_update utility with the remove_all_settings parameter to delete the instance configuration files. For details, see "Using emgr_update to remove instance configuration files from Web Studio" in the *Endeca Administrator's Guide*. If you do not perform both steps, you may store unnecessary or duplicate sets of files for an application.

- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.
- [Specifying the EAC Central Server](#) on page 186
On the **EAC Settings** page, you specify the host and port for the EAC Central Server. These settings control which machine Merchandising Workbench communicates with when making requests to the Central Server.
- [Adding an application to the Central Server](#) on page 152
Adding an application to the Central Server adds the provisioning information for an application to the Central Server.
- [The EAC Settings page](#) on page 20
The **EAC Settings** page is where you specify the host and port for the EAC Central Server.
- [The EAC Administration Console page](#) on page 21
The **EAC Admin Console** page provides a graphical representation of an Endeca implementation.

Adding a host to an application

Adding a host to an application informs Merchandising Workbench that the machine is available for any task in an Endeca implementation.

You add a host by specifying basic information that allows the EAC Central Server to communicate with the host. After you add the host, you then provision the host by assigning it a particular task in the implementation, such as running Forge, the Indexer, the MDEX Engine, a Log Server, and so on.

To add a host to an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Click **Add New Host**.
3. Specify a **New Host Alias**.
A host alias allows you to switch staging and production machines easily, by changing the name and port associated with an alias. It makes it possible to reference a single physical host through different aliases.
4. Specify a **Host Name**. This can be the name or IP address of the machine.
5. Specify an **Agent Port**. The port is the HTTP port through which the EAC Central Server communicates with its Agents, for example 8888.
6. Click **Create Host**.
7. If desired, add a custom property.

8. If desired, add a custom directory.

- [Editing a host in an application](#) on page 155
You can change the properties of a host that you provision using Merchandising Workbench.
- [Deleting a host from an application](#) on page 155
If you are no longer using a machine in your Endeca implementation, you can remove its information from Merchandising Workbench.
- [The EAC Settings page](#) on page 20
The **EAC Settings** page is where you specify the host and port for the EAC Central Server.
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Editing a host in an application

You can change the properties of a host that you provision using Merchandising Workbench.

To edit a host in an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host you want to edit and click **Edit Host**.
3. As necessary, edit the host name, port, properties, or directory values.
4. When you are finished, click **Update**.

- [Adding a host to an application](#) on page 154
Adding a host to an application informs Merchandising Workbench that the machine is available for any task in an Endeca implementation.
- [Deleting a host from an application](#) on page 155
If you are no longer using a machine in your Endeca implementation, you can remove its information from Merchandising Workbench.
- [The EAC Settings page](#) on page 20
The **EAC Settings** page is where you specify the host and port for the EAC Central Server.
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Deleting a host from an application

If you are no longer using a machine in your Endeca implementation, you can remove its information from Merchandising Workbench.

To delete a host from an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host you want to remove, click **Edit Host**, and click **Delete**.

- [Adding a host to an application](#) on page 154
Adding a host to an application informs Merchandising Workbench that the machine is available for any task in an Endeca implementation.
- [Editing a host in an application](#) on page 155
You can change the properties of a host that you provision using Merchandising Workbench.
- [The EAC Settings page](#) on page 20
The **EAC Settings** page is where you specify the host and port for the EAC Central Server.
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The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Adding Forge to an application

You add a Forge component to an application using Merchandising Workbench, as part of provisioning.

Before you can add Forge to your application, you must add at least one host.

To add Forge to an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host where you want to add Forge.
3. Click the plus sign to expand the host's provisioning information.
4. From the **New Component** list, select **Forge**.
5. Specify the following options:

Working Directory	Working directory for Forge. If you specify the directory, it must be an absolute path. If you do not specify a path, Merchandising Workbench creates a default in %ENDECA_CONF%\work\appName\componentName (on Windows) or \$ENDECA_CONF/work/appName/componentName (on UNIX).
Log File	Name of the Forge log file. If you do not specify a log file, Merchandising Workbench creates a default with a name of the working directory plus component name plus .log.
Input Directory	The path to the instance configuration files (not the path to Forge's source data). This path can be relative to the working directory.
Output Directory	The path to where Forge stores its output. This path can be relative to the working directory.
Pipeline File	Name of the Pipeline.epx file for Forge. This path can be relative to the working directory.
State Directory	The path to where Forge stores several files during processing (typically autogen dimension files). This path can be relative to the working directory.

Num Partitions (under Advanced Options)	The number of source data partitions.
Output Prefix Name	The implementation-specific prefix name, without any associated path information.
Temporary Directory	The path to a temporary directory.
Arguments	A list of command line arguments to pass to Forge. Specify arguments here exactly as you would on the command line.

6. If desired, add custom properties.
7. Click **Create**.
 - [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.
 - [Endeca MDEX Engine](#) on page 163
The Endeca MDEX Engine is the search engine that powers Endeca-enabled applications.
 - [Editing Forge in an application](#) on page 157
You edit a Forge component in an application using Merchandising Workbench.
 - [Deleting Forge from an application](#) on page 158
You can remove a Forge component from an application in Merchandising Workbench.
 - [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
 - [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Editing Forge in an application

You edit a Forge component in an application using Merchandising Workbench.

Before you can add or edit Forge in your application, you must add at least one host.

To edit Forge in an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host that is running the instance of Forge you want to edit.
3. Click the plus sign to expand the host's provisioning information.
4. Locate the instance of Forge you want to edit, and make sure that it is not running. If it is running, wait for the process to stop or click **Stop**.
5. Click **Edit**.
6. As necessary, edit the values inline.
7. When you are finished, click **Update**.
8. If you stopped Forge before editing its configuration, click **Start** to run Forge.
- [Adding Forge to an application](#) on page 156

You add a Forge component to an application using Merchandising Workbench, as part of provisioning.

- [Deleting Forge from an application](#) on page 158
You can remove a Forge component from an application in Merchandising Workbench.
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Deleting Forge from an application

You can remove a Forge component from an application in Merchandising Workbench.

To remove a Forge component from an application:

1. On the **EAC Admin Console** page, select the **Components** tab.
2. Locate the Forge you want to remove, expand it, and click **Delete**.

- [Adding Forge to an application](#) on page 156
You add a Forge component to an application using Merchandising Workbench, as part of provisioning.
- [Editing Forge in an application](#) on page 157
You edit a Forge component in an application using Merchandising Workbench.
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- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Adding an Indexer to an application

An Indexer component (Dgidx) takes the data prepared by Forge and generates the proprietary indices for an MDEX Engine.

Before you can add an Indexer to your application, you must add at least one host.

To add an Indexer to an application in Merchandising Workbench:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host where you want to add an Indexer.
3. Click the plus sign to expand the host's provisioning information.
4. From the **New Component** list, select **Indexer**.
5. Specify the following options:

Working Directory	Working directory for the Indexer. If you specify the directory, it must be an absolute path. If you do not specify a path, Merchandising Workbench creates a default in %ENDECA_CONF%\work\appName\componentName
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(on Windows) or \${ENDECA_CONF}/work/appName/componentName (on UNIX).

Log File	Name of the Indexer log file. If you do not specify a log file, Merchandising Workbench creates a default with a name of the working directory plus component name plus .log.
Output Prefix Name	The implementation-specific prefix name, without any associated path information.
Input Prefix	The path and prefix name for the Forge output that Dgidx indexes. The input prefix typically corresponds to the value of the Output Prefix Name for the Forge component
App Config Prefix	The path and file prefix that specify the input for the Indexer.
Run Aspell	Specifies Aspell as the spelling correction mode for the implementation. This causes the Indexer component to run dgwordlist and to copy the Aspell files to its output directory, where the Dgraph component can access them. The default is true. For Aspell details, see the “Using Spelling Correction and Did You Mean” section in the <i>Endeca Developer’s Guide</i> .
Temporary Directory	The path to a temporary directory.
Arguments	A list of command line arguments to pass to the Indexer. Specify arguments here exactly as you would on the command line.

6. If desired, add custom properties.
7. Click **Create**.
 - [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.
 - [Endeca MDEX Engine](#) on page 163
The Endeca MDEX Engine is the search engine that powers Endeca-enabled applications.
 - [Editing an Indexer for an application](#) on page 159
An Indexer component (Dgidx) takes the data prepared by Forge and generates the proprietary indices for an MDEX Engine.
 - [Deleting an Indexer from an application](#) on page 160
An Indexer component (Dgidx) takes the data prepared by Forge and generates the proprietary indices for an MDEX Engine.
 - [About administration tasks](#) on page 151
The tasks described in “Administrating an Endeca application” are intended for system administrators.
 - [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Editing an Indexer for an application

An Indexer component (Dgidx) takes the data prepared by Forge and generates the proprietary indices for an MDEX Engine.

Before you can add an Indexer to your application, you must add at least one host.

To edit an Indexer in Merchandising Workbench:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host that is running the Indexer you want to edit.
3. Click the plus sign to expand the host's provisioning information.
4. Locate the Indexer you want to edit, and make sure that it is not running. If it is running, wait for the process to stop or click **Stop**.
5. Click **Edit**.
6. As necessary, edit the values inline.
7. When you are finished, click **Update**.
8. If you stopped the Indexer before editing its configuration, click **Start** to run the Indexer.

- [Adding an Indexer to an application](#) on page 158
An Indexer component (Dgidx) takes the data prepared by Forge and generates the proprietary indices for an MDEX Engine.
- [Deleting an Indexer from an application](#) on page 160
An Indexer component (Dgidx) takes the data prepared by Forge and generates the proprietary indices for an MDEX Engine.
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Deleting an Indexer from an application

An Indexer component (Dgidx) takes the data prepared by Forge and generates the proprietary indices for an MDEX Engine.

To remove an Indexer from an application in Merchandising Workbench:

1. On the **EAC Admin Console** page, select the **Components** tab.
2. Locate the Indexer you want to remove, click **Edit**, and click **Delete**.

- [Adding an Indexer to an application](#) on page 158
An Indexer component (Dgidx) takes the data prepared by Forge and generates the proprietary indices for an MDEX Engine.
- [Editing an Indexer for an application](#) on page 159
An Indexer component (Dgidx) takes the data prepared by Forge and generates the proprietary indices for an MDEX Engine.
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Adding an Aggregated Indexer to an application

An Aggregated Indexer component runs Agidx on a machine, creating a set of Agidx indices that support the Agraph program in a distributed environment.

Before you can add an Aggregated Indexer to your application, you must add at least one host.

The Agidx component is used only in distributed environments and is run sequentially on multiple machines. On the first machine, the Agidx component takes the Dgidx output from that machine as its input. On the next machine, the output from the first Agidx run is copied over, using the Copy utility. It, along with the Dgidx output from that machine, is used as Agidx input.

To add an Aggregated Indexer to an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host where you want to add an Aggregated Indexer.
3. Click the plus sign to expand the host's provisioning information.
4. From the **New Component** list, select **Aggregated Indexer**.
5. Specify the following options:

Working Directory	Working directory for aggregated Indexer. If you specify the directory, it must be an absolute path. If you do not specify a path, Merchandising Workbench creates a default in <code>%ENDECA_CONF%\work\appName\componentName</code> (on Windows) or <code>\$ENDECA_CONF/work/appName/componentName</code> (on UNIX).
Log File	Name of the aggregated Indexer log file. If you do not specify a log file, Merchandising Workbench creates a default with a name of the working directory plus component name plus <code>.log</code> .
Output Prefix Name	The implementation-specific prefix name, without any associated path information.
Input Prefixes	The path and prefix names to the output of various Dgidxes, which Agidx uses as input. The input prefixes typically correspond to the value of the Output Prefix Name for the Indexer components.
Previous Output Prefix	The file prefix of the Agidx data from the previous run, which has been copied to this machine by a Copy operation. This parameter should not be used when running the Agidx component on the first data subset.
Arguments	A list of command line arguments to pass to the Aggregated Indexer. Specify arguments here exactly as you would on the command line.

6. If desired, add custom properties.
7. Click **Create**.
 - [Editing an Aggregated Indexer in an application](#) on page 162
An Aggregated Indexer component runs Agidx on a machine, creating a set of Agidx indices that support the Agraph program in a distributed environment.
 - [Deleting an Aggregated Indexer from an application](#) on page 162
An Aggregated Indexer component runs Agidx on a machine, creating a set of Agidx indices that support the Agraph program in a distributed environment.
 - [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.

- [About Endeca components](#) on page 152

On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Editing an Aggregated Indexer in an application

An Aggregated Indexer component runs Agidx on a machine, creating a set of Agidx indices that support the Agraph program in a distributed environment.

Before you can add or edit an Aggregated Indexer in your application, you must add at least one host.

The Agidx component is used only in distributed environments and is run sequentially on multiple machines. On the first machine, the Agidx component takes the Dgidx output from that machine as its input. On the next machine, the output from the first Agidx run is copied over, using the Copy utility. It, along with the Dgidx output from that machine, is used as Agidx input.

To edit an Aggregated Indexer in an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host that is running the Aggregated Indexer you want to edit.
3. Click the plus sign to expand the host's provisioning information.
4. Locate the Aggregated Indexer you want to edit, and make sure that it is not running. If it is running, wait for the process to stop or click **Stop**.
5. Click **Edit**.
6. As necessary, edit the values inline.
7. When you are finished, click **Update**.
8. If you stopped the Aggregated Indexer before editing its configuration, click **Start** to run the Aggregated Indexer.

- [Adding an Aggregated Indexer to an application](#) on page 161

An Aggregated Indexer component runs Agidx on a machine, creating a set of Agidx indices that support the Agraph program in a distributed environment.

- [Deleting an Aggregated Indexer from an application](#) on page 162

An Aggregated Indexer component runs Agidx on a machine, creating a set of Agidx indices that support the Agraph program in a distributed environment.

- [About administration tasks](#) on page 151

The tasks described in "Administering an Endeca application" are intended for system administrators.

- [About Endeca components](#) on page 152

On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Deleting an Aggregated Indexer from an application

An Aggregated Indexer component runs Agidx on a machine, creating a set of Agidx indices that support the Agraph program in a distributed environment.

The Agidx component is used only in distributed environments and is run sequentially on multiple machines. On the first machine, the Agidx component takes the Dgidx output from that machine as its input. On the next machine, the output from the first Agidx run is copied over, using the Copy utility. It, along with the Dgidx output from that machine, is used as Agidx input.

To remove an Aggregated Indexer from an application:

1. On the **EAC Admin Console** page, select the **Components** tab.
2. Locate the Aggregated Indexer you want to remove, click **Edit**, and click **Delete**.

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An Aggregated Indexer component runs Agidx on a machine, creating a set of Agidx indices that support the Agraph program in a distributed environment.
- [Editing an Aggregated Indexer in an application](#) on page 162
An Aggregated Indexer component runs Agidx on a machine, creating a set of Agidx indices that support the Agraph program in a distributed environment.
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The tasks described in "Administering an Endeca application" are intended for system administrators.
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On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Endeca MDEX Engine

The Endeca MDEX Engine is the search engine that powers Endeca-enabled applications.

The MDEX Engine works behind the scenes in your application by accessing Endeca records, which are based on your source data, and then replying to user queries with appropriate record results. Your application displays the records returned from the MDEX Engine in a user's web browser.

- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.
- [Adding Forge to an application](#) on page 156
You add a Forge component to an application using Merchandising Workbench, as part of provisioning.
- [Adding an Indexer to an application](#) on page 158
An Indexer component (Dgidx) takes the data prepared by Forge and generates the proprietary indices for an MDEX Engine.
- [Adding an MDEX Engine to an application](#) on page 163
An MDEX Engine component launches the Dgraph (MDEX Engine) software and processes queries against the indexed Endeca records.
- [About Endeca records](#) on page 192
Defines Endeca records.
- [About properties](#) on page 192
This topic describes Endeca properties.
- [About user queries](#) on page 193
Defines user queries in Endeca IAP.

Adding an MDEX Engine to an application

An MDEX Engine component launches the Dgraph (MDEX Engine) software and processes queries against the indexed Endeca records.

Before you can add an MDEX Engine to your application, you must add at least one host.

To add an MDEX Engine to an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host where you want to add an MDEX Engine.
3. Click the plus sign to expand the host's provisioning information.
4. From the **New Component** list, select **MDEX Engine**.
5. Specify the following options:

Working Directory	Working directory for MDEX Engine. If you specify the directory, it must be an absolute path. If you do not specify a path, Merchandising Workbench creates a default in %ENDECA_CONF%\work\appName\componentName (on Windows) or \$ENDECA_CONF/work/appName/componentName (on UNIX).
Log File	Name of the MDEX Engine log file. If you do not specify a log file, Merchandising Workbench creates a default with a name of the working directory plus component name plus .log.
Port	The port on which the MDEX Engine listens for queries. The default is 8000.
Input Prefix	The path and prefix name for the Indexer output that MDEX Engine uses. The input prefix typically corresponds to the value of the Output Prefix for the Indexer component.
Request Log File	The path and name of the MDEX Engine request log. This log tracks user queries.
App Config Prefix	The path and file prefix that specify the input for the MDEX Engine.
Startup Timeout	Specifies the amount of time in seconds that the Application Controller waits while starting the MDEX Engine. If EAC cannot determine that the MDEX Engine is running in this time frame, the MDEX Engine times out. The default is 120 seconds.
Spell Directory	Specifies the directory in which the MDEX Engine looks for Aspell files. If it is not specified, the MDEX Engine looks for Aspell files in the MDEX Engine's input directory.
Update Directory	Specifies the directory from which the MDEX Engine reads the partial update file. For more information, see the "Implementing Partial Updates" section in the <i>Endeca Information Transformation Layer Guide</i> .
Update Log File	Specifies the file for update-related log messages.
Temporary Directory	The path to a temporary directory.
SSL Cert File	The cert-file specifies the path of the eneCert.pem certificate file that the MDEX Engine presents to any client. This is also the certificate that the Application Controller Agent should present to the MDEX Engine when trying to communicate with the MDEX Engine. You can use the version that came with your Endeca installation, or generate your own file for additional security. The file name can be a path relative to the component's working directory.
SSL CA File	The ca-file specifies the path of the eneCA.pem Certificate Authority file that the MDEX Engine uses to authenticate communications with other Endeca components. You can use the version that came with your Endeca

installation, or generate your own file for additional security. The file name can be a path relative to the component's working directory.

SSL Cipher	The cipher is an optional cipher string (such as RC4-SHA) that specifies the minimum cryptographic algorithm that the MDEX Engine uses during the SSL negotiation. If you omit this setting, the SSL software tries an internal list of ciphers, beginning with AES256-SHA. See the Endeca Security Guide for more information.
Arguments	A list of command line arguments to pass to the MDEX Engine. Specify arguments here exactly as you would on the command line. The defaults for a new MDEX component are --threads 2 --spl --dym.

6. If desired, add custom properties.
7. Click **Create**.
 - [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.
 - [Endeca MDEX Engine](#) on page 163
The Endeca MDEX Engine is the search engine that powers Endeca-enabled applications.
 - [Editing an MDEX Engine in an application](#) on page 165
An MDEX Engine component launches the Dgraph (MDEX Engine) software and processes queries against the indexed Endeca records.
 - [Deleting an MDEX Engine from an application](#) on page 166
An MDEX Engine component launches the Dgraph (MDEX Engine) software and processes queries against the indexed Endeca records.
 - [Overriding the MDEX Engine update process with your own script](#) on page 185
This topic should not be used as a default recommended procedure. In most cases, there is no need to override the MDEX Engine update process.
 - [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
 - [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Editing an MDEX Engine in an application

An MDEX Engine component launches the Dgraph (MDEX Engine) software and processes queries against the indexed Endeca records.

Before you can add or edit an MDEX Engine for your application, you must add at least one host.

To edit an MDEX Engine in an application in Merchandising Workbench:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host that is running the MDEX Engine you want to edit.
3. Click the plus sign to expand the host's provisioning information.
4. Locate the MDEX Engine you want to edit. If it is running, click **Stop**.

5. Click **Edit**.
6. As necessary, edit the values inline.
7. When you are finished, click **Update**.
8. If you stopped the MDEX Engine before editing its configuration, click **Start** to run the MDEX Engine.

- [Adding an MDEX Engine to an application](#) on page 163
An MDEX Engine component launches the Dgraph (MDEX Engine) software and processes queries against the indexed Endeca records.
- [Deleting an MDEX Engine from an application](#) on page 166
An MDEX Engine component launches the Dgraph (MDEX Engine) software and processes queries against the indexed Endeca records.
- [Overriding the MDEX Engine update process with your own script](#) on page 185
This topic should not be used as a default recommended procedure. In most cases, there is no need to override the MDEX Engine update process.
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Deleting an MDEX Engine from an application

An MDEX Engine component launches the Dgraph (MDEX Engine) software and processes queries against the indexed Endeca records.

To remove an MDEX Engine from an application in Merchandising Workbench:

1. On the **EAC Admin Console** page, select the **Components** tab.
2. Locate the MDEX Engine you want to remove, click **Edit**, and click **Delete**.

- [Adding an MDEX Engine to an application](#) on page 163
An MDEX Engine component launches the Dgraph (MDEX Engine) software and processes queries against the indexed Endeca records.
- [Editing an MDEX Engine in an application](#) on page 165
An MDEX Engine component launches the Dgraph (MDEX Engine) software and processes queries against the indexed Endeca records.
- [Overriding the MDEX Engine update process with your own script](#) on page 185
This topic should not be used as a default recommended procedure. In most cases, there is no need to override the MDEX Engine update process.
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Adding an Aggregated MDEX Engine to an application

An Aggregated MDEX Engine (Agraph) runs the Agraph program, which defines and coordinates the activities of multiple, distributed MDEX Engines (Dgraphs).

Before you can add an Aggregated MDEX Engine to your application, you must add at least one host.

To add an Aggregated MDEX Engine:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host where you want to add an Aggregated MDEX Engine.
3. Click the plus sign to expand the host's provisioning information.
4. From the **New Component** list, select **Aggregated MDEX Engine**.
5. Specify the following options:

Working Directory Working directory for Aggregated MDEX Engine. If you specify the directory, it must be an absolute path. If you do not specify a path, Merchandising Workbench creates a default in `%ENDECA_CONF%\work\appName\componentName` (on Windows) or `$ENDECA_CONF/work/appName/componentName` (on UNIX).

Log File Name of the Aggregated MDEX Engine log file. If you do not specify a log file, Merchandising Workbench creates a default with a name of the working directory plus component name plus `.log`.

Children Select each MDEX Engine component in the application that you want to associate with this Aggregated MDEX Engine.



Note: If you added a `<host-port>` element to your provisioning using either the `eaccmd` utility or via a web service, Merchandising Workbench displays that `<host-port>` element as an Agraph child and indicates which Agraph you associated it with. However, Merchandising Workbench does not allow you to create a `<host-port>` element as a component in Merchandising Workbench or re-associate a `<host-port>` element with a different Agraph.

Port The port on which the Aggregated MDEX Engine listens for queries. The default is 8000.

Input Prefix The path and prefix name for the Aggregated Indexer output that Aggregated MDEX Engine uses. The input prefix typically corresponds to the value of the Output Prefix for the Aggregated Indexer component.

Request Log File The path and name of the Aggregated MDEX Engine request log. This log tracks user queries.

App Config Prefix The path and file prefix that specify the input for the Aggregated MDEX Engine.

Startup Timeout Specifies the amount of time in seconds that the Application Controller waits while starting the Aggregated MDEX Engine. If EAC cannot determine that the Aggregated MDEX Engine is running in this timeframe, the Aggregated MDEX Engine times out. The default is 120 seconds.

SSL Cert File The cert-file specifies the path of the `eneCert.pem` certificate file that the Aggregated MDEX Engine presents to any client. This is also the certificate that the Application Controller Agent should present to the MDEX Engine when

trying to communicate with the MDEX Engine. You can use the version that came with your Endeca installation, or generate your own file for additional security. The file name can be a path relative to the component's working directory.

SSL CA File	The ca-file specifies the path of the eneCA.pem Certificate Authority file that the Aggregated MDEX Engines uses to authenticate communications with other Endeca components. You can use the version that came with your Endeca installation, or generate your own file for additional security. The file name can be a path relative to the component's working directory.
SSL Cipher	The cipher is an optional cipher string (such as RC4-SHA) that specifies the minimum cryptographic algorithm that the Aggregated MDEX Engine uses during the SSL negotiation. If you omit this setting, the SSL software tries an internal list of ciphers, beginning with AES256-SHA. See the <i>Endeca Security Guide</i> for more information.
Arguments	A list of command line arguments to pass to the Aggregated MDEX Engine. Specify arguments here exactly as you would on the command line.

6. If desired, add custom properties.
7. Click **Create**.
 - [Editing an Aggregated MDEX Engine](#) on page 168
An Aggregated MDEX Engine (Agraph) runs the Agraph program, which defines and coordinates the activities of multiple, distributed MDEX Engines (Dgraphs).
 - [Deleting an Aggregated MDEX Engine from an application](#) on page 169
An Aggregated MDEX Engine (Agraph) runs the Agraph program, which defines and coordinates the activities of multiple, distributed MDEX Engines (Dgraphs).
 - [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
 - [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.
 - [Dynamic business rules and the Aggregated MDEX Engine](#) on page 34
This topic applies only to users of the Aggregated MDEX Engine (Agraph).

Editing an Aggregated MDEX Engine

An Aggregated MDEX Engine (Agraph) runs the Agraph program, which defines and coordinates the activities of multiple, distributed MDEX Engines (Dgraphs).

Before you can add or edit an Aggregated MDEX Engine in your application, you must add at least one host.

To edit an Aggregated MDEX Engine in an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host that is running the Aggregated MDEX Engine you want to edit.
3. Click the plus sign to expand the host's provisioning information.
4. Locate the Aggregated MDEX Engine you want to edit. If it is running, click **Stop**.

5. Click **Edit**.
6. As necessary, edit the values inline.
7. When you are finished, click **Update**.
8. If you stopped the Aggregated MDEX Engine before editing its configuration, click **Start** to run the Aggregated MDEX Engine.

- [Adding an Aggregated MDEX Engine to an application](#) on page 167
An Aggregated MDEX Engine (Agraph) runs the Agraph program, which defines and coordinates the activities of multiple, distributed MDEX Engines (Dgraphs).
- [Deleting an Aggregated MDEX Engine from an application](#) on page 169
An Aggregated MDEX Engine (Agraph) runs the Agraph program, which defines and coordinates the activities of multiple, distributed MDEX Engines (Dgraphs).
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.
- [Dynamic business rules and the Aggregated MDEX Engine](#) on page 34
This topic applies only to users of the Aggregated MDEX Engine (Agraph).

Deleting an Aggregated MDEX Engine from an application

An Aggregated MDEX Engine (Agraph) runs the Agraph program, which defines and coordinates the activities of multiple, distributed MDEX Engines (Dgraphs).

To remove an Aggregated MDEX Engine from an application in Merchandising Workbench:

1. On the **EAC Admin Console** page, select the **Components** tab.
2. Locate the Aggregated MDEX Engine you want to remove, click **Edit**, and click **Delete**.

- [Adding an Aggregated MDEX Engine to an application](#) on page 167
An Aggregated MDEX Engine (Agraph) runs the Agraph program, which defines and coordinates the activities of multiple, distributed MDEX Engines (Dgraphs).
- [Editing an Aggregated MDEX Engine](#) on page 168
An Aggregated MDEX Engine (Agraph) runs the Agraph program, which defines and coordinates the activities of multiple, distributed MDEX Engines (Dgraphs).
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.
- [Dynamic business rules and the Aggregated MDEX Engine](#) on page 34
This topic applies only to users of the Aggregated MDEX Engine (Agraph).

Adding an Advanced Crawler to an application

A Crawler component runs the Endeca Advanced Crawler, which creates Endeca records based on crawled source documents.

For more information about the Advanced Crawler, see the *Endeca Information Transformation Layer Guide*. Before you can add an Advanced Crawler to your application, you must add at least one host.

To add an Advanced Crawler to an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host where you want to add an Advanced Crawler.
3. Click the plus sign to expand the host's provisioning information.
4. From the **New Component** list, select **Advanced Crawler**.
5. Specify the following options:

Working Directory	Working directory for the Advanced Crawler. If you specify the directory, it must be an absolute path. If you do not specify a path, Merchandising Workbench creates a default in %ENDECA_CONF%\work\appName\componentName (on Windows) or \$ENDECA_CONF/work/appName/componentName (on UNIX).
Log File	Name of the Advanced Crawler log file. If you do not specify a log file, Merchandising Workbench creates a default with a name of the working directory plus component name plus .log.
Port	The port on which the Advanced Crawler listens. The default is 8099.
Default Settings File	This file contains default values that the Advanced Crawler uses when it runs a crawl. The properties are advanced properties that are not exposed in the Merchandising Workbench Crawler configuration. For example, there are a variety of properties for threading, throttling, HTTP settings, and so on. The file is typically named <prefix>.crawler_defaults.properties.
Global Config File	This file contains global values that the Advanced Crawler uses when it runs a crawl. They provide a number of basic configuration settings for the Advanced Crawler including output format, proxy server settings, and memory allocated to the Advanced Crawler. The file is typically named <prefix>.crawler_global_config.xml.
Profile Config File	Path to the profile configuration file to use for this crawler run. The file is typically named crawler_profile_1_config.xml.
URL List File	The crawl_profile_url_1st.1st file stores the root URLs that the Advanced Crawler begins the crawl from.
Output Prefix	Path and prefix name for the data the Crawler component stores. For example, output_prefix = c:\temp\wine generates files that start with "wine" in c:\temp. Also, any downloaded files the crawler stores are located in a subdirectory of output_prefix called \crawler_downloaded_files.
Java Options	Java Virtual Machine settings. If you are modifying Java source files, you may need to modify these settings, which are passed to the Java process.
Classpath Elements	Class path add-ons. If you are modifying Java source files, the modifications may require additions to the class path.

Arguments	A list of command line arguments to pass to the Advanced Crawler. Specify arguments here exactly as you would on the command line.
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6. If desired, add custom properties.
7. Click **Create**.
 - [Editing an Advanced Crawler](#) on page 171
A Crawler component runs the Endeca Advanced Crawler, which creates Endeca records based on crawled source documents.
 - [Deleting an Advanced Crawler](#) on page 172
A Crawler component runs the Endeca Advanced Crawler, which creates Endeca records based on crawled source documents.
 - [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
 - [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Editing an Advanced Crawler

A Crawler component runs the Endeca Advanced Crawler, which creates Endeca records based on crawled source documents.

For more information about the Advanced Crawler, see the *Endeca Information Transformation Layer Guide*. Before you can add an Advanced Crawler to your application, you must add at least one host.

To edit an Advanced Crawler in an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host that is running the Advanced Crawler you want to edit.
3. Click the plus sign to expand the host's provisioning information.
4. Locate the Advanced Crawler you want to edit, and make sure that it is not running. If it is running, wait for the process to stop or click **Stop**.
5. Click **Edit**.
6. As necessary, edit the values inline.
7. When you are finished, click **Update**.
8. If you stopped the Advanced Crawler before editing its configuration, click **Start** to run the Advanced Crawler.

- [Adding an Advanced Crawler to an application](#) on page 170
A Crawler component runs the Endeca Advanced Crawler, which creates Endeca records based on crawled source documents.
- [Deleting an Advanced Crawler](#) on page 172
A Crawler component runs the Endeca Advanced Crawler, which creates Endeca records based on crawled source documents.
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.

- [About Endeca components](#) on page 152

On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Deleting an Advanced Crawler

A Crawler component runs the Endeca Advanced Crawler, which creates Endeca records based on crawled source documents.

For more information about the Advanced Crawler, see the *Endeca Information Transformation Layer Guide*. Before you can add an Advanced Crawler to your application, you must add at least one host.

To remove an Advanced Crawler from an application:

1. On the **EAC Admin Console** page, select the **Components** tab.
2. Locate the Advanced Crawler you want to remove, click **Edit**, and click **Delete**.

- [Adding an Advanced Crawler to an application](#) on page 170

A Crawler component runs the Endeca Advanced Crawler, which creates Endeca records based on crawled source documents.

- [Editing an Advanced Crawler](#) on page 171

A Crawler component runs the Endeca Advanced Crawler, which creates Endeca records based on crawled source documents.

- [About administration tasks](#) on page 151

The tasks described in "Administering an Endeca application" are intended for system administrators.

- [About Endeca components](#) on page 152

On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Adding a Log Server to an application

The Log Server component runs the Log server, which translates application logging requests into log files that the Report Generator can process.

Before you can add a Log Server to your application, you must add at least one host.

To add a Log Server to an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host where you want to add a Log Server.
3. Click the plus sign to expand the host's provisioning information.
4. From the **New Component** list, select **Log Server**.
5. Specify the following options:

Option	Description
--------	-------------

Working Directory	Working directory for Log Server. If you specify the directory, it must be an absolutepath. If you do not specify a path, Merchandising Workbench creates a default in %ENDECA_CONF%\work\appName\componentName (on Windows) or \$ENDECA_CONF/work/appName/componentName (on UNIX).
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Option	Description
Log File	Name of the Log Server log file. If you do not specify a log file, Merchandising Workbench creates a default with a name of the working directory plus component name plus .log.
Port	The port on which the Log Server listens. The recommended port number is the Dgraph port plus two. If you use the default Dgraph port of 8000, your Log Server should run on port 8002. In any case, the Log Server port number should not be greater than 32767.
Output Prefix Name	The implementation-specific prefix name, without any associated path information.
Gzip	Specifies whether raw logs should be compressed. If you set this to true, the Log Server writes logging data to a compressed file. The default is false.
Startup Timeout	Specifies the amount of time in seconds that the Application Controller waits while starting the Log Server. If EAC cannot determine that the Log Server is running in this time frame, the Log Server times out. The default is 120 seconds.

6. If desired, add custom properties.
7. Click **Create**.
 - [Editing a Log Server in an application](#) on page 173
You can change the properties of a Log Server that you provision using Merchandising Workbench.
 - [Deleting a Log Server from an application](#) on page 174
You can delete a Log Server from an application using Merchandising Workbench.
 - [About administration tasks](#) on page 151
The tasks described in "Administrating an Endeca application" are intended for system administrators.
 - [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Editing a Log Server in an application

You can change the properties of a Log Server that you provision using Merchandising Workbench.

To edit a Log Server in an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host that is running the Log Server you want to edit.
3. Click the plus sign to expand the host's provisioning information.
4. Locate the Log Server you want to edit. If it is running, click **Stop**.
5. Click **Edit**.
6. As necessary, edit the values inline.
7. When you are finished, click **Update**.
8. If you stopped the Log Server before editing its configuration, click **Start** to run the Log Server.

- [Adding a Log Server to an application](#) on page 172
The Log Server component runs the Log server, which translates application logging requests into log files that the Report Generator can process.
- [Deleting a Log Server from an application](#) on page 174
You can delete a Log Server from an application using Merchandising Workbench.
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Deleting a Log Server from an application

You can delete a Log Server from an application using Merchandising Workbench.

To delete a Log Server from an application:

1. On the **EAC Admin Console** page, select the **Components** tab.
2. Locate the Log Server you want to remove, click **Edit**, and click **Delete**.

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The Log Server component runs the Log server, which translates application logging requests into log files that the Report Generator can process.
 - [Editing a Log Server in an application](#) on page 173
You can change the properties of a Log Server that you provision using Merchandising Workbench.
 - [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
 - [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Adding a Report Generator to an application

The Report Generator component runs the Report Generator, which processes Log Server files into HTML-based reports that you can view in your Web browser and XML reports that you can view in Merchandising Workbench.

You cannot provision a Report Generator unless you have first provisioned a Log Server.

To add a Report Generator to an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host where you want to add a Report Generator.
3. Click the plus sign to expand the host's provisioning information.
4. From the **New Component** list, select **Report Generator**.
5. Specify the following options:

Working Directory	Working directory for the Report Generator. If you specify the directory, it must be an absolute path. If you do not specify a path, Merchandising Workbench creates a default in %ENDECA_CONF%\work\appName\componentName (on Windows) or \$ENDECA_CONF/work/appName/componentName (on UNIX).
Log File	Name of the Report Generator log file. If you do not specify a log file, Merchandising Workbench creates a default with a name of the working directory plus component name plus .log.
Input Directory or File	Path to the file or directory containing the logs to report on. If it is a directory, then all log files in that directory are read. If it is a file, then just that file is read.
Output File	Name of the generated report file and path to where it is stored. For example: C:\Endeca\reports\myreport.html on Windows. This path can be relative to the working directory.
Stylesheet File	Filename and path of the XSL stylesheet used to format the generated report. For example: %ENDECA_CONF%\etc\report_stylesheet.xsl (on Windows) or \$ENDECA_CONF/etc/report_stylesheet.xsl (on UNIX).
Settings File	Path to the report_settings.xml file used to define which report sections are excluded from the reports. For example: %ENDECA_CONF%\etc\report_settings.xml (on Windows) or \$ENDECA_CONF/etc/report_settings.xml (on UNIX).
Start Date	Sets the time to begin creating reports. This and Stop Date set the report window to the given date and time. The date format should be either yyyy_mm_dd or yyyy_mm_dd.hh_mm_ss. For example, 2007_01_25.19_30_57 expresses Jan 25, 2007 at 7:30:57 in the evening.
Stop Date	Sets the time to stop creating reports.
Charts	Specifies whether the component should generate report charts. The default is true.
Java Binary	Indicates a JDK 1.5.x or later. Defaults to the JDK that Endeca installs.
Java Options	Command-line options for the java_binary setting. This command is primarily used to adjust the Report Generator memory, which defaults to 1GB and to adjust the language code for reports, which defaults to English. To set the memory, use the following: java_options = -Xmx[MemoryInMb]m -Xms[MemoryInMb]m. To set the language code for reporting output, include one of the following options: -Duser.language = fr (generates reports in French) or -Duser.language = de (generates reports in German).
Arguments	A list of command line arguments to pass to the Report Generator. Specify arguments here exactly as you would on the command line.

6. If desired, add custom properties.
7. Click **Create**.

After you add a Report Generator to your application, you need to configure the report generation process. This will enable Merchandising Workbench to display your reports on the **View Reports** page.

- [Editing a Report Generator](#) on page 176

You can change properties of the Report Generator in Merchandising Workbench.

- [Deleting a Report Generator](#) on page 177
You can delete a Report Generator from an application in Merchandising Workbench.
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.
- [The Reporting page](#) on page 19
The **Reporting** page is where you view reporting data for your Endeca application.
- [About reports](#) on page 125
Reports allow you to look at what has happened on your site over the last day or week.

Editing a Report Generator

You can change properties of the Report Generator in Merchandising Workbench.

The Report Generator component runs the Report Generator, which processes Log Server files into HTML-based reports that you can view in your Web browser, and XML reports that you can view in Merchandising Workbench. You cannot provision a Report Generator unless you have first provisioned a Log Server.

To edit a Report Generator in an application:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Locate the host that is running the Report Generator you want to edit.
3. Click the plus sign to expand the host's provisioning information.
4. Locate the Report Generator you want to edit, and make sure that it is not running. If it is running, wait for the process to stop.
5. Click **Edit**.
6. As necessary, edit the values inline.
7. When you are finished, click **Update**.

- [Adding a Report Generator to an application](#) on page 174
The Report Generator component runs the Report Generator, which processes Log Server files into HTML-based reports that you can view in your Web browser and XML reports that you can view in Merchandising Workbench.
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On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.
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The **Reporting** page is where you view reporting data for your Endeca application.

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Reports allow you to look at what has happened on your site over the last day or week.

Deleting a Report Generator

You can delete a Report Generator from an application in Merchandising Workbench.

The Report Generator component runs the Report Generator, which processes Log Server files into HTML-based reports that you can view in your Web browser, and XML reports that you can view in Merchandising Workbench. You cannot provision a Report Generator unless you have first provisioned a Log Server.

To remove an Report Generator from an application:

1. On the **EAC Admin Console** page, select the **Components** tab.
2. Locate the Report Generator you want to remove, click **Edit**, and click **Delete**.

- [Adding a Report Generator to an application](#) on page 174
The Report Generator component runs the Report Generator, which processes Log Server files into HTML-based reports that you can view in your Web browser and XML reports that you can view in Merchandising Workbench.
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Reports allow you to look at what has happened on your site over the last day or week.

About custom properties

Adding name/value properties is useful when you need to store custom data with your provisioning information and make that custom data available to your EAC script.

Here are a few examples:

- An application may have 10 production MDEX Engines that are clustered to ensure that, during updates, five of them are taken offline and updated. When those five have finished, the other five are updated. You can specify a custom property for each to identify the cluster to which each Engine belongs. This allows provisioning information to specify an arbitrary Engine cluster for the EAC script to consume.
- An application archives logs for a component or EAC script. To make the archive configurable, a property can specify the maximum number of archives to maintain.
- [Adding a custom property to a component or host](#) on page 178
You can add properties, consisting of a required name and an optional value, to any component or host.

- [Adding a custom directory to a host](#) on page 178

You can add custom directories, consisting of a descriptive alias and full path, to a host.

Adding a custom property to a component or host

You can add properties, consisting of a required name and an optional value, to any component or host.

After your application is provisioned, any properties that you defined are included in the application definition. You can retrieve the application definition using the describe-app command of eaccmd. See the *Endeca Administrator's Guide* for details about using eaccmd.

To add a custom property to a component or host:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Select the component or host where you want to add a property. Click **Edit Host**.
3. Provide a name and value.
4. Click the **Add** icon.
5. Click **Update**.

- [Adding a custom directory to a host](#) on page 178
You can add custom directories, consisting of a descriptive alias and full path, to a host.
- [About custom properties](#) on page 177
Adding name/value properties is useful when you need to store custom data with your provisioning information and make that custom data available to your EAC script.
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The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Adding a custom directory to a host

You can add custom directories, consisting of a descriptive alias and full path, to a host.

The EAC Agent on that host creates the directories you specify. After your application is provisioned, any directories that you defined are included in the application definition. You can retrieve the application definition using the describe-app command of eaccmd. See the *Endeca Administrator's Guide* for details about using eaccmd.

To add a custom directory to a host:

1. On the **EAC Admin Console** page, select the **Hosts** tab.
2. Select the component or host where you want to add a property Click **Edit Host**.
3. Provide an alias for the directory and the full path including the directory name itself.
4. Click the **Add** icon.
5. Click **Update**.

- [Adding a custom property to a component or host](#) on page 178

You can add properties, consisting of a required name and an optional value, to any component or host.

- [About custom properties](#) on page 177
Adding name/value properties is useful when you need to store custom data with your provisioning information and make that custom data available to your EAC script.
- [About administration tasks](#) on page 151
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- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Adding an EAC script shortcut

Adding an EAC script creates a shortcut within Merchandising Workbench which points to a specific EAC script.

After you have added a script, users are able to start and stop it from the **Scripts** tab of the **EAC Admin Console** page. For more information on EAC scripts, see "Defining scripts in your provisioning file" in the *Endeca Administrator's Guide*.

To add an EAC script shortcut to an application:

1. On the **EAC Admin Console** page, select the **Scripts** tab.
2. Click **Add New Script**.
3. Specify the following options:

Option	Description
New Script Alias	A descriptive alias for the script.
Command	The command to be run. This is typically the name of an EAC script, followed by any arguments to be passed to the script.
Working Directory	The working directory for the script. If you specify the directory, it must be an absolute path. If you do not specify a path, Merchandising Workbench creates a default in %ENDECA_CONF%\working\app_id\ (on Windows) or \$ENDECA_CONF/working/app_id/ (on UNIX)
Log File	The path to where any log files from your scripts will be written. If you specify the directory, it must be an absolute path. If you do not specify a path, Merchandising Workbench creates a default in %ENDECA_CONF%\logs\script\app_id.script_id.log (on Windows) or \$ENDECA_CONF/logs/script/app_id.script_id.log (on UNIX)

4. Click **Create Script**.

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Adding an EAC script creates a shortcut within Merchandising Workbench which points to a specific EAC script.
- [Deleting an EAC script shortcut](#) on page 180
Adding an EAC script creates a shortcut within Merchandising Workbench which points to a specific EAC script.

- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Editing an EAC script shortcut

Adding an EAC script creates a shortcut within Merchandising Workbench which points to a specific EAC script.

After you have added the script, users are able to start and stop it from the Scripts tab of the EAC Admin Console page. For more information on EAC scripts, see "Defining scripts in your provisioning file" in the *Endeca Administrator's Guide*.

To edit an EAC script shortcut in an application:

1. On the **EAC Admin Console** page, select the **Scripts** tab.
2. Locate the script you want to edit, and make sure that it is not running. If it is running, wait for the process to stop.
3. Click **Edit**.
4. Make any necessary changes in the **Command** field.
5. Make any necessary changes in the **Working Directory** field.
6. Make any necessary changes in the **Log File** field.
7. Click **Update**.

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Adding an EAC script creates a shortcut within Merchandising Workbench which points to a specific EAC script.
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Adding an EAC script creates a shortcut within Merchandising Workbench which points to a specific EAC script.
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On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Deleting an EAC script shortcut

Adding an EAC script creates a shortcut within Merchandising Workbench which points to a specific EAC script.

After you have added the script, users are able to start and stop it from the Scripts tab of the EAC Admin Console page. For more information on EAC scripts, see "Defining scripts in your provisioning file" in the *Endeca Administrator's Guide*.

To remove an EAC script shortcut from an application:

1. On the **EAC Admin Console** page, select the **Scripts** tab.

2. Click **Edit** for the script you want to delete.

3. Click **Delete**.

- [Adding an EAC script shortcut](#) on page 179

Adding an EAC script creates a shortcut within Merchandising Workbench which points to a specific EAC script.

- [Editing an EAC script shortcut](#) on page 180

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- [About administration tasks](#) on page 151

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- [About Endeca components](#) on page 152

On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.

Performing system operations with Merchandising Workbench

This section contains information and instructions for performing basic system operations such as starting and stopping an EAC script, running and stopping a baseline update, and overriding the update process.

Starting an EAC script in Merchandising Workbench

After you have added an EAC script, it is available to start or stop from the **Scripts** tab of the **EAC Admin Console** page.

To start an EAC script in Merchandising Workbench:

1. On the **EAC Admin Console** page, select the **Scripts** tab.

2. Click **Start** to the right of the script you want to run.

The script status text changes to "Running."

- [Stopping an EAC script in Merchandising Workbench](#) on page 182

After you have added an EAC script, it is available to start or stop from the **Scripts** tab of the **EAC Admin Console** page.

- [Getting the status of an EAC script](#) on page 182

You can get information about the status of a script that is running or the most recent time the script was run.

- [Overriding the MDEX Engine update process with your own script](#) on page 185

This topic should not be used as a default recommended procedure. In most cases, there is no need to override the MDEX Engine update process.

- [About administration tasks](#) on page 151

The tasks described in "Administering an Endeca application" are intended for system administrators.

Stopping an EAC script in Merchandising Workbench

After you have added an EAC script, it is available to start or stop from the **Scripts** tab of the **EAC Admin Console** page.

To stop an EAC script in Merchandising Workbench:

1. On the **EAC Admin Console** page, select the **Scripts** tab.
2. Click **Stop** to the right of the script you want to run.

The script status text changes from "Running" to "Failed."

- [Starting an EAC script in Merchandising Workbench](#) on page 181
After you have added an EAC script, it is available to start or stop from the **Scripts** tab of the **EAC Admin Console** page.
- [Getting the status of an EAC script](#) on page 182
You can get information about the status of a script that is running or the most recent time the script was run.
- [Overriding the MDEX Engine update process with your own script](#) on page 185
This topic should not be used as a default recommended procedure. In most cases, there is no need to override the MDEX Engine update process.
- [About administration tasks](#) on page 151
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Getting the status of an EAC script

You can get information about the status of a script that is running or the most recent time the script was run.

To get the status of an EAC script:

1. On the **EAC Admin Console** page, select the **Scripts** tab.
The status of each script is located immediately to the right of the script alias, and is limited to "Running", "Not Running", or "Failed".
2. Click the script status link.
A dialog box displays more information about the script.

- [Starting an EAC script in Merchandising Workbench](#) on page 181
After you have added an EAC script, it is available to start or stop from the **Scripts** tab of the **EAC Admin Console** page.
- [Stopping an EAC script in Merchandising Workbench](#) on page 182
After you have added an EAC script, it is available to start or stop from the **Scripts** tab of the **EAC Admin Console** page.
- [Overriding the MDEX Engine update process with your own script](#) on page 185
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- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.

Running a baseline update in Merchandising Workbench

A baseline update completely rebuilds your Endeca application, including a complete data upload, and then restarts the MDEX Engine. You should run a baseline update whenever your project's source data has changed, as well as when you have changed your system provisioning.

You may need to provision a baseline update script if you have not done so already.

To run a baseline update:

1. On the **EAC Admin Console** page, select the **Scripts** tab.
2. Locate the script you want to run.
3. Click **Run**.

If the update fails for any reason, Merchandising Workbench displays a system status message at the top of the page. The amount of time it takes to complete the update depends on the size and complexity of your application. Click **Auto Refresh Status** to monitor the update's progress.

- [*Stopping a baseline update in Merchandising Workbench*](#) on page 183
This topic describes how to stop a baseline update.
- [*Overriding the MDEX Engine update process with your own script*](#) on page 185
This topic should not be used as a default recommended procedure. In most cases, there is no need to override the MDEX Engine update process.
- [*About administration tasks*](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.

Stopping a baseline update in Merchandising Workbench

This topic describes how to stop a baseline update.

To stop a baseline update:

1. On the **EAC Admin Console** page, select the **Scripts** tab.
2. Locate script you want to stop.
3. Click **Stop**.

- [*Running a baseline update in Merchandising Workbench*](#) on page 183
A baseline update completely rebuilds your Endeca application, including a complete data upload, and then restarts the MDEX Engine. You should run a baseline update whenever your project's source data has changed, as well as when you have changed your system provisioning.
- [*Overriding the MDEX Engine update process with your own script*](#) on page 185
This topic should not be used as a default recommended procedure. In most cases, there is no need to override the MDEX Engine update process.
- [*About administration tasks*](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.

Starting an Endeca component in Merchandising Workbench

After you provision an Endeca component (i.e. Forge, the Indexer, MDEX Engine and so on), it is available to start or stop.

To start a component:

1. On the **EAC Admin Console** page, select the **Components** tab.
2. Expand the host where you provisioned the component.
3. Locate the component you want to start.
4. Click **Start**.

- [*Stopping an Endeca component in Merchandising Workbench*](#) on page 184
After you provision an Endeca component (i.e. Forge, the Indexer, MDEX Engine and so on), it is available to start or stop.
- [*About administration tasks*](#) on page 151
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- [*About Endeca components*](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.
- [*The EAC Administration Console page*](#) on page 21
The **EAC Admin Console** page provides a graphical representation of an Endeca implementation.

Stopping an Endeca component in Merchandising Workbench

After you provision an Endeca component (i.e. Forge, the Indexer, MDEX Engine and so on), it is available to start or stop.

To stop a component:

1. On the **EAC Admin Console** page, select the **Components** tab.
2. Expand the host where you provisioned the component.
3. Locate the component you want to stop.
4. Click **Stop**.

- [*Starting an Endeca component in Merchandising Workbench*](#) on page 184
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- [*The EAC Administration Console page*](#) on page 21
The **EAC Admin Console** page provides a graphical representation of an Endeca implementation.

Overriding the MDEX Engine update process with your own script

This topic should not be used as a default recommended procedure. In most cases, there is no need to override the MDEX Engine update process.

Typically, when you make changes to the dynamic business rules, or other changes that you save but that do not require a baseline update, Merchandising Workbench updates the MDEX Engine with the changes using the default update process. The default update process updates all MDEX Engines that are provisioned for the specific EAC application with the changes that do not require a baseline update.

In some cases, you may choose to override the default update process by using your own script for updates to the MDEX Engine. For example, assume that you have two MDEX Engines running on the same machine, both administered via Merchandising Workbench. One of the MDEX Engines is used for the staging environment, and the other is used for the production environment. In this case, when you make changes to rules, you may choose to push them to the staging MDEX Engine, but not to the production MDEX Engine. To do this, you must use your own update script.

To summarize, you can override the default MDEX Engine update process that Merchandising Workbench uses with your own script that will update the MDEX Engine with changes.

To override the default update MDEX Engine update process:

1. Create your own script that will update the MDEX Engine.
2. Provision your script using the **EAC Admin Console** page.
3. Ensure that the script name you specify is `EndecaMDEXUpdateScript`. Merchandising Workbench uses this script instead of the default update process to update the MDEX Engine with changes that do not require a baseline update.

If the scripts that you write invoke Web Services in the EAC without using the `eaccmd` utility, they must point to the correct EAC central server host and port. You can use the `EAC_HOST` and `EAC_PORT` environment variables to pass data to your scripts. For information about using scripts in the EAC environment, see the *Endeca Administrator's Guide*.

- [Adding an MDEX Engine to an application](#) on page 163
An MDEX Engine component launches the Dgraph (MDEX Engine) software and processes queries against the indexed Endeca records.
- [Editing an MDEX Engine in an application](#) on page 165
An MDEX Engine component launches the Dgraph (MDEX Engine) software and processes queries against the indexed Endeca records.
- [Deleting an MDEX Engine from an application](#) on page 166
An MDEX Engine component launches the Dgraph (MDEX Engine) software and processes queries against the indexed Endeca records.
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.
- [About Endeca components](#) on page 152
On the **Components** tab of the **EAC Admin Console** page, you add the Endeca components that run on each host you provisioned on the **Hosts** tab.
- [Running a baseline update in Merchandising Workbench](#) on page 183
A baseline update completely rebuilds your Endeca application, including a complete data upload, and then restarts the MDEX Engine. You should run a baseline update whenever your project's source data has changed, as well as when you have changed your system provisioning.

- [Stopping a baseline update in Merchandising Workbench](#) on page 183
This topic describes how to stop a baseline update.
- [About administration tasks](#) on page 151
The tasks described in "Administering an Endeca application" are intended for system administrators.

Specifying EAC settings

This section provides detailed instructions for specifying the EAC Central Server.

Specifying the EAC Central Server

On the **EAC Settings** page, you specify the host and port for the EAC Central Server. These settings control which machine Merchandising Workbench communicates with when making requests to the Central Server.

To specify the EAC Central Server:

1. Provide the name or IP address of the machine on which the EAC Central Server is running.
2. Provide the port on which the EAC Central Server is listening.
3. Select **Use HTTPS** if you want Merchandising Workbench to use HTTPS to connect to the EAC Central Server.



Note: Selecting this option requires that the port you specified in the previous step is an SSL port. If this option is not selected, it is still possible for Merchandising Workbench to establish an SSL connection with the EAC Central Server by using an internal redirect. For more information about configuring SSL for the Application Controller and Merchandising Workbench, see the *Endeca Security Guide*.

4. Click **Save Changes**.

- [Adding an application to the Central Server](#) on page 152
Adding an application to the Central Server adds the provisioning information for an application to the Central Server.
- [Deleting an application from the Central Server](#) on page 153
Deleting an application from the Central Server removes the provisioning information for an application from the Central Server.
- [The EAC Settings page](#) on page 20
The **EAC Settings** page is where you specify the host and port for the EAC Central Server.
- [The EAC Administration Console page](#) on page 21
The **EAC Admin Console** page provides a graphical representation of an Endeca implementation.

Monitoring system status

This section provides information about viewing system logs and updating system status.

Updating system status manually

You can manually refresh the display of Merchandising Workbench's status.

To update the status of Merchandising Workbench:

In the **EAC Administration Console** page, click **Refresh Status**.

- [Updating system status automatically](#) on page 187
You can set Merchandising Workbench to automatically update its status messages.
- [Viewing component status](#) on page 188
Merchandising Workbench displays a summary of a component's status in the collapsed view of the **Hosts** tab and **Components** tab.
- [Viewing component logs](#) on page 188
You can view a detailed log for any Endeca component except the Log Server, which does not log its own actions.
- [Viewing system logs](#) on page 189
In addition to viewing component logs, you can also check the Endeca Application Controller and Merchandising Workbench logs that are located in the `workspace/logs` directory.
- [The Instance Configuration page](#) on page 17
The **Instance Configuration** page displays the list of XML files that describe the all the configuration settings of your application.
- [Web server troubleshooting](#) on page 190
Merchandising Workbench uses cookies to maintain a session. If your application is running on an application server on the same host as Merchandising Workbench, the cookie names used by each might collide. In this situation, user sessions may be terminated unexpectedly.

Updating system status automatically

You can set Merchandising Workbench to automatically update its status messages.

In the **EAC Administration Console** page, click **Auto Refresh Status**.

- [Updating system status manually](#) on page 187
You can manually refresh the display of Merchandising Workbench's status.
- [Viewing component status](#) on page 188
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- [The Instance Configuration page](#) on page 17
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- [Web server troubleshooting](#) on page 190

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Viewing component status

Merchandising Workbench displays a summary of a component's status in the collapsed view of the **Hosts** tab and **Components** tab.

You can access details about each component via the status link.

Click the status link.

A dialog box displays showing start time, duration (how long the component has been running), and the last time Merchandising Workbench checked the component's status.

- [Updating system status manually](#) on page 187
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- [Updating system status automatically](#) on page 187
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Viewing component logs

You can view a detailed log for any Endeca component except the Log Server, which does not log its own actions.

1. In the **EAC Administration Console** page, select the **Components** tab.
2. Locate the component you want to examine and click the plus sign to expand it.
3. Click **Edit** to see the component's configuration options.
4. Note the path for **Log File**.
5. Browse to the directory indicated by **Log File** and open the log file on the specified host.

- [Updating system status manually](#) on page 187
You can manually refresh the display of Merchandising Workbench's status.
- [Updating system status automatically](#) on page 187
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- [Viewing system logs](#) on page 189
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Viewing system logs

In addition to viewing component logs, you can also check the Endeca Application Controller and Merchandising Workbench logs that are located in the `workspace/logs` directory.

The Merchandising Workbench log (`webstudio.number.log`) logs activity such as user logins, dynamic business rule changes, automatic phrase creation and modification, and so on. Business rule logging records when a rule was modified, who modified the rule (according to user name), and the name of the rule. Business rule logging does not record specific changes to the rule's configuration such as changes to its trigger values, target values, rule properties, and so on. The Merchandising Workbench log, like other Endeca system logs, has a 1G size limit and is part of a two-log rotation. When `webstudio.0.log` reaches 1G in size, the system begins writing to `webstudio.1.log`. When `webstudio.1.log` reaches the 1G size limit, the system begins writing to `webstudio.0.log` once again, overwriting the previous content.

1. Navigate to the `workspace/logs` directory.
2. Open `webstudio.number.log`.

- [Updating system status manually](#) on page 187
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Web server troubleshooting

Merchandising Workbench uses cookies to maintain a session. If your application is running on an application server on the same host as Merchandising Workbench, the cookie names used by each might collide. In this situation, user sessions may be terminated unexpectedly.

To resolve this issue, you can either run the application and Merchandising Workbench on different hosts, or customize your application server to use a different cookie name than ESESSIONID through custom directives on your specific application server.

For more information, see the section "Using a Custom Application with Merchandising Workbench" in the *Endeca Administrator's Guide*.

- [Updating system status manually](#) on page 187
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- [The Instance Configuration page](#) on page 17
The **Instance Configuration** page displays the list of XML files that describe the all the configuration settings of your application.



Chapter 11

Basic Endeca concepts

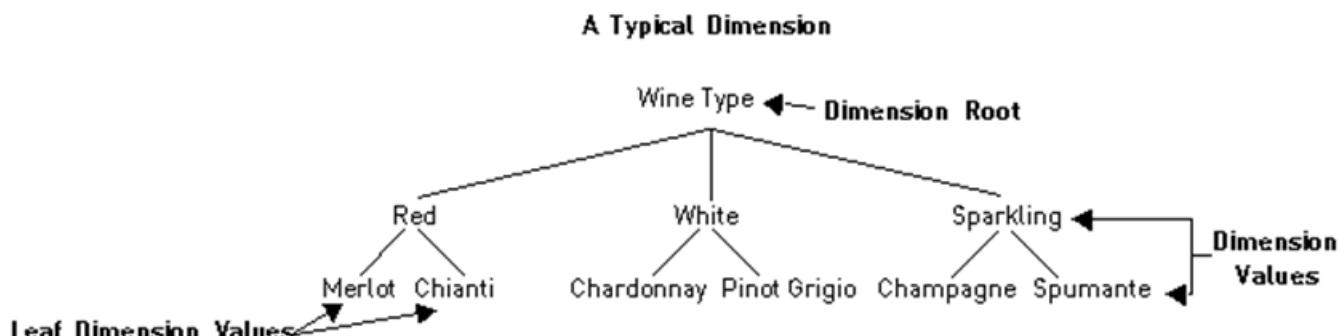
This section provides an overview of the basic Endeca concepts that are used throughout this guide.

About dimensions and dimension values

Describes Endeca dimensions and dimension values.

Dimension values are tags or labels associated with records in your data set that classify and organize those records into navigable categories. For example, dimension values can either be discrete values (as in a year, a flavor, or a price), or dimension values can include ranges with an upper and lower bound (the years 1990-1999, or all prices under \$10).

A dimension is a collection of related dimension values. Dimensions provide the logical structure for organizing the records in your data set. Your Endeca-enabled application can have many dimensions, for example, Wine Type, Price Range, Rating, and so on. Also, dimensions can be hierarchical, for example, the Merlot and Chablis dimension values could be children of the Wine Type dimension. Here is the relationship of sample wine dimensions and dimension values:



- [About rule targets](#) on page 29
A target is a collection of one or more dimension values and one or more featured results that tells the MDEX engine which records you want to promote when your rule is evaluated for firing.
- [About rule triggers](#) on page 27
A trigger is a set of conditions that must exist in a query for a rule to fire.
- [About featured records](#) on page 192
Defines a featured record.

About Endeca records

Defines Endeca records.

Endeca records are the entities in your data set that you are trying to search for or navigate to. Customer records in a customer relationship management (CRM) application, mutual funds in a fund evaluator, and bottles of wine in a wine store are all examples of items represented by Endeca records.

- [About properties](#) on page 192
This topic describes Endeca properties.
- [About user queries](#) on page 193
Defines user queries in Endeca IAP.
- [Endeca MDEX Engine](#) on page 163
The Endeca MDEX Engine is the search engine that powers Endeca-enabled applications.

About featured records

Defines a featured record.

A featured result is a specific record that is returned as part of the query results for a business rule's target. When a user triggers a rule that specifies a featured result, the record for that result is returned along with any other records for the dynamically generated results. You can add any number of featured results to a business rule's target.

- [About rule targets](#) on page 29
A target is a collection of one or more dimension values and one or more featured results that tells the MDEX engine which records you want to promote when your rule is evaluated for firing.
- [About rule triggers](#) on page 27
A trigger is a set of conditions that must exist in a query for a rule to fire.
- [About dimensions and dimension values](#) on page 191
Describes Endeca dimensions and dimension values.

About properties

This topic describes Endeca properties.

Properties are key/value pairs associated with Endeca records that are displayed once a user has searched for, or navigated to a record list or an individual record page. Properties contain descriptive information about a record. For example, common properties for an e-commerce application might be "price", "product description", and "model/part number". When a user locates a particular record, the values of the properties are displayed, for example, "\$8.00", "striped fleece scarf", and "123-4567".

- [About Endeca records](#) on page 192
Defines Endeca records.
- [About user queries](#) on page 193
Defines user queries in Endeca IAP.
- [Endeca MDEX Engine](#) on page 163

The Endeca MDEX Engine is the search engine that powers Endeca-enabled applications.

About user queries

Defines user queries in Endeca IAP.

When users of your application click on a link or type in a search term, they are making a query to the Endeca MDEX Engine. The MDEX Engine can return results for a variety of queries. The two most important types, however, are navigation queries and record search queries.

- Navigation queries return a set of records based on user-selected record characteristics, plus any follow-on query information. These characteristics take the form of dimensions and dimension values in your application. For example, a navigation query for white wines with a price between \$10 and \$15 and a rating between 85 and 90 would return all wines that match those characteristics. White wines is a dimension value of the wine types dimension. A price between \$10 and \$15 is a dimension value of the price range dimension.
- Record search queries return a set of records based on a user-defined search term, plus any follow-on query information. For example, a record search query for "Sonoma" would return all wines with Sonoma in their name or description.

Navigation queries and record search queries are complementary. Users can make a combination of navigation queries and record search queries to navigate to their desired record set in the way that works best for them.

- [About Endeca records](#) on page 192
Defines Endeca records.
- [About properties](#) on page 192
This topic describes Endeca properties.
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