

# Using Oracle Commerce



F52490-01  
April 2022



Using Oracle Commerce,

F52490-01

Copyright © 1997, 2022, Oracle and/or its affiliates.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software" or "commercial computer software documentation" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle, Java, and MySQL are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

# Contents

1	Understand Oracle Commerce	
	Product features	1-1
2	First Steps	
	Subscribe to Oracle Commerce	2-1
	Prepare for store development	2-1
	Become familiar with the administration interface	2-2
3	Work with the Dashboard	
	View reports	3-2
	Find documentation and training videos	3-2
	Enter basic store information	3-3
4	Design Your Store Layout	
	Access layouts	4-1
	Understand the default layouts	4-1
	Create a new layout instance (cloning)	4-2
	Customize your store layouts	4-3
	Customize layout components	4-3
	Work with layout components	4-4
	Customize slots	4-7
	Customize stacks	4-10
	Modify your page layout settings	4-14
	Upgrade deployed widgets	4-17
	Work with role-based layouts	4-18
	Preview your store	4-19
5	Customize Your Store's Design Theme	
	Understand the default theme	5-1

Create a new theme (cloning)	5-1
Customize your theme	5-2
Modify theme code	5-4
Apply a theme to a site	5-5
Delete a theme	5-5

## 6 Modify Your Storefront Using Code Editing Tools

---

Modify a component's code	6-1
Modify the theme CSS style sheet	6-2
Use developer tools to customize your store	6-2

## 7 Manage Your Catalog

---

Understand catalogs	7-1
Work with independent catalogs	7-2
Work with filtered catalogs	7-4
Work with legacy catalogs	7-8
Create legacy catalogs	7-9
Associate catalogs with sites or accounts	7-11
Edit catalog items without publishing	7-11
Create and edit product types	7-14
Create and work with products	7-23
Find products in catalogs	7-24
Create and work with SKUs	7-26
Create add-on products	7-30
Organize products in collections	7-32
Configure catalogs with optional collections	7-37
Link and unlink collections and products	7-39
Create default parent collections	7-41
Create custom properties for collections	7-44
Add metadata to products and collections	7-47
Display related products	7-48
Configure AI Recommendations Rules	7-49
Display product recommendations	7-55
Add images to products	7-57
Create gift cards	7-59
Manage inventory	7-60
Preview your changes	7-61

## 8 Manage SEO

---

Configure URL patterns	8-1
Customize SEO tags	8-5
Manage SEO content	8-7
Understand canonical tags	8-9
Utilize widgets for SEO	8-10
Understand SEO snapshots	8-12
Configure URL redirects	8-13
Edit the robots.txt file	8-14
Customize structured data	8-16
Understand XML sitemaps	8-17
Understand SEO localization	8-18
Control access to storefront servers	8-19

## 9 Manage Search Settings

---

Understand index fields	9-1
View index fields	9-1
Understand the searchable field ranking list	9-2
Add fields to the searchable field ranking list	9-3
Edit the searchable field ranking list	9-4
Understand the thesaurus	9-5
Create and edit thesaurus entries	9-6
Understand keyword redirects	9-8
Create and edit keyword redirects	9-9
Refine and order search results	9-11
Multiple sites and search	9-14
Configure dynamic content	9-14
Use the search REST APIs	9-16

## 10 Manage Media for Your Store

---

View the media library	10-1
Upload media files	10-2
Edit and remove media files	10-3
Import image assignments	10-4

## 11 Import and Export Catalog Items and Inventory

---

Understand export guidelines	11-1
Export catalog items	11-2

## 12 Manage Promotions

---

Understand promotions	12-1
Understand promotion targets	12-2
Understand currency-specific promotions	12-3
Understand audience-specific promotions	12-3
Understand site-specific promotions	12-4
Copy an existing promotion	12-4
Create an order discount promotion	12-5
Create an item discount promotion	12-6
Create a buy one get one promotion	12-8
Create a shipping discount promotion	12-9
Create a gift with purchase promotion	12-10
Define a promotion	12-11
Enable and disable promotions	12-19
Organize promotions in folders	12-19
Include or exclude products, SKUs, or collections	12-21
Exclude promotions	12-23
Add a coupon code to a promotion	12-24
Manage promotions with stacking rules	12-26
Manage upsell messages	12-27

## 13 Define Audiences

---

Understand audience definitions	13-1
View the list of audiences	13-12
Create an audience	13-12
Update an audience	13-14
Copy an existing audience	13-14
Disable an audience	13-15
Delete an audience	13-16
View audience usage	13-16
Add personalization to headless applications	13-16

## 14 Configure Tax Processing

---

Understand tax processor integrations	14-1
Understand the Tax Code property	14-2
Configure the AvaTax integration	14-2
Configure the Vertex O Series integration	14-3

Integrate with an external tax processor	14-4
Configure Ship from Warehouse Locations	14-5
Disable all tax processors	14-6

## 15 Add personalization to headless applications

---

## 16 Configure Payment Processing

---

Configure payment settings	16-1
Configure the CyberSource integration	16-2
Configure the PayPal integration	16-4
Configure the Chase Paymentech integration	16-5

## 17 Configure Shopper Settings

---

Configure the password policy	17-1
Configure the logged-in shopper session	17-2
Configure guest checkout	17-3
Disable soft login	17-3
Configure account-based shoppers	17-3
Configure shopper registration	17-4

## 18 Configure Email Settings

---

Enable the types of email your store sends	18-1
Configure Abandoned Cart settings	18-5
Ensure emails are not rejected as spam	18-6
Configure an Alternate SMTP Email Relay	18-6

## 19 Configure Internal User Accounts

---

Understand role-based access control	19-1
View role contents	19-8
Create new user profiles	19-8
Edit user profiles	19-9
Deactivate and reactivate user profiles	19-11
Access the Commerce administration interface	19-11

## 20 Configure Shipping

---

Create shipping regions	20-1
Create a shipping method	20-1
Specify a fallback shipping method	20-3
Specify a default shipping country	20-4
Configure shipping surcharges	20-4
Understand externally priced shipping methods	20-5

## 21 Configure Wish Lists

---

Understand wish list features	21-1
Implement wish lists	21-4
Configure Facebook access and announcements	21-4
Enable wish list email settings	21-4
Edit wish list widget content	21-6
Set up wish lists in a multiple site environment	21-7
Configure wish lists for OSF applications	21-8

## 22 Localize Your Store

---

Understand store localization	22-1
Select additional languages	22-2
Prepare your catalog for translation	22-3
Import translations for catalog items	22-4
Manually translate properties	22-4
Translate store text	22-5
Configure the default locale for a site	22-5
Create items in the default locale of a site	22-6
Use a specific locale code in a REST request	22-6
Troubleshoot translation issues	22-6

## 23 Configure Price Groups

---

Understand price groups	23-1
Create and edit price groups	23-3
Manually add prices to products and SKUs	23-5
Import prices for products and SKUs	23-5
Activate price groups	23-6
Update prices without publishing	23-7
Work with price group inheritance	23-8

## 24 Use Volume Pricing for Products

---

Understand volume pricing	24-1
Add volume prices to a product	24-1
Display volume pricing in a storefront	24-2
Understand volume price display in a product listing	24-3
Understand volume price display on the Product Layout	24-4

## 25 Publish Changes

---

Understand publishing	25-1
Understand worksets	25-3
Save changes to worksets	25-4
Create and edit worksets	25-4
Schedule publishing	25-6
Publish changes using the REST API	25-7

## 26 Configure Business Accounts

---

Understand accounts, contacts, and contracts	26-1
Understand delegated administration	26-2
Work with accounts	26-2
Work with account addresses	26-8
Work with account contacts	26-10
Work with account contracts	26-15
Understand shoppers and new account registration requests	26-16
Submit new account registration information as a business shopper	26-17
Work with account registration requests	26-18
Work with registration requests to review, change status, approve, and reject requests	26-21
Understand contact registration requests	26-23
Submit new contact registration information	26-24
Understand working with contact registration requests	26-25
Work with contact requests to review, change status, approve, and reject	26-31
Delete contact information	26-33

## 27 Create Page Layouts that Support Different Types of Shoppers

---

Understand the different types of shopper	27-1
Create cloned layouts	27-2
Restrict guest checkout	27-2
Manage pages for account-based shoppers	27-3
Configure page layouts for account hierarchies	27-4

Manage page layouts to support account and contact registration requests	27-5
--	------

## 28 Use Order Approvals

---

Understand order approvals	28-1
Enable or disable order approvals	28-2
Understand the purchase limit for order approvals	28-3
Set a price hold period	28-3
Manage approvers for an account	28-4
Understand how approvers approve and reject orders	28-5
Understand the effect of order approvals on scheduled orders	28-5
Notify users of order approval-related events	28-6

## 29 Run Multiple Stores from One Commerce Instance

---

Understand what is shared among sites	29-1
Define a site	29-2
View, preview, and publish sites	29-3

## 30 Accessibility Tasks

---

About keyboard shortcuts	30-1
--------------------------	------

## 31 Secure Your Service

---

Understand security features	31-1
Perform security tasks	31-3

## A Appendix: Layout Widgets and Elements

---

Account Addresses	A-1
Account Contacts	A-1
Account Details	A-1
Address Book	A-2
Add Product to Wish List	A-2
Assets	A-2
Asset Details	A-2
Breadcrumb	A-2
Cart Shipping	A-3
Cart Summary	A-3
Category Content	A-3
Checkout Schedule Orders	A-3

Collection	A-4
Collection Navigation	A-4
Collection Navigation Basic	A-4
Content Item	A-4
Customer Address	A-4
Checkout Address Book	A-5
Customer Profile	A-5
CyberSource Payment Authorization	A-5
Footer	A-5
Guided Navigation	A-6
Gift Card	A-6
Header	A-6
Hero	A-7
Login/Registration Checkout	A-7
Loyalty Details	A-7
Loyalty Payment	A-8
Managed Account Address Book	A-8
No Search Results	A-8
Notifications	A-8
Order Approvals	A-8
Order Approval Settings	A-9
Order Confirmation	A-9
Order Confirmation Summary	A-9
Order Confirmation with Additional Info	A-9
Order Details	A-10
Order Details with Additional Info	A-10
Order History	A-10
Order Summary	A-11
Order Summary Checkout	A-11
Orders Pending Approval	A-11
Overlayered Guided Navigation	A-11
Page Not Found	A-11
Pay After Approval	A-12
Payment Details	A-12
Payment Methods (Formerly Split Payments Widget)	A-12
Payment Gateway Options	A-12
Product Details	A-13
Product Listing	A-13
Product Recommendations	A-14
Product Social Meta Tags	A-15
Product Quick View	A-15

Promotion	A-15
Purchase Lists	A-16
Purchase List Details	A-16
Quick Order	A-16
Quote Details	A-17
Related Products	A-17
Return Items	A-17
Return Item Details	A-18
Request Quote	A-18
Review Order	A-18
Scheduled Order	A-18
Scheduled Order List	A-18
Scheduled Order - Checkout	A-19
Search Results	A-19
Shopping Cart	A-19
Split Payments	A-19
Update Password	A-19
Web Content	A-20
Wish List Canvas	A-20
Wish List Content	A-20
Wish List Header	A-21
Wish List Invitation	A-21
Wish List Notification Settings	A-21
Wish List Settings Header	A-22
Wish List Welcome	A-22

# 1

## Understand Oracle Commerce

Oracle Commerce is a scalable, flexible eCommerce solution designed specifically to run in the Oracle Cloud. The service provides the infrastructure and tools necessary to build a highly customizable, feature-rich storefront for your business.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Commerce comprises the following core pieces:

- The Commerce administration interface, which you use to design and manage your store. You access it through the URL given to you by Oracle when you subscribe to the service. The URL is similar to the following:  
`<youroracledomain.com>/occs-admin/#`
- Your storefront, located at the URL Oracle provides. Initially you are provided with a test version of the site, which you modify through the administration interface to create your own store.
- The Agent Console, which your customer service representatives can use to assist shoppers with their orders. The Agent Console is typically located at  
`<youroracledomain.com>/occs-agent/#`. The Agent Console is described in [Understand the Agent Console](#).

**Note:** Oracle supplies you with three separate environments as part of your subscription: testing (also called development), staging, and production. The URLs for the three components shown above vary for each environment.

Commerce also provides the following pieces:

- Developer features for extending the capabilities of your store, including a set of REST APIs and tools for customizing widgets. See [Understand Extension Features](#), [Understand the Open Storefront Framework](#) and [Create a Widget](#).
- Integrations with third-party vendors (for example, tax calculation services and payment processors) and other Oracle Cloud services. For more information on the integrations available, refer to the [Oracle Help Center page](#) for Commerce.

## Product features

This section lists some of the key capabilities that are available with or supported by Commerce and indicates where you can find more information about them.

With Commerce, you can perform the following operations related to managing an eCommerce storefront:

- Customize the templates and layouts that determine how your store looks. See [Design Your Store Layout](#).
- Manage your catalogs, inventory, and pricing. See [Manage Your Catalog](#) and [Configure Price Groups](#).

- Translate your catalogs and content into different languages and display prices in locale-appropriate currencies. See [Localize Your Store](#).
- Provide advanced search tools for your site. See [Manage Search Settings](#).
- Manage your Search Engine Optimization (SEO) strategy. See [Manage SEO Settings](#).
- Offer discounts and promotions. See [Manage Promotions](#).
- Personalize storefront content for different shoppers. See [Define Audiences](#).
- Support a loyalty points program. See [Work with Loyalty Programs](#).
- Offer product recommendations and display related products. See [Display product recommendations](#) and [Display related products](#).
- Manage transactional emails between the store and your shoppers. See [Configure Email Settings](#).
- Support wish lists with links to social networks. See [Configure Wish Lists](#).
- Integrate with payment and tax processors. See [Configure Payment Processing](#) and [Configure Tax Processing](#).
- View reports about your store. See [Understand Your Reports](#).

### **Business-to-Consumer and Business-to-Business Commerce**

Commerce supports both business-to-consumer (B2C, sometimes referred to as retail) and business-to-business (B2B) models. In B2C, your store sells to individual shoppers. In B2B, your store sells to buyers who represent another company or organization.

B2B features are not enabled by default in your environment. Note that B2B is referred to as “account-based commerce” in the Commerce documentation.

For more information, see [Configure Business Accounts](#).

### **Running multiple stores**

You can manage more than one storefront from a single subscription to Commerce. Certain elements, for example shopper profiles, can be shared among your sites. For more information, refer to [Run Multiple Stores from One Commerce Instance](#).

# 2

## First Steps

Before you can start developing your store, there are some preparatory steps you must perform, including activating the service, reviewing the initial materials provided by Oracle, and becoming familiar with the web-based administration interface for Oracle Commerce.

This section provides information on these steps.

### Subscribe to Oracle Commerce

Before you can start using Commerce, you must purchase a subscription.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

For information on how to do so, please contact an Oracle sales representative: <http://www.oracle.com/us/corporate/contact/index.html>

After purchasing your subscription, you will receive an email asking you to activate the service by confirming your order. Once your service has been activated, you will receive additional emails so you can set up your Oracle Cloud account.

When you purchase a Commerce subscription, you are also provided tenancy in the Oracle Cloud Infrastructure (OCI), which allows you to provision and maintain your Commerce environment and access your contracted environments. You will also receive additional information with links to extensive resources to help you get started.

### Prepare for store development

The materials you receive from Oracle after you subscribe to the service include detailed information about preparing for store development.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

It is important to review these materials carefully with your Oracle representative and complete any required preliminary tasks to ensure your implementation goes as smoothly as possible. In addition, it is suggested that you review the product documentation and become familiar with the key concepts of the Commerce administration interface.

You can access the latest product documentation and training videos through the [Oracle Help Center](#). The Commerce page also contains links to blogs, developer communities, and Support. (Please note that some of these resources require an account for access.)

The administration interface also provides direct links to the documentation and videos as described in [Work with the Dashboard](#).

**Important:** Commerce is designed to provide your shoppers with a fast, responsive storefront. However, it is critical to consider site performance from the beginning of your implementation project and build performance testing into your development strategy as early

as possible. It is highly recommended that your site developers read *Improve Performance* before starting any customization work.

## Become familiar with the administration interface

The Commerce administration interface (sometimes referred to as the Admin UI) is a web-based application you use to perform many of the tasks required to set up and maintain your storefront.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You access it at the URL provided to you by Oracle after you subscribe to the service. The URL typically takes the following form:

`<youroracledomain.com>/occs-admin/#`

For initial development, you use the administration interface running in your test environment.

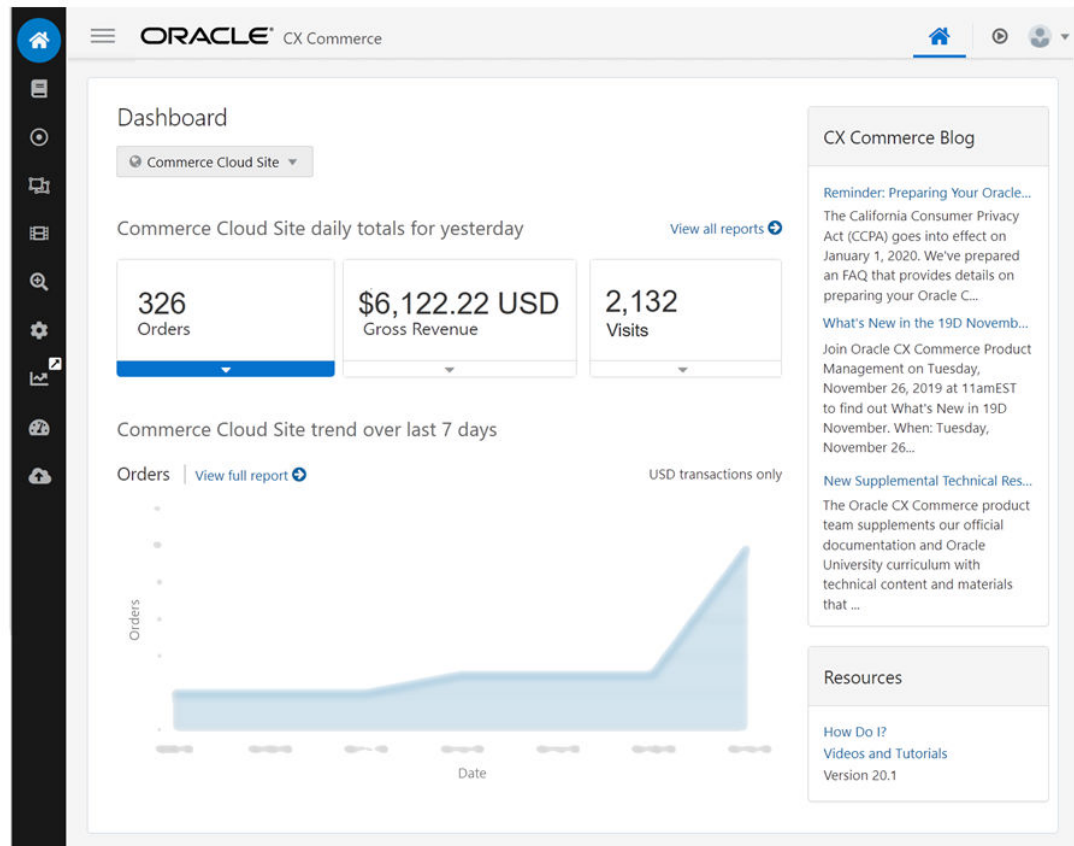
As part of setting up your service, Oracle configures an administrator account that allows a designated person at your organization to log in and start creating accounts for other users as needed. The materials you receive from Oracle after you subscribe to the service include instructions on how the designated administrator can complete the login fields for the first time. For more information, refer to [Access the Commerce administration interface](#).

# 3

## Work with the Dashboard

The dashboard is the first page you see after you log into Oracle Commerce. It allows you to navigate to the different functional areas of the administration interface.

The dashboard is shown in the image below.



Use the icons in the left pane to navigate to the functional areas described below.

- **Catalog:** Manage products and SKUs.
- **Marketing:** Create promotions and target content to specific audiences.
- **Design:** Change the layout and other design elements of your store.
- **Media:** Manage your catalog images.
- **Search:** Manage your store's catalog search features.
- **Accounts:** Create and manage accounts and contacts for a store that is used for account-based commerce. Note that these features may not be available in your environment.
- **Settings:** Configure other features your store supports, for example shopper profiles and emails.

- **Reports:** View report data for your store.
- **Service Operations:** View messages about webhook status (webhooks are used to transmit data related to store activities. For more information, see [Use Webhooks](#)).
- **Publishing:** Push new content and other changes to your storefront.

If options you are expecting to see do not appear, the role assigned to your profile may not have access to them. Refer to [Understand Role-based Access Control](#) for more information.

The dropdown list in the main area of the page shows the name of the store you are working on (in the illustration, Commerce Site). If you have set up more than one store, you can use the dropdown list to switch to a different store. See [Run Multiple Stores from One Commerce Cloud Instance](#).

The dashboard also contains the following elements:

- Reports for orders, gross revenue, and site visits over the last seven days. The data applies to store whose name is showing at the top of the report display.
- The most recent Commerce blog posts.
- Links to documentation and training videos.
- The Commerce version running in your environment.

## View reports

The dashboard automatically displays a snapshot of report data for orders, gross revenue, and site visits.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The data applies to the store whose name is showing at the top of the display. Click the arrow under any report to switch the view. Click **View Full Report** to display the report on the Reports page.

You can access more reports through the **Reports** icon.

For more information, see [Understand Your Reports](#).

## Find documentation and training videos

You can access product documentation and training videos from the administration interface dashboard.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Click **How Do I?** to view the documentation or click **Videos and Tutorials** to view a list of available training videos.

You can also access the product documentation and videos through the [Oracle Help Center](#).

## Enter basic store information

You must enter basic information about your store before you perform any other setup steps.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

In some cases, you will not be able to change basic store information after you enter it.

To enter the basic information for your store:

1. Log into the administration interface at the URL provided to you by Oracle. Typically you would use the administration interface in your test environment for this task. (See [Become familiar with the administration interface.](#))
2. Click the **Settings** icon.
3. Select **Setup**.
4. If your Commerce instance runs multiple sites (stores), pick a site to configure from the list that appears above the settings list. See [Run Multiple Stores from One Commerce Instance](#) for more information.
5. Click the **General** tab.
6. In the **Site Title** field, enter the value you want to use for the HTML <title> tag of your store's home page. This value is typically used by search engines as the title that appears for your store in a list of search results. It is also visible to shoppers in a number of places, for example in browser tabs, and it is offered to them as the default text for bookmarks.
7. In the **Site Base URL** field, enter your production store's base URL. You do not need to include the protocol (HTTP or HTTPS) in the URL. If you do, it will be stripped off when you save the settings. The actual protocol used will always be HTTPS, regardless of what you specify. So, for example, if you enter `www.examplestore.com` in the Site Base URL field, the actual base URL for the site is `https://www.examplestore.com`. See [Understand the site base URL](#) for more information.
8. On the **Location** tab, fill in the following fields:
  - Default Time Zone
  - Site Time Zone
  - Store Default Language
  - Additional Store Languages
  - Reporting Currency

**Important:** Do not change your store's default language once you set it, especially if you have already created catalog items such as products, SKUs, and collections. See [Localize Your Store](#) for more information.

You do not have to select a default language for the administration interface. The administration interface automatically displays in your browser's preferred language, provided it is a language that Oracle Commerce supports. See [Languages supported by the storefront](#) for more information.

Once you add additional store languages, a Content Language dropdown appears at the top of the administration interface, next to the Preview button. Use this dropdown to select an additional language when you translate your store text.

9. On the **URL Patterns** tab, customize the URL pattern for your store's product and collection pages. See [Configure URL patterns](#) for more information.

### Understand the site base URL

Each site running on your Commerce instance must have a different base URL. The site base URL setting is used as the prefix for all of the site's URLs. For example, if a site's base URL is `https://www.examplestore.com`, the URL for a specific product might be `https://www.examplestore.com/cowboy-shirt/product/prod10002`.

If your Commerce instance runs multiple sites, there are several strategies available for using site base URLs to distinguish between sites:

- Use unique domain names. For example, `www.shoestore.com` and `www.glovestore.com`.
- Use unique top-level domains. In particular, country-code top-level domains are often used to distinguish country stores. For example, `www.examplestore.fr` and `www.examplestore.it`.
- Use unique subdomains. For example, `shoestore.examplestore.com` and `glovestore.examplestore.com`, or `fr.examplestore.com` and `it.examplestore.com`.
- Use unique pathnames. This approach uses context roots (subdirectories) to distinguish sites. For example, `www.examplestore.com/shoes` and `www.examplestore.com/gloves`, or `www.examplestore.com/fr` and [www.examplestore.com/it](#).

If your site uses the subdirectory structure for the base URL, and a shopper with items in their cart switches from one site to another site with the same base URL, if those items are available for sale on the site they switch to, those particular items will remain in the cart. Any items not available for sale on the site the shopper switches to will be removed from the cart.

### Define additional store settings

As described in the previous section, the **Setup** page contains some required values you must specify before you start development on your store. The page also contains some general settings that are optional or can be specified later in the development process. These additional settings are described below.

- **Favicon:** Optional. Select an image to use as the favorite or shortcut icon for your site's pages. Browsers display this image in a number of places, for example in a bookmark list.
- **No-Image Image:** Optional. Select the default image to use for any product if no other image is available.
- **Theme:** Optional. Select a theme for this site. If your Commerce instance includes multiple sites, you can select a different theme for each site. See [Run Multiple Stores from One Commerce Instance](#) for more information about creating and configuring multiple sites. See [Customize Your Store's Design Theme](#) for more information about themes.
- **Default catalog:** Optional. If you create multiple catalogs, select a default catalog for the site. By default, the value of this setting is the default catalog, called Product Catalog. For more information, see [Manage Your Catalog](#).

- **Make Default Site:** Optional. If your Commerce instance includes multiple sites, select the Make Default Site checkbox to make the current site the default. See [Run Multiple Stores from One Commerce Instance](#) for more information about creating and configuring multiple sites.
- **Location** tab: Default Price Group and Additional Price Groups (optional).

Oracle Commerce uses price groups to manage and display prices in different currencies. Your Oracle Commerce instance comes with one configured price group, whose currency is US Dollars. If you want to display prices in other currencies, you must create new price groups, one for each currency. See [Configure Price Groups](#) for more information.

**Important:** Price groups you add to the **Additional Price Groups** field can be seen and selected by all shoppers who visit your store. If your store uses account-based commerce, do not select price groups that are associated with accounts in the **Additional Price Groups** field. Prices associated with specific accounts should be seen only by logged-in contacts from those accounts. See [Configure Business Accounts](#) for more information.

# 4

## Design Your Store Layout

Your storefront is made up of layouts, which represent the different page types that can appear, such as product details, checkout, and order confirmation. The default layouts act as templates, and you use them to design, adjust, and preview your pages before publishing live.

Layouts contain a set of design tools, known as widgets, that define the structure of your web store pages. Several widgets are themselves made up of configurable sub-component elements. Widgets contain within them the specific UI functionality to which they relate. For example, the Order Confirmation layout contains information on items ordered, prices, shipping address, and so on. Each layout's widgets combine to form the overall page layout. Accessible via a component library, widgets can be added, removed, cloned, and customized.

**Note:** You can use an extension to upload custom widgets and widget elements to your store. See [Understand Extension Features](#) for more details.

### Access layouts

To access layouts, click the **Design** icon on the dashboard. The default **Layout** tab is displayed.



*This section applies to Storefront Classic only.*

You will see overviews of the layout page types on the **Layout** tab. To avoid excessive scrolling, use the **Filter** icon, or **Sort** drop down, to access your preferred layout. In addition to the selection filters, you can choose whether or not to display layouts for accounts, and you can search for a specific layout by entering details in to a **Filter layouts** box.

The layout configuration menu icons displayed on the right of your layout overview enable you to customize each of the layouts. Here you can access the **Layout Settings**, **Clone Layout**, **Grid View**, and **Preview** configuration menus.

### Understand the default layouts

A flag icon next to a layout name indicates the default layout instance for any given layout type. The default layout is used if no other layout is assigned based on the page contents.



*This section applies to Storefront Classic only.*

Opening the **Layout** tab displays overviews of the layout page types available in Commerce.

**Note:** Non-default layout instances may not be visible to shoppers with the exception of the Article, Product Details, and Collections layouts assigned to selected products, product types or collections. This is also dependent on the shopper's chosen viewport.

Each time you clone a layout instance, you have the option to make that newly-cloned layout the default.

## Create a new layout instance (cloning)

You can create a new layout instance by cloning an existing layout instance; this action makes a copy of the original.



*This section applies to Storefront Classic only.*

When creating the newly-cloned layout you can configure settings such as sites, notes, viewports, default settings, and SEO information. To do so, complete the following steps:

1. Click the **Design** icon, and click the **Layout** tab.
2. Navigate to the layout you want to clone by either searching by name, or filtering by layout, site, or viewport.
3. Highlight the layout overview, and click the **Clone Layout** option from the configuration toolbar.

The New Layout dialog screen is displayed.

4. Enter the newly-cloned layout's name and any related notes. See [Customize your store layouts](#) for more details.

**Note:** Within the Collections layout you can assign the newly-cloned layout to a collection. Collections represent groups of products which have similar properties, such as, women's dresses or men's shoes. You should also note that within the Product layout you can assign the newly-cloned layout to a product type or product.

To select a collection, product type, or product, begin by typing or pasting some text in the relevant text box within the Layout Assignment section. The filter matches letters or numbers that you type, wherever they appear in the name, not just at the beginning. Usually, as you type more characters, there are fewer matches. You can assign a layout to more than one collection. As products and collections are made available from all catalogs, you must ensure you have assigned the catalog that is relevant for your site.

5. (Optional) Configure the new layout with one of the following checkbox options:
  - **Make Default Layout** - defines the new layout as the default. This layout is rendered for anonymous shoppers and registered shoppers.
  - **Display Layout to Account Shoppers Only** - restricts the new layout to account-based shoppers only.

You can enable these settings when designing a set of layouts for your anonymous and registered shoppers, and another set for your account-based shoppers. See [Create Page Layouts that Support Different Types of Shoppers](#) for more details.

6. Enter all other settings, such as the preferred **Site**, **Viewport**, **Page Title**, **Page Address**, **Cart Preview**, **Layout Preview**, and any new metadata tag information.
7. Click **Save** to confirm all settings. You can preview your newly cloned layout by clicking the Layout Preview icon.

## Customize your store layouts

You can use the layout configuration toolbar options to customize the design of your web store pages.



*This section applies to Storefront Classic only.*

The toolbar is accessed on the right hand side of any layout overview, visible as a row of icons. The same configuration options are also available above any layout opened via Grid View, within which the Layout Preview also provides access.

You can also use custom widgets and elements to extend the functionality of your web store. See [Understand widgets](#) for more details. This may be especially useful for developers working on implementations of Oracle Commerce. This guide also provides you with a general summary of each of the widgets and elements. See [Appendix: Layout Widgets and Elements](#).

## Customize layout components

Layouts have access to a set of components in the form of widgets, slots, application JavaScript, and stacks, displayed within a component library. .



*This section applies to Storefront Classic only.*

Before designing your store pages, you can choose which of these are visible, and which are hidden from view. Those which are visible are consequently available for use in the relevant layouts.

By default, the Quote Details and Request Quote widgets are automatically hidden. You will need to unhide these widgets if you are enabling quoting functionality on your web store.

**Note:** Choosing to hide components already in use has no impact on those particular instances.

To customize layout components:

1. Click the **Design** icon and display the **Components** tab.
2. Filter which component types are displayed by using the Type or Source filters. You can also search for a specific component by entering details in to a Filter box. An overview list of components displays. It includes the component type, the number of instances, and the latest version number.
3. (Optional) A green arrow next to the overview information indicates that an update is available for that particular component. Click the arrow to update the component to the latest version. If an update is not available, then a green check mark is displayed.
4. (Optional) To view all hidden components, click the **Show Hidden Components** button next to the filters - the eye icon overlaid with a strikethrough line indicates the hidden status.
5. (Optional) To view all unhidden components, which are the components that are available for use in layouts, click the **Do Not Show Hidden** eye icon button next to the filters.
6. Highlight your preferred component.

7. To hide your highlighted component from the component library, click the eye icon. Doing so means that this particular component will not be available within the Components menu of any associated layouts.  
**Note:** Any existing instances will remain in use.
8. To unhide your highlighted component from view, click the eye icon overlaid with a strikethrough line. This is now available for use in layouts.
9. Click the component name to expand the component's details. From here you can select the following elements:
  - **Extend JavaScript** button: Opens a JavaScript file for a widget, which you can edit and save. This JavaScript will be applied to all instances of the widget. The Extend JavaScript button is visible for non-extension widgets. For more information on this feature, see [Use the JavaScript Code Layering User Interface](#) feature.  
**Note:** The widget JavaScript is only editable for custom widgets that have had their editable JavaScript property activated.
  - **Go To Widget Code** icon: Displays the coding options page. See [Modify a component's code](#) for more details.
  - **Widget Settings** icon: Opens the configuration options available for that particular widget.
  - **Download Source** icon: Downloads the widget file for each widget instance.
  - **Applies to all Sites** check box: Ensures settings are applied across all sites, when running multiple instances of Oracle Commerce. This option applies only in the case of a global widget or an application JavaScript component.

## Work with layout components

Each layout has an associated component library that provides access to a group of layout-specific widgets and/or elements and stacks.



*This section applies to Storefront Classic only.*

Choose your preferred layout from the Layout tab, and select the Grid View configuration option to display it in a structured grid. Accessible via an expandable menu at the bottom of the screen, the Components menu's widgets and stacks can be dragged to the layout's grid and rearranged as required.

Within Grid View you can access each individual widget's settings via the Layout Settings icon. Here you can name the widget or add related internal notes which do not appear on your live store. Several widgets also contain a configurable Settings menu as well as a Layout menu where the widget's elements can be customized.

**Note:** When adding multiple collections to the Collections layout, you may see an error displayed if the collection IDs exceed the maximum field length of 255 characters. In order to avoid this limitation, you can clone the layout, and add any additional collections to the new identical layout.



Widget and stack settings can include the following menu tabs:

- Layout - provides access to sub-component elements.
- Settings - provides access to the general widget configurations.

- **About** - provides general information including the widget instance version and an indication of whether the latest version is in use. See [Upgrade deployed widgets](#) for more details. Clicking the **Go to Widget Code** button within the About tab takes you directly to that widget's code.

Add widgets to a layout

To add widgets to a layout:

1. Click the **Design** icon and display the **Layout** tab.
2. Using the Home Layout as an example, select the Home Layout default instance, and click the **Grid View** icon. This is where the structure of your page is defined.
3. Locate the relevant section of the grid where you want to add a new instance of a widget and click to highlight an existing region.
4. The new widget instance can be added above, below, or as part of the selected region's location.
5. Click the highlighted region's row header to display the toolkit.
6. Create a new row above , or below , your current selection.  
OR

Use the cursor selection arrows on either side of the region's edges to re-size it into a new position within the existing region.

**Note:** The Grid View region defaults to a maximum width of 12 columns. When a Grid View row contains more than one region, the combined column width must total 12.

7. Open the Components section at the bottom of your screen to select a widget type.
8. Select the widget type and drag it to the new row, or within an existing row if relevant. When dragging a widget instance from the component library to your page layout, you are prompted to create a new version of that widget. If the widget already exists on the page layout, then you can also clone the widget to create another copy.
9. Click **Create New Widget Instance** to confirm.  
OR

Click the **Clone Widget** icon to the right of the widget name.

10. Name the new widget instance, and click **Save** to confirm.

### Rearrange/remove widgets in a layout

Locate the row region containing the widget you want to rearrange, or remove, within your chosen layout's Grid View section.

To rearrange widgets, drag them to rows, between rows or alongside other widgets within a row.

**Note:** Rows consist of 12 columns and can be resized into a number of region widths that total 12 by dragging the cursor selection arrows at the edges of the row. You can also click the Adjust Widths icon from the row header to open the Region Widths dialog and enter the row columns manually.

To remove a widget, highlight it and click the 'x' icon. You will see a message confirming you've removed that particular widget instance. Once the widget has been removed, you can then delete that entire row by highlighting it and clicking the trash can icon.

### Rearrange/remove elements

Several widgets contain elements which you can add, rearrange, and remove to achieve the look you want for your chosen widget.

Elements are the sub-component parts that make up the overall widget structure. They can be accessed via an element library within several of the widgets' settings:

To access the elements:

1. Click the **Design** icon and display the **Layout** tab.
2. Highlight your preferred layout instance and open using the **Grid View** icon.  
**Note:** When you have multiple instances of layouts, using the search box to filter for your preferred layout may avoid excessive scrolling.
3. Double click the relevant widget to open. You can also open by clicking the Settings icon located on the top right corner of each widget.  
A new window opens displaying a combination of the Layout, Settings, and About menus, depending on which widget you have opened.  
**Note:** The About menu contained in each of the widget settings enables you to go directly to that widget's code by clicking the **Go to Widget Code** button.
4. Click the **Layout** option to display the elements.
5. Open the **Element Library** section at the bottom of your screen to select an element
6. Drag and drop your chosen element. You can resize and rearrange elements, depending on where you want them to be displayed in the widget. Clicking the row header will open the **Row Controls** options where you can add rows above or below the current row. You can also adjust the widths of the regions and you can also remove elements using the trash can or the individual element 'x' icon.
7. Save your choices and preview, or cancel to keep the existing panel layout.

### Configure image elements and company logo

You can add images to your storefront via the Image element, including your company logo. Access to the element is provided via any widget that contains an Element Library.

To configure an image element, or company logo:

1. Click the **Design** icon and display the **Layout** tab.
2. Use the filter options to locate your preferred layout instance, and click the **Grid View** icon.  
**Note:** When you have multiple instances of layouts, using the search box to filter for your preferred layout may avoid excessive scrolling.
3. Highlight your preferred widget, or, in the case of configuring your company logo, highlight the Header widget. You can also add a new widget, rather than using pre-loaded widgets.
4. Double click the widget to open. Clicking the **Settings** icon located on the top right corner of each widget will also open it.  
A new window opens displaying a combination of the Layout, Settings, and About menus, depending on which widget you have opened.  
**Note:** The About menu contained in each of the widget settings enables you to go directly to that widget's code by clicking the **Go to Widget Code** button.
5. Click the Layout option to display the elements.

6. (Optional) Delete the Logo element if you wish to upload your company logo.  
**Note:** When adding your company logo, you must delete the pre-loaded logo element and replace it with a logo image.
7. Open the Element Library section at the bottom of your screen.
8. Drag the Image element to the row.
9. Click the Image element title to open the configuration options page.
10. Configure the image element by naming it, selecting where to retrieve the image from, entering a hyperlink which is navigated to via the image, and adjusting the appearance settings.
11. Click **Done** to save and exit.

## Customize slots

Slots provide a means of content variation similar to stacks, however, only a single variant of a slot will be returned to the visitor's browser based on server-side rules.



*This section applies to Storefront Classic only.*

### Configure audience-based content slots

You can create several versions of your store content in order to reach a variety of target audiences. For example, content images may be based on gender, or age, categories.

To do so, you can add a Content Variation Slot to any layout.

To configure audience-based content:

1. Click the **Design** icon and display the **Layout** tab.
2. Navigate to any layout by using the filter options.
3. Select your preferred layout and click the **Grid View** icon.
4. Locate the relevant section where you would like to place a Content Variation Slot and highlight an existing region.
5. Either:  
Select an existing region and ensure all widgets are removed so that just the region itself remains.  
Or  
Add a new row (which contains regions) above or below using the arrows on the row menu bar.
6. See [Work with layout components](#) for details on adjusting a region's width settings, and removing widgets.
7. Open the **Components** menu, select **Content Variation Slot** and drag to the empty region. You will see a control (or default) variant, and an unassigned variant.
8. Drag and drop widgets from the Components menu to the default variant, as required.
9. Highlight the unassigned variant by clicking its name. You now have several configuration options available for the unassigned variant. These include, customizing the slot, choosing a target audience, or, configuring the slot settings, as described below:

**Note:** Audiences are defined when a set of rules are created based on attributes of the shopper profile, and are then used for personalizing the shopper's experience. See [Define Audiences](#) for more details.

To customize the slot, click the following options:

- Add variant '+' button on the far right to add up to a maximum 10 variants, these can be easily re-ordered via drag and drop.  
**Note:** The order of the variants follows a left to right sequence, with the leftmost variant (after the default) having the highest priority.
- Remove variant 'x' button to the right of each variant name to remove it. You cannot remove the default, and you must have at least one variant in addition to that default.
- Target icon to open the targeting modal, where you can name each variant as required. (This modal can also be opened by double clicking the variant name.)

To target an audience:

- Click the **target** icon to display the target audience configuration options.
- Enter the name of the variant.
- Select your target audience name. This can be chosen from a list of predefined audiences as soon as you begin typing. You cannot assign an audience to the default variant.
- Choose your audience from the list of available audiences.
- (Optional) Select a start and end date.  
**Note:** Results vary depending on the combination of dates and audiences chosen: you can select a date without specifying an audience, in which case, the default of 'All Shoppers' is applied; you can select an audience without specifying start and end dates, in which case, the results are shown for an immediate start date, and an indefinite end date; when a start date is not specified, the results shown relate to an immediate start date; when an end date is not specified, the results shown relate to an indefinite end date.
- Click **'Add a Variant'** if you wish to add more variant slots.  
**Note:** You can reorder the variants by dragging each one to a new position of priority.

To configure the slot settings:

- Click the **Settings** icon to display the configuration options.
- Choose your slot name and description details.
- Click **Save** to confirm your settings.

10. Save your configurations.

11. Drag and drop widgets from the Components menu to the variant(s) as required.  
**Note:** You can drag a Progress Tracker, Vertical tabs, or an Accordion stack on to the variants of a slot, sometimes referred to as a nested stack.

12. You must ensure that you publish the changes made to your store after assigning audiences to slots, otherwise the personalized content will not be displayed on the storefront.

### Configure role-based content slots

When an Agent accesses your store in order to gain insight into a shopper's perspective, they can view content based on their access role. You can, therefore create several versions of your store where the content is determined by the relevant access role. For example, the role of an Agent Supervisor, Administrator, or an Account Manager may be assumed. See [Create new orders](#) for more details.

To configure a role-based content slot:

1. Open the **Design** icon and display the **Layout** tab.
2. Navigate to any layout by using the filter options.
3. Select your preferred layout and click the Grid View icon.
4. Locate the relevant section where you would like to add a role-based content slot and highlight an existing region.
5. Either:  
Select an existing region and ensure all widgets are removed so that just the region itself remains.  
Or  
Add a new row (which contains regions) above or below using the arrows on the row menu bar.
6. See [Work with layout components](#) for details on adjusting a region's width settings, and removing widgets
7. Open the Components menu, select the 'Role Based Slot' option, and drag to the empty region. You will see a control (or default) variant, and an unassigned variant.
8. Highlight the unassigned variant by clicking its name. You now have several configuration options available for the unassigned variant. These include, customizing the slot, configuring the slot settings, or choosing an Agent access role, as described below:  
To customize the slot, click the following options:
  - Add variant '+' button on the far right to add up to a maximum 10 variants, these can be easily re-ordered via drag and drop.
  - Remove variant 'x' button to the right of each variant name to remove it. You cannot remove the default, and you must have at least one variant in addition to that default.
  - Target icon to open the targeting modal, where you can name each variant as required. (This modal can also be opened by double clicking the variant name.)

To configure your slot settings:

- Click the Settings icon to display the configuration options.
- Choose your slot name and description details.
- Click Save to confirm your settings.

Role-based slot variants provide access differently than other roles. Roles are generally only containers and do not provide access by themselves. Roles contain privileges that provide access. However, role-based slots variants do provide access. Ensure that you are providing the correct level of access for your users by setting up the variants correctly.

The following example shows how role-based slots work:

- You define a role-based content slot and configures one variant for the CS Agent role, which is a container for the CS Agent privilege and another variant for the CS Agent Supervisor role, which is a container for the CS Agent Supervisor role.

- You then create a custom role, Special Agent, that contains the CS Agent, Marketing and Preview privileges.
- Then you remove the CS Agent role from a specific user and give that user the Special Agent role instead.
- The user no longer sees the content in the variant for CS Agent, even though they have the CS Agent privilege. Because of the differences with role-based slot variants, you must ensure that you add Special Agent to the CS Agent variant.

To select the Agent access role:

- Click the target icon to display the access role configuration options.
- Enter the name of the variant.
- Choose your role from the list of available roles. This can be chosen from a list of predefined roles as soon as you begin typing. You cannot assign a role to the default variant.
- Click 'Add a Variant' if you wish to add more variant slots.

**Note:** You can reorder the variants by dragging each one to a new position of priority.

9. Save your configurations.
10. Drag and drop widgets from the Components menu to the variant(s) as required.  
**Note:** You can drag a Progress Tracker, Vertical tabs, or an Accordion stack on to the variants of a slot, sometimes referred to as a nested stack.
11. You must ensure that you publish the changes made to your store after assigning audiences to slots, otherwise the personalized content will not be displayed on the storefront.

## Customize stacks

Stacks enable you to group related widgets in to a distinct set of steps which can then be used for functional, navigational, or display purposes.



*This section applies to Storefront Classic only.*

The Progress Tracker, Vertical tabs, and Accordion stack options are available via the Components tool. You can also create a Popup stack that allows you to provide a summarized view of a product.

### Add a Progress Tracker

You can use the Progress Tracker to add steps to your checkout flow. Adding progress tracker steps guides shoppers through the checkout process in a series of easy to follow stages, right up until they ultimately pay for their item(s).

**Note:** The Progress Tracker is only available within the Checkout layout.

To create the Progress Tracker:

1. Click the **Design** icon and display the **Layout** tab.
2. Navigate to the **Checkout Layout** using the filter options.
3. Select the **Checkout Layout**, and click the **Grid View** icon.

4. Locate the relevant section where you want to add a progress tracker and click to highlight an existing region.
5. Either:  
Click an existing region and ensure all widgets are removed so that only the region itself remains.  
Or  
Add a row (which contains regions) above or below using the arrows on the row menu bar.
6. See [Work with layout components](#) for details.
7. Open the **Components** menu, select **Progress Tracker**, and drag to the empty region. You will see a default Progress Tracker containing three steps. You can now customize the steps as required, or, you can configure the settings.  
To customize the steps, click the following options:
  - Add Step '+' button on the far right of the Progress Tracker to add up to 10 steps. Each step must follow concurrently.
  - Remove Step 'x' button to the right of each step name to remove a step. You must have at least one step.
  - Step name to open the Step Label box where you can rename each step as required.To configure the settings:
  - Click the Settings icon to display the configuration options.
  - Choose your text alignment, background and step text colors, and button labels. You can also select whether you want to allow the user to go back a step by checking the Show "Previous" Button.
  - Click Save to confirm your settings.
8. Drag and drop widgets from the Components menu to each of the steps as required. Widgets can be dragged onto the currently active step; otherwise, you can drag a widget to the name of a step (which is then automatically activated).  
**Note:** You can drag a Progress Tracker, Vertical tabs, or an Accordion stack to the steps of a stack, sometimes referred to as a nested stack.

### Add vertical tabs

Adding vertical tabs to your web store enables shoppers to view a menu of associated categories as a vertical display. They can be used to vertically stack associated information in any layout and provide a means of avoiding too much screen content, and excessive scrolling.

**Note:** Account-based users can use vertical tab stacks as a dedicated section for the Shopper Profile, including, account details, address book, update password, and so on.

To add vertical tabs:

1. Click the **Design** icon and display the **Layout** tab.
2. Navigate to any layout by using the filter options.
3. Select your preferred layout and click the **Grid View** icon.
4. Locate the relevant section where you want to add vertical tabs and click to highlight an existing region.

5. Either:  
Click an existing region and ensure all widgets are removed so that only the region itself remains.  
  
Or  
  
Add a row (which contains regions) above or below using the arrows on the row menu bar.
6. See [Work with layout components](#) for details.
7. Open the **Components** menu, select **Vertical Tabs**, and drag to the empty region. You will see a default set of vertical tabs containing three steps. You can customize these steps as required, or you can configure the settings.  
  
To customize the tabs, click the following options:
  - Add Step '+' button on the far right of the vertical tabs to add up to 10 steps. Each step must follow concurrently.
  - Remove Step 'x' button to the right of each step name to remove a step. You must have at least one step.
  - Step name to open the Step Label box where you can rename each step as required.  
To configure the settings:
  - Click the **Settings** icon to display the configuration options.
  - Enter a name or notes, as required, and click **Save** to confirm your settings.
8. Drag and drop the required widgets from the **Components** menu to each of the steps.  
Widgets can be dragged on to the currently active step, otherwise, you can drag a widget to the name of a step (which is then automatically activated).  
  
**Note:** You can drag a Progress Tracker, Vertical tabs, or an Accordion stack to the steps of a stack, sometimes referred to as a nested stack.

### Add accordion stacks

Adding accordion stacks to your web store enables shoppers to view a menu of associated categories as a progression of steps. They can be used to stack associated information in any layout and provide a means of avoiding too much screen content, and excessive scrolling.

To add accordion stacks:

1. Click the **Design** icon and display the **Layout** tab.
2. Navigate to any layout by using the filter options.
3. Select your preferred layout and click the **Grid View** icon.
4. Locate the relevant section where you want to add accordion stacks and click to highlight an existing region.
5. Either:  
Click an existing region and ensure all widgets are removed so that only the region itself remains.  
  
Or  
  
Add a new row (which contains regions) above or below using the arrows on the row menu bar.

6. See [Work with layout components](#) for details.
7. Open the **Components** menu, select Accordion and drag to the empty region. You will see a default set of accordion stacks containing three steps. You can now customize the steps as required, or you can configure the settings.

To customize the accordion stacks, click the following options:

- Add Step '+' button on the far right of the vertical tabs to add up to 10 steps. Each step must follow concurrently.
- Remove Step 'x' button to the right of each step name to remove a step. You must have at least one step.

To configure the Accordion settings:

- Click the **Settings** icon to display the configuration options.
  - Enter a name or notes within the **About** tab.
  - Select the text alignment and colors for each of the steps within the **Settings** tab.
  - Click **Save** to confirm your settings, otherwise cancel.
8. Drag and drop the required widgets from the **Components** menu to each of the steps. Widgets can be dragged on to the currently active step, otherwise, you can drag a widget to the name of a step (which is then automatically activated).

**Note:** You can drag a Progress Tracker, Vertical tabs, or an Accordion stack to the steps of a stack, sometimes referred to as a nested stack.

### Add popup stacks

Adding popup stacks to your web store enables you to manage and configure content to be displayed as a screen that opens, or pops-up, in front of the one you are currently viewing.

Popup stacks contain a Main sub-region, and a Popup sub-region. These can be used by shoppers, for example, when they click a button and a log in/registration details page opens as a popup screen, or, when they are viewing a list of products and they click to open one in a summarized quick view popup screen.

To add popup stacks:

1. Click the **Design** icon and display the **Layout** tab.
2. Navigate to any layout by using the filter options.
3. Select your preferred layout and click the **Grid View** icon.
4. Locate the relevant section where you want to add a popup stack and click to highlight an existing region.
5. Either:  
Click an existing region and ensure all widgets are removed so that only the region itself remains.  
Or  
Add a new row (which contains regions) above or below using the arrows on the row menu bar.
6. See [Work with layout components](#) for details.
7. Open the **Components** menu, select **Popup Stack** and drag to the empty region. You will see two default sub-regions; Main, and Popup.

8. Open the Main sub-region. You can add a widget to the Main sub-region which triggers the display of the widget in the Popup sub-region. In order for this to happen, you must do the following:
  - Drag and drop the required widget from the Components menu to the Main sub-region.
  - Open the widget's Settings icon to display the configuration options, and open the About tab.
  - Click the **Go to Widget Code** button.

The Template window opens, displaying lines of HTML code.

From here, you can also edit the widget's style sheet, text snippets, or download the source file. See [Modify a component's code](#) for more details.

- Locate where in the template you wish to place the link that will launch the popup. An example of the link you may add to the code is shown below:

```
<a href="#" data-toggle="modal" data-bind="attr: {'data-target': $popupId}">Launch Popup</a>
```

9. Click Save to confirm your settings; otherwise click Cancel.
10. Open the Popup sub-region and complete the following steps:
  - Drag and drop the required widget from the Components menu to the Popup sub-region.
  - Open the widget's Settings icon to display the configuration options, and edit as required.

### Add a Quick View Popup Stack

An instance of the Popup Stack, known as the Quick View Popup Stack, is located within the Collection and Search Results layouts and enables shoppers to see a summarized view of a product. From there, they can then expand to view the full product details, if required.

You can create other instances of the Quick View Popup Stack. See [Understand widgets](#) for more details.

The Quick View Popup Stack is automatically provided with the following widget instances:

- Product Listing widget within the Main sub-region of the Collections layout.
- Search Results widget within the Main sub-region of the Search Results layout.
- Product Quick View widget within the Popup sub-region for both the Collection and Search Results layouts. This widget instance is an instance of the Product Details widget for the selected product.

## Modify your page layout settings

You can customize your store's page layouts by modifying the layout settings for each of them.



*This section applies to Storefront Classic only.*

Some common configuration settings across all layouts allow you to name the layout and add reminder notes. Many of the layouts also allow you to create a page title, add metadata to be used by search engines, and provide you with general information relating to default layouts.

In addition to those settings already mentioned, you can apply viewport(s) to newly created layouts. Refer to [Create a new layout instance \(cloning\)](#) for further information on new layouts. As default layouts apply to all viewports, if you check the Make Default Layout box in your new layout, then viewport options are no longer available.

To access the configuration settings for layouts:

1. Open the **Design** page and click the **Layout** tab.
2. Select your preferred layout and click either the **Layout Settings** icon, or the layout name. The settings window for the chosen layout opens.
3. Customize the layout settings, as required. You can refer to the settings table below for details.

You can also delete any of the layouts by clicking the **Delete** button located on the bottom left of any of the layout settings. However, given that default layouts cannot be deleted, you may notice that the delete button is not an option for default layouts.

The following table describes the layout settings and shows the layouts to which each setting belongs.

Setting	Layout	Description
Layout Name	All layouts	Enter a unique name for the layout.
Notes	All layouts	Record general notes for internal use.
Page Title	Home Checkout Order Confirmation All Article layouts Error Payer Authentication Wish List Order Details Order History Scheduled Order Assets Asset Details	Enter an alphanumeric page title, giving consideration to maximizing the best search engine results.

Setting	Layout	Description
Page Address	Checkout All Article layouts	The page address is appended to the URL for your store to create a link to the page. The page address: cannot contain spaces or special characters, can be used for multiple Article layout page types with various viewport assignments, must be unique for layouts other than the Article layout types, cannot be used simultaneously on a non-Article and an Article layout page type (applies across all Article Layout instances).
Add New Meta Tag	Home Collection Product Cart Checkout Order Confirmation All Article layouts Error Search Results No Search Results Payer Authentication Wish List	Add details of meta tag attributes, value and content.
Layout Preview – Product ID	Product	Add the relevant Product ID.
Layout Preview – Collection	Collection	Select a Collection from the available list, for example, Apparel/Women/Dresses.
Cart Preview	Cart Order Confirmation	Add up to 5 Product ID(s) along with their quantity.
Order Status	Checkout	Select from the list of order statuses.
Viewports	Cart Checkout All Article layouts	Select a viewport to suit the visible area of the display page.
Sites	Cart Checkout All Article layouts	Assign layout pages to one or more sites, when running multiple sites from your Oracle Commerce instance.
Make Default Layout	Cart Checkout	Check to make this the default layout.
Display layout to account shoppers only	Cart All Article layouts	Check to confirm this layout is for display to account shoppers only.
SEO Metadata – Meta Description	Home All Article layouts	Enter a description for SEO metadata that will be useful for search engine results.

Setting	Layout	Description
SEO Metadata – Meta Keywords	Home All Article layouts	Enter page content keywords for SEO metadata that will be useful for search engine results.

### Assign layouts to sites

When running multiple sites from your Oracle Commerce instance, you can assign layouts to one or more sites. Each site corresponds to an individual store and can have its own catalog. See [Run Multiple Stores from One Commerce Instance](#) for more details.

To assign a layout to a site:

1. Click the **Design** icon and display the **Layout** tab.
2. Select the page layout for which you wish to assign sites, and click the **Layout Settings** icon. (The preceding table highlights which page layouts can be assigned to sites.)  
**Note:** When you have multiple instances of layouts, using the search box to filter for your preferred layout may avoid excessive scrolling.
3. Scroll to the Sites option and begin typing the name of your preferred site. A filtered list of matching sites is displayed.
4. Select the site(s) you wish to assign.
5. Click **Save** to confirm your selections.

## Upgrade deployed widgets

Widget instances that have been deployed are not automatically upgraded when new versions of the widgets are released. This protects deployed widgets that have been customized from failing if the customizations are not compatible with the upgrades.



*This section applies to Storefront Classic only.*

In order to use a new version of a widget, you must remove any existing instances of the widget from your page layouts and replace them with the upgraded version. You also need to re-create any template or style sheet customizations for the upgraded widget.

To upgrade a deployed widget:

1. Make a copy of the template and style sheet code before the existing widget instances are deleted, and save the copy to an external file.  
**Note:** This code can be used as a reference for editing the new widgets once they are placed in the page layouts.
2. Log in to the Oracle Commerce administration interface.
3. Click the **Design** icon.
4. From the **Layout** tab, select the page layout that contains the widget you want to upgrade.  
**Note:** When you have multiple instances of layouts, using the search box to filter for your preferred layout may avoid excessive scrolling.
5. Click the **Grid View** icon.
6. Locate the widget on the page. Click the **X** icon to delete the instance.

7. At the bottom of the page, click **Components**.
8. Drag the upgraded widget and drop it in the same location as the widget you deleted.
9. Repeat these steps for all instances of the widget.
10. Edit the widget to include any modifications made to the previous instance. From the **Component** tab on the Design page, double click and open the instance in Grid View, click the **About** tab and click the **Go To Widget Code** button. Base these changes on the copy you made before deleting the widgets.

## Work with role-based layouts

When reviewing your storefront in Preview, you can use role-based layouts that render exclusively for selected roles.



*This section applies to Storefront Classic only.*

The layout only renders in Preview if the user is authenticated and matches one of the designated roles.

Layouts of this type can be used in conjunction with any Commerce roles. For example, you can use this feature to preview a page exclusively for developers with the Design role, allowing them to test changes before they are made on the production storefront application.

Role-based layouts provide access differently than other roles. Roles are generally only containers and do not provide access by themselves. Roles contain privileges that provide access. However, role-based layouts do provide access. Ensure that you are providing the correct level of access for your users by setting up the layouts correctly.

The following example shows how role-based layouts work:

- You define a role-based layout to be viewed in Preview by developers with the Design role. The Design role is a container for the Design privilege.
- You then create a custom role, Special Designer, that contains the Design, Marketing and Preview privileges.
- Then you remove the Design role from a specific user and give that user the Special Designer role instead.
- The user no longer sees the layout in Preview, even though they have the Design privilege. Because of the differences with role-based layouts, you must ensure that you add Special Designer to the layout.

To create a role-based layout:

1. Access the role-based layout from the **Design** page, **Layout** tab.
2. Navigate to the **Role** layout by using the filter options.
3. On the **Layout Settings, Role Layout** dialog, create a layout name, set the layout as the default layout (optional), and, if you are working with a cloned layout, select the applicable viewport(s).
4. Click the **Role** field to use the role picker functionality. You can select one or more roles for this layout.

**Note:** If a role is not selected in the **Role** field, or if the selected role is deleted, the layout is not rendered in Preview, even if accessed by an administrator, agent, or agent supervisor role.

5. Name the role display name.
6. For a cloned layout, include the page address and display name if applicable.
7. Click **Save**.

Once you have completed configuring the settings, create the page for Preview as you would with any other layout, using grid view, components, and elements.

## Preview your store

You can preview your web store as you make changes to it, without the need to publish live.



*This section applies to Storefront Classic only.*

To preview, open your chosen layout via the **Grid View** icon. Click the **Layout Preview** option from the layout configuration menu and you are automatically shown the relevant layout in the preview pane.

Additionally, you can click **Preview** from the layout configuration menu to display the full screen web store preview. **Note:** In environments running multiple sites from one Oracle Commerce instance, the particular layout associated with the site is displayed, and you can choose which site to view.

See [Preview your changes](#) for information about customizing a preview session.

Changes made to your storefront do not appear on your live store until you publish them. See [Publish Changes](#) for more details.

# 5

## Customize Your Store's Design Theme

A theme is a set of styling configurations, including colors, fonts, and other design elements, that defines the overall look and feel of your online store.

Commerce provides a default theme that you can copy and customize as required.

To access themes, click the **Design** page and open the **Theme** tab.

### Understand the default theme

Opening the **Theme** tab displays the sample theme. This is automatically activated as the default theme, highlighted by the **Active** icon.



*This section applies to Storefront Classic only.*

The default theme contains pre-configured settings that can help you start creating your own web store. You can make adjustments to the settings, as required, once you have cloned the theme. You will be able to see those configuration changes in your store/preview after you have activated the newly customized theme.

Details on cloning and configuring your style settings are described in the following sections.

### Create a new theme (cloning)

Creating a new version, or cloning a copy of an existing theme, is possible for any theme including the one that is currently active.



*This section applies to Storefront Classic only.*

To create a new theme:

1. Open the **Design page** and click **Theme**.

**Note:** When you are designing your web store for the first time, the currently active theme is displayed with the Active icon highlighted and a message instructing you to clone the theme before customizing settings.

2. Click the **Clone Theme** button.
3. Enter a unique name for the cloned theme.
4. Click **Save** to confirm.

Alternatively, you can also choose to make another copy of your newly cloned theme by clicking **Clone Theme**. All configurations related to the activated theme are now available to view or customize.

# Customize your theme

You can customize your theme's background, buttons and navigation tools. You can also customize the typography settings.



*This section applies to Storefront Classic only.*

This section includes the following information:

- [Access basic theme information](#)
- [Style your theme's background](#)
- [Style your theme's buttons and navigation tools](#)
- [Customize your theme's typography setting](#)
- [Compile your customized theme](#)

## Access basic theme information

The **About** menu tab displays basic information related to any given theme. Such information includes Theme Name, Sites, Theme Notes, and details about the theme from which the current theme has been cloned.

You can edit the Theme Name and Theme Notes as required. You can also make a clone of your theme by clicking the **Clone Theme** button, regardless of whether or not the theme you are cloning is active.

Clicking the **Go to Theme Code** button opens that theme's code for editing.

## Style your theme's background

The **Backgrounds** menu tab displays details on style, header, footer and navigation settings relevant to any given theme.

### Background style settings

These settings allow you to choose an image or background color to be used as the backdrop for your web store.

Use these style settings to adjust the positioning, color settings, and repeat patterns for your web store's background.

### Header row

These settings allow you to choose an image or background color to be used as the backdrop for your web store's top row header. This refers to the upper part of the header bar running across the top of your web pages. This section contains site links and customer login links.

Use these style settings to adjust the positioning, color settings, and repeat patterns for your Header Top Row.

### Footer row

These settings allow you to choose an image or background colors to be used as the backdrop for your web store's footer. This refers to the bottom section of your web pages.

Use these style settings to adjust the positioning, color settings, and repeat patterns for your Footer.

### Style your theme's buttons and navigation tools

Your theme's **Buttons & Nav Menu** tab displays details on style settings, colors, fonts, and sizes when using buttons and navigation colors within your web store.

#### Buttons

Choose your theme's button style settings for use throughout your web store. Button style settings include sizes, styles, colors, and fonts for both primary and secondary button types.

#### Navigation color settings

Choose your theme's color settings for use throughout your web store's navigation. Navigation color settings include top level, drop-down, and mobile navigation color settings.

### Customize your theme's typography setting

Choose your theme's typography settings for use throughout your web store. Typography settings enable you to set up various link colors as well as your default base font settings, and you can add new fonts via an external URL. The **Link Color** and **Base Font Settings** can be inherited throughout all heading styles, or you can edit the heading styles and make any changes you require to each one individually.

### Compile your customized theme

Themes are compiled automatically. However, you can also compile a theme manually after customization changes have been made, for example when you have added a new widget to a layout, or you have changed a theme's code by updating a widget/stack Less file. You can also compile a theme manually if a compile build has failed.

To do so:

1. On the **Design** page, click the **Theme** tab.
2. Click the **Theme Compilation** tab.
3. Click **Build Theme**.
4. Click **Save** to save the compiled changes.

If you have a significant number of sites, you may find that you must wait a considerable amount of time for all pending automatic theme compilations that occur when you publish your changes. You can use the following endpoints to disable automatic theme compilation, where themes are compiled automatically when changes occur. For example when updates to stacks, slots, or page layouts are updated.

You can use the Admin API to review and set automatic compilation of themes.

To obtain the compilation settings for themes, issue a **GET** command to `/ccadmin/v1/themes/compilationSettings/getThemeCompilationSettings`. A successful response body will contain the `compileThemesAutomatically` boolean property that indicates if themes will be compiled automatically.

To configure compilation settings for themes, issue a **PUT** command to `/ccadmin/v1/themes/compilationSettings/setThemeCompilationSettings` with the `compileThemesAutomatically` property set to `true` or `false`. Setting the property to `true` indicates that the theme should be automatically compiled. If automatic theme compilation is

disabled, you will need to manually compile your themes using the **Themes** tab of the administration interface before publishing any assets that contain style updates.

Once you have issued a `PUT` command, a successful response body contains the `compileThemesAutomatically` property that indicates whether or not the theme will be compiled automatically. Note that if compilation settings are invalid or cannot be saved, the 70030 error, which indicates that one or more of the given compilation settings is invalid, or the 70031 error, which indicates that an error occurred when trying to save the compilation settings, will display.

## Modify theme code

You use the code editing options available within the **Theme** tab to modify the theme's CSS.



*This section applies to Storefront Classic only.*

To modify theme code:

1. Open the **Theme** option on the **Design** page.
2. Scroll to the **Theme CSS** section, where all your web store's themes reside.
3. Select the theme you want to edit.

The design code window for that **Theme CSS** opens.

4. Choose to make your edits using any of the following options:
  - The **Style Variables** option accesses the variables file.
  - The **Style Sheet** option accesses the full theme Less/CSS.  
**Note:** Editing the theme code locks the theme UI editor. You can unlock the UI editor by clicking the Restore button to revert to the last version of the theme saved via the theme UI editor, however, you will lose any changes made to the design code.
  - The **Additional CSS** option appends to the end of the style sheet. You can append additional CSS for each individual Theme CSS. The additional code entered is appended to the end of the global style sheet. If you add CSS to this tab and do not modify the code on the **Style Variables** or **Style Sheet** tabs, then you are not locked from editing that theme in the theme UI editor.

A separate custom CSS file exists for each theme.

5. Modify the code as required.
6. Save your changes.

### Customize theme bootstrap variables

Your storefront Theme CSS is made up of Bootstrap Less files and widget-specific Less files. You can use the Style Variables option within the Theme CSS to customize, and add to, a theme's bootstrap style variables. For example, if you would like to change your theme's viewport sizes, you can copy the Bootstrap variable from your Bootstrap documentation and paste it to the end of the Style Variables file, for instance:

```
@screen-sm-min: 720px.
```

See [Configure a widget's style](#) for more information.

## Apply a theme to a site

When your Oracle Commerce instance runs multiple sites, you can apply a theme to any given site.



*This section applies to Storefront Classic only.*

To apply a theme to a site:

1. Open the **Settings** page, which automatically lands on the **Setup** settings.
2. Click the **General** tab.
3. Either:
  - Enter settings details to create a new site. See [Enter basic store information](#) for further information.
  - Choose your site from the site picker search box above the **Settings** menu options to open a site already created.
4. Scroll to the **Theme** drop down list and choose the theme you wish to activate for the site.
5. Save your changes to confirm.

Upon opening the **Theme** tab on the **Design** page, you will see the **Active** icon next to the theme that has been activated for that particular site within the **Custom Themes** section.

## Delete a theme

To delete a theme, click **Theme** on the **Design** page, and then open the theme you wish to delete.



*This section applies to Storefront Classic only.*

You can delete any opened theme by clicking the **Delete** button at the bottom of any of the configuration settings tabs. A message displays confirming the successful deletion of the theme.

**Note:** You cannot delete the currently active theme or any purchased themes.

# 6

## Modify Your Storefront Using Code Editing Tools

Several code editing options, primarily aimed at developers, are available within the Design page. They enable you to work with widget code, theme variables, CSS style sheets, style variables, text snippets, and component libraries.

**Important:** Caution should be taken at all times when editing and publishing code as any changes can have an adverse effect on your site's functionality. See [Publish Changes](#) for more details.

### Modify a component's code

You can modify a component's code via the HTML template, style sheets, or text snippets.




*This section applies to Storefront Classic only.*

To modify a component's code:

1. Open the **Design** page and click **Components**.
2. Filter the components that are displayed by choosing from the Type or Source filters. You can also search for a specific component by entering details in to a Filter box.
3. A list of components displays which includes overview information on the component type, the number of associated instances, and the latest version number. There are also several customization options available.
4. Select the component you wish to edit and click either its name or the **Details** icon. The component details open to display overview information on the list of instances, the component type, the number of associated instances, the latest version number, and the layout(s) associated with the component.
5. (Optional) The **Extend JavaScript** button is visible for non-extension widgets. Click the button to open the JavaScript file and modify the code. For more information on this feature, see Use the JavaScript Code Layering User Interface feature.

**Note:** The widget JavaScript is only editable for custom widgets that have had their editable JavaScript property activated.

6. Click the  icon to go to the coding options page. The HTML Template window automatically opens, displaying lines of HTML code. Immediately above the menu tabs is the Settings icon, which you can select if you wish to make changes to the component settings.
7. Depending on the task you wish to perform, you can now either:
  - Modify the code within the HTML Template option.
  - Modify the Less/CSS by selecting the Style Sheet option. Oracle Commerce makes use of Less in the style sheets. Less is a CSS pre-processor which requires the style sheet files to be compiled to produce CSS and provides additional features such as variables and functions. For further details on Less, refer to <http://lesscss.org>.

- Modify the component's text by selecting the Text Snippets option. See [Customize your web store's text](#) for more information on modifying your store's global text.  
All available values for your chosen component are displayed as editable links.
  - Click to open the value you wish to edit.
  - Enter the new value and confirm or reject the edits using either the **Save** or **Close** icons.
- 8. (Optional) Click the **Download Source** button to download the widget file for each widget instance.
- 9. Click **Save**.

## Modify the theme CSS style sheet

You can manipulate the CSS for each individual theme CSS.



*This section applies to Storefront Classic only.*

The code is available for editing from within the Theme option. See [Modify theme code](#) for more information.

## Use developer tools to customize your store

The Developer option in the Design page gives you access to extended coding features that allow you to change the text displayed to customers on your store and export and import design elements from one Oracle Commerce instance to another.



*This section applies to Storefront Classic only.*

### Customize your web store's text

Text snippets enable you to directly access your web store's customizable global text, which can include messages, labels and help tips. You can also customize the text contained within individual components. See [Modify a component's code](#) for more details.

To customize your web store's text:

1. Open the **Design** page and click **Developer**.
2. Select **Text Snippet**.
3. Choose the **Text Snippet Type** from the drop down list, or begin typing the name in the filter box. All available values for your chosen type are displayed as editable links.
4. Click the value you wish to edit.
5. Enter the new value and confirm or reject the edits using either the **Save** or **Close** icons.  
**Note:** Text set between double underscore characters, such as `__totalPrice__`, represents a parameter that will be replaced with the appropriate value when the resource is displayed in your web store. Such parameters can be moved within a resource value or deleted from it. However, you should avoid changing the name of the parameter, or the replacement will not work.

Text in brackets preceded by `$t` indicates an additional resource look-up is occurring. For example, `$t(ns.common:resources.option)` indicates that the value for the 'option' resource will be inserted at this position in the current resource value.

### Customize your store's code using the Design Code Utility tool

The Design Code Utility is a command-line tool that integrates Oracle Commerce with your IDE or code editor. It allows you to customize user-modifiable source code from a Commerce server and then upload it again.

To access the Design Code Utility:

1. Open the **Design** page and click **Developer**.
2. Select **Developer Tools**.
3. Under **Design Code Utility**, click **Download**.
4. Save the ZIP file to a location on your local machine and extract its contents. See *Use the Design Code Utility* for more details.

### Use server-side extensions

Some Oracle Commerce features are implemented as server-side extensions that can run on the `Node.js` server associated with your Commerce environment. To use one of these features, you must download the extension from the Commerce administration server. You can then optionally customize the extension and upload it to your `Node.js` server.

To download a server-side extension:

1. Open the **Design** page and click **Developer**.
2. Select **Server-Side Extensions**. A list of files available for download is displayed.
3. Find the ZIP file for the server-side extension you want to download.
4. Click the associated **Download Extension** icon and save the file to a location on your local machine.

The list of files available for download includes application files and library files. For example, for the punchout feature, there is an application file named `punchout-app.zip` and a library file named `punchout-lib.zip`. The application file contains the complete extension (including the library module), so you typically need to download only it and not the library file. The library file contains the business logic for the extension, and it is provided as a separate download so you can obtain updates when they are supplied.

To customize a server-side extension you have downloaded, you must first extract the contents of the ZIP file. Note that when you customize the extension, you should not make any changes to the library module, which is found in the following directory in the extension:

```
node_modules/@oracle-commerce-cloud/<SSE_name>-lib
```

For example, the punchout library module is found here:

```
node_modules/@oracle-commerce-cloud/punchout-lib
```

When you have finished your modifications, reassemble the application ZIP file and use the `POST /ccadmin/v1/serverExtensions` endpoint to upload it to your `Node.js` server.

### Update the library in a server-side extension

After you have downloaded the application file for a server-side extension and extracted the contents to a directory, you can replace the library module with an updated version (if one is available).

To update the library in a server-side extension:

1. Download the library file for the extension. For example, for the punchout extension, download `punchout-lib.zip`.
2. Extract the contents of the library file.
3. Use the extracted contents of the library file to replace the library module in the extension application.
4. Reassemble the application ZIP file and use the `POST /ccadmin/v1/serverExtensions` endpoint to upload it to your `Node.js` server.

For more information about developing server-side extensions, see the following post on the Oracle Partner Network:

<https://community.oracle.com/groups/oracle-commerce-cloud-group/blog/2017/07/21/working-with-commerce-cloud-server-side-extensions>

### Change the storefront framework version

The storefront framework comprises the JavaScript and CSS files used to manage many of the widget and theme elements that can appear in your storefront, including code that has been customized by your developers. You can choose to restore the previous version of the storefront framework or upgrade to the latest version. See [Restore or upgrade the storefront framework version](#) for more details.

# 7

## Manage Your Catalog

A catalog organizes your products, SKUs, and collections in a hierarchy that reflects the way users will navigate to them on your store. Your store contains only one catalog, but that catalog can contain any number of collections, which can contain any number of products and associated SKUs.

**Note:** Your store may be configured to allow the assignment of catalogs to business accounts. See [Configure Business Accounts](#) for information about accounts and contacts.

If a user does not have the correct access to a catalog the following conditions apply:

- The editors for the catalog and its collections, products and SKUs will be read-only. If a collection of product also belongs to other catalogs to which the user does have access, the item will be editable.
- UI controls for actions that the user cannot perform may be hidden or disabled.
- Some icons and menu options will change from Edit to View.
- In some catalog pickers, some items will be unavailable.

The topics in this section describe how to set up and manage your catalog.

### Understand catalogs

A catalog organizes your products, SKUs, and collections in a hierarchy that reflects the way users will navigate to them on your store.

A catalog contains collections, which in turn, contain products.

By default, Commerce includes a single catalog called Product Catalog, where you can create all the collections, products, and SKUs available to your store. There are times, though, when you might want to provide shoppers with a more customized shopping experience by creating additional catalogs. You can create and assign additional catalogs in the following instances:

- **Multiple stores:** You can run multiple stores (called sites) from a single instance of Commerce. Each site has a unique domain and you can assign each site its own catalog. For example, suppose you sell soccer jerseys. You could create a separate store for each team whose jerseys you sell. You would assign each store a catalog that contains only products for that team. Fans could easily find and purchase their team's gear without having to sift through merchandise for other teams. For details about running multiple sites, see [Run Multiple Stores from One Commerce Instance](#).
- **Account-based stores:** Commerce lets you create accounts for companies that do business with you, such as manufacturers, distributors, and wholesalers. You can provide each account with a catalog that meets its specific business requirements. It is unlikely that all account-based shoppers will need to purchase all products your store sells, so providing an account with its own focused catalog makes it easier for those shoppers to find and purchase the right products. Logged-in contacts who shop on your store can see and purchase only the products in the catalog associated with their account. For details about creating and managing accounts, see [Configure Business Accounts](#).

- Rules set by an external system. By default, Commerce assigns catalogs and price groups to sites or, for account-based commerce, to accounts. However, you might want to override these default assignments with different catalogs and price groups for each registered shopper. For example, you can personalize the catalog and prices a shopper sees based on geographic location or level in a loyalty program. For more information, see [Assign Catalogs and Price Groups to Shoppers](#).

Commerce lets you create the following types of catalogs:

- Independent catalogs are catalogs that are not dependent on any other catalog in your environment. Collections you add to an independent catalog can be exclusive to that catalog, or can be linked to a number of different catalogs. The Product Catalog that Commerce includes by default is structured as an independent catalog. See [Work with independent catalogs](#) for more information.
- Filtered catalogs provide custom views into the Product Catalog. Filtered catalogs let you add products to a catalog without defining collections in that catalog hierarchy. See [Work with filtered catalogs](#) for more information.
- Legacy catalogs are an older type of secondary catalogs that provide custom views into the Product Catalog. See [Work with legacy catalogs](#) for more information.

## Work with independent catalogs

Independent catalogs are catalogs that are not dependent on any other catalog, including the Product Catalog that is included with Commerce.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

An independent catalog can contain links to collections and products that are already in other catalogs, or it can contain collections and products that are not associated with any other catalogs.

All catalogs you create in the Commerce user interface are independent catalogs. (You must use the Admin API to create legacy catalogs and filtered catalogs. See [Work with filtered catalogs](#) and [Work with legacy catalogs](#) for more information.)

### Understand independent catalog structure

You can perform all catalog-related tasks on any independent catalog:

- View details for a product or a collection.
- Create a new product or collection.
- Link an existing product or collection.
- Edit or delete an existing product or collection.
- Rearrange products in a collection or rearrange collection hierarchy.
- Access the following options from the Manage Catalogs menu: Product Types, Price Groups, Inventory, and Upload Media.

Any changes you make to linked collections and products are automatically applied to all independent catalogs that are linked to the items that were changed. See [Link and unlink collections and products](#) for more information. Remember that you must publish any changes you make to catalogs before they will appear on your stores.

## Create independent catalogs

This section describes the steps you must complete to create a new independent catalog and add or link collections to it.

To create a new independent catalog:

1. On the **Catalog** page, click **Manage Catalogs** and select **New Catalog**.
2. Enter values for the Catalog Name and Catalog ID.  
You cannot change the Catalog ID once you create the catalog.
3. Click **Create**.

To add or link collections to a catalog:

1. Click the **Collections** link on the left-hand side of the catalog's details page.
2. Click **Edit**.
3. Select a collection from the list. You can filter the list by typing or pasting some text in the **Collections** box.  
The filter control matches letters or numbers that you type, wherever they appear in the name or ID, not just at the beginning. Usually, as you type more characters, there are fewer matches. When you see the item you want, select it.  
**Note:** Selecting a child collection does not add its parent collections to the catalog.
4. Click **Add Selected**.
5. Click **Done** when you finish adding collections.
6. (Optional) You can specify a default collection where Commerce creates products that have no parents, for example, products that come in on a feed. Click the **Select Collection** button and select a collection from this catalog.  
If you do not select a default collection, Commerce creates products with no parents in Unassigned Collections.
7. Click **Save** when you finish making changes.
8. Publish your changes. See [Publish Changes](#) for more information.

## Edit and delete independent catalogs

You can change a catalog's name and associated collections; you cannot change its ID. You can delete a catalog that is not associated with any sites or accounts. You can delete any additional catalogs that you created, but you cannot delete the Product Catalog that is included with Commerce.

**Important:** Deleting assets, such as products, catalogs, shipping methods, etc., can result in discrepancies in your system, which may produce errors. It is recommended that you disable assets instead of delete them.

To edit or delete a catalog:

1. Select the catalog to edit or delete in one of the following ways:
  - On the **Catalog** page, select a catalog from the drop-down list at the top of the catalog page to display the catalog.
  - On the **Catalog** page, click the **Manage Catalogs** button and select **All Catalogs**. Click the name of the catalog you want to edit.

2. To edit the catalog, click **Edit Catalog**, then change the catalog name or its collections. Click **Save** when you finish making changes.
3. To delete the catalog, click **Edit Catalog**, then click the **Delete** button. If the catalog is already associated with accounts or sites, you must first remove it from all accounts or sites before you can delete it. See [Work with account contracts](#) for information about removing a catalog from an account. See [Configure Sites](#) for information about associating catalogs with sites.

You cannot delete a catalog that is the base catalog for a filtered catalog.

## Work with filtered catalogs

A filtered catalog provides a filtered view of an existing independent catalog.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Filtered catalogs let merchants scale to a larger number of catalogs with less work and provide flexibility for merchants who sell to a number of accounts or in a number of countries. Filtered catalogs provide central management of collections and taxonomies and give merchants fine-grained control of account-level availability of products.

While independent catalogs can contain different collections and products, a filtered catalog references only products and collections that are already in its base independent catalog; you can, however, show or hide selected products from within the filtered view.

You must create the first new filtered catalog in your Commerce instance with the Admin API or via import. Once you have created the initial catalog, you can work with filtered catalogs on the Catalog page in the administration interface.

You can assign filtered catalogs to sites or, if your store supports account-based commerce, to business accounts. You assign filtered catalogs in the same way you assign independent catalogs. See [Associate catalogs with sites or accounts](#) for details.

### Understand the benefits of filtered catalogs

Because filtered catalogs let merchants scale to a larger number of catalogs and reduce manual duplication of effort, they are useful for merchants who share catalog taxonomies (collection hierarchies) across catalogs but want to have unique product membership per account or site.

This section describes two cases where a merchant would benefit from using filtered catalogs.

- An account-based merchant has one large main catalog that contains all the products the merchant sells. The merchant sells to a large number of accounts and assigns the full main catalog to about two-thirds of them. Each of the remaining accounts requires a catalog that contains a subset of the products from the main catalog. The merchant can set up a filtered view of the main catalog for each remaining account. Each filtered view has the same taxonomy as the main catalog, but contains only the products that are appropriate for the account to which it is assigned. For example, 70% of the products from the main catalog can be marked as core products that are available in all the filtered views. The remaining products can be tagged as needed on a per-view basis.

- A merchant has two main catalogs, one for sales in Europe and one for sales in North America. They have country store sites for Spain, Germany, UK, France, Italy, the US, Canada, and Mexico.

To avoid the need to recreate the hierarchy for each country catalog, the merchant creates a filter view catalog based on the European catalog for each of the following country stores: Spain, Germany, UK, France, and Italy.

Similarly, the merchant creates filtered catalogs based on the North American catalog for Canada and Mexico. (The US store uses the full North American catalog.)

The entire Wellness collection is not available in Spain, so a business user can hide all products from this collection in the filtered view for the Spanish site. After she publishes her changes, the Wellness collection no longer appears in the menu for the Spanish site. Three products in the Nail Polish collection are not available for sale in Germany due to ingredients restrictions. The business user can navigate to the Nail Polish Collection in the German filtered view and hide the three products that are not available in Germany. Once she publishes her changes she will see that three nail polishes are no longer showing up in the Nail Polish Collection on the German site.

Similarly, the entire Footspa collection is not available in Canada, so a business user can hide all products from this collection in the Canadian filtered view of the North American catalog.

Keep in mind that performance can be impacted if each filtered view contains a large number of non-core products. The best approach to filtered views is to have a set of core products and filter out by exception.

### Understand the structure of filtered catalogs

There are a number of tasks that you cannot perform in filtered catalogs. You can perform the following tasks only in the independent catalog that the filtered view is based on:

- Create a new product or collection.
- Edit or delete an existing product or collection.
- Rearrange products in a collection or rearrange collection hierarchy.
- Work with product types, price groups, inventory, and media.

Any changes you make in a base independent catalog are automatically applied to the filtered views that include the items that were changed. Remember that you must publish your changes before they will appear on your stores.

### Create a filtered catalog

The administration interface supports creating independent catalogs only. To create filtered catalogs, you must use the Admin API.

**Note:** You can also create new filtered catalogs by using the CSV import feature. See [Import catalog items and inventory](#) to learn how to create filtered catalogs by importing.

To create a catalog, you can use the `createCatalog` endpoint in the Admin API. The `catalogVersion` and `baseCatalog` properties specify that you are creating a filtered catalog:

- Set the value of `catalogVersion` to 3 to specify that the `createCatalog` endpoint should create a filtered catalog.
- The value of `baseCatalog` must be the catalog ID of an existing independent (version 2) catalog. Otherwise, the request returns an error.

The `createCatalog` request cannot associate collections with the new filtered catalog. If the request includes `categoryIds`, an error is returned.

The following example uses the `createCatalog` endpoint to create a filtered catalog:

```
POST /ccadmin/v1/catalogs HTTP/1.1
Content-Type: application/json
x-ccasset-language: en
```

```
{
  "catalogVersion": 3,
  "catalogId": "catSpain",
  "displayName": "Spain",
  "baseCatalog": "catEuro"
}
```

The response returns the properties of the catalog:

```
{
  "catalogVersion": 3,
  "defaultCategoryForProducts": null,
  "baseCatalog": {
    "catalogVersion": 2,
    "defaultCategoryForProducts": {
      "repositoryId": "cat40013"
    },
    "rootNavigationCategory": {
      "repositoryId": "rootCategory"
    },
    "displayName": "European Main Catalog",
    "repositoryId": "catEuro",
    "rootCategories": [
      {
        "repositoryId": "nonNavigableCategory"
      },
      {
        "repositoryId": "rootCategory"
      }
    ],
    "id": "catEuro"
  },
  "displayName": "Spain",
  "repositoryId": "catSpain",
  "rootCategories": [],
  "links": [
    {
      "rel": "self",
      "href": "http://myserver.example.com:9080/ccadmin/v1/catalogs"
    }
  ],
  "id": "catSpain"
}
```

After creating a catalog, you must publish your changes to make it available to use on your sites. See [Publish Changes](#) for more information.

### Understand product membership in filtered catalogs

The `updateProductMembership` endpoint enables and disables membership of products to linked filtered catalogs. Use this endpoint to perform the following tasks:

- Specify products as core products, which will automatically become members of all linked filtered catalogs unless explicitly excluded. Whenever a new filtered catalog is created, it will automatically contain all its base catalog's core products.
- Exclude core products from specific filtered catalogs.
- Include products that are not core products in specific filtered catalogs.

The `updateProductMembership` endpoint's properties specify how products are assigned to filtered catalogs.

- `catalogId` is an optional property that specifies a catalog context for the request. Only filtered catalogs that are linked to the specified can be updated by the request.
- `coreProduct` is a Boolean that specifies whether products are core products. If the value of this property is null, the existing core-product status of the products will not change.
- `filteredCatalogs` is a list of filtered catalog IDs that will include or exclude the products, depending on the products' `coreProduct` values.
- `enableMembership` is a Boolean that adds or removes products to the catalogs specified by `filteredCatalogs`. If the request does not include the `catalogId` property, then the catalogs specified by this property will explicitly replace existing values and will be treated as inclusive or exclusive depending on whether a product is a core product. If the request does include the `catalogId` property, then only the filtered catalogs linked to that catalog are replaced. Other filtered catalogs that contain the product remain unchanged.

The following sample adds `camera_1` and `camcorder_1` to the filtered catalogs `myFilteredView1` and `myFilteredView3`. These products are not core products.

```
POST /ccadmin/v1/products/membership HTTP/1.1
Authorization: Bearer <access_token>
Content-Type: application/json
```

```
{
  "filteredCatalogs":[
    "myFilteredView1",
    "myFilteredView3"
  ],
  "enableMembership":true,
  "products":[
    "camera_1",
    "camcorder_1"
  ],
  "coreProduct":false
}
```

## Work with legacy catalogs

Legacy catalogs are a type of secondary catalogs that provide custom views into the Product Catalog.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

As the name implies, legacy catalogs are an older style of Commerce catalog. Release 21A of Commerce includes a new type of secondary catalog called a filtered catalog. To learn how and why to use filtered catalogs to provide views into your Product Catalog, see [Work with filtered catalogs](#).

By default, Commerce includes a single catalog called Product Catalog. Legacy catalogs are secondary catalogs that provide custom views into the Product Catalog. Unlike independent catalogs, which can contain different collections and products, legacy catalogs reference only products and collections that are already in the Product Catalog.

You must use the Admin API (see [Create legacy catalogs](#)) to create new legacy catalogs, but you can edit and delete them in the administration interface (see [Edit and delete legacy catalogs](#)). You cannot convert a legacy catalog to an independent catalog.

You can assign legacy catalogs to sites or, if your store supports account-based commerce, to business accounts. You assign legacy catalogs in the same way you assign independent catalogs. See [Create or update an account contract](#) to learn how to assign a catalog to a business account. See [Enter basic store information](#) to learn how to assign a catalog to a site.

This section includes the following topics:

- [Understand legacy catalog structure](#)
- [Edit and delete legacy catalogs](#)

### Understand legacy catalog structure

In a Commerce instance that supports legacy catalogs, there are a number of tasks that you can perform only in the Product Catalog:

- View details for a product or a collection.
- Create a new product or collection.
- Edit or delete an existing product or collection.
- Rearrange products in a collection or rearrange collection hierarchy.
- Access the following options from the **Manage Catalogs** menu: **Product Types**, **Price Groups**, **Inventory**, and **Upload Media**.

Any changes you make in the Product Catalog are automatically applied to all legacy catalogs that include the items that were changed. For example, if you update the Product Catalog by adding a new product to a collection that is part of a catalog associated with one of your country stores, the new product automatically appears in that legacy catalog. Remember that you must publish any changes you make to catalogs before they will appear on your stores.

Commerce does not index legacy catalogs for storefront search.

## Edit and delete legacy catalogs

Although you must use the Admin API to create new legacy catalogs, you can edit and delete them on the **Catalog** page in the administration interface. See [Create legacy catalogs](#) for more information about creating these catalogs.

You can change a legacy catalog's name and associated collections, but you cannot change its ID. You can delete a catalog that is not associated with any sites or accounts. You cannot delete the Product Catalog.

To edit or delete a legacy catalog:

1. Select the catalog to edit or delete in one of the following ways:
  - On the **Catalog** page, select a catalog from the drop-down list at the top of the catalog page to display the catalog.
  - On the **Catalog** page, click the **Manage Catalogs** button and select **All Catalogs**. Click the name of the catalog you want to edit.
2. To edit the catalog, click **Edit Catalog**, then change the catalog name or its collections. Click **Save** when you finish making changes.
3. To delete the catalog, click **Edit Catalog**, then click the **Delete** button. If the catalog is already associated with accounts or sites, you must first remove it from all accounts or sites before you can delete it. See [Work with account contracts](#) for information about removing a catalog from an account. See [Configure Sites](#) for information about associating catalogs with sites.

## Create legacy catalogs

The administration interface supports creating independent catalogs only.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

If you want to create legacy catalogs, you must use the Admin API. You can then edit these catalogs using either the Admin API or the administration interface.

This section explains how to create legacy catalogs using the Admin API. For information about editing legacy catalogs in the administration interface, see [Work with legacy catalogs](#). For additional information about creating and editing legacy catalogs using the Admin API, see the REST API documentation in the Oracle Help Center.

**Note:** You can also create new legacy catalogs by using the CSV import feature. However, you must first use the API to enable support for them. See [Enable support for legacy catalogs](#) for more information. See [Import catalog items and inventory](#) to learn how to create legacy catalogs by importing.

### Enable support for legacy catalogs

Before you can create legacy catalogs, you must enable support for creating them. To do this, you use the `saveAdminConfiguration` endpoint in the Admin API to set the value of the `supportVersion1Catalogs` property. If your Commerce environment has any legacy catalogs, the value of this property defaults to true, and an error is returned if you attempt to set it to false. If your Commerce environment does not have any legacy catalogs, the value of this

property defaults to false, but you are free to change the value to true. The following example enables support for legacy catalogs:

```
PUT /ccadmin/v1/merchant/adminConfiguration HTTP/1.1
Authorization: Bearer <access_token>
Content-Type: application/json

{
  "supportVersion1Catalogs": true
}
```

### Create a legacy catalog

To create a catalog, you can use the `createCatalog` endpoint in the Admin API. The value of the `supportVersion1Catalogs` property determines whether an independent catalog or a legacy catalog is created:

- If `supportVersion1Catalogs` is true, the `createCatalog` endpoint creates a legacy catalog by default. You can override the default behavior and create an independent catalog by setting the value of the `catalogVersion` property to 2.
- If `supportVersion1Catalogs` is false, the `createCatalog` endpoint can create only independent catalogs. If you attempt to set the value of the `catalogVersion` to 1 to create a legacy catalog, the call returns an error.

The following example uses the `createCatalog` endpoint to create a legacy catalog:

```
POST /ccadmin/v1/catalogs HTTP/1.1
Content-Type: application/json
x-ccasset-language: en

{
  "catalogVersion": 1,
  "defaultCategoryForProducts": "cat88975",
  "categoryIds": [
    "cat40013"
  ],
  "catalogId": "catalogGroceries",
  "displayName": "Groceries"
}
```

The response returns the properties of the catalog:

```
{
  "catalogVersion": 1,
  "defaultCategoryForProducts": "cat88975",
  "rootNavigationCategory": {
    "repositoryId": "rootCategory"
  },
  "displayName": "Groceries",
  "repositoryId": "catalogGroceries",
  "rootCategories": [
    {
      "repositoryId": "cat40013"
    }
  ]
}
```

```
    ],  
    "links": [  
      {  
        "rel": "self",  
        "href": "http://myserver.example.com:9080/ccadmin/v1/catalogs"  
      }  
    ],  
    "id": "catalogGroceries"  
  }  
}
```

After creating a catalog, you must publish your changes to make it available to use on your sites. See [Publish Changes](#) for more information.

## Associate catalogs with sites or accounts

Once you have created and published a catalog, it is ready to be associated with one or more sites. If your Commerce environment supports account-based commerce, you can also associate published catalogs with accounts.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You can assign both independent and legacy catalogs to sites and accounts. See [Understand catalogs](#) for information about the differences between independent and legacy catalogs.

See [Configure Sites](#) for information about creating a new site and associating a default catalog with it. See [Work with account contracts](#) for information about associating a catalog with an account.

## Edit catalog items without publishing

Direct catalog editing allows you to update your live catalog and web site without running through publishing steps.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This feature is not designed to be turned on and off. We recommend you choose the publishing strategy that makes sense for your business based on a number of factors, including how large your catalog is and its source, how often you will need to make changes to it (high frequency/volume of publishes), and the organization of your team.

By default, when you create or modify catalog items, the changes you make must be published before they take effect. However, you can optionally configure Commerce so that you can make changes to the following catalog items directly on the storefront without publishing:

- Catalogs (not including catalog media)
- Product types
- Collections
- Products and add-on products
- SKU and SKU bundles

Publishing catalog changes works well for many merchants, particularly those that change their catalogs relatively infrequently. Some merchants, however, have a large number of products and update their catalogs frequently, in some cases updating them every day or multiple times a day. For these merchants, Commerce provides the ability to make catalog changes available on the storefront immediately, bypassing the publishing process.

Enabling the direct catalog editing feature means:

- You can immediately display any changes without the need to publish.
- You can directly push your entire catalog data to production by avoiding the publishing step. This is particularly useful when changes to products, collections, or SKUs occur frequently.
- When direct catalog editing is enabled, your site's URL patterns must use IDs to specify products and collections. Using URL slugs instead of IDs in URL patterns will cause errors. See [Configure URL patterns](#) for more information.
- Search content updates run every 15 minutes to ensure the search index is up-to-date.

Consider direct catalog editing if you are getting catalog data from an external system, such as a supplier or a PIM, and passing that data through without requiring users to make changes to that catalog data; or if you frequently publish a large number of items or assets. You may also want to consider it if you are concerned about publishing times, which increase when changes affect a large number of assets, and/or when there is a high volume of product catalog changes.

You might also want to use direct editing if you are concerned about lockout, since during a publishing event, users cannot work with administration interface tools. This feature may also be helpful if you have distributed teams, with a number of individuals publishing throughout the day and/or from multiple time zones.

Direct catalog editing is not designed to be turned on and off, and as such, you should consider this process to be part of your environment. Because this feature is working with a live production site, you should carefully consider whether direct catalog editing is something that you want to enable.

### Understand additional considerations when using direct catalog editing

Choosing to use direct catalog editing and bypassing the publishing process comes with some trade-offs, including:

- You will not be able to preview any changes you make before they are in production.
- Search indexing runs every fifteen minutes, which might result in a lag between when changes go live and when that changed is indexed and appears in any search or navigation results.
- Product recommendations do not immediately reflect direct catalog edits. Instead, the recommendations service exports the catalog daily in order to generate product recommendations, which can mean that the products returned may be up to 24 hours old.

**Important:** Enabling direct catalog editing automatically enables direct price editing. For more information about direct price editing, see [Update prices without publishing](#). (You can choose to use direct price editing on its own, even if you choose to use the default publishing process for catalog changes.)

Since direct catalog editing is not designed to be turned on and off, you should consider whether or not it makes sense to use this feature, ideally during your site implementation as you are thinking through your business processes. Because this feature is working with a live production site, you should carefully consider whether direct catalog editing is something that you want to enable.

### Perform prerequisite checks

There are a few things that you should check before enabling and disabling direct catalog editing:

- There are no items in the search indexing queue.
- If your stores have any unpublished catalog or price changes, you must publish them before attempting to enable direct catalog editing. Additionally, make sure no imports or publishing events are happening while you are enabling direct catalog editing.
- Your site's URL patterns are using IDs to specify products and collections.

Note that the `updateDirectEditConfiguration` endpoint will perform the necessary validations and return the appropriate errors.

### Update your catalog without publishing

To update your catalog directly without publishing, enable direct catalog editing using the `updateDirectEditConfiguration` endpoint.

For example:

```
PUT /ccadmin/v1/merchant/directEdit/catalog
{
  "enable" : true
}
```

### Use direct catalog editing

If you create or modify a catalog item when direct catalog editing is enabled, (using the administration interface, an endpoint, or an import process) the changes you make are available on the storefront without publishing; they do not appear in the list of changes that are returned by REST endpoints or appear in the Publishing page of the administration interface (although the data that is live on the site is reflected and editable in the administration interface tool elsewhere).

When you publish changes, Commerce initiates an indexing operation so the search index is updated to reflect the changes. However, with direct catalog editing, catalog items on the production server can be changed without publishing, which means catalog items in the index may become out of date. See [Manage Search Settings](#) for more information.

To ensure the index is kept up-to-date, enabling direct catalog editing enables a schedule that performs incremental indexing every 15 minutes. Performing a publishing operation does not trigger an index when direct catalog editing is enabled. However, if you have already used the `setSearchPartialSchedule` endpoint in the Search Data and Indexing API to set up a different incremental indexing schedule, that schedule will remain in place instead.

**Note:** When bulk import is running, you will notice that storefront performance is slower because bulk import requires continual purging and invalidation of the storefront cache. Refer to Perform Bulk Export and Import for additional information.

### Disable direct catalog editing

Before disabling direct catalog edit, refer to [Perform prerequisite checks](#) for more information.

You can disable direct catalog editing by using the `updateDirectEditConfiguration` endpoint to set the `enable` property back to `false`. Doing so initiates a full publishing process.

It is worth noting, however, that you should decide which mode makes most sense for your store, and continue to use that mode unless your business needs change. The feature is not designed to be turned on and off frequently. Disabling direct catalog editing may cause a considerable delay, because Commerce must then synchronize your publishing server with the catalog on your production server.

After disabling direct catalog editing, direct price editing remains enabled, as does incremental indexing. If you then turn off direct price editing, incremental indexing is canceled.

However, if you used the `setSearchPartialSchedule` endpoint to create a different incremental indexing schedule, disabling catalog editing does not cancel that schedule unless you have set the `parseString` parameter to `"* * * * * 0,15,30,45"`.

### Understand scheduled site map generation

Site maps are generated nightly and direct catalog editing does not modify that behavior.

**Note:** All site maps are updated, even if your catalog updates only impact a small number of your overall site maps.

## Create and edit product types

Product types are templates for products you add to your catalog.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Product types contain properties that describe a product, such as fabric type or available colors. They can also optionally contain properties that request shopper input, such as the message to include with a gift or the initials to use for a monogram. When a merchandiser creates a new product, the properties available to fill out depend on the product type they select.

### Understand the base product type

The built-in base product type contains basic product and SKU properties that apply to all products and SKUs in your catalog. Custom product types automatically inherit all the base product type's properties.

The following table describes the default product properties for the base product type:

Property	Description
Name (required)	Short, descriptive name that identifies the product.
Product ID (required)	The ID that identifies the product internally. Each product ID must be unique within your catalog.

Property	Description
Description	A short description to display with the product.
Brand	The name of the manufacturer.
List Price (required)	<p>Default price of the product before any discounts or promotions.</p> <p>If your store supports more than one currency, enter a list price for each price group shown. See <a href="#">Configure Price Groups</a> for more information.</p>
Sale Price	<p>Sale price of the product.</p> <p>If your store supports more than one currency, enter a sale price for each price group shown. See <a href="#">Configure Price Groups</a> for more information.</p>
Shipping Surcharge	<p>Additional shipping charges that apply to the product because of size, weight, or special handling.</p> <p>If your store supports more than one currency, enter a shipping surcharge for each price group shown. See <a href="#">Configure Price Groups</a> for more information.</p>
Product Tax Code	A tax code to assign to the product that allows your tax processor to make the appropriate tax calculations. For more information, see <a href="#">Configure Tax Processing</a> .
Long Description	Detailed descriptive text to display with the product. The long description is created with an HTML editor called CKEditor that you can use to edit and apply rich-text formatting.
Active	Specifies whether the product is displayed on your store and in search results. By default, the Active option is not selected.
Discountable	Specifies whether the product can be discounted by Commerce promotions. By default, the Discountable option is selected. For more information, see <a href="#">Understand promotion targets</a> .

Property	Description
Not For Individual Sale	<p>Specifies whether the product can be purchased only as part of a complex, customizable product. For example, if your store sells laptops, some of the individual components such as motherboards or graphics cards may not be for sale as individual products but can be sold as component parts of a customized product.</p> <p>Products marked as not for individual sale do not appear in collections shoppers browse on your store or in search results.</p> <p>Unlike inactive products, which shoppers cannot purchase at all, products marked as not for individual sale can be purchased, but only as a component of a customizable product.</p> <p>By default, the Not For Individual Sale option is not selected.</p> <p><b>Note:</b> To create customizable products, you must have an active Oracle CPQ account.</p>
Not Returnable	<p>Indicates that the storefront elements allowing shoppers to initiate a return from their order history should not be active for this product.</p>
Exclude from XML Sitemap	<p>Excludes selected products from the product sitemap.</p> <p>The XML sitemap is an index of page URLs on your site that is available for crawling by search engines. It helps search engines to crawl your site more intelligently.</p>
Assetable	<p>Indicates that the product should be tracked as an asset.</p> <p>Prior to checkout, Commerce will require shoppers to assign customer, service, and billing account details for this product, along with a billing profile. Select this property only for products sold as services or subscriptions such as broadband, wireless, or magazine subscriptions.</p>
Shippable	<p>Specifies that the product is a physical item that can be shipped. By default, the Shippable option is selected. Deselect it if the product is something that will not be shipped, such as a service.</p>
Arrival Date	<p>Stock arrival date for the product.</p> <p>Stock arrival date for the product. By default, this property is not displayed on the storefront (though it is available to be added to custom widgets you create), and does not control whether a product can be purchased.</p> <p>Shoppers can purchase an active product with active SKUs in stock, regardless of the Arrival Date, even if that date is in the future.</p>
Height, Length, Width, and Weight	<p>Specifies the physical dimensions of a product.</p>

Property	Description
Order Limit	The maximum number of this product that can be purchased per order.

The following table describes the default SKU properties for the base product type.

Property	Description
Name	Short, descriptive name that identifies the SKU. By default, the SKU inherits the name of its parent product.
SKU ID	The ID that identifies the SKU internally. Each SKU ID must be unique within a product.
Active	Specifies whether the SKU is displayed on your store and in search results when its parent product is active. By default, the Active option is selected.
Discountable	Specifies whether the SKU can be discounted by Commerce promotions. By default, the Discountable option is selected. For more information, see <a href="#">Understand promotion targets</a> .

### Edit the base product type

You can add new properties to the base product type and make some changes to its default properties. You cannot remove any of the default type or SKU properties, though you can do the following:

- Mark some of them as not required so that merchandisers can ignore them when creating new products. (The product's Name, ID, and List Price properties are always required, as is the SKU ID property.)
- Mark them as Internal-Only so that they cannot appear on the storefront.

To edit product properties in the base product type:

1. On the **Catalog** page, click the **Manage Catalogs** button and select **Product Types**.
2. Click **Base Product** to display its type properties.
3. To add a new product property, click **Add Property** and select **Standard** or **Shopper Input**.
  - **Standard** specifies properties whose values you provide when creating products.
  - **Shopper Input** specifies properties whose values shoppers provide when purchasing a product on your store. For example, initials for a monogram or a message to accompany gift wrapping.

See [Create custom product types](#) for details about how to add a new property.

4. To edit an existing property, click its **Edit** button.

You cannot change a default property's ID. You can make optional properties required, but you cannot make required properties optional.

See [Create custom product types](#) for details about property settings.

5. Click **Done** when you finish adding and editing properties.

To add or edit SKU properties in the base product type:

1. On the **Catalog** page, click the **Manage Catalogs** button and select **Product Types**.
2. Click **Base Product** to display its type properties.
3. Click the **SKU Properties** tab.

### Understand custom product types

In addition to inheriting all the product properties from the base product type, custom product types let you provide product, SKU, and variant properties for different kinds of products.

- Standard product properties let you add information specific to a particular kind of product. For example, suppose your store carries a large inventory of cameras. You might want to create a custom product type called Camera that includes type properties like effective pixels and exposure control. Standard product property values can also be used as search terms and facets on your store. For more information, see [Create custom product types](#).
- Shopper input product properties let you capture information from shoppers for a particular kind of product. For example, shoppers can enter initials for a monogram or a message to include in a card with gift wrapping. Shopper input properties can be displayed on the storefront but are not used as search terms and facets. Shopper input properties can be optional or required. For example, when a shopper selects gift wrapping they can include an optional gift message, but when a shopper selects monogramming, they must supply the letters that will be monogrammed on the main product.

See Support add-on products for an example of incorporating a custom shopper input property into a widget so shoppers can use it on the storefront.

- SKU properties let you add information specific to a SKU. For example, you could create custom SKU properties that hold UPC codes or IDs that represent SKUs in an external order management system. SKU property values can also be used as search terms and facets on your store. For more information, see [Create custom product types](#).
- Variant properties represent options you can combine to create SKUs. For example, if a shirt is available in three sizes and two colors, size and color are its variant properties. Variant property values can also drive image display on your store's product details and category pages. Select one variant property per product that gets images assigned to each of its values. For example, suppose a shirt called Cotton Tee is available in three colors, red, blue, and green. You can assign separate images to each color value. When a shopper navigates to the shirt's product details page and selects the color green, the main image changes to the green shirt.

You can also display style-based products on category pages. That is, images for each value of the selected variant appear as separate products on your store. Continuing with the shirt example, suppose the shirt is part of the Tops & Tees category. When a shopper navigates to Tops & Tees, the shirt appears three times on the page, once in each of the available colors.

For more information, see [Create custom product types](#).

### Create custom product types

To create a custom product type:

1. On the **Catalog** page, click the **Manage Catalogs** button and select **Product Types**.
2. Click **New Custom Type**.
3. Enter a name for the new product type and click **Save**.  
You can now add product, SKU, and variant properties to the new product type.

To add standard product properties to a custom product type:

1. On the product type's **Product Properties** tab, click **Add Property** and select **Standard**.
2. Select a property type and enter values to define it.  
The property type you select controls the type of editor merchandisers see when they create products using this new type. For more information, see [Property types](#).
3. Click **Save**.
4. Repeat steps 1 through 3 for each new standard product property you want to add to the product type. When you are finished, click **Done**.

To add shopper input properties to a custom product type:

1. On the product type's **Product Properties** tab, click **Add Property** and select **Shopper Input**.
2. Select a property type and enter  
The property type you select controls the type of editor shoppers see on your store. . For more information, see [Property types](#).
3. Click **Save**.
4. Repeat steps 1 through 3 for each new standard product property you want to add to the product type. When you are finished, click **Done**.

To add SKU properties to a custom product type:

1. On the product type's **SKU Properties** tab, click **Add Property**.
2. Select a property type and enter values to define it.  
The property type you select controls the type of editor merchandisers see when they create products using this new type. For more information, see [Property types](#).
3. Click **Save**.
4. Repeat steps 1 through 3 for each new SKU property you want to add to the product type. When you are finished, click **Done**.

To add variant properties to a custom product type:

1. On the product type's **Variant Properties** tab, click **Add Property**.
2. Enter a name, ID, and values for the property. Press the ENTER key after you type each property value.  
For example, to add color variants to a property type, you could enter the following:

Name: Color

ID: color

Values: Poppy, Navy, Charcoal, White

**Tip:** You can drag values to reorder them. The order values appear in here is their default order on the product detail page on your store, though you can change the order for individual products. See [Sort variant values on the product details page](#) for more information.

3. Click **Save**.

4. Repeat steps 1 through 3 for each new variant property you want to add. When you are finished, click **Done**.

You can configure how images are displayed for property values of one variant per product type. Select a variant whose properties look different in images, such as color.

To configure image display for a variant property's values:

1. On the product type's **Variant Properties** tab, click **Edit** for the property you want to use.
2. Under display properties, select **Allow** product images at variant property value level.  
This allows you to assign a different image to each of the variant's values.
3. If you also want to display images for each value separately on collections pages, select Display product entries in product listing by these property values.  
**Important:** Once you save these options, you cannot change them.
4. Click **Save**.

See [Add images to products](#) for information about how to assign images to the values on a product-by-product basis.

### Delete custom product types

You can delete custom product types with the Admin API. You cannot delete the base product type. You cannot delete a product type that is being used by products in your catalog. For details about the Commerce REST API endpoints, see [Use the REST APIs](#).

Delete a custom product type by specifying its ID. Send a `GET` request to the `/ccadmin/v1/productTypes` endpoint to get a list of all custom product types in your Commerce instance. For example:

The following is a sample response for a `productTypes` request:

```
{
  "items": [
    {
      "displayName": "test product type",
      "id": "testproducttype"
    },
    {
      "displayName": "New Product Type",
      "id": "NewProductType"
    }
  ]
}
```

Once you have the ID of the custom product type you want to delete, send a `DELETE` request to the `/ccadmin/v1/productTypes/{id}` endpoint to delete the specified product type. The following sample request body removes the custom product type `NewProductType` in a Commerce instance:

```
{"id": "NewPropertyType"}
```

## Property types

The following table describes the properties you can add to a product type or SKU type.

Property type	Allows the merchandiser to enter
Short text	A single line of unformatted text.
Text area	One or more paragraphs of unformatted text. This is also known as a long text property. For details about this property type, see <a href="#">Add long text properties to products and SKUs</a> .
Rich text	One or more paragraphs of formatted text. <b>Note:</b> A rich text property can have a default value of no more than 255 characters. However, if you import or manually enter the value, it can have multiple paragraphs, each with more than 255 characters.
Number	A numeric value.
Check box	A single true/false property.
Date	A date and time property with a calendar picker.
Selection list	A list property that allows a single selection from a specified set of values.

The following table describes the settings for each standard product or SKU property:

Setting	Description
Label (required)	The label that appears above the property editor in the product dialog.
Property ID (required)	The ID that identifies the property internally. Each property ID must be unique within your catalog, although the administration interface does not always prevent you from creating multiple properties with the same ID. If a property in the base product type and a custom property in a custom product type have the same property ID, the value of the property in the base product type always overwrites the value of the property in the custom product type.
Default Value	A value that is pre-populated in the property editor. Properties that are required must have default values.
Values	For a Selection List property, the set of strings to display in the list. You must add at least one string. Press Enter after you finish typing each string to add it to the Values field.
Required	Specifies whether a property must be set before a merchandiser can save a product. By default, properties are not required.
Translatable	Specifies whether a short-text or rich-text property can be translated. By default, properties are not translatable. If you select this option, you cannot change it later.

Setting	Description
Display Properties	Select Visible in Storefront if you want to be able to display the property on your store. This is the default setting for all properties.  Select Internal Only if you do not want the property to appear on your storefront.  Note that shopper input properties cannot be Internal Only.
Allow property to be searched	Allows shoppers to search on values entered for properties.  This setting is available for short text and number properties.  You must also add the property to the searchable field ranking to make it searchable. See <a href="#">Add fields to the searchable field ranking list</a> .
Allow property to be search facet	Allows shoppers to use the property as a refinement when filtering search results.  This setting is available for short text and number properties.
Allow property to be a multi-select search facet	Allows shoppers to use the property as a refinement when making multiple selections to filter search results. For example, shoppers could filter results by selecting several brands.  This setting is available for short text and number properties.

The following table describes the settings for each shopper input product property:

Setting	Description
Label (required)	The label that appears above the property editor on your store's pages.
Property ID (required)	The ID that identifies the property internally. Each property ID must be unique within a product type.
Shopper Input Prompt	Helper text that appears with the property editor on your store's pages.
Default Value	A value that is pre-populated in the property editor. Properties that are required must have default values.
Values	For a Selection List property, the set of strings to display in the list. You must add at least one string. Press Enter after you finish typing each string to add it to the Values field.
Required for Shopper	Specifies whether a property must be set before a shopper can complete the purchase. By default, properties are not required.

### Add long text properties to products and SKUs

Long text properties (called Text Area in the administration interface Property Types dialog) let you store a large amount of plain unformatted text, such as content in CSV, JSON, or new-line-separated list formats.

No long text properties are available by default, but you can create and add long text properties to any Commerce product type or SKU type, using either the administration interface or the Admin API.

To create a long text property in the administration interface, follow the instructions in [Create custom product types](#). To create a long text property with the Admin API, use the `createProductTypeSpecification` endpoint for product types and the `createSkuProperty` endpoint for SKU types. See [Learn about the APIs](#) for information about accessing the REST API documentation.

## Create and work with products

A product is a navigational end-point in your catalog, for example, a camera or a pair of shoes.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Once you have defined product types as described in [Create and edit product types](#), you can use those types to create or import new products. This section describes how to work with products on the Commerce Catalog page. To learn how to import products into your catalog, see [Import and Export Catalog Items and Inventory](#).

This section includes the following topics:

- [Create products](#)
- [Activate and deactivate products](#)
- [Delete products](#)

### Create products

If a collection is selected when you create a product, the new product is automatically created in that collection. Otherwise, it is created in Unassigned Products. If the collection where you create a product is linked to other parents, the product will appear in all locations the collection is linked to. You cannot create products in the Storefront Navigation or Non-Navigable root collections. See [Organize Products in Collections](#) for more information.

This section describes how to create a new product. See [Link and unlink collections and products](#) to learn how to link an existing product to a collection.

To create a new product:

1. On the **Catalog** page, click the **New Product** button and select **New** from the menu that appears.
2. Select a product type and click **Select**.
3. Enter values for the product's properties.  
The properties you see depend on the product type you selected.  
  
See [Understand the base product type](#) for information about the default properties available to all products.
4. Click **Create**.

Now you can create SKUs by combining the properties you entered. See [Create and work with SKUs](#) for more information. You can also add images. See [Add images to products](#) for more information.

### Activate and deactivate products

By default, a newly-created product is not active, which means that none of the product's SKUs are displayed on your store. You might want to deactivate a product if inventory is low or if the product will soon be discontinued.

Deactivating a product prevents it from appearing on your store or in search results but does not remove it from your environment. (See [Delete products](#) for information about permanently removing a product.) If you deactivate a product that is linked to more than one parent, Commerce deactivates it in all locations.

To deactivate a product:

1. On the **Catalog** page, open the product you want to deactivate.
2. On the **General** tab of the product details page, uncheck the **Active** setting and click **Save**.

### Delete products

Deleting a product permanently removes the product and all its associated SKUs from Commerce. All price lists that included prices for the product's SKUs are automatically updated. If you delete a product that is linked to more than one parent, Commerce deletes it in all locations.

Once you delete a product, you cannot retrieve it. Deleting a product might also affect orders and reports that include the product's SKUs. An alternative to deleting a product is marking it as inactive so that it is no longer displayed. See [Activate and deactivate products](#) for more information.

**Important:** Deleting assets, such as products, catalogs, shipping methods, etc., can result in discrepancies in your system, which may produce errors. It is recommended that you disable assets instead of deleting.

To delete a product:

1. On the **Catalog** page, select the product whose SKUs you want to delete.
2. On the **General** tab, select SKUs and click **Delete Selected SKUs**.
3. Confirm that you want to delete the SKUs.

## Find products in catalogs

You can perform custom, rule-based searches to quickly find products in collections and catalogs.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The Catalog page in the administration interface always opens in Search Products view, which is empty until you perform a search or select a collection that contains products.

You can perform a simple search by entering a product name or product ID into the search field at the top of the page, or you can create a rule that searches using other product properties, including custom properties. By default, the search returns results from all catalogs, though you can filter the results so only products from the current catalog are displayed.

To find products in your catalogs:

1. On the **Catalog** page, select **Search Products**.
2. (Optional) To search only a specific collection, select it in the catalog's collection hierarchy. You can also select Unassigned Products and Unassigned Collections.
3. In the search box, type or paste full or partial product names, IDs, or both.
  - Separate multiple entries with commas.
  - You can mix names and IDs in the same search. For example, entering the following search terms returns all products whose names and IDs include the word glass as well as the item whose ID is xprod2162:  
glass, xprod2162
  - If you enter just a comma, the search will not start, even if your catalog includes products whose names include commas.
  - There is a limit of 1000 characters and 200 search terms, whichever comes first. If there are more than 200 search terms, all terms past 200 are ignored. If there are duplicate IDs, any ID past the first is ignored.
4. To search on properties other than Product Name and Product ID, create a rule. See [Create rules to search for products](#) for more information.

### Create rules to search for products

A rule automatically finds products based on product properties in a product type you specify. You cannot save search rules. If you navigate away from the **Catalog** page, any search rules you created will not persist when you return.

To create a search rule, follow these steps:

1. On the **Catalog** page, click **Search Products** and then click the **Custom Search** icon next to the search text box.
2. Select a product type to use from the **Product Types** list, then click the **Create Rule** button.  
You can select only one product type per rule.
3. Select a property from the drop-down list in the rule. The available properties depend on the product type you selected in the previous step. You can select only one property per rule.
4. Select an operator that links the property to a value that you will specify in the next step. The operators you see depend on the type of property you selected. See [Create and edit product types](#) for details about product types and the types of properties they can contain.
5. Select or enter a value for the property.  
For some values, such as parent collections, Commerce displays a list for you to choose from. For others, such as Availability Date or Brand, you must type in a value. The rule editor does not validate any text, numeric, or date values you type.
6. If you create more than one rule, select one of the following options from the **Match** list to specify how the rules behave together. You can select one option only for the entire set of rules.
  - **Any Rules:** If a product matches any rule in the set, it is returned in the search results.

- **All Rules:** (default) If a product matches all the rules in the set, it is returned in the search results.

7. Click **Search**.

**Example: Search for missing information**

The following example shows how to find all the products with no images that are currently displayed on your store so you can quickly fix them by adding images. In this example, you will create two rules that are both evaluated together. One rule searches for all products that do not have product images and the other searches for all active products.

To find active products with no images, follow these instructions:

1. On the Catalog page, click **Search Products** and then click the **Custom Search** icon.
2. Select **All** from the **Product Types** list and **All Rules** from the **Match** list.
3. Click the **Add Rule** button.
4. In the new rule, select **Product Images** from the **Properties** list and **Does Not Exist** from the **Operators** list.
5. Click the **Add Rule** button again to add a second rule.  
You'll see that the second rule starts with **AND** because you selected **All Rules** in step 2.
6. In the second rule, select **Active** from the **Properties** list and **True** from the **Operators** list.
7. Click **Search** when you finish creating the rules.

The search results will display all the products without images that are active on your store. You can click a product in the results to open its details pane, where you can add images to its **Media** tab.

## Create and work with SKUs

A SKU (stock keeping unit) represents a purchasable instance of a product on your store.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Customers do not actually purchase products, they purchase SKUs. A product can have several different SKUs associated with it, representing varieties, sizes, and colors. For example, the product Sundress, which is available in two different colors and five sizes, has ten associated SKUs, one for each size/color combination. Each product must have at least one SKU.

You create SKUs by combining a product's variant properties. Each product must have at least one SKU for customers to purchase and for Commerce to index for searching. You create SKUs by combining a product's variant properties. If a product was created from a product type that has no variant properties, you must still create a single SKU for it.

This section includes the following topics:

- [Create SKUs](#)

- [Deactivate SKUs](#)
- [Delete SKUs](#)
- [Sort variant values on the product details page](#)
- [Create SKU bundles](#)

### Create SKUs

To create a SKU for a product with no variant properties:

1. On the **Catalog** page, select the product for which you want to create the SKU.
2. Click the **SKUs** tab.
3. Select the SKU and add an ID and optionally, a name, for it.
4. Click **Create**.

To create SKUs for a product with variant properties:

1. On the **Catalog** page, select the product for which you want to create SKUs.  
**Note:** You cannot add variant properties and create multiple SKUs for products created with the base product type. For more information, see [Create and edit product types](#).
2. On the **SKUs** tab, select values for each variant property.  
Click the variant to see a full list of available values. Select a value from the list. To narrow the list, begin typing some text. The filter matches characters that you type wherever they appear in the value, not just at the beginning. Usually, as you type more characters, there are fewer matches.
3. When you have selected all the variant properties you want to combine into SKUs, click **Display Combinations**.
4. Select each SKU you want to assign to the product and add an ID and optionally, a name, for each SKU you select. SKU IDs are required and each must be unique within the product.
5. Click **Create**.

If a SKU's product was created with a product type that includes custom SKU properties, you can edit them once you have created the SKUs.

To edit SKU property values:

1. On the **Catalog** page, select the product whose SKUs you want to update.
2. On the **SKUs** tab, click the SKU ID of the SKU to update.
3. Click the **SKU Properties** tab and edit the SKU properties.  
If the SKU's parent product was created from a custom product type, the name of the tab will be the name of the product type instead of SKU Properties.
4. Click **Save**.

By default, SKUs inherit the list and sale prices of their parent product. You can override these prices on a per-SKU basis. To change the price for a SKU:

1. On the **Catalog** page, select the product whose SKUs you want to update.
2. On the **SKUs** tab, click the SKU ID of the SKU to update.
3. Click the **SKU's Price Groups** tab and then click the Edit icon.
4. Enter a new list price or sale price value.

5. Click **Save**.

### Deactivate SKUs

By default, all a product's SKUs are active, which means that when the product is active, all SKUs are displayed on your store. You might want to deactivate a SKU if inventory is low or if the SKU contains a variant that will soon be discontinued, like a seasonal color.

Deactivating a SKU prevents it from appearing on your store or in search results but does not remove it from the product. (See [Delete SKUs](#) for information about permanently removing a SKU from a product.) If you deactivate all a product's SKUs but do not deactivate the product, the product is still visible and appears in search results but shoppers cannot buy it. See [Create and work with products](#) for information about deactivating a product.

To deactivate a SKU:

1. On the **Catalog** page, select the product whose SKUs you want to deactivate.
2. On the **SKUs** tab, click the ID of a SKU.
3. On the SKU details page, uncheck the **Active** setting and click **Save**.

### Delete SKUs

Deleting a SKU permanently removes it from a product. If you want to keep the SKU but no longer display it, mark it as inactive. See [Delete SKUs](#) for more information.

To remove SKUs from a product:

1. On the **Catalog** page, select the product whose SKUs you want to delete.
2. On the **SKUs** tab, select SKUs and click **Delete Selected SKUs**.
3. Confirm that you want to delete the SKUs.

### Sort variant values on the product details page

By default, variant values appear on the product details page in the order specified when you created the product type. You can override the default order for individual products.

To reorder variant values on the product details page:

1. On the **Catalog** page, open the product whose variant values you want to reorder.
2. On the **SKUs** tab, select the name of the variant whose values you want to reorder from the Configure Storefront Display list.
3. Reorder the values and click **Update** or **Save**.
4. Click **Save** to close the product.

### Create SKU bundles

A SKU bundle is a single SKU that is composed of several other SKUs. SKU bundles allow a group of items to be purchased as a single item but treated as multiple items in order fulfillment. The SKUs that make up a bundle are always the same; a shopper cannot customize a SKU bundle. For example, a gift basket created as a SKU bundle always contains the same items; shoppers cannot choose the contents of the gift basket.

SKUs in a bundle can be sold exclusively in the bundle, but you can also sell them individually.

Commerce automatically sets the inventory for a SKU bundle based on available inventory of the SKUs the bundle contains. For example, suppose a SKU bundle (SKU C) contains 1 of SKU A and 2 of SKU B. There are 20 of SKU A and 10 of SKU B in stock. Therefore, SKU C's (the bundle's) stock is 5 because that is how many bundles could successfully be purchased given the current inventory of SKU A and SKU B. See [Manage inventory](#) for more information.

If the SKU that serves as the bundle is set as not discountable, then the entire SKU bundle cannot be discounted, even if some of the SKUs it contains are marked as discountable. Similarly, if the SKU that serves as the bundle is marked as discountable, then the entire SKU bundle can be discounted, even if some of the SKUs it contains are marked as not discountable.

Creating a SKU bundle is a three-step process:

1. Create the SKU that will serve as the bundle.
2. Add SKUs to the bundle.
3. Specify how many of each SKU the bundle contains.

The procedures that follow describe each of these steps in detail.

To create the SKU that serves as the bundle:

1. Create a product that will include the SKU bundles. See [Create and work with products](#) for more information.  
Since SKU bundles cannot be customized by shoppers, you might want to create a product that contains a number of similar SKU bundles to offer shoppers choice. For example, suppose you want to bundle a variety of scented votive candles into different combinations of three. In this case, create a product called Votive Packs.
2. In the new product, create the SKUs that will serve as the bundles. See [Create SKUs](#) for more information.  
Continuing with the votive candle example, create a SKU for each combination of scents you want to sell.

To add SKUs to a SKU bundle:

1. Select a SKU and click the **Bundled SKUs** tab.
2. Click the **Include SKUs** button.
3. Select one or more SKU IDs from the list. You can filter the list by typing or pasting all or part of a SKU ID in the SKUs box.
4. Click **Add Selected**.
5. Click **Done** when you finish adding SKUs.

To specify the number of each SKU that the bundle will contain:

1. On the **Bundled SKUs** tab, click the quantity for the SKU you want to edit.
2. Enter a new value and click the **Save** icon.
3. Click the **Save** button on the SKU tab when you finish updating quantities.

## Create add-on products

Add-on products let shoppers customize or enhance their purchases with optional extras like monogramming, gift wrap, or warranties.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You link an add-on product to a main product so shoppers see it on the main product's details page and can optionally purchase it along with the main product.

If your storefront is built using Storefront Classic, you must make changes to several storefront layouts to allow your store to support add-on products. To learn how to display add-on products in Storefront Classic layouts, see [Support add-on products](#). If your storefront is built using Open Storefront Framework (OSF), you can use the default OSF widgets that let you display add-on products in the Product, Cart, Checkout, Order History, Order Details, and Return Details pages. These widgets are described at the end of this topic.

Keep the following points in mind when working with add-on products:

- An add-on product is available for all the main product's SKUs. You cannot link an add-on product only to specific SKUs. For example, if monogramming is available for a tote bag, you cannot specify that monogramming is available only for canvas SKUs but not leather SKUs.
- For an add-on product with multiple SKUs, you do not have to link all the SKUs to a main product. For example, suppose an add-on product for warranties includes SKUs for 1-year, 2-year, and 3-year protection. It may not be appropriate to offer a 2-year or 3-year warranty on inexpensive items, so you can choose to offer only the 1-year warranty on those items.
- Any SKUs added to an add-on product after it was added to the main product are not automatically selected as add-ons. To add the new SKUs remove the product as an add-on and then add it again.
- Add-on products can be products that you let shoppers buy separately, for example, USB cables or chargers could be sold separately and could also be sold as add-on products for phones. It does not make sense for certain types of add-ons, like monograms and gift wrapping, to be sold on their own, but for add-on products that can be purchased separately, the price is the same, whether the product is purchased on its own or as an add-on to another product.
- Volume pricing is not supported for add-on products.
- When a product is discounted by a promotion, add-on products linked to are also discounted. See [Understand how add-on products affect promotions](#) for more information.

Follow these steps to create an add-on product:

1. Create a product type for the add-on product. This lets you add product, SKU, and variant properties specific to each type of add-on product, such as color, style, and text for a monogram, or length of coverage for a warranty. See [Create and edit product types](#) for more information.
2. Create the add-on product from the product type you created in the previous step. See [Create and work with products](#) for more information.

3. Create one or more SKUs for the new product. See [Create SKUs](#) for more information. Continuing with the monogram example, create a SKU for each combination of monogram colors and styles you want to offer.
4. Add inventory for each SKU. See [Manage inventory](#) for more information.

Follow these steps to link an add-on product to a main product:

1. On the Catalog page, select the main product to which you want to link add-on products.
2. On the Add Ons tab, click the Include Add Ons button.
3. Select one or more products from the list. You can filter the list by typing or pasting all or part of a product name or ID in the Add Ons box.
4. Click Add Selected.
5. Click Done when you finish adding products.
6. By default, Commerce includes all an add-on product's SKUs, but you can remove any that are not appropriate for the main product. Click an add-on product to display its SKUs, then click the X icon next to a SKU to remove it. If you remove all a product's SKUs, Commerce automatically removes the add-on product.
7. Click Save.

### Import and export add-on products

You can use the import feature to create add-on products and link them to other products in your catalog. See [Import and Export Catalog Items and Inventory](#) for details about how to import and export data in Commerce.

The easiest way to format a file for importing catalogs is to start by exporting a file that you can use as a template for items you want to add or modify. See [Export catalog items](#) for more information about how to export data.

When you look at the exported spreadsheet, you can see that the second row displays column headings that contain the internal names of the exported properties. The `addOnProduct` column includes product IDs for the add-on products and the `addOnSku` column includes SKU IDs for each SKU available for the products in the corresponding `addOnProduct` cell.

Product data begins in the third row and continues for the remainder of the spreadsheet. If an item does not have a value for a property, the corresponding cell is blank. When an add-on product has multiple SKUs, its `addOnProduct` cell contains multiple entries for each product, one for each of the SKUs and its `addOnSku` column contains multiple entries, one for each available SKU. Multiple entries are separated with a| (vertical bar).

For example, suppose a product has optional monogramming. There are three monogramming SKUs, one for each of three colors. The `addOnProduct` cell in the spreadsheet might look like this:

```
item1:Product_19Mg|item2:Product_19Mg|item3:Product_19Mg
```

The `addOnSku` cell in the spreadsheet might look like this:

```
item1:Sku_19red|item2:Sku_19blu|item3:Sku_19grn
```

## Display add-on products in Open Storefront Framework (OSF)

OSF includes default widgets that let you display add-on products on your storefront.

The product-details container widget, on the Product layout, includes a product-add-on-items widget. This widget renders a checkbox with the add-on item name. It includes a child component, add-on-item-details, that renders the additional details of each add-on item.

The add-on-item-details component has two child components:

- add-on-item-shopper-input displays fields for shopper input, such as the message to include with a gift or the initials to use for a monogram. For details about shopper-input properties, see [Create and edit product types](#).
- add-on-item-variant displays the list of SKUs, a shopper can select from, such as combinations of monogram colors and styles. Each SKU is displayed with a radio button so shoppers can select it.

When the shopper selects add-on items and clicks the product-add-to-cart button, the selected add-on items are added to the cart along with the main product. The cart-add-on-items widget renders the add-on items, along with details like SKUs and shopper-input values, on the Cart, Checkout, Order Confirmation, Order History, Order Details, and Return Details pages. On the Cart, Extended Cart, and Checkout Shipping pages, a checkbox is displayed (and checked by default) for each add-on item. If the shopper unchecks a checkbox, the associated add-on item and its details are removed and the cart is repriced. (On the Checkout Review, Order History, Order Details, and Return Details pages, the checkbox is hidden and only add-on item details are displayed.)

# Organize products in collections

Collections organize your catalog into a hierarchy that provides a navigational framework for your store.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Collections can contain both products and other collections.

**Note:** Commerce also supports directly linking products to independent catalogs without adding those products to collections.

## Understand collections

Collections organize your catalog into a hierarchy that provides a navigational framework for your store. Collections can contain both products and other collections.

Each Commerce catalog includes two root collections. These collections cannot be deleted or made children of any other collections. These are the only two root collections a catalog can contain; you cannot create other root collections.

- Storefront Navigation is the starting point in the navigational structure of the catalog. It contains all the catalog's collections, products, and SKUs.
- Non-Navigable contains products and collections, like gift wrapping or monogramming, that shoppers can buy but not browse to as part of the hierarchical catalog on your store.

Collections, except root collections, can belong to multiple catalogs. See [Link and unlink collections and products](#) for more information.

To create new products in a collection, see [Create products](#). To link existing products to a collection, see [Link and unlink collections and products](#).

### Understand Unassigned Products and Unassigned Collections

Products and collections that are not assigned to any parent in any catalog hierarchy appear in these lists above the collection hierarchy on the Catalog page. Products that are not part of any collection appear in the Unassigned Products list. Collections that have no parent collection appear in the Unassigned Collections list.

Unassigned products do not appear in the navigation for your store and are not returned in any search results. Unassigned collections are not returned in search results.

A product or collection becomes unassigned when one of the following things happens:

- It has been removed from all other collections.
- It has been unlinked from all parents.
- It is imported into Commerce with no parent collection.
- You specifically created a product in Unassigned Products.

You can view and work with unassigned products and collections just as you do any others in your catalog hierarchy. You cannot create new collections or drag existing collections in the Unassigned Collections lists. You can link a product or collection to a collection in the Unassigned Collections list. You can create new product in the Unassigned Products list but you cannot link an existing product there.

There are several ways to move an item out of the Unassigned Products or Unassigned Collections lists:

- Drag both products and collections to a parent in the catalog hierarchy.
- Move both products and collections to a parent in the catalog hierarchy. See
- Link collections to a parent in the catalog hierarchy. See [Link and unlink collections and products](#) for more information.

### Create collections

You can create a collection that is a child of either of the two root collections, Storefront Navigation or Non-Navigable. You cannot create a new collection at the root level of a catalog.

This section describes how to create a new collection. To link an existing collection, see [Link and unlink collections and products](#).

To create a new collection:

1. On the **Catalog** page, click the **New Collection** button and select New from the list that appears.
2. Fill in the property fields in the **New Collection** screen.
3. Click **Save**.

The following table describes the properties Commerce provides for collections. You can also use the REST APIs to create custom properties for collections. See [Create custom properties for collections](#) for more information.

Property	Description
Name (required)	Short, descriptive name that identifies the collection. Collection names do not have to be unique.
Collection ID (required)	The ID that identifies the collection internally. Each collection ID must be unique within your catalog.
Description	A short description to display with the collection.
Long Description	Detailed descriptive text to display with the collection. The long description is created with an HTML editor called CKEditor that you can use to edit and apply rich-text formatting.
Exclude from XML Sitemap	Excludes selected collections from the collections sitemap.  The XML sitemap is an index of page URLs on your site that is available for crawling by search engines. It helps search engines to crawl your site more intelligently.
Selected Parents	All the collection's parent collections.  By default, when you create a new collection, it has a single parent, Storefront Navigation.  To change a collection's parents, click the Edit button and select collections from the list. See <a href="#">Link and unlink collections and products</a> for more information.  To make the collection a child of another collection, select a collection in the Change Parent list.  If you remove all a collection's parents, Commerce moves it to the Unassigned Collections list.
Status	Specifies whether the collection is displayed on your store.  Active: The collection is displayed on your store.  Inactive: The collection is not displayed on your store. This is the default setting for new root collections.  Inherited from parent: The collection's status is the same as its parent. This is the default setting for new child collections.

### Reorder products in collections

Each product has a specific position in the collection. The page coding in the Commerce layouts and widgets uses the position to control the order in which products appear on the collection pages.

If you reorder products in a collection that is linked to other collections or catalogs, the collection's product order is the same in all places the collection appears.

To reorder products in a collection:

1. On the **Catalog** page, navigate to the collection that contains products you want to rearrange.
2. You can drag a product to a new position in either **Grid View** or **List View**.
3. To use numbers to move a product to a new position in the collection, click the **List View** button at the top of the page, then change the product's number. Enter a number from 1 to the number of products in the collection. If the number you enter is greater than the number of products, rearranging moves the product to the end of the list.
4. To move a product to the top of a collection, click the arrow icon at the right-hand side of the product's tile.

### Move collections

You can reorder collections by dragging them to new positions in an independent catalog's collections list: If a collection is linked to multiple parents, the new order is the same in all catalogs. You cannot move a collection to the root position in a catalog. You cannot move a parent collection to one of its children.

1. On the **Catalog** page, navigate to the collection you want to move.
2. Perform one of the following tasks:
  - Drag the collection to a new position in the hierarchy and drop it. A vertical line appears at a potential drop location when you hover over it.
  - Right-click the collection and click **Edit**. Click the **Edit** button next to the **Selected Parents** field and select a new parent for the collection.

### Find products in collections

To learn how to perform custom, rule-based searches for products in collections and catalogs, see [Find products in catalogs](#).

### Sort products in collections

To display a collection of products, click the corresponding link in the left column of the **Catalog** page, and then choose a sort option from the **Display Order** list. The list includes options for sorting by name, ID, or price, in ascending or descending order.

Note that the **Display Order** list is disabled for search results.

### Delete collections

Deleting a collection that has more than one parent removes it from all parent collections. You can delete only empty collections. If you want to delete a collection that contains products or other collections, remove them first.

To delete a collection:

1. On the **Catalog** page, navigate to the collection you want to delete.
2. Click the edit link.
3. In the collection's details dialog, click **Delete**.
4. Confirm that you want to delete the collection.

## Remove products from collections

Removing products from a collection does not remove them from the catalog. If a product has more than one parent collection, removing it from one collection does not automatically remove it from others. If you remove a product from its only parent collection, it is automatically moved to the Unassigned Products list.

You can also remove a product from a collection on the product's details page. See [Link and unlink collections and products](#) for more information.

To remove products from a collection:

1. On the **Catalog** page, navigate to the collection where you want to remove products.
2. Hover over the product to remove until the remove icon appears.  
**Tip:** To remove multiple products, select all the products you want to remove and then click the remove icon on any of them.
3. Click the **remove** icon.

## Add images to collections

Use a collection's Media tab to upload and arrange collection images that will appear on your store, for example, a hero image that appears on a category landing page. You can upload JPG, PNG, and GIF files. Commerce automatically sizes your images for display on different devices, such as laptops, tablets, and mobile phones.

**Note:** This section describes how to upload images to individual collections. See [Manage Media for your Store](#) for information about using the media library, including information about uploading a ZIP file of images and other types of media that are automatically assigned to products and collections in your catalog.

Once you assign images to a collection, you can tag them to specify how they are displayed on your store via the Category Content widget. For example, an image tagged with Hero is displayed as the hero image on the category landing page. For more information about the Category Content widget, see [Design Your Store Layout](#).

To add an image to a collection:

1. On the **Catalog** page, navigate to the product to which you want to add images.
2. On the product's **Media** tab, click **Add Images** and select **Add New**.
3. Select an image to upload.  
You can upload only one image at a time. If you select a file with the same name as a file you already uploaded, the new file replaces the existing one.
4. Click **Save**.

To assign an image to a product from the media library:

1. On the **Catalog** page, open the product to which you want to add images.
2. On the product's **Media** tab, click **Add Images** and select **Media Library**.
3. Select images to assign to the product and click **Add**.  
For details about selecting, sorting, and searching for images in the media library, see [Manage Media for your Store](#).
4. Click **Save**.

To tag an image for display in the **Category Content** widget:

1. On the **Catalog** page, open the collection whose images you want to tag.
2. On the collection's **Media** tab, hover over the image and click the **Tag** icon.
3. Click the **Tags** field and select a tag value to assign to the image.  
You can select **Hero**, **Large**, **Medium**, **Small**, or **Thumbnail**.

You can assign the same tag to more than one image. For example, if you assign the **Hero** tag to several images for the same collection, the images are displayed in a carousel on the category landing page.

4. Click the check mark icon to save your tags.
5. Click **Save**.

## Configure catalogs with optional collections

You can link products directly to an independent catalog without adding them to any collections.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

By default, you add products to collections to organize your catalog into a hierarchy and provides a navigational framework for your store. You can also link products directly to a catalog, without adding them to any collections. Linking new products directly to a catalog can speed up catalog deployment, especially for large catalogs.

### Understand catalogs with optional collections

You can link products directly to independent catalogs; you cannot link products directly to legacy catalogs or to a filtered view of an independent catalog. (Catalogs with directly-linked products do support filtered views, however.)

You can create catalogs with all products directly linked, or you can create catalogs that include a mix of directly-linked products and products in collections. You can also add directly-linked products to collections, except in the default Product catalog that ships with Commerce; product linked directly to that catalog cannot be in any of its collections.

**Note:** If your environment uses a default collection for products, a product directly linked to the catalog will also be added to the default collection for products. See [Create default parent collections](#) for more information about setting a default collection for products.

On your storefront, shoppers can find directly-linked products by searching. Keep in mind, though, that by default, collections control catalog hierarchy and navigation. Therefore, shoppers cannot browse to products that are only directly-linked to a catalog unless you have created a custom menu/taxonomy structure with custom links. Storefronts that are driven entirely by search require this type of customization, for example.

### Understand the difference between optional collections and filtered views

A filtered catalog provides a filtered view of an existing independent catalog. Catalogs with directly-linked products do support filtered views, and while both features can speed up catalog creation and deployment, they address different merchant concerns.

- Filtered views let merchants scale to a larger number of catalogs with less work and provide flexibility for merchants who sell to a number of accounts or in a number of countries. Filtered catalogs provide central management of collections and taxonomies

and give merchants fine-grained control over the availability of products for each account or country while maintaining a single collection structure across catalogs.

- Directly linking products to catalogs lets merchants who have very large catalogs deploy more quickly because they do not have to manage collections and assign products to them. Directly linking products to catalogs is especially useful for merchants who want a purely search/facet driven storefront or those who manage their taxonomies externally and do not want to replicate this effort in Commerce.
- Filtered views and direct linking of products can be used together and can be especially useful for merchants who need to scale to a larger number of catalogs but who also manage taxonomies externally.

For more information about creating filtered views, see [Work with filtered catalogs](#).

### Find products directly linked to catalogs in the administration interface

You can quickly find products that are linked directly to catalogs by performing a rule-based search on the Catalog page in the administration interface.

To create the search rule, follow these steps:

1. On the **Catalog** page, click **Search Products** and then click the **Custom Search** icon next to the search text box.
2. Select a product type to use from the **Product Types** list, then click the **Create Rule** button. You can select only one product type per rule.
3. Select **Directly Linked Catalogs** from the drop-down list in the rule. You can select only one property per rule.
4. Select an operator that links the property to a value that you will specify in the next step. You can select **contains**, **does not contain**, **exists**, or **does not exist**.
5. If you selected the operator **contains** or **does not contain**, select a catalog to search. If you selected the operator **exists** or **does not exist**, you do not need to select a catalog.
6. Click **Search**.

For more information about searching for products, see [Find products in catalogs](#).

### Link products directly to a catalog

This section describes how to link a product directly to a catalog in the administration interface. To learn how to link products to a catalog by importing them, see [Import catalog items and inventory](#). To learn how to link products to a catalog with the REST API, see information about the `/ccadmin/v1/products` endpoints using the `directCatalogs` parameter in the REST API for Oracle Commerce documentation.

To link an existing product to a catalog:

1. On the **Catalog** page, navigate to the product you want to link. See [Find products in catalogs](#) for more information.
2. On the product's **Membership** tab, click the **Edit List** button under **Directly Linked Catalogs**.
3. Display available catalogs by typing or pasting some text in the search box. The filter control matches letters or numbers that you type, wherever they appear in the name or ID, not just at the beginning. Usually, as you type more characters, there are fewer matches. When you see the item you want, select it.

4. Select one or more catalogs and click **Add Selected**.
5. (Optional) to unlink the product from a catalog, remove a catalog from the **Selections** list.
  - To remove a single catalog, click the **x** at the end of a catalog's name.
  - To remove all catalogs from the list, click the **Clear List** button.
6. Click **Done** when you finish adding catalogs.

### Import and export products directly linked to catalogs

You can use the Import and Export features on the administration interface Catalog page to import and export products that are directly linked to catalogs. See [Import and Export Catalog Items and Inventory](#) for details about how to perform bulk import and export of products in Commerce.

The easiest way to format a file for importing related products for products is to start by exporting a file that you can use as a template for the items you want to add or modify. See [Export catalog items](#) for more information about how to export products.

When you look at the exported spreadsheet, you can see that the second row displays column headings that contain the internal names of the exported properties. The `directCatalogs` column includes catalog IDs for the catalogs that products are directly linked to.

Product data begins in the third row and continues for the remainder of the spreadsheet. If an item does not have a value for a property, the corresponding cell is blank. If the first row of the spreadsheet includes a catalog context in the sixth column (F1), for example, `CATALOG=movieCat`, the `directCatalogs` column can contain only the catalog ID specified in the in the header, otherwise, the data will not import successfully. If the spreadsheet does not include a catalog context, the `directCatalogs` column can contain any valid catalog ID from your Commerce instance. To directly assign a product to multiple catalogs, separate each ID with a comma.

See [Import catalog items and inventory](#) for more information about how to import your changes back into the catalog.

## Link and unlink collections and products

Linking a collection or product associates it with a parent.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Linking is useful when you want a product to appear in multiple collections or a collection to appear in multiple catalogs. Linked items have multiple parents, one parent for each location. When you make a change to the item in one location, that change is reflected in all locations.

For example, suppose your catalog contains a product called Gas Hibachi in the Outdoors collection and you want it to also appear in a seasonal Father's Day Gifts collection. You can simply link it to that collection.

You can link both products and collections to multiple parent collections. To link a collection to another catalog, add it to the catalog's Included Collections list. (See [Understand catalogs](#) for more information.)

This section includes the following topics:

- [Link and unlink products](#)

- [Link and unlink collections](#)

### Link and unlink products

You can link a product to one or more collections. Products appear in more than one catalog when they are linked to collections that are part of different catalogs.

If you unlink a product from all its parent collections, Commerce moves it to the Unassigned Products list.

To access all products in your environment, regardless of their parent collections or catalogs, click the All Products lists that appears above the collection hierarchy on the administration interface **Catalog** page. See [Find products in collections](#) for more information.

To link an existing product to a collection:

1. On the **Catalog** page, navigate to the collection where you want to link products.
2. Click the **New Product** button and select **Link Existing Products** from the menu that appears.
3. By default, Commerce lets you search for products in all catalogs. To search for products in a specific catalog, click the **Catalogs** button and select a catalog.
4. Select one or more products from the list. You can filter the list by typing or pasting some text in the **Products** box.  
The filter control matches letters or numbers that you type, wherever they appear in the name or ID, not just at the beginning. Usually, as you type more characters, there are fewer matches. When you see the item you want, select it.
5. Click **Add Selected**.
6. Click **Done** when you finish adding products.

To link products to multiple parent collections at the same time

1. On the **Catalog** page, navigate to the product you want to work with and open it.
2. On the product's **Membership** tab, click the **Edit** button.
3. By default, Commerce lets you search for collections in all catalogs. To search for products in a specific catalog, click the **Catalogs** button and select a catalog.
4. Select a collection from the list. You can filter the list by typing or pasting some text in the **Collections** box.  
The filter control matches letters or numbers that you type, wherever they appear in the name or ID, not just at the beginning. Usually, as you type more characters, there are fewer matches. When you see the item you want, select it.
5. Click **Add Selected**.
6. (Optional) to unlink the product from a collection, remove a collection from the Included **Collections** list.
  - To remove a single collection, click the **x** at the end of a collection's name.
  - To remove all collections from the list, click the **Remove All button**.
7. Click **Done** when you finish adding collections.

## Link and unlink collections

You can link a collection to one or more parent collections. If you unlink a collection from all its parent collections, Commerce moves it to the Unassigned Collections list. See [Work with independent catalogs](#) to learn how to link collections to catalogs.

To link a collection to a parent:

1. On the **Catalog** page, navigate to the collection you want to be the parent.
2. Right-click the collection in the tree and click **Link Existing Collection**.
3. By default, Commerce lets you search for collections in all catalogs. To search for products in a specific catalog, click the **Catalogs** button and select a catalog.
4. Select a collection from the list. You can filter the list by typing or pasting some text in the **Products** or **Collections** box.  
The filter control matches letters or numbers that you type, wherever they appear in the name or ID, not just at the beginning. Usually, as you type more characters, there are fewer matches. When you see the item you want, select it.
5. (Optional) By default, the collection you right-clicked is automatically selected as the parent collection, but you can change it by selecting a new collection from the **Select Parent Collection** list.
6. Click **Link**.

To unlink a collection from a parent:

1. On the **Catalog** page, navigate to the collection you want to unlink.
2. Right-click the collection in the tree and click **Unlink From Parent**.  
If you unlink a collection from its last parent, Commerce moves it to the **Unassigned Collections** list.

## Create default parent collections

A collection or product can be the child of more than one collection, in more than one catalog. Its default parent is the collection that determines its hierarchy in a catalog.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Linking products and collections to multiple catalogs provides a more flexible catalog strategy, but can complicate navigation. This is especially true if a shopper accesses a collection or product through a search engine rather than by traversing the catalog hierarchy.

A product or collection's `parentCategory` and `parentCategoryScope` properties allow you to specify a default parent collection for each catalog where a product or collection is linked. The value of `parentCategory` must be the `categoryId` of a collection that is one of the item's existing parents.

The scope of the parent setting, that is, where it should be applied, is specified by its `parentCategoryScope` property. You set both properties when you create or update a collection with the `createCollection` and `updateCollection` endpoints, or when you create or update a product with the `createProduct` and `updateProduct` endpoints.

The `parentCategoryScope` property can have one of the following values:

- `base` specifies that the `parentCategory` collection is the default parent in all catalogs where it is included. Use this scope when you want to specify the default parent collection that should apply wherever the collection or product is shared, unless it is overridden for a specific catalog.
- `catalogSpecific` specifies that the `parentCategory` collection is the default parent only for the catalog specified by `catalogId`. Use this scope for a product that should be available only in a specific catalog, for example, a product that can be sold only in a certain country. Setting a `catalogSpecific` value does not change the existing `base` value. If no `base` value is set, Commerce automatically sets the `base` value as the same value you set for `catalogSpecific`.
- `global` specifies the default parent category for a product or collection and applies it in every catalog where the item appears. The `global` scope resets the `base` scope value and removes all catalog context from the collection or product's default parent.
- `revertToBase` removes the `catalogSpecific` scope for the catalog in context for the product or collection and sets its default parent back to the `base` scope.

If no scope is specified in a PUT or POST request, and a catalog-specific value exists, the request uses that value. Otherwise, the request uses the `base` value.

### Set a default parent for a collection

This section contains Admin API examples that show how to set a default parent for a collection. To update a collection, issue a PUT request to the `/ccadmin/v1/collections/{id}` endpoint. To create a collection, issue a POST request to the `/ccadmin/v1/collections/{id}` endpoint.

The examples in this section are based on the following scenario:

A Commerce instance includes two sites, one for US shoppers and one for UK shoppers. Each site has its own catalog, `usCatalog` and `ukCatalog`, respectively. The `BigBrand` collection is linked to the following locations in both catalogs:

- UK-Catalog / StorefrontNav / New / BigBrand
- UK-Catalog / StorefrontNav / Brands / BigBrand
- US-Catalog / StorefrontNav / New / BigBrand
- US-Catalog / StorefrontNav / Tableware / Brands / BigBrand

The following example updates the default parent collection for `BigBrand` to `Brands`. This change affects both catalogs, since the `Brands` collection exists in both.

```
PUT /ccadmin/v1/collections/bigBrand
```

```
{
  "properties":{
    "parentCategoryScope": "base",
    "parentCategory" : "Brands"
  }
}
```

The following example updates the default parent collection for BigBrand to New in the US Catalog only. It does not affect BigBrand's default parent collection in the UK Catalog.

```
PUT /ccadmin/v1/collections/bigBrand

{
  "properties":{
    "catalogId": "usCatalog",
    "parentCategoryScope": "catalogSpecific",
    "parentCategory" : "New"
  }
}
```

The following example updates the default parent collection for BigBrand to Brands. This change affects both the US and UK catalogs, even if a catalog-specific default parent was previously set, as in the previous example.

```
PUT /ccadmin/v1/collections/bigBrand

{
  "properties":{
    "parentCategoryScope": "global",
    "parentCategory" : "Brands"
  }
}
```

The following example updates the default parent collection for BigBrand to New in the UK Catalog only. It does not affect BigBrand's default parent collection in the US Catalog.

```
PUT /ccadmin/v1/collections/bigBrand

{
  "properties":{
    "catalogId": "ukCatalog",
    "parentCategoryScope": "catalogSpecific",
    "parentCategory" : "New"
  }
}
```

The following example clears the catalog-specific parent setting from the previous example. The default parent collection for BigBrand in the UK Catalog is now set to Brands, which was set as the base value in the first example in this section. Note that the request includes a catalog context ("catalogId": "ukCatalog"). A catalog context is required to set the parentCategoryBase to revertToBase.

```
PUT /ccadmin/v1/collections/bigBrand

{
  "properties":{
    "catalogId": "ukCatalog",
    "parentCategoryScope": "revertToBase"
  }
}
```

```
    }
}
```

### Set a default parent for a product

This section contains Admin API examples that show how to set a default parent for a product with the `/ccadmin/v1/products` endpoints. To update a product, issue a PUT request to the `/ccadmin/v1/products/{id}` endpoint. To create a product, issue a POST request to the `/ccadmin/v1/products/{id}` endpoint.

The code examples in this section are based on the following scenario:

A Commerce instance includes two sites, one for US shoppers and one for UK shoppers. Each site has its own catalog, `usCatalog` and `ukCatalog`, respectively. A serving platter is linked to the following locations in both catalogs:

- UK-Catalog / StorefrontNav / New / Large Oval Platter
- UK-Catalog / StorefrontNav / Brands / BigBrand / Large Oval Platter
- US-Catalog / StorefrontNav / New / Large Oval Platter
- US-Catalog / StorefrontNav / Tableware / Large Oval Platter

The following example updates the default parent collection for the Large Oval Platter to New. This change affects both catalogs, since the New collection exists in both.

```
PUT /ccadmin/v1/products/prod_largeOvalPlatter

{
  "properties":{
    "parentCategoryScope": "base",
    "parentCategory" : "New"
  }
}
```

## Create custom properties for collections

Collections include a predefined set of properties that store information about collections you use to organize your catalog.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

In addition to these predefined properties, you can create custom collection properties. This section describes how to use the Commerce Admin REST APIs to add custom properties to collections. See [Use the REST APIs](#) for information you need to know before using the APIs.

### Understand item types

Item types are templates for Commerce assets, such as collections and promotions. They contain properties that describe the asset.

The `category` item type lets you work with the collections in a Commerce catalog. You can use the `updateItemType` endpoint to modify the `category` item type. You can modify existing properties by changing the values of their attributes and create custom

properties by specifying their attributes. See `Settable` attributes of shopper type properties for descriptions of these attributes. The next section provides an example of creating a custom property for collections.

### Create a custom collections property

To add custom properties to the `category` item type, issue a `PUT` request to the `/ccadmin/v1/itemTypes/category` endpoint on the administration server.

Use the following format:

- The request header must specify the `x-ccasset-language` value.
- The request body is a map where each key is the ID of a new property, and each value is an object that specifies the values of the attributes of the property.
- Each object is also a map, with each key being the name of an attribute and each value being the corresponding attribute value.

Note that the ID of a custom property must include the underscore character (`_`). This ensures that the ID will not conflict with any properties that Commerce adds to item types in the future. The endpoint returns an error if you attempt to create a custom property without an underscore in its ID.

Remember to publish the new property once it is successfully created. See [Publish Changes](#) for more information.

The following example shows a sample request for adding a custom text property to the `category` item type:

```
PUT /ccadmin/v1/itemTypes/category HTTP/1.1
Authorization: Bearer <access_token>
x-ccasset-language: en
Content-Type: application/json
```

```
{
  "specifications": [
    {
      "id": "_myNewProperty",
      "label": "My New Property",
      "type": "shortText",
      "required": false,
      "uiEditorType": "shortText",
      "uiwritable": "true",
      "localizable": false,
      "hidden": false,
      "propertySortPriority": "100"
    }
  ]
}
```

The response includes the property you created.

```
...
{
  "hidden": false,
  "length": 254,
  "label": "My New Property",
```

```

        "type": "shortText",
        "required": false,
        "searchable": false,
        "writable": true,
        "internalOnly": false,
        "uiEditorType": "shortText",
        "default": null,
        "audienceVisibility": null,
        "localizable": false,
        "textSearchable": false,
        "id": "_myNewProperty",
        "dimension": false,
        "propertySortPriority": "100",
        "editableAttributes": [
            "internalOnly",
            "default",
            "audienceVisibility",
            "hidden",
            "textSearchable",
            "label",
            "dimension",
            "propertySortPriority",
            "required",
            "searchable"
        ]
    }
    ...

```

When you add a custom property to the category item type, the property is added to all collections, including any new collections you create and any collections that already exist. It appears on the General tab of every collection's details page in the administration interface. Business users can view, add, and edit values for custom collection properties, just as they do for predefined properties. (See [Organize products in collections](#) for more information.) Custom collection properties themselves cannot be edited in the administration interface; you can perform these tasks only with the Admin API.

### Access custom collections properties

Storefront and Agent Console developers can access custom properties of the `category` item type with the following Store API and Agent API endpoints:

- `getCollection` returns a collection by ID.
- `listCollections` returns a list of collections by a list of IDs.
- `listItemTypes` returns information about item types by a list of IDs.
- `getItemType` returns information about an item type by ID.
- `getPage` returns a specific page. For category page responses, custom properties are also returned as part of the response.

Keep the following points in mind when accessing custom properties with Store or Agent endpoints:

- If a custom property is specified as internal only (by setting the attribute `internalOnly=true` when you create the property), it will not be returned by any Store endpoints.
- Custom properties appear at the top level of the response.
- Only `getCollection` returns custom properties for child collections. The request must include the parameter `expand=childCategories`. For example:

```
GET /ccstore/v1/collections/rootCategory?
catalogId=storefrontCatalog&maxLevel=1000&expand=childCategories&fields=ch
ildCategories%28items%29
```

- There is no view model support for custom properties of the `category item` type.

## Add metadata to products and collections

You can enter metadata search information including a title, keywords, and a description for each product and collection in your catalog.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The metadata is then tagged and retrieved as part of a search via a search engine and displayed in the results.

This section describes how to add metadata to products and collections. You can also add alt-text and titles to images assigned to products and collections. See [Add alt text and titles to images](#) for more information.

To enter metadata for a product or collection:

1. On the **Catalog** page, open the relevant product or collection for which you want to enter metadata search information.
2. Open the product or collection's **Metadata** tab. By default, the following properties are automatically assigned to metadata when a product or collection is created:
  - **Title Tag:** The Name of the product or collection.
  - **Meta Keywords:** The Name and Parent Collection of a product. The Name and Selected Parent of a collection.
  - **URL Slug:** The Name of the product or collection.
  - **Meta Description:** The Name and Description of the product or collection.
3. To change the current information you must check **Edit Manually** and enter the text within each box.  
To change back to the default alt text, check **Edit Manually** and click **Reset Default**.
4. Enter a **Title Tag**. This is normally the product or collection title.
5. Enter **Meta Keywords**. These are used by search engines to find the most relevant information when processing a search request. Search engines determine the relevance of a search request against these keywords.
6. Enter a **URL Slug**. This is a unique, URL-friendly version of the Name of the product or collection. A URL slug can contain only lowercase letters (a-z), numbers (1-9), and a limited number of special characters (- \_ % ~). Using a unique URL slug ensures that you

do not encounter storefront display issues, such as, 404 errors. See [Configure URL patterns](#) for more information

For example, for the product named Button Down Shirt, the URL slug could be `button_down_shirt`.

See [Understand canonical tags](#) for information on signaling the source, or original, URL of a page to search engines.

7. Enter **Meta Description**. This description can promote your site to search engine users.
8. Click **Save**.

## Display related products

Use a product's **Related Products** tab to select products to display in the Related Products widget on the Product layout and specify the order in which the related products appear.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Use the **Details** tab to configure how the products look in the widget, for example, whether names and prices are displayed for related products. For more information, see [Design Your Store Layout](#).

This section includes the following topics:

- [Add and organize related products](#)
- [Import and export related products](#)

### Add and organize related products

To select and organize related products:

1. On the **Catalog** page, navigate to the product to which you want to add related products.
2. On the product's **Related Products** tab, click **Manage Products**.
3. Select products to display.

To select products, begin by typing or pasting some text in the box. The list of products that appears matches letters or numbers that you type, wherever they appear in the asset name or ID, not just at the beginning.

**Note:** If you select inactive products, the Related Products widget will not display them. For more information about active and inactive products, see [Understand the base product type](#).

4. When you finish adding related products, click **Display Products**. The Related Products widget will display the products in the order they appear here. You can rearrange them by dragging them to new positions.
5. Click **Save**.

### Import and export related products

You can use the Oracle Commerce import process to import and export a product's fixed related products. See [Import and Export Catalog Items and Inventory](#) for details about how to import and export products in Oracle Commerce.

The easiest way to format a file for importing related products for products is to start by exporting a file that you can use as a template for the items you want to add or modify. See [Export catalog items](#) for more information about how to export.

When you look at the exported spreadsheet, you can see that the second row displays column headings that contain the internal names of the exported properties. The `fixedRelatedProducts` column includes product IDs for the products to display in the Related Products widget on the Product layout.

Product data begins in the third row and continues for the remainder of the spreadsheet. If an item does not have a value for a property, the corresponding cell is blank. When you import multiple related products, separate each ID with a comma. The order of the IDs in the spreadsheet controls the order of products displayed on the product details page.

See [Import catalog items and inventory](#) for more information about how to import your changes back into the catalog.

## Configure AI Recommendations Rules

Commerce lets you create complex recommendation strategies in the administration interface. You can manage these rules across widgets on different page layouts.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Product recommendations are generated by an AI-powered learning engine. Strategies and global exclusions work in harmony with this engine to provide granular control over the merchandising experience.

- Recommendation strategies are rules you build to customize the kinds of products that are recommended to shoppers.
- Global exclusions are rules you build to prevent certain products from ever being recommended to shoppers.

### Understand recommendations strategies

Commerce product recommendations are generated by an AI-powered learning engine. The engine analyzes each shopper's behavior in real time to recommend the most relevant products at every interaction.

Commerce provides a number of pre-defined strategies that let you restrict displayed recommendations, for example, to products the shopper has most recently viewed, or products that are most frequently bought by other shoppers who have also viewed a product that a shopper is currently viewing.

In addition to these pre-built strategies, Commerce lets you create your own strategies that provide customized guidance to the recommendations engine. You can use strategies to restrict the kinds of products that are recommended, creating a more curated experience for shoppers and providing the flexibility to tailor your recommendations plan to match your merchandising goals.

Each custom strategy is made up of one or more recommendation groups. A recommendation group is a set of conditions that are evaluated together to specify a group of product recommendations. If a strategy includes multiple recommendation groups, the Product Recommendations widget will display products returned by each recommendation group sequentially, that is, all products returned by the first recommendation group, followed by all products returned by the second recommendation group, and so on.

If a product is returned by multiple recommendation groups in a strategy, it appears only once in the Product Recommendations widget. The product's display position will be determined by the first recommendation group that returns it.

The following table describes each type of condition you can add to a recommendation group.

Condition type	Description
Brand	The value of the product's brand property in the context of the current product or products being viewed. If there are multiple products, such as the products in a cart or a wish list, products in any of the brands can be part of the condition.
Browsed Together	Returns recommended products based on the most frequently browsed products by other shoppers associated with the product the shopper is currently viewing.
Collection	<p>The condition returns products based on either the same collection or collections in the context of the current product or products being viewed, or only in collections you specify. If multiple collections are represented, products in any of the collections can be recommended. If there are no collections in context, no restrictions are placed on the recommendations.</p> <p>A product can be in one or more collections. For more information, see <a href="#">Organize products in collections</a>.</p>
Manually Related Products	Returns recommended products based on the products specified as related products for the current product or products being viewed. See <a href="#">Display related products</a> for more information about adding related products to a specific product.
Most Recently Viewed	Returns products the shopper has viewed. Recommended products are displayed starting from the most recently viewed. First-time shoppers on the site are offered no product recommendations.
Price	Lets you select a price range of products to recommend.
Price Type	Lets you select products from specific price list groups to recommend.
Purchased Together	Uses the context of the product the shopper is currently viewing. Recommended products are displayed based on the most frequently purchased products by other shoppers associated with the product the shopper is currently viewing.

Condition type	Description
Top Sellers	<p>Restricts recommendations to global top sellers. If the recommendation group contains other conditions, Top Sellers will be applied after all other rules.</p> <p>The algorithm for the Top Sellers strategy is based on products purchased. It generally considers the top ten percent of recently-purchased products from the product catalog to offer as recommendations. The strategy does not offer products in a sequential order of most purchased items and has no time restrictions as to when items were purchased. Top Sellers is designed to personalize items recommended to each unique shopper. While a particular product might sell more frequently than other products, that product may not be recommended based on a shopper's navigation of the site.</p>

### Understand product context

Product context lets you decide whether a condition for a recommendation group or exclusion rule should be dynamically inferred from the current page. The following procedure explains the steps Commerce goes through to provide context for recommendations conditions when the shopper is viewing pages on your store:

1. If the current page has a brand or collection, it is used for the context of Brand or Collection.
2. Otherwise, if the current page has a product, its brand, parent collections, co-browses, and co-buys are used as the context for Brand, Collections, Browsed Together, and Purchased Together conditions.
3. Otherwise, if there are current wish lists, the products in the wish lists are used to define the context as described in the previous step.
4. Otherwise, if an order has been placed in the current session, the products in the order are used to define the context as described in step 2. An order is defined as an item that has been purchased during the shopper's current session. The item could have been placed in the cart during a past session.
5. Otherwise, if the shopper has added products to their cart but not purchased them (either in this session or their most recent previous session), the products in the cart are used to define the context as described in step 2.
6. Otherwise, no context is found, so the current condition will not apply.

### Understand recommendations for account-based shoppers

Commerce lets you create accounts for companies that do business with you, such as manufacturers, distributors, and wholesalers. Each account represents a single organization and a unique customer. Shoppers who are associated with an account are called contacts.

The recommendations engine considers the behavior of all contacts who are members of an account when determining which recommendations to show an individual contact. (This also applies to recommendations strategies and exclusions you create.) While recommendations continue to be generated for an individual contact, Commerce also factors in key information

about other contacts within the same account. Shared account behavior ensures that buyers now see relevant recommendations based on interaction from all buyers across an account.

For example, suppose buyers within the same account are viewing and purchasing the same products. To enhance the quality of recommendations, the Commerce aggregates information about related purchases and customer behavior to optimize the quality and breadth of products that are recommended.

For more information about working with account-based stores and shoppers, see [Configure Business Accounts](#).

## Display recommendations

Once you have created and published custom recommendations strategies, you can customize the Product Recommendations Carousel widget to use specific strategies for different locations on your site. This helps you create more specialized product selections appropriate to each shopper's current context. When you customize the widgets settings on the Design page in the administration interface, you can select any custom strategies you published, along with the out-of-the-box strategies. For more information, see [Display product recommendations](#).

## Create recommendation strategies

To create a recommendation strategy, follow these steps:

1. On the Marketing page, click **Strategies** under **AI Recommendations**.
2. Click the **New Strategy** button.
3. Enter the name, ID, and optional description for the strategy.  
Strategy Display Name: A name for the strategy that will appear in the list of strategies in the administration interface. Each global strategy name must be unique. The name can be up to 50 characters long.  
  
Strategy ID: Commerce automatically creates a unique ID based on the display name you entered. You can change the ID while you are creating the strategy, but you cannot change it once the strategy is saved. An ID can contain only alphanumeric characters or numbers (a-z, A-Z, 0-9) and must be unique.  
  
Strategy Description: An optional description of the strategy that helps other users understand it. The description can be up to 1,000 characters long.
4. Define the strategy by adding recommendation groups. By default, a blank recommendation group is already visible and ready for you to add conditions.
5. Click the **Add Condition** button.
6. Select a value from the **Select a condition type** list. You can select only one type per condition. For details about each condition type, see the table earlier in this section.
7. If you selected Brand, Collection, Price, or Price Type, you must select an operator that links the property to a value that you will specify in the next step. The operators you see depend on the condition type you selected.
  - For Brand and Collection, you can select **is**, which matches the rule to the property you will select in the next step or **is same as context**, which matches the rule to .

- For Price you can select from several numeric operators that match the rule to prices or price ranges. For example, select **is less than** if you want the condition to return all products priced at less than \$50.
  - For Price Type you can select **is**, which matches the rule to a single price group, **is one of**, which matches the rule to more than one price group, or **is same as context**, which matches the rule to the shopper's current price group.
8. Select or enter a value for the condition property. For Collection and Price Type, Commerce displays a list for you to choose from. For Brand and Price, you must type in a value. The rule editor does not validate any text, numeric, or date values you type.
  9. To add another condition to the recommendation group, click the **Add Condition** button again and specify the details for the new condition.  
If a recommendation group contains more than one condition, it returns products that match all the conditions. Products that match only some of the conditions but not all, are not returned by the recommendation group.
  10. When you are finished adding conditions to the recommendation group, click **Save**.
  11. To add another recommendation group to the strategy, click **Add Recommendation Group**.
  12. When you are done adding recommendation groups, click **Save** to save the strategy.
  13. You must publish strategies in order for them to take effect on your production storefront, though once saved, they are immediately available for preview. See [Publish Changes](#) for more information.

### Recommendation strategies examples

You could use the AI Recommendations rule builder to create the following sample recommendations strategies.

- Suppose you want to create a dynamic cross-sell on the Product Detail Page that focuses on brand affinity. You could create a strategy with the following three recommendations groups. Set the maximum number of returned products in each group to four.
  - Group 1 includes two conditions: Brand is the same as context and Collection is not same as context.
  - Group 2 includes two conditions: Brand is the same as context and Purchased Together.
  - Group 3 includes two conditions: Brand is the same as context and Browsed Together.

This strategy recommends up to four products that have the same brand but belong to a different collection, followed by up to four products that are the same brand and frequently purchased together, followed by the remaining products that are browsed together (but not necessarily purchased together).

- Suppose you want to recommend an outfit when the shopper is viewing any apparel item. A custom recommendations strategy can dynamically generate an outfit recommendation that automatically promotes products from complementary collections. You could create a strategy with the following four recommendations groups. Set the maximum number of returned products in each group to one.
  - Group 1 includes two conditions: Collection is Men's Tops and Collection is not same as context.

- Group 2 includes two conditions: Collection is Men's Pants and Collection is not same as context, Number of Products = 1.
- Group 3 includes two conditions: Collection is Men's Shoes and Collection is not same as context.
- Group 4 includes two conditions: Collection is Men's Belts and Collection is not same as context.

To display these recommendations, create a custom Product Details layout where you define the Product Type as Men's Apparel and Men's Footwear and place the Recommendations widget on the layout. Customize the widget to use this custom strategy by selecting it from the Strategy dropdown on the widget's settings.

Now, when the shopper is on any men's apparel or footwear product details page, they will see recommendations from the complementary collections.

### Create global exclusions

Global exclusion rules let you exclude certain products from all recommendations results, ensuring they are never recommended to shoppers. You can exclude products from recommendations based on their brand, parent collections, price range, or price type. Once you publish a global exclusion, it automatically takes affect on your site.

To select products to exclude from recommendations follow these steps:

1. On the Marketing page, click **Global Exclusions** under **AI Recommendations**.

2. Click the **New Global Exclusion** button.

3. Enter the name, ID, and optional description for the rule.

Global Exclusion Display Name: A name for the rule that will appear in the list of global exclusions in the administration interface. Each global exclusion rule name must be unique. The name can be up to 50 characters long.

Global Exclusion ID: Commerce automatically creates a unique ID for the rule based on the display name you entered. You can change the ID while you are creating the rule, but you cannot change it once the rule is saved. An ID can contain only alphanumeric characters or numbers (a-z, A-Z, 0-9) and must be unique.

Global Exclusion Description: An optional description of the rule that helps other users understand it. The description can be up to 1,000 characters long.

4. Define the exclusion rule.

Select a type of property to use from the **Select a condition type** list. You can select only one type per rule:

- Brand lets you select from all the manufacturer values assigned to products in your catalog. For more information about the Brand property, see [Create and edit product types](#).
- Collection lets you select a collection whose products you want to exclude. You can select a collection from across all catalogs or from a specific catalog.
- Price lets you select a price range of products to exclude.
- Price Type lets you exclude products from specific price list groups.

Select an operator that links the property to a value that you will specify in the next step. The operators you see depend on the condition type you selected.

- For Brand and Collection, you can select **is**, which matches the rule to the property you will select in the next step or **is same as context**, which matches

the rule to whatever product the shopper is currently viewing, as well as any products in the shopper's cart or wish lists.

- For Price you can select from several numeric operators that match the rule to prices or price ranges. For example, select **is less than** if you want to exclude all products priced at less than \$50 from recommendations.
  - For Price Type you can select **is**, which matches the rule to a single price group, **is one of**, which matches the rule to more than one price group, or **is same as context**, which matches the rule to the shopper's current price group.
5. Select or enter a value for the condition property. For Collection and Price Type, Commerce displays a list for you to choose from. For Brand and Price, you must type in a value. The rule editor does not validate any text, numeric, or date values you type.
  6. Click the **Create** button when you are finished with rule.
  7. You must publish strategies in order for them to take effect on your production storefront, though once saved, they are immediately available for preview. See [Publish Changes](#) for more information.

### Global exclusion examples

You could use the AI Recommendations rule builder to create the following global exclusions.

- Never recommend anything from the brand MySample.  
In the Global Exclusion Definition, select **Brand** as the condition, select **is** as the operator, then **MySample** in the text box.
- Never recommend anything in the Health and Wellness collection.  
In the Global Exclusion Definition, select **Collection** as the condition, select **is** as the operator, and then select **Health and Wellness** (including catalog context) from the **Collection** dropdown list.
- Never recommend products that cost less than \$25.  
In the Global Exclusion Definition, select **Price** as the condition, select **less than** as the operator, and then enter **25** in the text box.
- Never recommend products that are on sale.  
In the Global Exclusion Definition, select **Price Type** as the condition, select **is** as the operator, and then select **Sale Price** from the dropdown list.

## Display product recommendations

Commerce includes a Product Recommendations widget you can use to provide automated, personalized product recommendations to each shopper. The widget can be placed in any layout, and the same widget instance can be shared over as many pages as necessary to provide recommendations to your shoppers.



*This section applies to Storefront Classic only.*

Commerce lets you create complex recommendation strategies and global exclusions in the administration interface. Product recommendations are generated by an AI-powered learning engine. Strategies and global exclusions work in harmony with this engine to provide granular control over the merchandising experience. To learn how to create strategies that you can use with the Product Recommendations widget, see [Configure AI Recommendations Rules](#).

**Note:** For information on including recommendations in emails your store sends, see [Customize Email Templates](#).

To display product recommendations:

1. Click the **Design** icon.
2. From the **Layout** menu, select the layout in which you want to provide product recommendations.
3. Clone the layout to preserve the original layout for future use as a template. For more information, see [Design Your Store Layout](#).
4. Open the layout in grid view. Create any new rows as needed to accommodate the widget.
5. From **Components**, drag and drop the **Product Recommendations** widget into the layout in the location you want the recommendations to appear. You can create a new widget instance or use an existing instance.
6. Making changes to widget settings is optional. Either accept the widget default settings or click the Settings icon located on the widget instance to edit the widget settings.
  - Setting changes to **Recommendations Title** affects font styles and display text for the widget. For information on changing the font, see [Customize Your Store's Design Theme](#).
  - The **Recommendations** carousel is where the recommendations are displayed, affected by the number of recommendations to show, the strategy, and the restriction. Additional conditions may affect the appearance of the carousel. For example, a smart phone screen may display fewer recommended products by virtue of its available screen size.
7. On the widget settings dialog, click Settings to make changes to maximum number of product recommendations, strategies, restrictions, and collection(s). Changes to widget settings are optional.
  - Enter the maximum number of recommendations to appear in the widget instance. The default is 12.

While the default is 12, the number of recommendations displayed to your shoppers is based on strategies and restrictions as well as your catalog configuration. Screen width also influences the number of recommendations displayed in the widget instance at one time.

As a best practice, choose a number of recommendations so that all recommendations can be viewed in the carousel with one or two clicks of the **Next** button.

- Select the strategy, restriction, or collection(s) associated with the displayed recommendations. For details about built-in and custom strategies, see [Configure AI Recommendations Rules](#)
- Click **Save**.

The following table describes the restrictions you can apply to displayed recommendations:

### Manage personal data in product recommendations

The Product Recommendations widget collects personal data as defined by the EU General Data Protection Regulation (GDPR). However, if you have configured your site to request cookie consent, and the shopper has declined to provide that consent, the widget does not capture or use personal data for the visit. Specifically, the Product Recommendations widget checks for the existence of the

GDPRCookieP13nConsentGranted cookie. If the cookie is not present on the shopper's browser, personal data is not collected. Cross-session recommendations are not available for the shopper, and the Most Recently Viewed strategy is not maintained for him or her. The shopper is thus treated as a new, unknown shopper for each session.

For detailed information on how to configure your site to request consent, refer to [Manage the Use of Personal Data](#).

## Add images to products

Use a product's Media tab to upload and arrange product images that will appear on your store.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You can upload JPG, BMP, PNG, and GIF files. Commerce automatically sizes your images for display on different devices, such as laptops, tablets, and mobile phones.

**Note:** This section describes how to upload images to individual products. See [Manage Media for Your Store](#) for information about using the media library, including information about uploading a ZIP file of images and other types of media that are automatically assigned to products and collections in your catalog.

This section includes the following topics:

- [Add and assign images](#)
- [Manage images for variant values](#)
- [Add alt text and titles to images](#)
- [Reorder images](#)
- [Remove images](#)

### Add and assign images

If you upload multiple images, the first image displayed on the **Media** tab is used as the primary image for the product. To see how images will be displayed on your store, go to the **Design** page and select the **Product** layout. For more information about layouts, see [Design Your Store Layout](#).

To add an image to a product:

1. On the **Catalog** page, navigate to the product to which you want to add images.
2. On the product's **Media** tab, click **Add Images** and select **Upload New**.
3. Select an image to upload.  
You can upload only one image at a time. If you select a file with the same name as a file you already uploaded, the new file replaces the existing one.
4. Click **Save**.

To assign an image to a product from the media library:

1. On the **Catalog** page, open the product to which you want to add images.
2. On the product's **Media** tab, click **Add Images** and select **Media Library**.
3. Select images to assign to the product and click **Add**.

For details about selecting, sorting, and searching for images in the media library, see [Manage Media for Your Store](#).

4. Click **Save**.

### Manage images for variant values

If you specified that product images should be displayed at the variant property value level, you can assign a separate main image to the product for each value. For example, you can assign a separate image to each color.

To manage images for variant values:

1. On the **Catalog** page, navigate to the product whose images you want to manage.
2. On the product's **Media** tab, select a variant value from the drop down list. By default, **Always Shown** is selected. This means that the same image is displayed for each of the values.

**Note:** If you uploaded a ZIP file of images that were automatically assigned to the product, those images are assigned to Always Shown. See [Automatically assign images to products and collections](#) for more information.

3. To add an image for the selected value, click **Add Images** and select either **Upload New** or **Media Library**.
4. Select an image to upload or assign.  
You can assign more than one image to each value.
5. Repeat steps 2 through 4 for each value that requires images.
6. Click **Save**.

### Add alt text and titles to images

Alt text and titles provide descriptions of images assigned to products and collections.

- Search engines index alt text and use it to return images for user queries. Alt text is also used when shoppers cannot view images on the web. For example, a blind shopper's screen reader reads an image's alt text when it reaches the image on a category page on your store.
- A title is used as a tooltip, or hover text, when a shopper points to the image.

By default, Oracle Commerce uses a product or collection's name for both the alt text and title text for all images assigned to that product or collection. You can edit the default alt text and title text on the product or collection's Media tab.

**Note:** You can also add keywords, titles, and descriptions to products and collections. See [Add metadata to products and collections](#) for more information.

To edit an image's alt text and title:

1. On the **Catalog** page, open the product or collection whose image you want to edit. Click the **Media** tab.
2. Hover over the image and click the **Edit** current image icon when it appears. A new screen displays containing the image properties.
3. To change the current Alt Text you must check **Edit Manually** and enter the new text in the text box.  
To change back to the default alt text, check **Edit Manually** and click **Reset Default**.

4. To change the current Title you must check **Edit Manually** and enter the new one in the text box.  
To change back to the default title, check **Edit Manually** and click **Reset Default**.
5. Click **Save**.

### Reorder images

The first image displayed on a product's **Media** tab is used as the primary image for the product on your store. The remaining images are displayed on the product details page in the order they appear on the **Media** tab.

To reorder images:

1. On the **Catalog** page, open the product whose images you want to reorder. Click the **Media** tab.
2. To make an image the primary image for the product, do either of the following:
  - Drag the image to beginning of the list.
  - Hover over the image and click the star icon when it appears.

### Remove images

When you remove an image from a product, you cannot access it again with the Commerce tools. If you remove the primary image, the next image on the **Media** tab becomes the primary image. If you remove all images from a product, a placeholder is displayed on your store.

To remove an image from a product:

1. On the **Catalog** page, navigate to the product whose images you want to remove.
2. On the product's **Media** tab, select an image click the **X** icon when it appears.  
**Tip:** To remove multiple images, select all the images you want to remove and then click the **X** icon on any of them.
3. Confirm that you want to remove the selected images.

## Create gift cards

This section describes how to add gift cards to your catalog.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You create a gift card just as you do any other product in your catalog. This release of Commerce does not support electronic gift cards. You can sell only physical gift cards that are shipped to shoppers. See *Integrate with a Gift Card Payment Gateway* for information about integrating with a gift card payment provider to enable shoppers to use gift cards to make purchases on your store.

To add gift cards to your catalog:

1. (Optional) Create a collection for gift cards. You can also add your gift cards to any existing collection in your catalog.
2. If your store sells different styles of gift cards, create a new product type for gift cards. You will use the product type to add variant properties for the different types of cards or

envelopes you want to offer. For example, the variant property **Card Style** could have the values **Classic**, **Happy Birthday**, and **Congratulations**. If your store sells only one style of gift card, you do not have to create a product type. Simply use the base product type.

For more information, see [Create and edit product types](#).

3. Create a new product with the **Gift Card** or base product type. The **List Price** property specifies the gift card's denomination. You must create a separate product for each denomination. For example, if your store sells gift cards in \$25, \$50, \$75, and \$100 denominations, you must create four gift card products. For more information, see [Create and work with products](#).
4. Create SKUs for each gift card. For more information, see [Create and work with SKUs](#).
5. Add images for the gift cards. For more information, see [Add images to products](#).
6. (Optional) If your store uses a branded name for your gift cards, you can replace the phrase "gift card" with that name in places like your checkout page. For more information, see [Customize your web store's text](#).

## Manage inventory

By default, Commerce maintains one set of inventory values for each SKU.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This section describes how to view and update the inventory and stock threshold for each product and SKU in your catalogs. Additionally, you can use the Commerce Admin API to perform the following inventory tasks:

- Manage preorder and backorder counts and thresholds. See [Manage Inventory for Preorders and Backorders](#) for more information.
- Maintain inventory for specific locations, such as stores and warehouses. See [Manage Multiple Inventory Locations](#) for more information.

**Important:** The inventory list includes both published and unpublished products. You do not have to publish inventory changes. Changes you make to inventory for published products are immediately visible on your store. Changes you make to inventory for new (unpublished) products will appear on your store with the rest of the product information the next time you publish changes.

To add or update inventory:

1. On the **Catalog** page, click **Manage Catalogs**, then select **Inventory**. The Inventory page is empty until you search for products or SKUs.
2. In the search box, type or paste full or partial product names, SKU IDs, or both.
  - Separate multiple entries with commas.
  - You can mix names and IDs in the same search.
  - The search will not start if you enter just a comma, even if your catalog includes products whose names include commas.
  - There is a limit of 1000 characters and 200 search terms, whichever comes first. If there are more than 200 search terms, all terms past 200 are ignored. If there are duplicate IDs, any ID past the first is ignored.

Commerce displays the following inventory details for each product or SKU:

- **Inventory count:** The number of items that are physically in stock.
  - **Stock threshold:** A value you specify that indicates when an item should display as out-of-stock on your storefront. An item is considered out-of-stock when the inventory count is less than or equal to the stock threshold value.
  - **Status:** Icons that specify if a SKU or product is out-of-stock or if a product includes some SKUs that are out-of-stock.
3. Double-click the SKU's inventory count and enter a new value. You must enter an integer. Press Enter to save the new value and move to the inventory count of the next SKU in the list. You can also click somewhere else on the page to save the new value without moving to the next SKU.
  4. (Optional) Double-click the SKU's stock threshold and enter a new value. You must enter an integer. Press Enter to save the new value and move to the stock threshold of the next SKU in the list. You can also click somewhere else on the page to save the new value without moving to the next SKU.

**Note:** You can quickly make a number of inventory changes at once by importing them. For more information, see [Import and Export Catalog Items and Inventory](#).

### Customize inventory status messaging

You can view and update the inventory status message that displays to your shoppers. The messaging displayed to shoppers is configurable , as follows:

1. Open the **Design** page and click the **Layout** tab.
2. Open the **Product** layout and click the **Grid View** option.
3. Locate the **Product Details** widget and open the **Settings** icon, visible on the top right corner of each widget.
4. Click the **Layout** option to display the elements and select **Inventory Status**. You can now see the **Product Details** widget inventory status tabs, allowing you to customize the messaging displayed for each of the different statuses:
  - In Stock
  - Out of Stock
  - PreOrder
  - BackOrder
5. Add your message to the relevant inventory status.
6. Customize the message settings, and preview.
7. Click **Done** to save your configurations, and **Save** to exit the widget settings.

## Preview your changes

Before you publish any changes, preview them so you can see how they will appear on your live store.



*This section applies to Storefront Classic only.*

Nothing you do in a preview session affects your production storefront.

To launch a preview session at any time, click the **Preview** button. The preview session launches in a new browser tab or window. If your instance supports more than one store, select the store to preview from the drop-down list at the top of the preview window. To end the preview session, simply close that tab or window.

You can apply the following settings to a preview session:

- Audience shows how the store looks to specific groups of shoppers.
- Account shows how an account-based store looks to shoppers associated with a specific account.
- Date shows how the store looks at a specified future date and time.
- Viewport shows how the store's pages look on different devices, such as desktops and mobile phones.

### Preview a store by audience

Audiences help you target content to certain groups of shoppers. Previewing a store as a member of an audience shows how the store looks to a shopper who is a member of the audience. See [Define Audiences](#) to learn how to create and use audiences.

To preview a store as the member of an audience:

1. Click the **Preview** button to launch a new preview session in a new tab or window.
2. Click the **Site Preview Settings** icon.
3. On the **Display** tab, click the **Audience** box and select an audience from the list. You can filter the list by typing or pasting some text in the **Audience** box.
4. You can add more than one audience, but you can select only one at a time.
5. Click **Apply**.

If you select a disabled audience, Commerce treats it as enabled during the preview session.

If you select more than one audience, Commerce displays the content based on the priority of each audience assigned to a content variation slot. See [Customize slots](#) for more information.

### Preview a store by viewport

Previewing a store by viewport lets you see how the store's pages look on different devices, such as mobile phones, tablets, and laptops.

To preview a store by viewport:

1. Click the **Preview** button to launch a new preview session in a new tab or window.
2. Click the **Site Preview Settings** icon.
3. On the **Display** tab, select a viewport breakpoint to preview.
  - XS (extra small resolutions)
  - SM: (small resolutions)
  - MD: (medium resolutions)
  - LG: (large resolutions)
4. Click **Apply**.

### Preview a store by date and time

Previewing a store by date and time lets you see how the store's pages look if your changes were published at a future date and time. The date and time filter allow you to view the following types of content:

- Promotions and promotional content scheduled for a future date and time.
- Widgets configured in slots against a future date and time.

Commerce evaluates preview dates and times based on the date and time on the server.

To preview a store by date and time:

1. Click the **Preview** button to launch a new preview session in a new tab or window.
2. Click the **Site Preview Settings** icon.
3. In the **Date** field, click the calendar icon and select a date. Click the clock icon to set the hour, minute, and AM/PM portions of the time. .
4. Click **Apply**.

# 8

## Manage SEO

Search Engine Optimization (SEO) is a term used to describe a variety of techniques for making your store's pages more accessible to web spiders (also known as web crawlers or robots) used by Internet search engines to crawl the Web to gather pages for indexing.

The goal of SEO is to increase the ranking of the indexed pages in search results, and to make sure shoppers view the pages you want them to see when they search. The topics in this section describe several SEO techniques and the built-in tools that Commerce provides for implementing them.

### Configure URL patterns

In Commerce, you can customize the URL structure of your store's Collection and Product pages so they mirror your SEO strategies.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This section includes the following topics:

- [Plan URL patterns](#)
- [Understand default URL patterns](#)
- [Customize URL patterns](#)

#### Plan URL patterns

Keep the following points in mind as you plan your URL patterns:

- It is best to customize URL patterns when you are planning and testing your store. If you change a URL pattern on your production storefront, you must specify a URL redirect for that pattern. Otherwise, older bookmarked URLs will display an error page instead of the pages you intended.
- Each URL pattern must be a valid URL for the page type (Collection or Product) and must contain only components that are valid for the page type. For example, if you include the variable {brand} in the Collection pattern, you will not be able to save your changes because brand is not a collection property.
- Each URL pattern uniquely identifies each product and collection via id numbers, or, you can use the URL slug to enter descriptive terms. For example, `/product/{=seoUrlSlugDerived}`
  - descriptive URLs for categories may not be required as, by definition, categories should already have distinctive unique names.
  - descriptive URLs for products may be necessary as products can have similar names (slugs) and could, therefore, benefit store maintenance.
- Each URL pattern can contain up to 254 characters and cannot contain spaces or special characters except – (dash).

- It is best to plan URL patterns bearing in mind that each URL must be unique. This is necessary in order to avoid storefront display issues, such as, 404 errors, or the wrong collection being displayed.

Keep the following points in mind as you plan your URL patterns and your Commerce instance supports more than one language:

- Commerce automatically creates URL patterns for each supported language. Commerce uses your catalog translations for the variables values, but you must manually translate any words that are not variables. For example, in the default product page URL pattern, you must manually translate the word product. For more information, see [Localize Your Store](#).
- Although it is possible to configure a different product and collection page URL pattern for each language supported by your site, it is recommended to maintain URL pattern consistency between each language. This allows you to translate any fixed parts you may have in your URL patterns for each language.
- There is a language prefix (a language subdirectory) that is automatically included for each additional language supported by your site. This subdirectory is not included in the default language URL structure for a multi-lingual site. For example, if you support 3 languages for your site: English, Spanish, and French, with English being the default language, your URL structures will be as follows:

English URLs: `www.example.com/my-url-patterns`

Spanish URLs: `www.example.com/es/my-url-patterns`

French URLs: `www.example.com/fr/my-url-patterns`

### Understand default URL patterns

By default, Commerce uses the following URL patterns for Category and Product pages:

- **Collection page:** `/ {seoTitleDerived} /category/ {id}` For example, `/cameras-and-camcorders/category/cameracat`.
- **Product page:** `/ {seoTitleDerived} /product/ {id}` For example, `/striped-button-down/product/prod10001`.

### Understand URL slug patterns

Clicking the **Build URL Slugs** button generates a URL mapping table, allowing the slug value to be used as a unique url pattern identifier instead of the `{id}` property.

This enables you to define the URL patterns with a descriptive slug value, prefixed with `'='`. The `'='` symbol is used with the `seoUrlSlugDerived` pattern only and ensures that the specified products and collections are returned from the server, as highlighted below:

- **Collection page:** `/category/ {=seoUrlSlugDerived}`, for example `/category/cameras-and-camcorders`.
- **Product page:** `/product/ {=seoUrlSlugDerived}`, for example, `/product/samsung-f90bn-hd-flash-memory-camcorder`.

### Customize URL patterns

To customize URL patterns for your store:

1. Click the **Settings** icon.
2. Select **Setup** and then click the URL Patterns tab.
3. If your Commerce instance runs multiple sites, pick a site to configure from the list at the top of the settings list. See [Run Multiple Stores from One Commerce Instance](#) for more information.
4. Click the **Collection Page URL**.
5. Type the new pattern and click the **Save** icon when you are done. **Note:** URL slug values must be unique, if not, a warning message is displayed indicating that this must be the case.  
Variables must be inside {} (curly braces, for example, {id} or {seoTitleDerived}). For a list of variables for Collection Page URLs and Product Page URLs, see the tables that follow this procedure.
6. (Optional) Check the **Auto Redirect** box so that shoppers who have bookmarked older URLs are automatically redirected to the new URL. **Auto Redirect** is selected by default and will only redirect from the default URLs, not from previous patterns.
7. If you want to use URL slugs rather than IDs in your URLs, you will need to click the **Build URL Slugs** button.
8. (Optional) You can simplify your URL slugs by clicking the **Build URL Slugs** button. You will notice that the most recent date and time the URL slug table was built is displayed. Simplifying URL slugs removes any special characters, replaces spaces with hyphens, and simplifies into lowercase. Once the simplified URL slugs have been built, you will need to manually update the URL pattern to use the new URL slug. For example, "/product/{=seoUrlSlugDerived}". **Note:** If a warning displays informing you that URL slugs are not unique, then a uniqueness check can be performed in order to fix this issue. See [Perform uniqueness checks for URL patterns](#) for details.
9. Click the **Product Page URL** and repeat steps 4 – 6 to update the URL pattern for the product page.
10. Check if the URL pattern was changed by clicking through your store. You may also wish to check that redirected URLs work correctly.

The following table describes the available properties for Collection Page URL patterns. Each property displays the value of the corresponding collection property. For more information about collection properties, see [Organize products in collections](#).

Collection Page URL Variable	Description
displayName	The collection's Name property. (A short, descriptive name that identifies the collection.)
Id	The collection's ID property. (The ID that identifies the collection internally.)
Description*	The collection's Description property. (A short description to display with the collection.)
parentCategory	The display name of the collection's current parent.
seoDescriptionDerived*	The collection's Meta Description property. See <a href="#">Add metadata to products and collections</a> for more information.
seoTitleDerived*	The collection's Title Tag property. See <a href="#">Add metadata to products and collections</a> for more information.

Collection Page URL Variable	Description
seoUrlSlugDerived	The collection's URL Slug property. See <a href="#">Add metadata to products and collections</a> for more information.

\* These variables should not be used as queryable elements in URL patterns (that is, they are not included in Build URL Slugs).

The following table describes the available properties for Product Page URL patterns. Each variable displays the value of the corresponding product property. For more information about product properties, see [Understand the base product type](#).

Product Page URL Variable	Description
displayName	The product's Name property. (A short, descriptive name that identifies the product.)
Id	The product's ID property. (The ID that identifies the product internally.)
Description*	The product's Description property. (A short description to display with the product.)
parentCategory	The display name of the product's current parent collection.
Brand	The name of the manufacturer.
Type	The product type. If the product was created with the Base product type, this value is not displayed. See <a href="#">Create and edit product types</a> for more information.
seoDescriptionDerived*	The product's Meta Description property. See <a href="#">Add metadata to products and collections</a> for more information.
seoTitleDerived*	The product's Title Tag property. See <a href="#">Add metadata to products and collections</a> for more information.
seoUrlSlugDerived	The product's URL Slug property. See <a href="#">Add metadata to products and collections</a> for more information.

\* These variables should not be used as the elements in URL patterns.

### Perform uniqueness checks for URL patterns

The uniqueness of URL patterns plays a significant role in ensuring your site does not encounter storefront display issues, such as 404 errors or the wrong collection being displayed. Therefore, you must ensure the URL patterns used produce unique URLs for each product and category.

It is worth noting that the uniqueness check for URL patterns is required only when you have clicked the **Build URL Slugs** button and you are using {=seoUrlSlugDerived} in your URL pattern.

You can use the Catalog export file to check that categories and/or products do not have a shared URL slug value. To do so:

1. Go to **Catalog** and click the **Export** button to export the **Catalog** data.

2. Select the item you wish to export and click **Export**. This exports the data in the form of an Excel spreadsheet.
3. Open the Excel data.
4. Scroll to the `seoUrlslugs` column and sort alphabetically.  
The `seoUrlslugs` column may not contain any data; this happens only when URL slugs have already been built.
5. Identify instances that are identical, and do one of the following:  
Either
6. Edit the values for the duplicated `seoUrlslugs` within Excel, and click Save. You must then click Import, choose the edited file, and click Upload File. Click the Validate button to confirm.  
Or
7. On the **Catalog** page, open the product with the duplicated URL and go to the Metadata tab. To change the current information, check Edit Manually and enter the text within each box. You can change back to the default alt text by checking Edit Manually and clicking Reset Default.
8. Click **Save**.

**Note:** The uniqueness check procedure is automatically performed when the **Build URL** button is clicked, producing a list of duplicates via the API response. However, you can continue to perform the above procedure as required.

## Customize SEO tags

Commerce provides the option to modify meta tag patterns, or customize the meta tags on any static page. Meta tags are placed within the code of your web store pages and provide additional information to the search engine. They control how, and suggest what, results get displayed in the search results.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Web search engines partly base their rankings of pages on the words that appear in certain HTML tags, particularly `<meta>` tags and the `<title>` tag.

A common SEO technique is to list key search terms in those tags in order to raise the ranking of the pages for those terms. While you should avoid “keyword stuffing” – that is, overloading tags with content and keywords that are not helpful for shoppers, especially keywords that have nothing to do with the content of your store – you can customize these tags.

This section includes the following topics:

- [Tag store pages](#)
- [Customize URL slugs](#)
- [Tag metadata for images](#)
- [Add Open Graph tags to product and wish list pages](#)

### Tag store pages

Meta title and meta description optimization play a vital role in SEO as both elements are displayed in the search results. The meta title tag is taken into consideration in the ranking

process. The meta description is used by Google in Search Engine Results Pages (SERPs) snippets, and may encourage users to click on your page, thereby potentially impacting your click-through rate.

Commerce automatically adds `<title>`, `<meta name="keywords">`, and `<meta name="description">` tags to the headers of several types of pages on your store.

For each product and collection page in your store, Commerce sets the default values of SEO tags to the following:

- `<title>` tag: The value of the Name property of the product or collection.
- `<meta name="keywords">` tag: The values of the Name and Parent Collection properties of a product. The values of the Name and Selected Parent properties of a collection.
- `<meta name="description">` tag: The values of the Name and Description properties of the product or collection.

You can customize the metadata for these tags when you edit a product or collection on the Catalog page in the administration interface. To learn how to customize the metadata that Commerce automatically turns into tags, see [Add metadata to products and collections](#).

For content pages, such as the home page and article pages on your store, Commerce sets the default values of SEO tags to the following:

- `<title>` tag: The value of the Site Name property.
- `<meta name="keywords">` tag: By default, there is no metadata in this tag.
- `<meta name="description">` tag: By default, there is no metadata in this tag.

You can customize the metadata for these tags when you edit a layout on the Design page in the administration interface.

### Customize URL slugs

A URL slug is the SEO-friendly, human-readable part of product and collection page URLs. Commerce automatically creates a URL slug for each product and collection page that is set to the value of the Name property for the product or collection.

You can customize the URL slug when you edit a product or collection on the Catalog page in the administration interface. For example, you could edit the slug to exclude special characters that can cause problems for robots that index your pages, and re-test to see if the problems reoccur. To learn how to customize a URL slug, see [Add metadata to products and collections](#).

### Tag metadata for images

An alt attribute attached to an image file helps search engines understand what the image shows, and rank it in the image search. Images can deliver a significant part of site traffic so it is worthwhile to use descriptive:

- file names - rename the file before uploading to the Commerce, for example, red-bag.jpg is better than 3847539.jpg.
- alt attribute - a few words describing what the image presents. Alts and title attributes can be customized via a bulk CSV upload.

Commerce automatically adds alt text and title attributes to the `<img>` tag for each image on a product or collection page on your store.

- Search engines index alt text and use it to return images for user queries. Alt text is also used when shoppers cannot view images on the web. For example, a blind shopper's screen reader reads an image's alt text when it reaches the image on a category page on your store.
- A title is used as a tooltip, or hover text, when a shopper points to the image.

By default, both attributes are set to the value of the Name property for the product or collection. You can customize the alt text and title when you edit a product or collection on the Catalog page in the administration interface. See [Add alt text and titles to images](#) for more information.

### Add Open Graph tags to product and wish list pages

The Product Social Meta Tags widget automatically adds Open Graph (OG) protocol meta tags to product pages to control the content displayed when a page is shared on Facebook. To learn how to customize the Product Social Meta Tags widget, see [Share using email, Facebook, Pinterest, or Twitter](#) and [Product Social Meta Tags](#).

You can add custom tags to the header of any page by creating them in the Additional Meta Tags section of the page layout. To learn how to customize metadata for page tags, see [Design Your Store Layout](#).

## Manage SEO content

Commerce enables you to manage the SEO content within your store by providing configurable title and meta descriptions, headings, category and product descriptions, accessible content, and product variants.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

### Generate title/meta description

Commerce provides auto generated title and meta descriptions for the display name, brand name, and body content of your store. You can configure patterns based on default or custom fields for each page type, with each static page displaying a preview of how your page snippet will look in search results.

Duplication of SEO tags, where the same title or meta tag value is propagated across pages of a given type, should be avoided. It is good practice to customize your homepage title and meta description as title tags are taken into account in organic rankings. Whilst meta descriptions suggest to Google what should be displayed in an organic snippet. To optimize your meta descriptions you should highlight product features for a higher click through rate.

### Headings

Commerce supports unique heading tags (H1-H6) on each page type. The heading tag default settings are:

- <h1> - product/category name or page title
- <h2> - your product or category description field value
- <h3> - inside the main unique body content; not to be used for repetitive site-wide widgets
- <h4> - <h6> tags are used in the remaining site-wide page elements (such as reviews, similar products, etc.)

When planning heading tags for your Commerce site, keep in mind the following points:

- place primary keywords inside H1 headings, secondary keywords are allocated in H2 headings.
- H1-H2 tags with the highest importance should be unique. Therefore, it is advisable to make key headings different from the page title. In particular, H1-H2 tags should be planned out for the homepage, product, category, and static article pages.
- customize the H1-H6 placements directly within in the widget source code.
- avoid constraining heading placements with CSS styling.
- ensure heading tags do not make any changes in page layouts.

### Category/product descriptions

Each category or single product page should have a unique description as it is recommended to tailor your site copy without duplication from the product details. For example, category descriptions can be placed at the bottom of the page to achieve usability on mobile and for the benefit of SEO.

### Content accessible to web crawlers

To aid accessibility on mobile devices, ensure your most relevant content is instantly visible once a user lands on a page. Copy hidden under a “see more” link, or beneath tabs, must be present in the prerendered version of the page.

To view the DOM of a prerendered page:

1. Open Chrome Developer Tools and navigate to the Network tab.
2. Switch the User-Agent to Googlebot and reload the page.
3. Click on the Elements tab. You will see the prerendered version of DOM. **Note:** If you use onClick or onScroll events to load additional content on the page, it will not be included in the prerendered version of DOM.
4. Search the DOM to check if the content has loaded. **Note:** If you use video or images, it is recommended to always provide captions, ALT/TITLE attributes and transcriptions for video content.

### Product variants

Multiple variants of the same product should be published under one URL page to avoid duplicate content issues. This is the case when there is little that differentiates the product - such as color, size, pattern, etc. It is also recommended to use drop downs and selectors to help shoppers pick their product features on a single product page. Sizes are most often implemented as a drop down with a URL that does not change, or with a parameter added to create a URL canonicalized to the primary product URL.

For instances when a product type may be perceived as two different items, products can be submitted as separate indexable URLs, especially if a shopper is more likely to use the variation of the product in their searches. For example, a product such as an eyeshadow with two unique variant names would be two different items. In this case, each variant = unique indexable URL. You may want to consider the number of potentially duplicate product variants that can result from adding separate indexable URLs for each variant.

# Understand canonical tags

Each of your web store pages has a canonical link (or tag) embedded within the `head` section code. This link signals the source, or original, URL of a page to search engines.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

## Use canonical links

When a given page on your web store can be accessed via several URLs, then the canonical link indicates to search engines which version of that page is the original version. This is also the case when there are multiple pages with different URLs containing only slight content variations.

The use of canonical links within your web store pages improves search engine rankings as search engines use them to consolidate links to duplicate, or similar, content. This means they assign a higher ranking value to those pages marked as the source URL.

An example of how this may look on your site is outlined below.

Say a robot lands on the following link:

`http://www.mystore.com/shoes/category/mens_shoes`

In the `<head>`, this page might include the canonical URL

```
<html>
<head>
<link rel="canonical" href="http://www.mystore.com/shoes/category/
mens_shoes">
```

If a robot follows a link somewhere that lands the same page, but with a different address, such as:

`http://www.mystore.com/footwear/category/mens_shoes`

The canonical URL would point to the first category.

```
<html>
  <head>

      <link rel="canonical" href="http://www.mystore.com/shoes/category/
mens_shoes">
```

## Use canonical and pagination tags

Commerce provides two different pagination layouts: numeric (default), or `rel="next"` and `rel="prev"` links.

For the first page in a sequence on the numeric pagination layout, you will see a normal request for the category page and a request for page zero of the sequence. Zero should be used to display the first batch of content on the product listing pages. All canonical tags on paginated pages in a sequence should be self-referential, so the URLs might look like `www.example.com/category/c1234`, `www.example.com/category/cshoes/2`,

`www.example.com/category/c1234/3`, and so on. The `rel=canonical` attribute for `/1` will point to the page zero category page URL.

If the page type is 'Article' then a non-parameterized self-reference is added.

Each shopping and article page contains a `<link>` element with the attribute `rel="canonical"`. If the page type is:

- 'Home' then the canonical attribute points to `https://www.hostname.domain`.
- 'Product', then a self-reference is added to the non-parameterized version of that product detail page.
- 'Collection', then canonical elements are added based on whether or not the listing includes pagination, as described earlier: page zero, page /2, page /3, and so on.

The pagination layout with the HTML attributes `rel="next"` and `rel="prev"` indicate to search engines that the relationship between individual URLs should follow a logical sequence. These are automatically added when there is more than one page displaying items from one Collection.

If there is a previous page in the sequence, you will see the `rel="prev"` element referring to the previous page.

If there is a next page in the sequence, you will see the `rel="next"` element referring to the next page.

Therefore, aside from page "zero" and the last page in a given sequence, all in-between compound pages will contain both `rel="prev"` and `rel="next"`.

Making changes to your pagination configurations can result in some of the subsequent URLs being inaccessible to search engines. For example, you may want to use an infinite scroll to load additional items in a Collection, however, search engine crawlers do not scroll so everything that appears after an event of scrolling will not be discovered by the crawler. Therefore, you should not remove your pagination links from mobile views, and prior to your site launch you should always verify they work. The numeric pagination layout provides optimal SEO for all store types, whereas the `rel="next"` and `rel="prev"` links work best where there are 1 or 2 paginated pages.

### Use canonical and language tags

When at least one additional storefront language exists, then the `'hreflang'` tag is added to all pages. Regardless of whether a multi-lingual store uses directories or subdomains, `'hreflang'` annotations must be used as these signal the relationship between multi-lingual sites. Canonical tags across different language sites should always be self-canonical.

## Utilize widgets for SEO

You can use several of the widgets within Commerce's Design page to facilitate SEO.



*This section applies to Storefront Classic only.*

This section includes the following topics:

- [Customize the Page Not Found widget](#)
- [Utilize the Pop-up Stack widget](#)

- [Optimize the Breadcrumbs widget](#)
- [Optimize widgets on mobile screens](#)
- [Understand meta robot tags in widgets](#)

### Customize the Page Not Found widget

Web sites display Error 404 pages when a page cannot be found on the server, for example, if a shopper tries to access your store with a bookmarked URL for a product your store no longer carries.

Commerce uses the Page Not Found widget to display a message to the shopper that the page they searched for has not been found. (This widget is available for the Error layout.) You can benefit from adding links to other category pages within the message, for example, include deep links to the most popular collections.

**Note:** There is a unique URL for each of the page layouts, providing a direct link to the individual layout previews without the need to navigate from the Layout tab.

Customizing the Page Not Found widget and Error layout can help reduce site abandonment when shoppers reach your error page. Make sure the page reflects your store's branding and includes links to other pages, such as bestselling products (see [Display product recommendations](#) for more information), the store's home page, or important categories.

To learn how to customize layouts and widgets, see [Customize your store layouts](#).

### Utilize the Pop-up Stack widget

The Pop-up Stack widget's modal windows appear when a user interacts with your site. Commerce's platform prevents pop-up messages or loaders from being included in the prerenders, consequently these are not shown to Googlebot or other web crawlers.

You should consider the appearance of pop-up windows on user interaction (events like clicking or scrolling) and their potential impact on decreasing the bounce rate and user frustration. Test your pop-up widgets and ensure:

- multiple modal windows are not triggered at the same time.
- modal windows can be easily dismissed.
- the visibility of key body content on the landing pages is not obscured.

### Optimize the Breadcrumbs widget

The Breadcrumbs widget is available for category and product pages, and can also be enabled for static pages. Breadcrumb navigation reflects the dependencies between pages and helps to better understand the structure of those pages, usually containing links.

Breadcrumbs should always be visible for mobile view. To improve usability, they can be moved to the bottom of the page, beneath the product/category descriptions. It is advisable to test breadcrumbs on various tablet and mobile resolutions and decide which placement works best for your site.

### Optimize widgets on mobile screens

As mobile screens limit the ability for all of the page widgets to be visible, you should ensure the following elements (widgets) are always present on smaller resolutions:

- deep menu links (for example, via drop down menus) - shoppers must be able to drill down through the category hierarchy tree

- breadcrumbs - can be allocated above/below product listings
- pagination links - infinite scroll can be added on top of numeric links to compound pages in a sequence
- page heading
- category descriptions
- product descriptions

**Note:** Commerce generates HTML prerenders as responsive. The same snapshot code is served to both Googlebot mobile and desktop. Mobile-first indexing means that Googlebot mobile will be decisive in organic rankings. You should be aware that although the elements will be accessible for crawling for Googlebot mobile, parity between crucial page elements being rendered on both mobile and desktop must be assured.

### Understand meta robot tags in widgets

Several widget types contain a default meta robot `'noindex'` tag which prevents them from being indexed, but are still accessible to web crawlers. Content pages, such as wish lists, are set to `'noindex'`. It is not recommended to change the directives for those subdirectories. If a page is set to `'noindex'` that page will no longer be available in the search results.

You can choose between meta robots `'index, follow'` and `'noindex, follow'` on a per page basis, as well as revoke the default `'noindex'` on a directory level.

**Note:** Unlike canonical tags, which provide suggestions only, a meta robots tag is a directive that is always followed by search engines.

## Understand SEO snapshots

SEO generates static snapshots every 24 hours or whenever changes are published. These snapshots provide a prerendered copy of a storefront page. However, as Commerce does not have control over how often a crawl happens, search engine results are not guaranteed to reflect the latest changes.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

All key SEO settings from your client side rendered store are mirrored when OCC scripts generate HTML snapshots of your site, so you can be sure that signals sent to search engines are consistent. The default setting ensures prerendered snapshots are served to Googlebot and other search engine bots. However, you can modify your preferences and decide whether JavaScript client side rendered, or HTML, snapshots should be served to other crawlers.

As Commerce uses a JavaScript framework it is worth noting that all search engines have some limitations in terms of processing JavaScript and rendering JavaScript-heavy pages. In order to help search engines with crawling and indexing, Commerce renders the page and static snapshots of your pages directly to the search engine crawlers. These snapshots provide a prerendered copy of a storefront page. Prerendering aims to speed up the indexing of fresh content published in your store, such as, new product or collection pages.

Search engines (such as Google) regularly update URL information based on a strict timeout. When pages are provided to Google after the timeout, the request is canceled

and the page is not updated. Therefore, Commerce uses prerendered snapshots in order to ensure storefront pages are delivered to Google as quickly as possible.

Commerce generates an already-rendered version of a storefront URL and stores a static copy of the page (excluding dynamic elements or JavaScript) on the server to ensure a fast retrieval. Note also that Commerce generates distinct snapshots for both mobile and desktop.

Your store's key SEO settings are mirrored when Commerce generates HTML snapshots of your site, ensuring that signals sent to search engines are consistent. The default setting ensures prerendered snapshots are served to search engine bots. However, you can modify your preferences and decide if JS client side rendered, or HTML snapshots should be served to other crawlers.

## Configure URL redirects

You can configure URL redirects for your site that specifically relate to 301 and 302 browser response codes, indicating that your redirected URL has either permanently or temporarily moved, respectively.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

In the case of a 301 redirect, the URL is moved to a new target permanently. This type of redirection can help with moving the SEO authority from the old URL to the new equivalent. The following example illustrates a 301 redirect with an example site base URL:

`www.example-shop.com/example` with the redirection rule:

- `originUrl: /smartphones/collection/id1234?show=all`
- `targetUrl: /fr/smartphones/collection/id789?show=20`

It is worth noting that 302 redirects are the preferred choice if you want to redirect a page for a limited amount of time.

URL redirects are created/deleted using the `createRedirect` and `deleteRedirect` endpoints in the Admin REST API. The total number of entries in the database defaults to 1 million. Should you require more than that, please contact Oracle Support.

URL redirection rules can be setup on a per site basis as each of the URL redirects are relative to the site base URL. If a `siteId` is not provided, then the rule acts as a global redirect for all sites. The following table describes the properties for redirecting URLs:

Parameter	Description
<code>originUrl</code>	Origin URL of the redirect.
<code>siteId</code>	ID of the site to which the redirect belongs.
<code>type</code>	Redirect type (301 or 302).
<code>targetUrl</code>	Destination URL of the redirect.

Query parameters are not copied from the origin to target URL, instead you are required to include them in the definition of the redirect rule. When deleting a URL redirect, you specify the ID of the rule to delete using the path parameter of the `deleteRedirect` endpoint. For example: `DELETE /ccadmin/v1/redirects/30001`.

The following example illustrates a 301 redirect:

```
POST /ccadmin/v1/redirects HTTP/1.1
Authorization: Bearer <access_token>
Content-Type: application/json
{
  "originUrl": "/smartphones/collection/id1234?show=all",
  "siteId": "siteUS",
  "type": 301,
  "targetUrl": "/fr/smartphones/collection/id789?show=20"
}
```

See the Oracle Commerce REST API documentation in the Oracle Help Center for more information.

## Edit the robots.txt file

The `robots.txt` file controls how web robots access and index your store's pages.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

For more information about `robots.txt` and the Robots Exclusion Protocol, visit [www.robotstxt.org](http://www.robotstxt.org).

If you run multiple sites within a single instance of Commerce, each site has its own `robots.txt` file. See [Configure Sites](#) to learn how to create multiple sites.

To view your store's current `robots.txt` file:

1. Enter the following URL into your browser:  
`https://[store url]/robots.txt`

where [store url] is the base URL for your store.

2. Commerce displays the contents of the current `robots.txt` file.

If you run multiple sites and keep language versions in directories, for example, `example.com/de/`, `example.com/es/`, you do not need to create a separate `robot.txt` file for each version. This is only the case for multiple sites over sub domains.

The Commerce `robots.txt` file below shows the updated contents after these recommendations have been made:

```
User-agent: *
Disallow: /cart
Disallow: /en/cart
Disallow: /checkout
Disallow: /en/checkout
Disallow: /profile
Disallow: /en/profile
Disallow: /searchresults
Disallow: /en/searchresults
Disallow: /confirmation
Disallow: /en/confirmation
Disallow: /wishlist_settings
Disallow: /en/wishlist_settings
```

```
Disallow: /wishlist
Disallow: /en/wishlist

Sitemap: http://[store url]:8080/sitemap.xml
```

User-agent: \* means that the exclusion rules should apply to all robots. You can replace the \* (asterisk) with the name of a specific robot to exclude, for example, Googlebot, or Bingbot.

Each Disallow: /[page] entry indicates a page that robots should not visit. You should not remove any of the Disallow: entries from the default robots.txt file, though you might want to include additional pages that you want robots to ignore. If you are testing your store and do not want any robots to crawl any pages, you might want your robots.txt file to look like this:

```
User-agent: * Disallow: /
```

If you plan to use your staging site as your production site when development and testing is complete, you will need to change the content in the robots.txt file to the custom settings presented above. If you tested on a separate staging domain, Commerce inputs a valid default robots.txt for you for your production storefront when you go live.

You cannot edit the robots.txt file in the administration UI. You must edit it with the Commerce Admin REST API. See Use the REST APIs for information about the REST APIs.

To update the robots.txt file, issue a PUT request to /ccadmin/v1/merchant/robots. The body of the request must include the entire contents of the file, in text/plain format.

When you update the robots.txt file, it will not be overwritten until the next PUT request is sent to /ccadmin/v1/merchant/robots.

If you run multiple sites within a single instance of Commerce, you must specify the site whose robots.txt file you are updating in the x-ccsite header in the PUT request. If you do not specify a site, the request updates the default site's robots.txt file.

The following example shows a PUT request that adds your error page to the list of pages for robots to ignore.

```
PUT /ccadmin/v1/merchant/robots HTTP/1.1
Content-Type: text/plain
Authorization: Bearer <access_token>

{
  User-agent: *
  Disallow: /cart
  Disallow: /checkout
  Disallow: /profile
  Disallow: /searchresults
  Disallow: /confirmation
  Disallow: /wishlist_settings
  Disallow: /wishlist
  Disallow: /error
  Sitemap: http://{occs-host}/sitemap.xml}
```

**Note:** The XML sitemap is an index of page URLs on your store that is available for crawling by search engines. It helps search engines to crawl your site more intelligently. Only pages,

products, and collections that can be seen by anonymous shoppers (that is, visitors to your store who are not logged in) are included in the generated sitemaps. Each sitemap.xml includes a `<lastmod>` tag that provides the date and time the item was last published. See [Understand XML sitemaps](#) for more information.

### Upload a custom robots.txt file

The `updateRobotsFile` endpoint allows you to upload a custom `robots.txt` file. However in previous versions of Commerce, when publishing or on startup, the `RobotsManager` automatically replaced this custom `robots.txt` with an auto-generated one. In this case it was advisable to contact support who were required to manually disable automatic `robots.txt` generation.

From the current version of Commerce, the `updateRobotsFile` endpoint automatically disables the automatic `robots.txt` file generation. Additionally, the new endpoint `/ccadmin/v1/merchant/seoConfig` allows you to query, or update, the status of automatic `robots.txt` file generation.

### Understand internal search results pages

Internal search refers to the search option on your own website when internal search results pages are generated. To prevent creating low-quality pages, internal search results are excluded from crawling in the `robots.txt` file and are not found in Search Engine Results Pages (SERPs).

**Note:** You can use Google Analytics to track internal search queries and use the reports to regularly monitor for:

- the discovery of new keywords that customers use when searching for your products.
- hints of navigational issues - users may be looking for existing categories that are difficult to find in your main navigation.

## Customize structured data

Commerce automatically generates a valid markup for the homepage, product, and collection pages with: Products, Breadcrumbs, ItemLists, Reviews, WebSite, and Organization properties.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The functionality to highlight page elements on certain template types and display in Search Engine Results Pages (SERPs) is limited to Google only. Therefore, your markup would not be seen by other search engines. Commerce enables you to switch off the default markup for given page types, and substitute it with your custom script template that utilizes values from Commerce variables.

JSON-LD is Google's recommended implementation. When customizing your JSON-LD, include as many applicable properties as possible to create different structured data templates for different product types in your store.

You can use the Structured Data report in the Google Search Console to monitor how Google interprets JSON-LD scripts across your store, and check for any markup errors and warnings referring to missing properties. You can also verify how Google sees structured data on a per page basis.

# Understand XML sitemaps

Commerce auto generates valid XML sitemaps for all of your store pages, or resource types.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Commerce resource types include:

- product
- category
- static pages
- video
- images
- supplementary pages: blog/lifestyle section

## Determine page visibility settings

These settings will determine whether a URL appears in an XML sitemap:

- **Active**  
This option hides a given page from the shopper. If a previously published product is deactivated, you will be prompted to specify its redirect path. If you deactivate a category, you are prompted to provide a direct path and warning displays indicating that you are about to orphan your products. These will then be displayed in a separate folder for you to assign to other active categories
- **Meta robots directive**  
Commerce provides two options: `index, follow` (default) and `noindex, follow`. The latter will exclude the page from Google search results, but crawlers will still follow and crawl any links on that page.
- **Canonical tag**  
This should be self-referential (default setting), or your custom URL.
- **Exclude from Sitemap**  
This allows you to exclude specific pages from being included in XML sitemaps.

Your XML sitemaps should be submitted in Google Search Console and Bing Webmaster tools. If your store's static image assets are hosted externally/on subdomains then additional hostnames should be verified in Search Console, and XML image sitemaps submitted for those properties. Any possible crawling issues related to images can, therefore, be monitored.

Note that sitemap URLs are generated automatically by Commerce for all of the locales that correspond to a given site.

## Work with the image XML sitemap

A separate XML image sitemap file utilizes both required and optional sitemap tags to indicate to search engines which site images are to be crawled and indexed. By default, only key body images, such as, product photos or homepage banners, are included in XML sitemaps. Additional tags are utilized to include the image caption and title.

Images are also included in the default structured data output in JSON-LD. Commerce allows the customization of ALT and TITLE image attributes through editing single images in the Media section, or bulk CSV upload. The default values for product imagery include:

- ALT → product {displayName}
- TITLE → product {description} (short)

ALT and TITLE image attributes should be unique and not duplicates of product display names or descriptions. It is recommended that you do not use too many keywords or repeat the same attribute content. All product images should have descriptive file names prior to being uploaded, and dashes should be used to separate words, for example, `example-phone-v2-C328.jpg` should be used instead of `image_8974.jpg`.

**Note:** You should avoid embedding copy into banners as this is illegible to web crawlers. Instead, overlay text on top of imagery as only the ALT and TITLE attributes can be interpreted. Also avoid using CSS background images and instead use standard HTML `<img src="">` to add imagery that you want to appear in search results (namely all product photos on both product/collection pages). To add design elements, such as, arrows, bars, small icons, and so on, you can use the CSS background property.

### Verify the XML sitemap

You can verify the validity of all your domains and subdomains in a search engine, such as Google Search Console.

Submitting a valid XML sitemap file will influence how quickly your pages are crawled and subsequently indexed. Google's Index Coverage report provides feedback on how quickly new URLs are being processed. **Note:** You should allow some time for this information to finalize as even though Googlebot may have seen your URLs, it does not mean they will be automatically included in the index.

Sitemap submissions for larger sites enables you to verify the most important directories of the main site as separate properties for easier monitoring. For multi-site store directories, you can verify the language subdirectories as separate properties.

## Understand SEO localization

Commerce platform auto generates `hreflang` tags that adhere to Google guidelines. The `hreflang` tags enable search engines to serve the correct regional or language URLs in search results based on the searcher's country and language preferences.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

### Plan your targeting

You are required to specify how many countries and language variants your site will target. Consider how many translations you will be able to provide - you could target 20 countries, but you may only have to provide English, French, and German language variants.

You will also need to decide on the number of country top level domains (cTLDs) your site will incorporate under one Commerce panel. cTLDs such as `.co`, `.uk`, `.ie.`, or `.pt` will typically target their relevant country only, however, they are all perceived to be equal

by Google, so there is no disadvantage in terms of rankings to gain organic visibility with a domain.co.uk on google.com.

You may also choose to target multiple languages and locales from one gTLD only (.com, .org, .net), for example, `example.org/en-gb/`, `example.org/en-au`. Your final choice will also depend on the collection of domains already in use by your business.

When URL structures are planned out, country URL prefixes should not be used as they are redundant. For example, `example.com/us-kitchen-accessories/` or `example.com/us-pottery/`.

They do not contribute to the overall understanding of what a given page is about. If the same domain is to target other languages/countries, subdirectories are recommended (rather than subdomains).

### Monitoring

Google Search Console allows to verify your language and locale targeting settings in the Search Traffic, International Targeting report. The Language report can list up to 1,000 errors with your `hreflang` implementation:

**Note:**For single language stores: if your domain is a generic TLD, you will be able to specify your site-wide language setting.

### Content localization

The purpose of multi-language stores is not only to translate the contents to cater to different markets, but also to make content suited for the locales you wish to target. The process of localization should go beyond translation only: accepting payments in local currency, adding payment methods specific to a locale, adjusting delivery information for each geographical location, using appropriate measurement systems. Also, you should always ensure that you adjust any visual communications to suit different cultures accordingly.

## Control access to storefront servers

In addition to the servers running your production storefront, you may have various other storefront servers used for development, testing, and staging purposes.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

To prevent unwanted access to your storefront servers by web crawlers and other processes, Commerce provides a basic authentication system. (This system does not apply to administrative servers, as these servers already require OAuth 2.0 authentication to access any content.) The basic authentication system checks various values associated with an incoming request, such as the hostname, client IP address, and headers. If any of these values is specifically allowed, the request is accepted without a challenge, but if not, a dialog is displayed for entering a username and password. For example, your production server is typically configured to bypass authentication if the request is sent to the official site URL (such as `www.example.com`), but the dialog is displayed if the request is sent to the internal hostname (such as `ccstore-xxxx-xxxx.oracleoutsourcing.com`).

The primary purpose for the basic authentication system is not security, but rather to prevent accessing the servers in an unexpected way. For example, if a web crawler accesses a test server, the authentication system prevents it from indexing pages, so that web search results do not direct shoppers to that server. On the production server, web crawlers are permitted to index pages, but only when the pages are accessed via the official site URL.

Note that the basic authentication system is completely separate from any shopper login. On your production server, shoppers should never see the authentication dialog unless something is misconfigured.

Your servers are configured by default to display the authentication dialog only when appropriate. You should typically not need to make any changes to the configuration. However, the Admin API does include endpoints you can use to make changes to the configuration, including the username and password, allowed headers, IP addresses, and hostnames:

- To see your current settings, use the `getBasicAuthConfiguration` endpoint.
- To change your settings, use the `updateBasicAuthConfiguration` endpoint.

For more information about these endpoints, see the Oracle Commerce REST API documentation in the Oracle Help Center:

[http://docs.oracle.com/cloud/latest/commercecs\\_gs/CXOCC/](http://docs.oracle.com/cloud/latest/commercecs_gs/CXOCC/)

# 9

## Manage Search Settings

The Search page in the administration interface contains a read-only table that lists all properties that are searchable or serve as facets. You can use the Search page to configure the searchable field rankings that determine how searches work in your store.

The Search page also lets you create synonyms for shoppers' search terms in a thesaurus or create keyword redirects for search terms. You can see the Search page only if you have been assigned the Admin or Search role.

The topics in this section describe how to set up and manage search settings.

### Understand index fields

A catalog property must be indexed before it can be considered when a shopper searches in your store.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

To add a property to the index, select either or both of the following options in the property's configuration in the catalog:

- Allow property to be searched
- Allow property to be a search facet

After you publish this change, the property is added to the index, where it is represented by an index field.

In order for a shopper's search term to be matched against an index field's contents, the field must be configured as searchable in the catalog, (the first option previously described), and must be added to the searchable field ranking list. Searchable field ranking changes take effect after the next time you publish.

### View index fields

The Index Fields page displays a read-only list of all the index fields for your site.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

To display the list, click Index Fields on the Search page. The list provides the following information for each index field:

- Searchable  
If this field is selected, shoppers can search on values entered for this property.
- Facet  
If this field is selected shoppers can use this property as a refinement when filtering search results.
- Multi-select

If this field is selected, shoppers can use this property as a refinement and make multiple selections to filter search results. For example, shoppers could filter results by selecting several colors.

## Understand the searchable field ranking list

Every place where a shopper uses search on your site is associated with a *searchable field ranking list*.

 *This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The searchable field ranking list determines which records are returned in search results – matches, and influences the order of these search results -- rank.

The searchable field ranking list is composed of an ordered list of fields:

- These fields are considered when a search term entered by a shopper is matched against records.
- The order of these fields in the list affects the ranking of results.

You can view, add or delete fields from this list. Your site has at least two searchable field ranking lists:

- All is the default searchable field ranking list for catalog searches.
- TypeAhead is a separate, auto-suggest searchable field ranking list.

For example, TypeAhead can return results in a type-ahead format when a shopper types into a dropdown box.

Your site might have additional searchable field ranking lists for other types of searches.

**Note:** In addition to the user interfaces described in this chapter, Commerce also provides search Rest APIs that you can use to manage your searchable field ranking. In the APIs, the searchable field ranking is known as a search interface. See *Use the REST APIs* for more information.

### Cross-field matching

Cross-field is the priority that is assigned to a matching record if the match is split across multiple fields. A cross-field match can be configured to appear higher in the results than some single-field matches.

### Cross-field matching example

Consider two exact matches. One is product name + product color; the other match is product description. The record that displays first depends on whether or not you use and how you use cross-field matching.

A shopper enters “blue suede shoes” in the search box. Two records are matches, but which one should have the higher priority? Here are the two records:

Record	product.name	product.color	product.description
One	Suede shoes	Blue	Customer favorite

Record	product.name	product.color	product.description
Two	Suede shoes	Red	Tired of your blue suede shoes? Try these!

Record One is a match where “blue suede shoes” is split across multiple fields. Record Two is a match where “blue suede shoes” occurs in a single `product.description` field. Record One is the better match and should have the higher priority, but it will only display first if the following conditions are met:

- Your searchable field ranking list uses cross-field matching.
- Cross-field matches have a higher priority than a single `product.description` field match.

There are no rules for which fields in a searchable field ranking list should be given a higher priority than cross-field matches, but you likely want to consider structured fields such as category, brand, color, or features. Fields that allow more unstructured or free-form content, such as a product description, should be given a lower priority and should display after cross-field matches.

Cross-field matching is enabled by default for each searchable field ranking list. To disable cross-field matching, you must use the search REST APIs.

### Relevance Ranking

Search field ranking is taken into account by configurable modules that sort the records in search results as part of a relevance ranking strategy. For information about how to configure the sorting of search results, see [Specify which index fields are included in searches](#).

## Add fields to the searchable field ranking list

To make a field searchable, it must be configured as searchable in the catalog and be a member of a searchable field ranking list.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Follow these steps to add a field to a searchable field ranking list.

1. Click the **Search** icon in the dashboard.
2. On the **Search** page, click **Searchable Field Ranking**.
3. Click the **searchable** field ranking list to which you want to add a field.  
The searchable field ranking list displays index fields that are searchable. The order of the fields in the searchable field ranking list affects the ranking of search results. Fields higher up in the list have a greater ranking and search requests that match values in these fields appear first in your search results.
4. Under **Add Field**, select the index field that you want to add to the searchable field ranking list. You can also type the name of an index field in the box, and Commerce filters the list to match what you have typed. The match is not case sensitive.  
If you cannot find the field, you must find the associated property in the catalog, click “Allow property to be searched,” and then publish your changes. See [Create and edit product types](#) for more information. Note that it might be several minutes after publishing completes for the new index field to appear.

5. The field is added to the bottom of the list of index fields.
6. Click the field and then click and drag it to the position in the list that reflects its rank.
7. Click **Save**.

Changes to the searchable field ranking list do not affect your store until after you publish.

### Configure cross-field matching

If cross-field matching is enabled for this searchable field ranking list, you can configure where you want cross-field matches to display in a list of search results. To learn more about cross-field matching, see [Cross-field matching](#).

1. On the **Search** page, click **Searchable Field Ranking**.
2. Click the searchable field ranking list in which you want to configure cross-field matching.  
The searchable field ranking list displays a slider next to the list of index fields. If the slider is disabled you cannot configure cross-field matching. To enable cross-field matching, use the search REST APIs.  
  
Moving the slider handle up or down changes where cross-field matches display in your search results. Matches for index fields above the slider handle have a higher priority. These matches appear before any cross-field matches. The index fields below the slider handle have a lower priority than cross-field matches.
3. Move the slider handle up to give cross-field matches a higher priority, or down to give them a lower priority.
4. Click **Save**.

## Edit the searchable field ranking list

The order of the fields in the searchable field ranking list affects the ranking of search results.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You can change the rank of index fields or remove them altogether from the searchable field ranking list.

1. On the **Search** page, click **Searchable Field Ranking**.
2. Click the searchable field ranking list that you want to edit.
3. To change a field's priority in search results, click the field and then click and drag it to the position in the list that reflects the priority you want.
4. If you want to remove an index field so it is no longer considered for matches in search results in this ranking, click the delete icon.
5. Click **Save**.

If you want to stop using a field for search in all searchable field ranking lists, you can deselect "Allow property to be searched," in the catalog and then publish your changes. See [Create and edit product types](#) for more information. Commerce recommends removing the index field from all searchable field ranking lists.

# Understand the thesaurus

The thesaurus provides a way to include alternate terms for a shopper's search query.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The thesaurus lets you create the synonyms that capture other ways of expressing queries relevant to your store.

You can add two kinds of synonyms to your thesaurus:

- **One-way** thesaurus entries provide alternate ways of expressing query words or phrases that apply in a single direction only.  
For example, you could define a one-way mapping so that all queries for computer would also return matches containing laptop, but queries for laptop would not return results for the more general computer. You can add an unlimited number of synonyms to a one-way entry, and Commerce expands the query to search for each synonym with the same one-way relationship.
- **Equivalent** thesaurus entries establish a mutual equivalence relationship between words or phrases. The words and phrases are interchangeable. A query for one term would also return results for all other terms.  
For example, an equivalent might specify that the phrase “notebook” is interchangeable with the phrase “laptop.”

In the Rest API an equivalent thesaurus entry is known as a multi-way entry. See [Configure a thesaurus](#).

In addition to the user interfaces described in this section, Commerce also provides search REST APIs that you can use to manage your thesaurus. See [Configure a thesaurus](#) for more information.

## Tips on using the thesaurus

The thesaurus can help customers find products in your store, but poorly conceived entries might not be useful. To maximize the potential of the thesaurus, review the following tips:

- Do not create thesaurus entries for common spelling corrections. Commerce fixes misspelled words automatically.
- Do not create equivalent entries with different cases of the same word. The thesaurus is not case sensitive.  
For example, entries such as Tartan = tartan are unnecessary.
- Do not create an equivalent 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 an equivalent synonym for khaki = pants, then a shopper's search for khaki towels could return irrelevant results for pants.
- Do not create an equivalent synonym between a general and several more-specific terms, such as top = shirt = sweater = vest. This increases the number of results the shopper has to go through while reducing the overall accuracy of the items returned. In this instance, if a shopper searches for “vest,” the shopper also gets results for “sweater.” You get better results by creating individual one-way entries between the general term “top” and each of the more-specific terms. In that case a search for vests would only return vests, not sweaters, too. Only a search for “top” would return both sweaters and vests.

- Do not create an entry that includes a term that is a substring of another term in the entry.  
For example, consider an equivalent entry of “tackle” and “bait and tackle.” If shoppers type “tackle,” they get results for “tackle” or “bait and tackle.” These are the same results they would have received for “tackle” without the thesaurus. If shoppers type “bait and tackle,” they get results for “bait and tackle” or “tackle,” causing the “bait and” part of the query to be ignored.
- Avoid multiple word entries where single-word entries are appropriate.  
In particular, avoid multiple word forms that are not phrases that shoppers are likely to type, or to which phrase expansion is likely to provide relevant additional results. For example, the equivalent entry “King Aethelbert of Wessex” = “King Athelbert of Wessex” should be replaced with the single-word entry Aethelbert = Athelbert.

## Create and edit thesaurus entries

You create synonyms for shoppers' search terms by adding them to the thesaurus, which you access from the Search page in the administration interface.

You must be assigned the Admin or Search role to create or edit thesaurus entries. Changes to the thesaurus do not affect your store until after you publish. See [Publish Changes](#).

You can see how your thesaurus entries behave when shoppers search for items by previewing your store. Click Preview and then search for items that you expect to trigger the thesaurus entries that you want to test. For more information about previewing your store, see [Preview your changes](#).

### View the list of thesaurus entries

The thesaurus page displays a list of all the thesaurus entries that have been added to your store. Each entry displays the following information:

- Search terms for one-way entries with an arrow that point to a list of synonyms. Equivalent entries show synonyms only.
- The type of entry: one-way or equivalent.
- The last modified date, and the user that modified the entry.

The list can be sorted by clicking **Sort By** and selecting the type of entry, modified by user, or date modified. Sorting always resets your view of the list to the first page. You can filter the list by starting to type a search term, synonym, or user name in the **Filter** list box.

### Create one-way thesaurus entries

One-way thesaurus entries apply in a single direction only. When a shopper enters the specified search term, the search results include the results for all of the synonyms for the entry.

1. On the **Search** page, click **Thesaurus**.
2. Click **New Entry**.  
The **New Entry** dialog displays with the default One-way option selected.
3. In the **Search Term** field, enter the word or phrase that a shopper might enter as a query.

4. In the **Synonyms** field, enter all the words or phrases to which a shopper's search term might map. The search results for the search term include the results for all the synonyms. Press **Enter** or **Tab** between entries.  
Note that the entries in this field do not map to one another or back to the term in the **Search Term** field. If a shopper enters a term in the synonym list, the search results only include the results for that term.
5. Click **Create**.

### Create equivalent thesaurus entries

Equivalent thesaurus entries are mutually related words or phrases. When a shopper enters any of the terms in a query, the search results include the results for all of the other synonym terms.

1. On the **Search** page, click **Thesaurus**.
2. Click **New Entry**.
3. Click **Equivalent**.
4. In the **Synonyms** field, enter all the mutually related words or phrases that a shopper might enter into a **Search** box. Press **Enter** or **Tab** between entries.  
Note that the entries in this field are equivalent. This means that each of the entries in this field produce the same search results when entered by a shopper. The entries are interchangeable.
5. Click **Create**.

### Edit an entry

You can edit an existing thesaurus entry as follows:

1. On the **Search** page, click **Thesaurus**.
2. Click the entry in the list.
3. If necessary, change the entry type.  
If you change the entry from one-way to equivalent, the existing search term automatically moves to the beginning of the synonyms list.  
  
If you change the entry from equivalent to one-way, the existing synonyms remain intact, and a blank Search Terms field appears.
4. Update a synonym by deleting it and re-entering it.
5. Click **Save**.

### Delete an entry

To delete an entry from the thesaurus:

1. On the **Search** page, click **Thesaurus**.
2. Type a synonym or a search term for the entry that you want to delete into the **Filter By** field.
3. Click the trash can icon next to the entry.
4. When the confirmation appears, click **Delete**.

## Understand keyword redirects

You can configure a keyword redirect to send shoppers to a location in your store or an external site when they enter a specified search term. This lets you display a relevant promotional page or product category page instead of a typical list of search results.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

A keyword redirect is triggered by one or more search terms; the target of a keyword redirect is a URL in your store or an external site. For example, a keyword redirect with the search term “delivery” and the URL “<http://shipping.example.com>” redirects shoppers to “<http://shipping.example.com>” if they use “delivery” as a search term.

### Site-specific keyword redirects

You can define a keyword redirect that applies to all sites or one or more specific sites only. The same search term, entered on different sites, can redirect shoppers to different pages. For example, if Site A and Site B have different policies for returns, you can set up the term “returns” to take shoppers to different pages depending on the site where they are shopping.

You can filter the list of keyword redirects by site to easily find all of the keyword redirects defined for a specific site.

### Match modes

The keyword redirect has three match modes. You can set the match mode to a non-default setting by using the search REST APIs. See [Configure the ranking of records in search results](#) for more information.

- **Exact**  
Default match mode. A search query triggers a redirect only if the shopper’s search query matches the keyword or a close variant **exactly**. The search query cannot include additional words before or after the matching terms.  
  
For example, if the keyword is “support” and the shopper enters “support,” then the shopper is redirected. If the shopper enters “customer support,” then she is not redirected.
- **Phrase**  
A search query triggers a redirect if the terms in a shopper’s query match **all** the terms in a keyword or a close variant **in the same order**. The search query might include additional words before or after the matching terms.  
  
For example, if the keyword is “customer support” and the shopper enters “customer support telephone number” then the shopper is redirected. If the shopper enters “support customer” or just “support,” she is not redirected.
- **All**  
A search query triggers a redirect if the terms in a shopper’s query match **all** the terms in a keyword or a close variant, **but not necessarily in the same order**. The search query might include additional words before or after the matching terms.

For example, if the keyword is “customer support” and the shopper enters “telephone support customer number,” then the shopper is redirected. If the shopper enters “telephone support number,” then she is not redirected.

### Integration with the thesaurus

If you create a thesaurus entry that corresponds to a search term for a keyword redirect, the keyword redirect has priority over the thesaurus entry.

For example, you might have a keyword redirecting “curtains” to `http://example.com/fallsale/curtains`.

If you have a one-way thesaurus entry, with a search term of “curtains” and synonyms of “drapes, shades” then the following occurs:

- A shopper who enters “curtains” as a search term is redirected to `http://example.com/fallsale/curtains`.
- A shopper who enters “drapes” or “shades” as a search term is not redirected.

If you have an equivalent thesaurus entry, with synonyms of “curtains, drapes, shades” then the following occurs:

- A shopper who enters “curtains” as a search term is redirected to `http://example.com/fallsale/curtains`.
- A shopper who enters “drapes” or “shades” as a search term is not redirected.

## Create and edit keyword redirects

You can create and edit keyword redirects for shoppers’ search terms on the Keyword Redirects page.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Open the **Keyword Redirects** page from the **Search** page. You must be assigned the Admin or Search role. Changes to the keyword redirects do not affect your store until after you publish. See [Publish Changes](#).

You can see how your keyword redirect entries behave when shoppers search for items by previewing your store. Click **Preview** and then search for items that you expect to trigger the keyword redirect entries that you want to test. For more information about previewing your store, see [Preview your changes](#).

### View the list of keyword redirects

The **Keyword Redirects** page displays a list of keyword redirects that have been added to your store. Each entry displays the following information:

- Keywords that the shopper enters.
- A redirect page which is the absolute or relative URL to which the shopper gets redirected.
- A clickable icon that displays the redirect page in a new tab or window.
- The read-only match mode field.
- The last modified date, and user.

By default all keyword redirects are displayed. You can filter the list of keyword redirects by site.

The list can be sorted by clicking the Sort By list and selecting keyword, redirect page, modified by user order, or date modified order. Sorting always resets your view of the list to the first page. You can filter the list by starting to type a keyword, redirect URL, match mode, or user name in the Filter terms box.

### Work with redirect URLs

Commerce recommends using relative URLs for redirecting shoppers to internal pages within the store and only using absolute URLs for redirecting shoppers to external pages outside of the store. Relative URLs are especially important for internal pages because your preview storefront and production storefront have different hostnames. Using relative URLs in this case allows you to preview and test your keyword redirects before you publish.

### Create a keyword redirect

All keyword redirects that you add using the administration interface have a match mode of Exact.

1. On the **Search** page, click **Keyword Redirects**.
2. Check to see if the keyword has already been entered. If a keyword has multiple entries with different redirect URLs, you might get unexpected results.
3. Click **New Entry**.
4. By default, the keyword redirect you create is global, that is, it applies to all sites. To create a keyword redirect that applies to one or more specific sites, deselect **Global** under **Sites**, click the Select items box and select the site or sites.
5. In the **Keyword** field, enter the term to be redirected to a page.
6. In the **Redirect** field, enter the absolute or relative URL for the page to which you want the shopper to be redirected. The entry must begin with `http://`, `https://`, or a forward slash (/).
7. Click **Create**.
8. Verify the redirect URL by clicking the redirect icon next to the URL. The URL displays the redirect page in a new tab or window.

### Edit a keyword redirect

You can modify the keywords or the redirect URLs for keyword redirect entries.

1. On the **Search** page, click **Keyword Redirects**.
2. Click the keyword entry in the list.  
You can update an existing keyword or the redirect URL, or the site it applies to.
3. Click **Save**.
4. If you edited the redirect URL, verify it by clicking the redirect icon next to the URL. The URL displays the redirect page in a new tab or window.

### Delete a keyword redirect

1. On the **Search** page, click **Keyword Redirects**.
2. Click the trash can icon next to the entry.

3. When the confirmation appears, click **Delete**.

## Refine and order search results

There are several ways to influence the ordering of the search results your shoppers see in your store: specifying dynamic curation criteria, boosting and burying products, and using facets.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

### Use dynamic curation

Dynamic curation allows you to influence the ordering of search results when the shopper navigates to a category (collection) or enters a search term. With this feature, you can create dynamic curation rules. Each rule has a destination (a collection or search terms), a set of criteria for ordering the search results, and an importance level for each criterion. Search uses your prioritization and blends the criteria to generate a sort order.

For example, in collections within Women's, you can prioritize products that are newest, bestselling, and in stock; whereas within Men's, you can prioritize bestselling, in stock, and most viewed. As another example, you can display in-stock and on-sale items near the top of the search results.

The dynamic curation feature does not replace the configuring Searchable Field Ranking feature, but rather supplements it. For text searches, it is best to configure Searchable Field Ranking to return the most relevant results first, and use dynamic curation rules sparingly. Otherwise, you might not display the most relevant results consistently.

You cannot test views and sales in Dynamic Curation in your staging or test environment.

Dynamic curation rules apply to all search-driven pages (where another dynamic curation rule does not apply), and not to collection pages driven by the repository. For example:

- If your storefront is customized such that the category pages accessed from the top-level collections are search-driven, the curated ordering applies on those pages.
- If the shopper uses guided navigation to navigate to a category page, the curated ordering applies on that page.
- If your storefront is not customized, the collection pages accessed from the top-level collections are repository-driven, and dynamic curation rules do not apply to them.

In addition, with the default search settings in Commerce, consider the following:

- When a curation rule has search terms as a destination, the rule serves only as a tiebreaker - that is, it takes effect only when two or more products that have the same relevance need to be ordered.
- When a curation rule has a collection as a destination, the criteria in the rule have a more direct effect, since relevance is not a consideration in the ordering. A rule defined for a collection applies to all sub-collections, except for any sub-collections that have their own rules.

Also be aware that because the underlying algorithm blends the criteria, predicting the search results order exactly may not always be possible.

## Implement dynamic curation

This section describes how you can use the dynamic curation feature to influence the ordering of search results. Any changes you make will take effect in production after you publish them.

### Create a curation rule

Follow these steps to create a new curation rule:

1. On the **Search** page, click **Dynamic Curation**.
2. Click **New Curation Rule**.
3. Select the site the rule applies to.
4. Select a collection or enter one or more search terms to define which search results will be ordered.
5. Click **Add Criteria** to select the criteria.  
**Note:** If you choose **Newness** as a criterion, it will only apply to products that are less than 100 days old. In addition, if Arrival Date is not populated for a product, Creation Date will be used instead.  
**Note:** The **In Stock** criterion only uses the default inventory; location-level inventories are not supported.
6. Use sliders to rate the importance of each criterion you have selected.
7. If you selected **Product type**, select and order the product types.
8. Click **Create**.

### Update a curation rule

Follow these steps to edit an existing curation rule:

1. On the **Search** page, click **Dynamic Curation**.
2. Click on the curation rule you want to edit from the list of dynamic curation rules.
3. Update the collection or search terms to define which search results will be ordered.
4. Click **Edit Criteria**.
5. Use sliders to rate the importance of each criterion you have selected.
6. Click **Save**.
7. Optionally click **Save and Preview** to preview the search results you just curated. For site-specific rules, click the preview button on the header of the administration interface.

### Delete a curation rule

Follow these instructions to delete a curation rule:

**Note:** The default rule cannot be deleted.

1. On the **Search** page, click **Dynamic Curation**.
2. Click on the curation rule you want to delete from the list of dynamic curation rules.
3. Click **Delete**.
4. When the confirmation appears, click **Delete**.

## Boost and bury products

In addition to specifying the dynamic curation criteria, you can promote (boost) products to the top of the search results and move products to the bottom of the search results (bury).

Follow these instructions to boost or bury products:

1. On the **Search** page, click **New Curation Rule**.
2. Select the site the rule applies to.
3. Select a collection or enter one or more search terms to define which search results will be ordered.
4. Click **Add Products** under **Select products to boost** or **Select products to bury** to search for, select, and add products to be boosted or buried, respectively. In the grid of boosted or buried products, you can reorder products using drag and drop or the context menus. Alternatively, switch to the list view to edit the products' sequence numbers.
5. Click **Create**.
6. Optionally click **Create and Preview** to preview the search results you just curated. For site-specific rules, click the preview button on the header of the administration interface.

**Note:** You can boost a maximum of 200 products and bury a maximum of 200 products.

## Order facets

You can select and order the facets that appear in the Guided Navigation widget when the shopper views search results or navigates to a search-driven collection.

- You can specify the default facets. These facets appear in the Guided Navigation widget on any search-driven page that does not have its own explicitly defined list of facets.
- You can create an ordered list of facets for a specific collection. These facets appear in the Guided Navigation widget when the shopper views the collection's search-driven page.
- You can create an ordered list of facets for one or more search terms. These facets appear in the Guided Navigation widget when the shopper enters any of the search terms.

Follow these instructions to add facets:

1. On the **Search** page, click **Facet Ordering** and then **New Facet Ordering Rule**.
2. Select the site the rule applies to.
3. Select a collection or enter one or more search terms to define which search results whose facets you want to order.
4. Click the **Add facet** field to add facets.
5. Click **Create** and then **Save**.

## Understand the behavior when a collection is created in two catalogs

If you create a collection in two catalogs on the same site, with the same path in each catalog, the collection will appear once in Dynamic Curation and Facet Ordering, under the site's default catalog. A rule created for this collection will apply in both catalogs.

If you create a collection in two catalogs on different sites, or in two catalogs on the same site, but with a different path in each catalog, the two collections will both appear in the

collection picker in Dynamic Curation and Facet Ordering. If you want the same rule to apply to both collections, you must create the rule twice, once for each collection.

## Multiple sites and search

If you run multiple sites within a single instance of Commerce, these sites share a single search configuration.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Your sites share the following search features:

- All searchable field ranking lists
- A single thesaurus

## Configure dynamic content

With Dynamic Content, merchandisers can return dynamic content alongside products and navigation.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

For one or more search terms, or for any collection, you can choose dynamic media from the media library. When a shopper enters one of the search terms, or navigates to the collection, the metadata for the image along with the search results are returned. For example, a search containing the term "sale" may display a clickable banner with "Click here to go to our sale page".

Open the **Dynamic Content** page from the **Search** page. You must be assigned the Admin or Search role. Changes to the dynamic content do not affect your store until after you publish.

You can see how your dynamic content rules behave when shoppers search for terms or view a collection by previewing your store by clicking **Save and Preview**. If a widget has been created and placed on the Search Results or Collection layout, you can see the destination and that the image you specified is displayed.

### Create a dynamic content rule

Follow these steps to create a new dynamic content rule:

1. On the **Search** page, click **Dynamic Content**.
2. Click **New Content Rule**.
3. Select the site the rule applies to.
4. Select a collection or enter one or more search terms to define the search results where you want to spotlight your content. Or you can select **All destinations on the selected sites**.
5. Click **Select Media** to select or add an image to display. Multiple image selection is not supported.
6. Optionally enter URL information in the **Link URL** field. A shopper who clicks on the image will be taken to this URL.

7. Click **Create**.

### Update a dynamic content rule

Follow these steps to edit an existing dynamic content rule:

1. On the **Search** page, click **Dynamic Content**.
2. Click to open the dynamic content rule you want to edit from the list of dynamic content rules.
3. Update the site, destination or media.
4. Click **Save**.
5. Optionally click **Save and Preview** to preview the search results. For site-specific rules, click the preview button on the header of the administration interface.

### Delete a dynamic content rule

Follow these steps to delete a dynamic content rule:

1. On the **Search** page, click **Dynamic Content**.
2. Click to open the dynamic content rule you want to delete from the list of dynamic content rules.
3. Click **Delete**.
4. When the confirmation appears, click **Delete**.

### Create dynamic content widgets

To display dynamic content, you create a `dynamicContentList` widget. The widget can be added to the Search Results layout or the Collection layout of Storefront or Agent. The widget also ensures that a shopper who clicks on the image is redirected to the URL specified in the rule.

In the search response, the dynamic content is returned in the additional content property and this is mapped to the additional content property in the `searchResultsDetails` view model. The widget instances interact with the view model to retrieve and display the image.

A `dynamicContentList` widget could be created in a way similar to the following example, which you could store in a file named `dynamiccontent-widget.js`:

```
define([
  'jquery', 'knockout', 'ccLogger', 'pubsub'],
function($, ko, CCLogger, pubsub) {
  'use strict';
  return {

    onLoad : function(widget) {
      widget.dynamicContentList = ko.observableArray();
      widget.searchSuccess = function(result) {
        if(this.dynamicContent && this.dynamicContent.contents &&
this.dynamicContent.contents.length>0){
          widget.dynamicContentList(this.dynamicContent.contents);
        } else {
          widget.dynamicContentList([]);
        }
      }
    }
  }
});
```

```

    };
    $.Topic(pubsub.topicNames.SEARCH_RESULTS_UPDATED).subscribe(widget
t.searchSuccess);
    $.Topic(pubsub.topicNames.SEARCH_RESULTS_FOR_CATEGORY_UPDATED).su
bscribe(widget.searchSuccess);
    }
  }
}
);

```

Once you have retrieved the dynamic content image URL, you can display it using your widget template. The `display.template` file might contain the following:

```

<div id="cc-dynamic-content">
<!-- ko if: dynamicContentList().length > 0 -->
<h3> Displaying dynamic content </h3>
<!-- ko foreach: dynamicContentList-->
<!-- ko if: $data['@type'] == "Media" -->
<div id="banner" >
<a data-bind="attr:{href: $data['linkURL']}">
<img class="img-responsive center-block" data-bind="ccResizeImage: {
    isSrcSetEnabled : true,
    source: $data['imageUrl'] }"/>
</a>
<br/>
</div>
<!-- /ko -->
<!-- /ko -->
<!-- /ko -->
</div>

```

## Use the search REST APIs

Some search-related tasks cannot be done through the administration interface and can only be completed using the search REST APIs.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The following tasks must be completed through the REST APIs:

- Create and delete a searchable field ranking list
- Enable and disable cross-field matching
- Enable different types of partial matching
- Specify snippet sizes
- Select modules that sort search results as part of a relevance ranking strategy
- Configure locales, search term wildcards, and spelling dictionaries

See [Use the REST APIs](#) for more information.

## Manage Media for Your Store

You can upload and manage product and collection images, as well as media that you use in other places on your store, such as a hero image on the home page. Commerce automatically sizes your images for display on different devices, such as laptops, tablets, and mobile phones.

This section describes how to use the Media tab to upload and manage images that appear on your store.

### View the media library

Click the **Media** icon to see all the files in your media library displayed in a grid.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Media files are initially sorted by name, though you can also sort them by size or last-modified date. You can also display them in a list.

The media library stores files in the following folders:

- **Products** - contains media files assigned to and available to products.
- **Collections** - contains media files assigned to and available to collections.
- **General** contains media files you can access when you configure the design elements for your store. See [Design Your Store Layout](#) for more information.

Click **Products**, **Collections**, or **General** to view and access just that folder's media files and to upload the selected types of files. Click **All Media** to view and access all files in your media library. You cannot move media files from one folder to another.

Click an image to display details for that file, including name, path, size, file type, and the date and time it was last modified.

There is a unique URL for each published item in your media library, providing a direct link that lets you open the item in a browser. Format the URL as follows:

`<youroracledomain.com>/file/<path>`

- `<youroracledomain.com>` is the URL Oracle provides to access your store.
- `<path>` is the value of the Path field, which you can see when you click the image on the Media page.

For example, suppose the file `oled4kwarranty.pdf` contains a warranty for a TV sold on your store `www.example2.com`. The file is stored in the General folder. Use the following URL to access the PDF:

`www.example2.com/file/general/oled4kwarranty.pdf`

# Upload media files

You can upload individual files to the media library or you can compress media files in a ZIP file, which you then upload to Commerce.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You can name media files so they are automatically assigned to products or collections in your catalog.

This section includes the following topics:

- [Automatically assign images to products and collections](#)
- [Upload individual images](#)
- [Upload multiple media files](#)

## Automatically assign images to products and collections

You can format image-file names so that they are automatically assigned to products and collections in your catalog when you upload them.

Format file names for product and collection images as follows:

`<product_id>.<name>.<file_type>`

`<collection_id>.<name>.file_type`

- `<product_id>` is the product's Product ID property. See [Create and work with products](#) for more information.
- `<collection_id>` is the collection's Collection ID property. See [Create collections](#) for more information.
- `<name>` is the descriptive name portion of the file.
- `<file_type>` is the file extension. Only JPG/JPEG, PNG, and GIF files can be automatically assigned to products and collections.

For example, suppose you want to assign several images to a pair of boots whose product ID is xprod2102. You could upload the following files:

```
xprod2102.bootsideview.png
xprod2102ridingboottopview.png
xprod2102.ridingbootfrontview.png
```

Keep the following in mind when you name media files to upload:

- A file cannot be assigned to a product or collection if a file of the same name is already assigned to it.
- The file name is case-sensitive. For example, the system considers `xprod030.rattanchair.jpg` and `xprod030.Rattanchair.jpg` to be two different files.

Product IDs are case sensitive. `xprod030` and `XPROD030` are different product IDs.

You can also import assignments in bulk for images that you have already uploaded. See [Import image assignments](#) for more information.

### Upload individual images

You can upload individual JPG/JPEG, PNG, and GIF files to the media library. You can name media files so they are automatically assigned to products or collections in your catalog once they are uploaded. See [Automatically assign images to products and collections](#) for more information.

To upload a single image:

1. On the **Media** page, select the type of media files to upload. Select **Products**, **Collections**, or **General**.
2. Click **Upload**.
3. Select an image to upload.  
You can upload only one image at a time. To upload multiple images at once, see [Upload multiple media files](#).

If you select a file with the same name as a file you already uploaded, the new file replaces the existing one.

4. Click **Save**.

### Upload multiple media files

To upload a number of media files at once, compress them in a ZIP file, then upload the ZIP file to the media library. Commerce scans the ZIP file for viruses and checks to ensure it contains only allowed file types. (You can upload only GIF, JPG/JPEG, PNG, SWF, SVG, and PDF files.) You can name media files so they are automatically assigned to products or collections in your catalog once they are uploaded. See [Automatically assign images to products and collections](#) for more information.

**Note:** Each ZIP file cannot be larger than 1GB. If your upload times out, check the ZIP file to make sure its size is 1GB or smaller.

To upload the ZIP file:

1. On the **Media** page, select the type of media files to upload. Select **Products**, **Collections**, or **General**.
2. Click **Upload**.
3. Find the ZIP file to upload and click **Open**.  
Depending on the size of the ZIP file, this process could take some time to complete. Remember that the ZIP file you upload must not be larger than 1GB.

When the upload is complete, the **Upload Media** dialog displays the total number of new and changed files, errors, and files assigned to products or collections. To see a complete report for the upload in CSV format, click **Download Full Report**.

If you upload a file with the same name as a file you already uploaded, the new file replaces the existing one.

## Edit and remove media files

You can change a media file's name or remove it from the media library.

 This section applies to Open Storefront Framework (OSF) and Storefront Classic.

This section includes the following topics:

- [Rename media files](#)
- [Remove media files](#)

### Rename media files

You can rename a file in the media library. If the file is an image assigned to a product or collection, renaming it breaks the connection to the product or collection. Once you save the new name, however, the service checks the name and if the name is formatted correctly, automatically assigns the image. See [Automatically assign images to products and collections](#) for more information.

To rename a media file:

1. On the **Media** page, find the file you want to rename and click.
2. Enter a new name in the **Name** box.  
Do not use the same name as an existing file in the same folder.
3. Click **Save**.

### Remove media files

When you remove a file from the media library, you cannot access it again with the Commerce tools. If you remove the primary image for a product or collection, the next image assigned to it becomes the primary image. If you remove all images from a product, a placeholder is displayed on your store.

To remove a file from the media library:

1. On the **Media** page, navigate to the files you want to remove.
2. Hover over a file and click the **X** icon when it appears.  
To remove multiple files, hover over a file and click the check mark icon when it appears. (To remove all the files on the current page, click **Select All**.) Repeat this for all the files you want to remove and then click the **X** icon on any of them.
3. Confirm that you want to remove the selected files.

## Import image assignments

You can use the Oracle Commerce import process to assign a number of already-uploaded images to products and collections at once and to create a title and alt text for each assigned image.

 This section applies to Open Storefront Framework (OSF) and Storefront Classic.

See [Import and Export Catalog Items and Inventory](#) for details about how to import and export data in Oracle Commerce.

The easiest way to format a file for importing image assignments for products or collections is to start by exporting a file that you can use as a template for the items you want to add or modify. See [Export catalog items](#) for more information about how to export.

When you look at the exported spreadsheet, you can see that the second row displays column headings that contain the internal names of the exported properties. There are three properties for image assignment:

- `images` specifies the name and path of the uploaded image to assign to the product or collection)
- `altText` specifies the alt text to assign to the image.
- `title` specifies the title to assign to the image.

Product or collection data begins in the third row and continues for the remainder of the spreadsheet. If an item does not have a value for a property, the corresponding cell is blank. When you enter data in the images column, you must format it as follows:

`media<number>:<path>/<file_name>`

- `<number>` is the number that specifies the display order of the image. `media1` specifies that the file will be displayed as the primary image.
- `<path>/<file_name>` specifies the full path to the image and the name of the image file, including the extension. The path and file name for an image is shown in the Path field on its details page, which you access from the Media page. See [View the media library](#) for more information.

**Note:** When you import multiple image assignments for a product or collection, you separate them with a | (vertical bar). Therefore, you should not use this character in any media file names.

See [Import catalog items and inventory](#) for more information about how to import your changes back into the catalog.

# Import and Export Catalog Items and Inventory

You can export products, SKUs, collections, and catalogs to a file in CSV (Comma Separated Value) format so you can work with them outside of Oracle Commerce and easily import changes back into your Commerce environment.

The following are examples of changes you can make by exporting and importing data:

- If you are a new Commerce customer, you can import an existing catalog to initially populate your storefront.
- If new catalog information arrives on an automated feed, you can format and edit the new assets in bulk and import them into your catalog.
- If you receive updates from a number of people, you can incorporate all the changes into your catalog at once instead of manually entering each change.
- You can quickly make bulk edits or perform global operations (like search and replace or spell-checking) on catalog assets in a spreadsheet and then import those changes back into your catalog.
- You can distribute asset information for review to people who do not have access to the Commerce tools.
- If you let shoppers view your store in different languages, you can import translations for each language your store supports.

You can also import inventory data, such as inventory count and stock threshold, for products and SKUs into your catalog.

## Understand export guidelines

It is important to plan before exporting your data.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This section provides information that helps you plan and understand your export.

- You can export products, SKUs, collections, and catalogs.
- You can export only one type of item in each export procedure. For example, you cannot export both products and collections to the same spreadsheet; you must export the products in one export procedure and then export the collections in another.
- Exporting catalogs exports properties that describe each of your catalogs, such as ID, display name, and root categories. Exporting catalogs does not export the products, SKUs, and collections the catalogs include.
- When you export products, SKUs, collections, and catalogs, all available properties are automatically exported. You cannot change the list of properties to export.

- If you modified a product, SKU, collection, or catalog, the modified version is exported, even if you have not published the changes. For items you have not modified, the published version is exported.
- If your Commerce instance uses multiple catalogs, you can export products, SKUs, and collections from a specific catalog or from all catalogs. You can also export items in Unassigned Products and Unassigned Collections, which are not associated with any catalogs.

## Export catalog items

You can export products, SKUs, collections, and catalogs to a file in CSV (Comma Separated Value) format so you can work with them outside of Commerce and easily import changes back into your Commerce environment.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This section includes the following topics:

- [Export products, SKUs, and collections](#)
- [Export catalogs](#)
- [Specify export filter criteria](#)
- [View the exported data](#)

### Export products, SKUs, and collections

Follow these steps to export products, SKUs, or collections to a spreadsheet:

1. On the Catalog page, click the **Export** button.
2. Select the items to export: Products, Product Variants (SKUs), or Collections.
3. If your Commerce instance includes multiple catalogs, specify which catalogs to export from: Select **All Catalogs** to export the selected items from all catalogs. This is the default selection.
4. If your store supports more than one language, select the language to export from the **Language** list. This list does not appear if your store supports only one language.
5. If you want to export a subset of items, select **Filter Items Being Exported** See [Specify export filter criteria](#) for more information.
6. Click **Export**.  
Once you click the **Export** button, the operation cannot be canceled and you cannot work on other tasks until the export is complete.
7. When the export is complete, your browser displays a dialog box where you choose whether to open or save the spreadsheet.  
If you click **Cancel** in this dialog box, the export file is not saved and you must repeat the export procedure.
8. See [View the Exported data](#) for information about how to understand the exported data.

### Export catalogs

Follow these steps to export information about all catalogs to a spreadsheet:

1. On the **Catalog** page, click the **Export** button.
2. Select **Catalogs** from the list of items to export.
3. If you want to export a subset of items, select **Filter Items Being Exported**. See [Specify export filter criteria](#) for more information.
4. Click **Export**.  
Once you click the **Export** button, the operation cannot be canceled and you cannot work on other tasks until the export is complete.
5. When the export is complete, your browser displays a dialog box where you choose whether to open or save the spreadsheet.  
If you click **Cancel** in this dialog box, the export file is not saved and you must repeat the export procedure.
6. Read [View the Exported data](#) for information about how to understand the exported data.

### Specify export filter criteria

By default, when you export products, SKUs, collections, and catalogs, Commerce exports all of the type of item you selected. To export fewer items, you can create rules that filter the items based on properties you specify, such as a parent collection for products.

**Note:** You cannot save filter rules. If you select a different type of item to export or navigate away from the **Catalog** page, any filter rules you created will not persist when you return.

To create a rule while exporting items, follow these steps:

1. In the **Export Catalog** dialog, select **Filter Items Being Exported**.  
The operators you see depend on the type of property you selected.
2. If you selected a specific catalog to export from and that catalog has filtered views, you can select one from the **Select Filtered View** list. The default selection is **All Filtered Views**.
3. Click **Add Rule**.
4. Select a property from the drop-down list in the rule. The available properties depend on the type of items you are exporting. You can select only one property per rule.
5. Select an operator that links the property to a value that you will specify in the next step. The operators you see depend on the type of property you selected.
6. Select or enter a value for the property.  
For some values, such as Parent Collections, Commerce displays a list for you to choose from. For others, such as Name or ID, you must type in a value. The rule editor does not validate any text, numeric, or date values you enter.
7. If you create more than one rule, select one of the following options from the **Match** list to specify how the rules behave together. You can select only one option for the entire set of rules.
  - **Any:** If an item matches any rule in the set, it is exported.
  - **All:** (default) If an item matches all the rules in the set, it is exported
8. Click **Export**.

### View the exported data

The exported CSV file can be viewed and edited using a spreadsheet program such as Microsoft Excel. The default file name follows the format `<YYMMDDhhmmss>export.csv`.

For example, a file exported January 30, 2017 at 11:43:27 AM is named  
170130114327export.csv.

The exported data follows a specific format that can be used to re-import the spreadsheet to Commerce. The following figure shows an example of exported product data in a spreadsheet:

	A	B	C
1	/atg/commerce/catalog/ProductCatalog:product		TIMEFORMAT=MM/dd/yyyy HH:mm:ss
2	ID	displayNameDefault	endDate
3	xprod2525	Metallic silk blend tank top	01/31/2009 23:59:00
4	xprod1068	Wool waist tie top	04/02/2009 01:00:00

### Row One: Repository, Item Type, Formatting Options, and Process Messages

The first row is reserved for the repository path and item type, any formatting options, and any warning or error messages.

- The first column of row one (cell A1) contains the repository path and the item type separated by a colon. For example: /atg/commerce/catalog/ProductCatalog:product
- Columns two through six (cells B1, C1, D1, E1, and F1) contain data formatting options:

TIMEFORMAT appears in the third column (cell C1) and shows the format used for dates with a time stamp, for example, TIMEFORMAT=MM/dd/yyyy HH:mm:ss.

If your store supports more than one language and you selected a different export language than the default language for your store, LOCALE appears in the fifth column (cell E1) and shows the ISO locale format for the language, for example, en\_US.

If your Commerce instance includes multiple catalogs and you selected a specific catalog to export from, CATALOG appears in the sixth column (cell F1) and shows the catalog ID, for example, CATALOG=movieCatalog.

### Row Two: Property Headings

The second row displays column headings that contain the property names of the exported properties. The ID property is always the first column (cell A2) and is always labeled "ID" regardless of the actual repository name of the ID property.

**Note:** The spreadsheet contains the Property ID and Label of the property and not the localized display name.

### Rows Three and Greater: Data

Catalog data begins in the third row and continues for the remainder of the spreadsheet. If an item does not have a value for a property, the corresponding cell is blank.

### Data for filtered catalogs

When you export products or SKUs and your Commerce instance contains filtered catalogs, the second row of the exported spreadsheet includes column headings that contain the following property IDs:

- The `coreProduct` column specifies whether the item is a core product in the catalog.
- The `filteredCatalogs` column includes the Catalog IDs that specify filtered catalog the item belongs to.

See [Work with filtered catalogs](#) for more information.

### Data for exported catalogs

When you export catalogs, the second row of the exported spreadsheet always displays column headings that contain the following internal property IDs.

- The `ID` column includes the Catalog ID for each catalog.
- The `displayName` column includes the Catalog Name for each catalog.
- The `catalogVersion` column includes an integer that specifies the type of catalog. 1 specifies a legacy catalog, 2 specifies an independent catalog, and 3 specifies a filtered catalog. See [Understand catalogs](#) for more information.  
**Note:** You cannot change a catalog's `catalogVersion` value if you import the file back into Commerce. If you do, the import will fail.
- The `rootCategories` column includes a comma-separated list of Collection IDs for the collections in each legacy catalog.  
This column contains values only for catalogs whose `catalogVersion` value is 1.
- The `rootNavigableCategory` column includes the navigable root collection for each catalog whose `catalogVersion` value is 2. The default value for this property is `rootCategory`.
- The `rootNonNavigableCategory` column includes the non-navigable root collection for each for each catalog whose `catalogVersion` value is 2. The default value for this property is `nonNavigableCategory`.
- The `defaultCategoryForProducts` column includes the Collection ID of the collection that will automatically be the parent of any product created or imported in this catalog without a specified parent.  
This column contains values only for catalogs whose `catalogVersion` value is 2.

## Import catalog items and inventory

The import feature lets you work with products, SKUs, collections, and catalogs outside of Commerce and import them, in spreadsheet format, back into Commerce.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Importing provides a convenient method for adding items and batch editing.

You can also import inventory data for products and SKUs into your catalog. Importing inventory is a separate procedure from importing products, SKUs, collections, and catalogs.

The following procedure is an overview of the steps you perform to import either catalog items or inventory from a spreadsheet into Commerce:

1. Create a spreadsheet in the correct format for importing to Commerce. For more information see [Export catalog items](#) and [Format a file for import](#).
2. Load the file and validate that the items can be imported.
3. Import the spreadsheet. For more information, see [Import products, SKUs, collections, or catalogs](#).
4. Review the outcome of the import for any errors or warnings. For more information, see [Validate and preview items](#).

5. Review the imported items on the Catalog page.

### Format a file for import

The easiest way to format a file for importing products, SKUs, collections, or catalogs is to start by exporting a file from your catalog that contains the items you want to modify. If you are importing inventory, you must manually create the import file starting with a blank spreadsheet.

**Caution:** If you leave a cell blank, a property value might be deleted. See instructions later in this section for marking data to ignore.

### Required formats for importing a spreadsheet

The first row and first column of the spreadsheet are reserved for use by the import process and must contain specific information. The first row contains information about the data that is being imported and the first column (except for row 1) contains the ID property of the items being imported.

In the first row of the spreadsheet, you must specify the repository, item type, and any special formats for data types, as follows:

- **For catalog items:** The first column of row one (cell A1) must contain the internal component path and should be left exactly as exported when you created the import template. For example, the following path indicates that the spreadsheet contains products:  
`/atg/commerce/catalog/ProductCatalog:product`
- **For inventory:** Cell A1 must contain the following path:  
`atg/commerce/inventory/InventoryRepository:inventory`
- Use the additional columns in row one (cells B1 through D1) to specify any special property formatting, such as specific date formats. Each format must be in its own cell, but it does not have to appear in any particular order. The following table describes the formatting options:

Description	Format in Spreadsheet	Requirements
Format of date property values, such as 01/31/2009	DATEFORMAT=MM/dd/yyyy The day, month, and year indicators can appear in any order to match your data, for example dd/MM/yyyy	Required if any imported properties are of type date. The date value must exactly match the format, for example 03/15/2014 instead of 3/15/14.
Format of timestamp property values, such as 31/01/2009 22:45:01	TIMEFORMAT=MM/dd/yyyy HH:mm:ss The day, month, and year indicators can appear in any order to match your data, for example, dd/MM/yyyy HH:mm:ss To use 12-hour time, the format is MM/dd/yyyy hh:mm:ss aa, where aa can be either AM or PM, for example 03/15/2009 05:30:00 AM	Required if any imported properties are of type timestamp. The timestamp value must exactly match the format, for example 03/15/2014 05:30:00 instead of 3/15/14 5:30.

Description	Format in Spreadsheet	Requirements
ISO locale format of the language you are importing. See <a href="#">Localize Your Store</a> for more information about importing translations.	LOCALE=locale The ISO locale format for the language, for example, en_US.	Required if you are importing translations for a particular language.
ProductCatalog:sku	LOCALE=locale ID=SKU displayName= parentProduct= Type= configurable=TRUE/FALSE productLine= productFamily= barcode= active=TRUE/FALSE nonreturnable=TRUE/FALSE bundledSkusItem=item1:SKU_5Cxy item2:SKU_27Gxyii bundledSkusQuantity=item1:2 item2:1 configurationMetadataName= configurationMetadataValue=	The ISO locale format for the language, for example, en_US. Qualified SKU Text name Parent product, if any. An empty string or a valid type that is defined in the repository. TRUE/FALSE Product Line, if any. Product Family, if any. Qualified barcode TRUE/FALSE TRUE/FALSE SKUs in the bundle. Quantity of each SKU in bundledSkusItem Meta data name, if any. Value for configurationMetadataName

Beginning with the second row, the first column of the spreadsheet is reserved for the ID property of the imported items. No other property can occupy column one.

- **For catalog items:** The second row (cell A2) contains the ID heading, which is always ID regardless of the actual name of the repository item's ID property. The remaining rows (cells A3 and greater) contain the ID values for each imported item. Any rows with blank ID values are skipped during import.
- **For inventory:** The second row (cell A2) contains the ID heading, which is always catalogRefId regardless of the actual name of the repository item's ID property. Cell B2 contains the label stockLevel. Cell C2 contains the label stockThreshold. Cell D2 contains the label preorderLevel. Cell E2 contains the label preorderThreshold. Cell F2 contains the label backorderLevel. Cell G2 contains the label backorderThreshold. Cell H2 contains the label availabilityDate.

Keep in mind that ID values can contain only alphanumeric characters, hyphens (-), and underscores (\_).

For details about preorder and backorder levels and thresholds, see *Manage Inventory for Preorders and Backorders*.

### Import file size limitations

The maximum number of item rows that can be imported from a single spreadsheet is 25,000. If you import more than 25,000 items, any items above that limit are not imported and the import report includes a message that tells you the import was truncated.

### Format for importing non-ASCII characters

When you import text properties (such as display names for products, SKUs, and collections) that contain non-ASCII characters, you must save the CSV file with UTF-8 encoding before you import it. Otherwise, the non-ASCII characters will appear garbled in the administrative interface.

**Note:** When you export text properties that contain non-ASCII characters, those characters do not automatically display in the exported CSV file. In order to display these characters in the CSV file you must save it with UTF-8 encoding

### Format for importing custom-property values

If your spreadsheet includes values for custom properties, it must include a column with the heading `type` in the second row. For each row that includes a value for a custom property, this column must include the ID of the product type that contains the property.

### Format for adding new items

The import feature allows you to create new items when you import your spreadsheet. To create an item, add a row to the spreadsheet and enter property values for each column. If you leave a cell blank, then the value for that property is set to null. If you leave the ID column blank, the item is skipped and not created.

Creating new items is supported only for importing products, SKUs, and collections. It is not supported for importing inventory.

You assign an ID value for the new item in one of the following ways:

- Enter `NEW` in the ID column to let Commerce create an ID.  
The new item is created using an automatically generated ID. The `NEW` keyword must be typed in all capital letters and must be the only value in the cell.
- Enter a unique ID in the ID column.  
A new item is created with the ID you enter.

To create a new top-level collection, in addition to adding the new row, you must also add the new collection's ID to the `fixedChildCategories` column of the `rootCategory` row. For example, if you add a row to the spreadsheet to add a new category whose ID is `cat5000`, you must also add the ID `cat5000` to the `fixedChildCategories` column of the `rootCategory`. Otherwise, the new collection will not appear in the Catalog tree in the administration interface.

**Note:** To create an item, you must provide values for required properties.

### Format for adding new items to specific catalogs

You can use import to create new products, SKUs, and collections in specific independent (version 2) catalogs. (By default, products, SKUs, and collections are imported into the main Product Catalog that is included with Commerce.) See [Work with independent catalogs](#) for more information.

In order to create new items in specific catalogs, you must enable support for the feature. To do this, you issue a PUT command to the `adminConfiguration` endpoint in the Admin API to set the value of the `useCatalogHeaderForCreatingNewItem` property to true. For example:

```
PUT /ccadmin/v1/merchant/adminConfiguration HTTP/1.1
Authorization: Bearer <access_token>
```

```
Content-Type: application/json
```

```
{
  "useCatalogHeaderForCreatingNewItems": true,
  "useCatalogHeaderForCreatingNewItems": true,}
```

To create new products, SKUs, or collections in a specific catalog, include `CATALOG=<id>` in the first row of the CSV file, where `<id>` is the Catalog ID of the catalog where you want to create the items. You must specify the ID of an existing independent catalog.

New collections without a specified parent are created in Storefront Navigation in the specified catalog.

If you configured the catalog to have a default collection for products, new products without a specified parent are created in that collection. Otherwise, new products without a specified parent are created in Unassigned Products. See [Import catalogs](#) for more information.

If the catalog is associated with existing filtered catalogs, you can specify valid filtered catalogs by Catalog ID in the `filteredCatalogs` column.

If products are to be directly linked to catalogs, you can specify valid independent catalogs by Catalog IDs in the `directCatalogs` column. If you are importing products into a specific catalog (that is, if the first row of the CSV file includes `CATALOG=<id>`), the value in a product's `directCatalogs` cell must match the `CATALOG=<id>` Catalog ID if that product is being linked directly to that catalog.

### Format for deleting property values

You can delete a property value of an item when you import it. To delete a property value, leave the corresponding cell blank.

- If you try to delete a required property value, such as pricelist, the spreadsheet cannot be validated and the import will fail.
- If the property has a default value, leaving the cell blank resets the value to the default.
- If you delete a cell in the spreadsheet but do not want to delete the property value during import, you can mark the cell as ignored. See [Marking Data to Ignore](#).

This delete format does not apply when you are adding items to collection properties. If you format a column to prepend or append items to a collection, blank cells are automatically ignored during import -- nothing is added or removed from the collection. See [Format for adding items to a collection property](#).

### Marking data to ignore

When you import a spreadsheet, the file might contain data that you do not want to include in the import, for example, columns with formulas or notes, columns containing a property that you do not want to edit, or blank cells that might cause data to be deleted. To remove these items from the import, you can mark columns (properties), rows (individual items), or cells (individual property values) to be ignored by the import process.

Use the keyword `IGNORE`, in all capital letters, to mark data that you want to ignore during import, as shown in the following table:

To ignore this	Do this
Ignore a column of data, such as a single property or extra column	Type <code>IGNORE</code> in the column heading (row 2).

To ignore this	Do this
Ignore an item (a single row)	Type IGNORE in the ID cell for the item (column 1).
Ignore a property for an item (a single cell)	Type IGNORE in the cell.

### Format for adding items to a collection property

You can add items to a collection property by typing an ampersand (&) before or after the property name in the column heading of a collection property, as follows:

- Insert the ampersand at the beginning of the heading name to prepend items to the beginning of a collection, for example `&fixedChildProducts`.
- Insert the ampersand at the end of the heading name to append products to the end of a collection, for example `fixedChildProducts&`.

If you already use the ampersand character as part of a collection property name, you can use a different character for appending and prepending items to collections.

The prepend and append formats simplify the process of editing collections because you only need to include additional items and not every item in the collection. If you do not use this format, the import process overwrites the collection property with the exact items listed in the spreadsheet.

When you use this format, leave a cell blank to indicate that nothing should be added to the collection. If you have formatted a column to prepend or append items to a collection, blank cells in that column are ignored during import (nothing is added or removed from the collection).

The following illustration shows an example of the prepend format used to add products to collections:

	A	B
1	/atg/commerce/catalog/ProductCatalog:category	
2	ID	&fixedChildProducts
3	cat10032	xprod2072.xprod2075
4	cat10018	xprod2072.xprod2075

### Import Catalogs

In addition to the rest of the information about importing described in this topic, keep the following points in mind when you import catalogs into Commerce.

- The first column of row one (cell A1) must contain the following string:  
`/atg/commerce/catalog/ProductCatalog:catalog`  
If you created an import template by exporting catalogs, this string will already be in the spreadsheet and should be left exactly as exported.
- You can create a new filtered catalog by specifying its `catalogVersion` and `baseCatalog` values. The `catalogVersion` column includes an integer that specifies the type of catalog. 3 specifies a filtered catalog. The `baseCatalog` column must specify the catalog ID for the independent catalog that the new filtered catalog is based on. If the `baseCatalog` value does not specify an existing independent catalog, the import will fail.  
**Note:** You cannot change an existing catalog's `catalogVersion` during import. If you do, Commerce cannot validate the CSV file and the import will fail.
- You can create a new legacy catalog by specifying its `catalogVersion` value. The `catalogVersion` column includes an integer that specifies the type of catalog. 1

specifies a legacy catalog and 2 (default value) specifies an independent catalog. You can create legacy catalogs only if you configured Commerce to support them. See [Create legacy catalogs](#) for information about how to use the Admin API to enable support for legacy catalogs.

**Note:** You cannot change an existing catalog's `catalogVersion` during import. If you do, Commerce cannot validate the CSV file and the import will fail.

- The `rootCategories` column includes a comma-separated list of Collection IDs for the root collections in each legacy catalog. This cell must be blank if the `catalogVersion` value is 2; otherwise, the import will fail.  
If you are creating or updating a legacy catalog, the only values you can add to the `rootCategories` cell are the IDs of root collections for the Product Catalog, including `rootCategory` and `nonNavigableCategory`. See [Understand catalogs](#) to learn about the Product Catalog.
- The `rootNavigableCategory` column includes the navigable root collection for each catalog whose `catalogVersion` value is 2. The default value for this property is `rootCategory`.  
You cannot change the value of `rootNavigableCategory` for an existing catalog and this cell must be blank if the `catalogVersion` value is 1; otherwise, the import will fail.
- The `rootNonNavigableCategory` column includes the non-navigable root collection for each for each catalog whose `catalogVersion` value is 2. The default value for this property is `nonNavigableCategory`.  
You cannot change the value of `rootNonNavigableCategory` for an existing catalog and this cell must be blank if the `catalogVersion` value is 1; otherwise, the import will fail.
- The `defaultCategoryForProducts` column includes the Collection ID of the collection that will automatically be the parent of any product created or imported in this catalog without a specified parent.  
This column can contain values only for catalogs whose `catalogVersion` value is 2; otherwise, the import will fail.

### Validate and preview items

When you import a file, Commerce validates the file, first verifying that the file is formatted correctly and contains data that can be imported, then validating the spreadsheet. If you receive errors or warnings prior to the actual import, you can stop the task, edit the spreadsheet to remove any errors, and then upload the file again.

After executing the validation phases and importing the spreadsheet, Commerce displays the outcome of the import in a results dialog box.

### File validation

When you select a file for import, Commerce validates the file format and the formats of the first two rows of the spreadsheet. If there is an error in the file, a message appears on the Import dialog.

Errors that can occur during this phase include the following:

- The file is not in CSV format.
- The repository or item type in the first column of row 1 is not valid.
- The file is missing the ID column or it is not the first column.
- Row 2 of the file contains properties that do not exist for this item type or have a misspelled property name.

- The file contains properties that are not allowed.  
**Note:** Commerce does not export these types of properties, so if the spreadsheet contains them, they were added to it manually and should be removed.
- The file contains a `timestamp` or a date property but does not have a corresponding `TIMESTAMP` or `DATE` format in row 1.

### Item validation

After the file is uploaded and passes file validation, Commerce validates all items and displays the outcome in the Import window. You can also download a full validation report.

The validation process determines how many imported items have changed, how many are new, and how many are unchanged.

**Note:** To improve performance, Commerce does not check to see if a SKU has duplicate variants during item validation. If you find duplicate SKU variants in your catalogs, you can simply delete them.

Errors or warnings that can occur during item validation include:

- The value in the spreadsheet cannot be converted to the correct type for a property, for example, a date does not include two digits for the month, or a letter or symbol appears in a numeric property.
- A value for a required property is missing.
- A repository ID in a property value cannot be found.  
If the unknown ID is for the same type of item that is being imported, the message is a warning because the item might be created elsewhere in the spreadsheet. If it is a different item type, the message is an error.

**Note:** If the ID column contains a non-existent repository ID, a new item is created with that ID. See [Format for Adding New Items](#).

### Import products, SKUs, collections, or catalogs

Before you import your products or SKUs for the first time, you must create product types and variant properties in Commerce. For more information, see [Manage Your Catalog](#).

Follow these steps to import products, SKUs, or collections from a spreadsheet:

1. On the Catalog page, click the **Import** button.
2. In the Import dialog, click **Browse** and locate the CSV file to import.
3. Click **Upload File**.
4. Click **Validate**.  
**Note:** Depending on the size of the spreadsheet, this process could take several minutes to complete.

The Import dialog displays the total number of changed, new, and unchanged items, as well as any errors or warnings. To see a full validation report, click **Download Full Report**.

5. Click **Import**.

The new and changed items are added to the catalog. You can now publish them to your storefront.

**Note:** If direct price editing is enabled for your Commerce store, any price changes you import are available on the storefront without publishing. Other product changes, however, must still be published. As a result, prices may exist on your production system before the associated products do. These prices will be applied to the products when they are published. See [Update prices without publishing](#) for more information.

### Import inventory

Follow these steps to import inventory information for your products and SKUs from a spreadsheet into Commerce:

1. On the Catalog page, click **Manage Catalogs** and select **Inventory**.
2. On the Manage Inventory page, click the **Import** button.
3. In the Import dialog, click **Browse** and locate the CSV file to import.
4. Click **Upload File**.
5. Click **Validate**.  
**Note:** Depending on the size of the spreadsheet, this process could take several minutes to complete.

The Import dialog displays the total number of changed, new, and unchanged items, as well as any errors or warnings. To see a full report, click **Download Full Report**.

6. Click **Import**.

The new inventory data is added to your catalog and is automatically updated on your storefront.

# Manage Promotions

Promotions allow you to offer discounts on specific products or groups of products.

For example, you might decide to promote a range of products for Mother's Day by highlighting them with an image on your site's "Welcome!" page and offering a 10 percent discount if customers order them by a specific date.

This section describes how to work with promotions on the Marketing page. You can also use the Commerce Admin API to programmatically create a number of promotion types that are not available in the UI. For more information, see [Create Custom Promotions](#).

## Understand promotions

A promotion defines both the conditions an order must meet before qualifying for a discount, and how the discount is applied.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

For example, you can specify that a customer can get a discount on a specific video game console, on orders of more than \$50, or on purchases made during July.

By default, promotions are available to all shoppers, but once you create a promotion, you can make it available only to customers who provide a coupon code. See [Add a coupon code to a promotion](#) for more information.

An order might qualify for more than one promotion. In this case, promotions are applied in order of priority, with low priority numbers applied first. Commerce sorts the promotions by the value of the `Priority` property. A promotion's priority is evaluated against other promotions of the same type. For example, item discounts are evaluated only against other item discounts, not against order discounts. If an order qualifies for multiple promotion types, item discounts are applied first, followed by order discounts. Promotions that are of the same type and have the same priority have no guaranteed sequence, so the order in which they are evaluated is undefined.

When you preview your store, you can see how your promotions behave when users shop for items. Simply click the Preview button and then shop for items that you expect to trigger the promotions you want to test. For more information about previewing your store, see [Preview your changes](#).

Commerce templates provide an easy way to create the following types of promotions:

- Order discount: The entire order is discounted. See [Create an order discount promotion](#) for more information.
- Item discount: The shopper receives a discount on an item or items. See [Create an item discount promotion](#) and [Create a buy one get one promotion](#) for more information.
- Shipping discount: The shopper receives discounted or free shipping. See [Create a shipping discount promotion](#) for more information.

# Understand promotion targets

A target is an item that is discounted or given by a promotion.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This section describes how promotions are applied to items and includes the following topics:

- [Understand which items cannot be discounted by default](#)
- [Understand how add-on products affect promotions](#)
- [Understand the Discountable property for products and SKUs](#)

## Understand which items cannot be discounted

The following items cannot be discounted by Item Discount, Buy One Get One, Buy X Get Order Discount, or Buy X Get Shipping Discount promotions. Even if you add them to a promotion's offer, Commerce will not consider them for the promotion.

- Items already acting as qualifiers for any other Item Discount, Buy One Get One, Buy X Get Order Discount, or Buy X Get Shipping Discount promotion.
- Items already discounted by any other Item Discount, Buy One Get One, Buy X Get Order Discount, or Buy X Get Shipping Discount promotion, including the current promotion.
- Items with zero prices.
- Items with negative prices.
- Items whose prices are lower than promotion price.

**Note:** By default, items on sale do qualify for promotions and can be promotion targets.

## Understand how add-on products affect promotions

Add-on products let shoppers customize or enhance their purchases with optional extras like monogramming, gift wrap, or warranties. Add-on products cannot be used to qualify a product for a promotion, nor can they be explicitly targeted by a promotion. However, when a promotion targets a product in the cart that includes add-ons, the promotion discounts the total item price, that is, the price of the product plus the price of any add-ons. For example, suppose a promotion offers 20% off all wireless headphones. A \$200 pair of headphones comes with an optional \$40 replacement warranty. When a shopper places both the headphones and the warranty in the cart, the promotion discounts the total cost of the headphones and warranty (\$240) for a discount of \$48. You cannot apply a discount only to a parent product and not its add-ons. Keep this in mind when designing your promotions, especially when designing promotions that might offer products with optional add-ons as free gifts. See [Create add-on products](#) for more information.

When determining if a product with add-ons can be the target of a promotion, Commerce considers the Discountable property of a parent product only; it does not consider the Discountable property of any of the parent's add-ons. For example, suppose a set of wireless headphones is discountable but an optional charger available as an add-on product is not discountable. When a shopper places both the

headphones and the charger in the cart, the charger will be discounted by any item or order promotion that discounts the headphones, even though the charger's Discountable property is set to false. See [Create and work with products](#) to learn how to set the Discountable property for products and SKUs.

### Understand the Discountable property for products and SKUs

Each product and SKU you create in Commerce has a Discountable property. By default, the Discountable property is set to true; this means that the product or SKU is available to be used as a promotion target for item discount and order discount promotions. (Shipping discount promotions ignore the Discountable property.) If you set the Discountable property to false, the product or SKU can never be discounted by any item or order promotion, even if you add it to a promotion's offer condition.

**Note:** The Discountable property does not affect promotions from an external system that you access with the External Promotions webhook .

Products and SKUs marked as not discountable can act as qualifiers for item and shipping discount promotions, but they cannot contribute to the qualifying order total for order discount promotions. For example, suppose a promotion offers 20% off orders of at least \$65. If a cart is valued at \$75 but contains a \$25 shirt marked as not discountable, the order does not qualify for the promotion; the shopper must add \$40 in discountable items to the cart in order for the order to qualify for the promotion.

To prevent not-discountable items from acting as qualifiers, exclude them from a promotion in one of the following ways:

- Add individual products or SKUs to the Buy Condition's Excluded Items list.
- Create the following rule in the Buy Condition's Excluded Items section:  
Type = Base Product, Attribute = Discountable, Value = False

## Understand currency-specific promotions

If your store uses price groups to support multiple currencies, you can specify that a promotion applies only to items purchased in specific currencies.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

For example, you can create an order discount called "Spend 100 Euros, get 10 Euros off" that applies to the product prices in all price groups that contain the currency Euro. Or you can create a promotion that applies only if the shopper is paying with a specific credit card.

When you create a promotion, you use the Price Groups field to specify the price groups for which the promotion is valid.

If you select one or more price groups, the promotion is valid only for those price groups. If you leave the Price Groups field blank, the promotion is valid for all price groups.

## Understand audience-specific promotions

An audience represents a segment of the shoppers that visit your store.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You define an audience by creating a set of rules based on attributes of the shopper profile. You can create promotions that can be claimed only by shoppers who are members of specific audiences. For example, a 20% off store-wide promotion could apply only to employees of a certain company or shoppers with a high average order value.

When you create a promotion, you use the Target Audience field on the Availability tab to select the audiences whose members are eligible for the promotion. If you select one or more audiences, the promotion is valid only for members of those audiences. If the Target Audience field contains no audiences, all shoppers are eligible for the promotion, assuming they meet the other qualifying conditions.

You can select both enabled and disabled audiences for a promotion. If you select a disabled audience, the promotion is not valid for that audience until you enable the audience.

If an audience you added to a promotion is later deleted, Commerce does not automatically remove the deleted audience from the promotion, but adds an icon that indicates it has been deleted. You should remove deleted audiences from the promotion. If all the audiences associated with a promotion are deleted, the promotion will never be available to any shoppers.

See [Define Audiences](#) for more information about creating and managing audiences.

## Understand site-specific promotions

If your store supports multiple sites, you can specify that a promotion applies to items purchased only from specific sites.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Your Commerce instance initially has a single site, or store. You can, however, run multiple sites from a single Commerce instance. Each site corresponds to a store. For example, you might have a site that sells jerseys for a specific team, and you may want to apply a promotion only to items sold on that site.

When you create a promotion, you use the Sites field to specify the sites on which the promotion is valid. If you select one or more sites, the promotion is valid only for those sites. If you select the Applies to All checkbox, the promotion is valid on all sites.

## Copy an existing promotion

Creating a new promotion based on an existing one lets you easily create a number of similar promotions, and lets you reuse promotions that were successful in the past.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

When you copy an existing promotion, the following values are automatically copied to the new promotion:

- Display name (By default, this will be set to the name of the promotion that was copied, followed by (copy). For example, Summer Sale (copy).
- Description
- Price groups

- All condition and offer properties
- Priority
- Folder
- Excluded promotions

When you copy an existing promotion, the following values are not copied to the new promotion:

- Start and end dates
- Promotion ID (A new ID is automatically assigned when you save the promotion.)
- Stacking rules
- Coupon or coupon batch
- Enabled status
- Any translations for shopper-visible properties, such as the name of the promotion. You can copy an existing promotion only in the store's default language. Once you save the copied promotion, you can translate properties into other languages your store supports. See [Localize Your Store](#) for more information.

You can copy promotions created on the Promotions page of the administration interface. You cannot copy custom promotions created with the `rawPmdlTemplate` promotion template. For more information about custom promotions, see [Create Custom Promotions](#).

To copy an existing promotion:

1. On the Promotions page, click the row of the promotion to copy and then click the **Copy** button.  
Click anywhere in the row except on the link that is the promotion's name. Clicking that link opens the existing promotion.
2. Enter information about the promotion that was not copied.
3. Click **Save**.
4. (Optional) Create a coupon code that customers must provide to redeem the promotion. See [Add a coupon code to a promotion](#) for more information.

## Create an order discount promotion

An order discount promotion discounts an entire order.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Commerce includes the following order discount promotion templates:

- Spend Y for Order Discount discounts an order when a shopper spends a specified amount. You can discount orders by a fixed amount, such as \$20, or by a percentage, such as 15%.  
You can configure this promotion to apply bigger discounts as the value of an order increases. For example, a promotion might discount a \$75 order by 10%, a \$100 order by 15%, and an order of \$150 or more by 20%.
- Spend Y in X Get Order Discount discounts an order when the shopper spends a specified amount in specified product areas. For example, Spend \$50 in Back-to-School Fashions, Get 20% Off Your Entire Order.

- Buy X Get Order Discount discounts an order when a shopper buys something in a specified product area. For example, Buy 2 Kids Backpacks, Get 10% Off Your Entire Order. See [Understand promotion targets](#) for information about how this type of order discount interacts with item discounts. You can configure this promotion to discount any order, regardless of how much shoppers spend or what items they purchase.

When Commerce sends the JSON representation of an order in the body of a webhook or a response to a REST API request, order discount promotions are listed individually in an `orderDiscountInfos` map within each cart item's JSON representation. The map includes the promotion ID, discount amount, and coupon codes (if applicable) for each order discount applied to the order. The following sample shows part of an Order Submit webhook body for an order that is discounted by two different order discount promotions.

```
...
  "orderDiscountInfos": [
    {
      "couponCodes": [],
      "amount": 59.7,
      "promotionId": "orderDiscount"
    },
    {
      "couponCodes": ["coupon101"],
      "amount": 3.65,
      "promotionId": "promo10001"
    }
  ],
  ...
```

To create a new Order Discount promotion, follow these steps:

1. On the Promotions page, click **New Promotion** and select **Spend Y for Order Discount**, **Spend X in Y Get Order Discount**, or **Buy X Get Order Discount**.
2. Enter the name, description, and price groups for the promotion. See [Enter general promotion information](#) for details about each field.
3. Enter condition and offer details for the promotion. See [Enter condition and offer information](#) for details about each field.
4. On the promotion's Availability tab, define the promotion's lifecycle and enter information that determines when the promotion is active and usable. See [Enter promotion availability information](#) for details about each field.
5. (Optional) Specify promotions that cannot be combined with this one. See [Exclude promotions](#) for more information.
6. Click **Save**.
7. (Optional) Create a coupon code that customers must provide to redeem the promotion. See [Add a coupon code to a promotion](#) for more information.

## Create an item discount promotion

An item discount promotion discounts one or more qualifying items.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Oracle Commerce includes the following types of item discount promotion templates:

- Get Item Discount automatically discounts one or more qualifying items without requiring the shopper to make any other purchases. For example, 20% Off All Kids' Backpacks.
- Spend Y in X Get Item Discount discounts one or more qualifying items when the shopper spends a specified amount in specified product areas. For example, Spend \$100 in Back-to-School Fashions, Get 20% Off Kids' Backpacks.

You can create a promotion that discounts one or more items when a customer spends the specified amount anywhere in your store (Spend Y Get Item Discount) by specifying that shoppers can spend the minimum amount on any item. For example, Spend \$100, Get 20% Off Kids' Backpacks. See [Enter condition and offer information](#) for details.

Each item in a shopper's cart can be discounted by only one item discount promotion, even if it qualifies for more than one item discount. Item discount promotions are evaluated in order of priority, with low priority numbers applied first. Item discount promotions that have the same priority have no guaranteed evaluation order. For example if a shirt qualifies for three item discount promotions, and all three promotions have the same priority, there is no way to be certain which promotion will be applied to the shirt when a shopper places it in her cart.

To create a new Get Item Discount or Spend Y in X Get Item Discount promotion:

1. On the Promotions page, click **New Promotion** and select **Get Item Discount** or **Spend Y in X Get Item Discount**.
2. Enter the name, description, and price groups for the promotion. See [Enter general promotion information](#) for details about each field.
3. Enter condition and offer details for the promotion. See [Enter condition and offer information](#) for details about each field. See [Sample item discount promotion](#) for an example that explains how different condition and offer settings can affect the discount. **Note:** The Get Item Discount promotion has no buy condition.
4. On the promotion's Availability tab, define the promotion's lifecycle and enter information that determines when the promotion is active and usable. See [Enter promotion availability information](#) for details about each field.
5. (Optional) Specify promotions that cannot be combined with this one. See [Exclude promotions](#) for more information.
6. Click **Save**.
7. (Optional) Create a coupon code that customers must provide to redeem the promotion. See [Add a coupon code to a promotion](#) for more information.

### Sample item discount promotion

This section describes a promotion called Summer Skirt Sale. When a shopper spends \$100 anywhere in the Bags and Luggage collection, the promotion discounts one skirt by 25%. The items to include and exclude for offer are the same as items in buy condition. At least one qualifying item must be purchased. The discount order is least expensive item discounted first and the promotion uses list prices to sort the discount order. The promotion discounts a maximum of one item.

A shopper's cart contains the following items:

- One backpack, list price \$100

- One skirt, list price \$100, on sale for \$75
- One skirt, list price \$200, on sale for \$50

The backpack fulfills the promotion condition. The discount is applied to the skirt that costs \$75, not to the one that costs \$50, because the less-expensive skirt has a higher list price.

## Create a buy one get one promotion

A buy one get one (sometimes called BOGO or Buy X Get Y) promotion discounts an item when a customer buys another, often similar, item.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

A common buy one get one condition is that the shopper buys an item in a collection and receives a discount on a second item in that collection. For example, when a shopper buys two tops, she gets one for 50% off. A common Buy X Get Y condition is that a shopper buys one or more items and receives a discount on a related item. For example, when a shopper buys a pair of hiking boots, she gets a free pair of hiking socks.

To create a new buy one get one promotion, follow these steps:

1. On the Promotions page, click **New Promotion** and select **Buy One Get One**.
2. Enter the name, description, and price groups for the promotion. See [Enter general promotion information](#) for details about each field.
3. Enter condition and offer details for the promotion. See [Enter condition and offer information](#) for details about each field. See [Sample buy one get one promotion](#) for an example that explains how different condition and offer settings can affect the discount.
4. On the promotion's Availability tab, define the promotion's lifecycle and enter information that determines when the promotion is active and usable. See [Enter promotion availability information](#) for details about each field.
5. (Optional) Specify promotions that cannot be combined with this one. See [Exclude promotions](#) for more information.
6. Click **Save**.
7. (Optional) Create a coupon code that customers must provide to redeem the promotion. See [Add a coupon code to a promotion](#) for more information.

### Sample buy one get one promotion

This section describes a promotion called Summer Shoes: Buy One Get One. When a shopper buys one pair of shoes from the collection Ladies Shoes, the promotion discounts another pair from that collection by 50%. The buy condition includes the collection Ladies Shoes but excludes its child collection Ladies Designer Shoes. The items to include and exclude for offer are the same as items in buy condition. At least one qualifying item must be purchased. The discount order is least expensive item discounted first and list prices are used to sort the items. The promotion discounts a maximum of 2 items.

A shopper's cart contains the following items:

- One pair of ladies sandals, list price \$100

- One pair of ladies designer boots, list price \$800

In this case, the discount is not applied to either item. The designer boots are excluded from the buy condition, so the sandals cannot be discounted. While the sandals do count toward the buy condition, the boots are excluded from the offer, so they cannot be discounted.

Another shopper's cart contains the following items:

- One pair of ladies sandals, list price \$100
- One pair ladies sandals, list price \$75

In this case, the \$75 sandals receive the discount. If you edit the promotion to apply the discount to the most expensive item first, then the \$100 sandals receive the discount.

## Create a shipping discount promotion

A shipping discount promotion offers free or discounted shipping via shipping methods you associate with the promotion.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Shipping discount promotions can discount both internally-priced and externally-priced shipping methods. Shipping discount promotions you create with templates on the Promotions page apply the shipping discount to an entire order. To apply a shipping discount to an individual shipping group within an order, you must create a custom promotion with the Commerce Admin API.

**Note:** Shipping surcharges are not affected by shipping promotions and are added to the order total during checkout. See [Manage Your Catalog](#) and [Configure Shipping](#) for more information about shipping methods and shipping surcharges.

You can create the following types of shipping discounts:

- Get Shipping Discount discounts shipping for all orders with no required buy condition
- Spend Y Get Shipping Discount discounts shipping when the shopper spends at least a specified amount.
- Spend Y in X Get Shipping Discount discounts shipping when the shopper spends at least a specified amount in specified product areas. For example, Spend \$50 in Back-to-School Fashions, Get Free Shipping On Your Entire Order.
- Buy X Get Shipping Discount discounts shipping when the shopper purchases specified items.

To create a new shipping discount promotion:

1. On the Promotions page, click **New Promotion** and select **Get Shipping Discount**, **Spend Y Get Shipping Discount**, **Spend Y in X Get Shipping Discount**, or **Buy X Get Shipping Discount**.
2. Enter the name, description, and price groups for the promotion. See [Enter general promotion information](#) for details about each field.
3. Enter condition and offer details for the promotion. See [Enter condition and offer information](#) for details about each field. See [Sample buy one get one promotion](#) for an example that explains how different condition and offer settings can affect the discount.  
**Note:** Get Shipping Discount does not require a buy condition.

4. On the promotion's Availability tab, define the promotion's lifecycle and enter information that determines when the promotion is active and usable. See [Enter promotion availability information](#) for details about each field.
5. (Optional) On the promotion's Exclusion Rules tab, specify promotions that cannot be combined with this one. See [Exclude promotions](#) for more information.
6. Click **Save**.
7. (Optional) Create a coupon code that customers must provide to redeem the promotion. See [Add a coupon code to a promotion](#) for more information.

## Create a gift with purchase promotion

Gift with purchase promotions let you give a customer a free item as part of their order.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You can create two types of gift with purchase promotions:

- Gift with Item Purchase gives the shopper a free gift with a purchase. You can offer a gift with any purchase or with the purchase of a specific item. This promotion can apply only once per shopping cart. Gift items cannot act as qualifiers for the promotion. For example, suppose you create a promotion that offers a free votive candle with any purchase. If the shopper adds one votive candle to the cart, that candle is not repriced to free. If the shopper then adds another item to the cart, that item qualifies the cart for the promotion, and the votive candle is repriced to free.
- Spend Y Get Gift with Purchase gives the shopper a free gift when they spend a specified amount. For example, "Spend \$100, get a free \$10 gift card." Gift items cannot act as qualifiers for the promotion, so if a shopper adds a gift item to the cart, its price does not count toward the Spend Y total. This promotion can apply only once per shopping cart; if a shopper adds two of the qualifying item, only one will be repriced to free.

When a shopper's cart qualifies for a gift with purchase promotion, one of the following things happens:

- If no item in the cart meets the offer criteria, the gift item is automatically added to the cart. The gift item cannot act as a qualifier for other promotions.
- If the shopper has already added the gift item to their cart, the item is repriced to be free. Once the gift item is repriced, it can no longer act as a qualifier for other promotions.

If the shopper removes the gift from a qualifying cart, Commerce does not automatically re-add the gift while the cart still qualifies for the promotion. There are two ways to add the gift again:

- If the shopper re-adds the gift item to the cart, the item is repriced to free if the cart still qualifies for the promotion.
- If the cart becomes unqualified (for example, if the shopper removes items required for the buy condition) and then qualified again (for example, if the shopper adds back items required for the buy condition), Commerce automatically re-adds the gift.

When an item appears in an order object (for example, in the body of an Order Submit webhook), the property `gwp` specifies whether the item was given as part of a gift with purchase promotion. For gift items, the value of the `gwp` property is `true`; for all other items, the value is `false`. For example:

```
"gwp":true,
```

To create a new gift with purchase promotion, follow these steps:

1. On the Promotions page, click **New Promotion** and select **Gift with Item Purchase** or **Spend Y Get Gift with Purchase**.
2. Enter the name, description, and price groups for the promotion. See [Enter general promotion information](#) for details about each field.
3. Enter condition and offer details for the promotion. See [Enter condition and offer information](#) for details about each field.
4. On the promotion's Availability tab, define the promotion's lifecycle and enter information that determines when the promotion is active and usable. See [Enter promotion availability information](#) for details about each field.
5. (Optional) Specify promotions that cannot be combined with this one. See [Exclude promotions](#) for more information.
6. Click **Save**.
7. (Optional) Create a coupon code that customers must provide to redeem the promotion. See [Add a coupon code to a promotion](#) for more information.

## Define a promotion

You define a promotion by entering basic descriptive information, the buy condition and offer, and the promotion's availability.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This topic contains the following sections that describe how to define a promotion:

- [Enter general promotion information](#)
- [Enter condition and offer information](#)
- [Enter promotion availability information](#)
- [Understand promotion filters](#)

### Enter general promotion information

The following table describes the basic properties for a promotion. You set these properties on the promotion's General tab.

Property	Description
Display Name (required)	Short, descriptive name that identifies the promotion.
Description	Short description that helps you to identify a promotion in the administration interface. The description does not appear on your store.

Property	Description
Sites	Select the sites this promotion applies to. Select Applies to all for a promotion that can be used on all sites. By default, the promotion applies to all sites. See <a href="#">Understand site-specific promotions</a> for more information.
Price Groups	Select the price groups this promotion applies to. If you leave this field blank, the promotion applies to all price groups. See <a href="#">Understand currency-specific promotions</a> for more information.

### Enter condition and offer information

The condition and offer determine how your promotion works, as well as what the qualifying behavior is, what type of discount results, and if there are any exclusions.

- The buy condition describes items or spend amount that qualify for the discount. (Not all promotions require a buy condition. For example, the Get Item Discount and Get Order Discount promotions do not require a buy condition.)
- The offer describes items that are discounted by the promotion. Commerce evaluates the condition rules first before evaluating the offer rules to find target items for the discount.

You set condition and offer properties on the promotion's General tab.

The following table describes the buy condition properties for Commerce promotions.

**Note:** The Get Item Discount and Get Shipping Discount promotions do not have buy conditions.

Property	Description
Minimum Spend	<p>The spend threshold for promotions that require a shopper to spend a minimum amount.</p> <p>Minimum Spend applies to the following promotions: Spend Y Get Gift With Purchase, Spend Y in X Get Item Discount, Spend Y for Order Discount, Spend Y in X Get Order Discount, Spend Y in X Get Shipping Discount, and Spend Y Get Shipping Discount.</p> <p>If you are creating a Spend Y For Order Discount promotion, you can specify one or more spend tiers and assign a discount to each tier. For example, order totals from \$75 to \$99.99 are discounted by 10%, order totals from \$100 to \$149.99 are discounted by 15%, and order totals of \$150 or more are discounted by 20%.</p> <p>To create a promotion without tiers, that is, one that provides the same spend threshold for all orders, enter the Minimum Spend value, leave the Range End value blank, and then enter a discount amount.</p>

Property	Description
Get Discount With Any Order	For Buy X Get Order Discount promotions, specifies that the shopper can make any purchase anywhere in your store. If you do not select this option, you must select individual products and collections that qualify for the promotion (Included Items).
Spend On Any Item	For Spend Y in X promotions, specifies that the shopper can spend the Minimum Spend amount anywhere in your store. If you do not select this option, you must select individual products and collections that qualify for the promotion (Included Items).
Included Items	<p>Products, collections, and SKUs that qualify for the discount. See <a href="#">Include or exclude products, SKUs, or collections</a> for more information.</p> <p>To qualify everything in your store for the discount, select Include Entire Catalog. Even if you select this option, you can still select products and collections that cannot qualify for the promotion (Excluded Items).</p> <p>Included Items applies to the following promotions: Get Item Discount, Buy One Get One, Gift With Item Purchase, Spend Y in X Get Item Discount, Spend Y in X Get Order Discount, Buy X Get Order Discount, Spend Y in X Get Shipping Discount, and Buy X Get Shipping Discount.</p>
Excluded Items	<p>Products, collections, and SKUs that cannot qualify for the promotion. Excluded items always take precedence over included items. See <a href="#">Include or exclude products, SKUs, or collections</a> for more information.</p> <p>Excluded Items applies to the following promotions: Get Item Discount, Buy One Get One, Gift With Item Purchase, Spend Y in X Get Item Discount, Spend Y in X Get Order Discount, Buy X Get Order Discount, Spend Y in X Get Shipping Discount, and Buy X Get Shipping Discount.</p>
Give Gift With Any Order	For a Gift With Item Purchase promotion, specifies that the promotion should apply to any order without requiring the purchase of specific products. If you select this option, you will no longer see the Included items, Excluded items, and Number of items required to buy to get offer fields.
Number of Items Required to Buy to Get Offer)	For a Buy One Get One promotion, the number of items the shopper must purchase in order to receive the discount.

The following table describes the offer properties for Commerce promotions.

Property	Description
Discount Type	<p>For order promotions, select Amount Off or Percent.</p> <p>For shipping promotions and item promotions (except gift with purchase), select Amount Off, Percent, Fixed Price, or Free.</p>
Discount Amount	<p>Enter the amount of the discount or, if the Discount Type is Fixed Price, enter the price of the item. If the Discount Type is Free, this field does not appear.</p>
Included Items	<p>Products, collections, or SKUs that are discounted by the promotion. See <a href="#">Include or exclude products, SKUs, or collections</a> for more information.</p> <p>To allow everything in your store to be discounted by the promotion, select Include Entire Catalog. Even if you select this option, you can still select products, collections, and SKUs that cannot be discounted by the promotion (Excluded Items).</p> <p>This offer property applies to the following promotions: Get Item Discount, Buy One Get One, and Spend Y in X Get Item Discount.</p>
Excluded Items	<p>Products, collections, or SKUs that cannot be discounted by the promotion. Excluded items always take precedence over included items.</p> <p>See <a href="#">Include or exclude products, SKUs, or collections</a> for more information.</p> <p>This offer property applies to the following promotions: Get Item Discount, Buy One Get One, and Spend Y in X Get Item Discount.</p>
Items to Include and Exclude For Offer Are the Same as Items in Buy Condition	<p>For Buy One Get One promotions, you can select this option instead of selecting items to include or exclude for the offer.</p> <p>If you update the included and excluded items in the condition, the offer is automatically updated when you save the promotion.</p>
Number of Items to be Discounted as Part of the Offer	<p>Prevents discounting an unlimited number of qualifying items. Enter the number of items that can receive the discount. For instance, if a shopper purchases six items in the discounted category, you might discount five of them. By default, this is set to unlimited.</p> <p>This offer property applies to the following promotions: Get Item Discount, Buy One Get One, and Spend Y in X Get Item Discount.</p>

Property	Description
Order by Which Discount is Applied	<p>Select whether the discount should be applied to the lowest or the highest priced items in the order first. By default, discounts are applied to the lowest-priced items first.</p> <p>This setting applies only if you specified a number of items to be discounted as part of the offer. If the offer discounts unlimited items, this setting is ignored.</p> <p>This offer property applies to the following promotions: Get Item Discount, Buy One Get One, and Spend Y in X Get Item Discount.</p>
Price to Use for Sorting Items	<p>Select whether to use list prices or lowest discounted prices when Commerce determines which items the promotion should discount. A product's lowest discounted price can be discounted by one or more of the following: a price group's sale price, promotion discounts, or integration with an external pricing system.</p> <p>See <a href="#">Sample item discount promotion</a> for details about how this setting affects items discounted by a promotion.</p> <p>This setting applies only if you specified the number of items to be discounted as part of the offer. If the offer discounts unlimited items, this setting is ignored.</p> <p>This offer property applies to the following promotions: Get Item Discount, Buy One Get One, and Spend Y in X Get Item Discount.</p>
Include Shipping Methods	<p>For shipping promotions, the shipping methods that qualify for the discount.</p> <p>To select shipping methods, begin by typing or pasting some text in the Add Shipping Methods box.</p> <p>If a shipping method has an internal name assigned, it appears in parentheses after the shipping method's display name. Internal names are hidden from shoppers but let you create multiple shipping methods with the same display name.</p>
Select a Gift	<p>For gift with purchase promotions, the product given as a free gift by the promotion. You can select any single product from your catalog.</p>
Gift Handling When Cart No Longer Meets Buy Condition	<p>For gift with purchase promotions, specifies what should happen to a gift item in the cart when the cart no longer qualifies for the promotion. Select one of the following options:</p> <ul style="list-style-type: none"><li>Automatically remove gift item from cart</li><li>Leave gift in cart and reprice item</li></ul>

## Enter promotion availability information

The following table describes the properties that define a promotion's lifecycle by specifying when it is active and usable. These properties are available on a promotion's Availability tab.

Property	Description
Start Date / Time	Date and time the promotion becomes available.
End Date / Time	Date and time the promotion is no longer available.
Target Audience	Select one or more audiences whose members are eligible for this promotion. By default, no audiences are specified and the promotion is available to all shoppers. Audiences are listed alphabetically by display name. Both enabled and disabled audiences appear in the list. See <a href="#">Understand audience-specific promotions</a> for more information.
Coupon Code	<p>The code customers use to redeem a coupon for this promotion. Coupon codes are case-sensitive.</p> <p><b>Note:</b> You must save a new promotion before you can add a coupon code to it.</p> <p>See <a href="#">Add a coupon code to a promotion</a> for more information.</p>
Priority (required)	<p>The priority of the promotion. Promotions are applied in order of priority, with low priority numbers applied first. Commerce sorts the promotions by the value of this property.</p> <p>A promotion's priority is evaluated against other promotions of the same type. For example, item discounts are evaluated only against other item discounts, not against order discounts.</p> <p>If an order qualifies for multiple promotion types, item discounts are applied first, followed by order discounts, then shipping discounts.</p> <p>Promotions that are of the same type and have the same priority have no guaranteed sequence, so the order in which they are evaluated is undefined.</p>
Enabled	Specifies whether this promotion can be used with a qualifying order. This setting is turned on by default, but a promotion's availability also depends on any start and end dates you set. If Enabled is turned off, the promotion cannot be used regardless of the start and end dates.

Property	Description
Card IIN Range	<p>Credit cards use an international Issuer Identification Number (IIN) that identifies the type of card, for example, MasterCard or American Express. The first 6 digits of a credit card contain the IIN. You can create a range of numbers that identify a specific credit card issuer, allowing you to create credit card-specific promotions. Entering a range of numbers allows you to identify specific credit cards that qualify for this promotion.</p> <p>You can use dashes (-) and commas (,) to set ranges. For example, 2 – 3 would include all credit cards that have an IIN between 200000 and 399999. The end of the range must be larger than the starting range. Use commas to specify a series of ranges, such as 222 (all numbers between 222000 and 222999), 444 (all numbers between 444000 and 444999). These conventions can be used together, for example, 1011, 122122-122925, 133-139, 15. By default, promotions are not limited to any credit card type or range.</p> <p><b>Note:</b> Although it is possible to assign IIN ranges when working with CyberSource payment gateways, the promotions will not apply.</p>
Folder	<p>The folder where this promotion is stored. By default, no folder is selected. If you created the promotion by copying an existing promotion, then the value is the same folder as the promotion you copied. See <a href="#">Organize promotions in folders</a> for more information.</p>
Custom Defined Label	<p>A custom property associated with the promotion, if one has been configured. (Custom promotion properties are configured with the Admin API. See <a href="#">Create custom properties for promotions</a> for more information.)</p>

### Understand promotion filters

Promotions can be filtered using the options provided on the promotion's **Advanced** tab. Filters allow you to perform a number of actions, such as exclude or include qualified items, or include items that are on sale. Filters are based on qualifying conditions or offers presented by the promotion. To implement a filter, perform the following steps:

1. Use the administration interface to go to **Promotions**.
2. Select the promotion to edit.
3. Click the **Advanced** tab. The screen displays the filters that are available for that promotion.
4. Use the drop down menu to select the filter settings. If you do not select a setting, the default settings are used.

The following filters are available for promotions:

Filter	Description	Used on promotions
Qualified Items (Any promotion)	This conditional filter allows you to identify if a qualifier can be used only once per promotion. If you select Include, qualifiers will be used only once per promotion.	Item, Order or Shipping promotions.
Discounted Items (Any promotion)	This conditional filter allows you to include or exclude items discounted by any promotion and allow them to act as a qualifier for other promotions.	Item, Order or Shipping promotions.
Discounted Items (Current promotion)	This conditional filter allows you to determine if items discounted by the current promotion can act as a qualifier for other promotions	Item promotions.
Items on Sale	This conditional filter identifies if items that have a sale price can act as qualifiers.	Item, Order or Shipping promotions.
Items with Zero Prices	This conditional filter identifies if an item with a zero price can act as a qualifier for this promotion.	Item, Order or Shipping promotions.
Items with Negative Prices	This conditional filter identifies if items with negative prices can act as qualifiers. If you select Include, then items with negative prices will act as a qualifier.	Item, Order or Shipping promotions.
Qualified Items	This offer filter includes or excludes items that have acted as qualifiers for another discount. If you include these items, any item that acted as a qualifier for another discount can be receive the discount.	Item promotions only.
Discounted items (Any promotion)	This offer filter determines if items that have already been discounted by the current promotion can receive the discount again. If you include discounted items, the items can receive the discount again.	Item promotions only.
Discounted Items (Current promotion)	This offer filter includes or excludes discounted items from the current promotion.	Item promotions only.
Items on Sale	This offer filter includes or excludes items that were priced with a sales price from receiving the discount.	Item promotions only.

Filter	Description	Used on promotions
Items with Zero Prices	This offer filter includes or excludes items that have zero prices.	Item promotions only.
Items with Negative Prices	This offer filter identifies if items with negative prices can receive the discount. If you include items with negative prices, they will receive the discount.	Item promotions only.
Items with Prices Lower than Promotion Price (Fixed Price promotions only)	This offer filter includes or excludes items that have a price lower than the promotion price. This applies to fixed price promotions only.	Item promotions only.

## Enable and disable promotions

You can enable and disable promotions within qualifying orders.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

A promotion is available to be used with a qualifying order if both of the following are true:

- You have selected the Enabled checkbox on the promotion's Availability tab.
- The qualifying order is placed during the time specified by the promotion's start and end dates.

The easiest way to disable a promotion is to uncheck its Enabled checkbox.

**Important:** Deleting assets, such as products, catalogs, shipping methods, etc., can result in discrepancies in your system, which may produce errors. It is recommended that you disable assets instead of delete them.

## Organize promotions in folders

You can create folders to organize your promotions so they are easier to find and work with.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This section includes the following topics:

- [Create a promotions folder](#)
- [Edit a promotions folder](#)
- [Add promotions to a folder](#)
- [Delete a promotions folder](#)

### Create a promotions folder

To create a promotions folder, follow these steps:

1. On the Promotions page, click the **Manage Folders** button.

2. Click **Create New Folder**.
3. Enter a name for the folder and, if you want it to be a child of another folder, click the Locate Folder Under drop-down list and select a parent folder.
4. Click **Create**.

#### Edit a promotions folder

You can change a folder's name and parent folder. You cannot change a folder's ID.

To edit a promotions folder, follow these steps:

1. On the Promotions page, click the **Manage Folders** button.
2. Click the edit icon for the folder you want to edit.
3. Change the folders name and/or parent folder.
4. Click **Save**.

#### Add promotions to a folder

You can add one or more promotions to a folder by selecting them from the Promotions list and then selecting a folder to add them to. You can also add a single promotion to a folder by specifying a folder while creating or editing the promotion.

To add one or more promotions to a folder, follow these steps:

1. On the Promotions page, select the promotions to move to a folder.
2. Click the **Manage Folders** button.
3. Select a folder from the list.  
**Note:** You can add the promotions only to an existing folder; you cannot create a folder and add the selected promotions to it in a single step. If you click Create New Folder in this dialog, Commerce does create a new folder, but does not add the selected promotions to it.

To change a promotion's folder property follow these steps:

1. On the Promotions page, click the promotion to edit.
2. Select a folder from the **Add Promotion To** list.
3. Click **Save**.

#### Delete a promotions folder

Deleting a promotions folder does not also delete its contents. If you delete a folder that contains promotions or other folders, they are automatically moved to the top level in the folder list.

**Important:** Deleting assets, such as products, catalogs, promotions, etc., can result in discrepancies in your system, which may produce errors. It is recommended that you disable assets instead of delete them.

To delete a promotions folder, follow these steps:

1. On the Promotions page, click the **Manage Folders** button.
2. Click the edit icon for the folder you want to delete.
3. Click **Delete**.

4. Confirm that you want to delete the folder or click **Cancel** to keep the folder.

## Include or exclude products, SKUs, or collections

Most promotions must include at least one item that a shopper must buy to qualify their order for the discount (called the buy condition) and at least one item that can be discounted by the promotion (called the offer).



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You can specify products to include or exclude from a promotion's condition or offer using any combination of the following:

- Select one or more products from your catalog. All SKUs for a selected product are included or excluded from the buy condition or offer.
- Select one or more collections from your catalog. All products in a selected collection are included or excluded from the buy condition or offer.
- Select one or more SKUs from your catalog.
- Create one or more rules that automatically select products based on product, SKU, or variant properties you specify. For example, suppose you want to exclude all premium brands from a promotion that discounts athletic shoes. You would create a rule that includes the product property Brand and specifies which brands to exclude. See [Create rules to include or exclude items](#) to learn how to create a rule.

Keep the following in mind when you include and exclude items from a buy condition or offer:

- Excluded items always take precedence over included items. For example, if an offer includes the collection Movie Store Root but excludes its child collection Clearance Movies, no items in Clearance Movies will be discounted by the promotion. However, if you include Clearance Movies but exclude its parent, Movie Store Root, then no movies, even those in the Clearance Movies collection, can be discounted by the promotion.
- Commerce does not prevent you from adding the same item to both the included and excluded items lists. In this case, the item is excluded.
- If an included or excluded items list uses a combination of selected products, selected collections, and a set of rules, Commerce checks each item in the shopper's cart to see if it matches any of the products in the list or the set of rules.
- Promotions identify included and excluded products and collections by their IDs. If an item is part of a promotion and you reassign its ID to different item, the promotion automatically uses the new item with the reassigned ID. This may cause unexpected results.

To select products, collections, or SKUs to include or exclude from a buy condition or offer, follow these steps:

1. On a promotion's details page, under Included Items or Excluded Items, click the **Edit** button next to the **Products** or **Collections** box.
2. Select a product or collection from the list. You can filter the list by typing or pasting some text in the Products or Collections box.  
The filter control matches letters or numbers that you type, wherever they appear in the name or ID, not just at the beginning. Usually, as you type more characters, there are fewer matches. When you see the item you want, select it.

3. Click **Add Selected**.
4. Click **Done** when you finish adding products or collections.

### Create rules to include or exclude items

This section describes how to create a rule for a buy condition or offer. A rule automatically selects items based on product, SKU, or variant properties. For example, suppose you created a custom, internal property called Do Not Discount on the base product type. Merchandisers select this option for products in your catalog that should never be discounted by any promotion. To make sure that no promotions ever discount these products, create a rule for each promotion's offer that includes the base product property Do Not Discount and specifies that its value should be True.

To create a rule that specifies products to include or exclude from a buy condition or offer, follow these steps:

1. On a promotion's details page, under Included Items or Excluded Items, click the **New Rule** button.
2. Select a type of property to use from the **Type** list. You can select only one type per rule:
  - Base Product lets you select from all the product properties associated with your catalog's base product type, including custom properties you created.
  - Base SKU lets you select from all the SKU properties associated with your catalog's base product type. SKUs created from the base product type can have SKU properties but not variant properties.
  - Custom Product Type Product lets you select from all the custom product properties associated with a custom product type you created in your catalog, where Custom Product Type is the product type's name.
  - Custom Product Type SKU or Variant lets you select a SKU property or variant property from a custom product type you created in your catalog, where Custom Product Type is the product type's name.

See [Create and edit product types](#) for more information about product properties and SKU properties. See [Create and work with SKUs](#) for more information about variant properties.
3. Select a property from the Attribute list. The available properties depend on the Type you selected in the previous step. You can select only one attribute per rule.
  - For Base Product, Commerce displays all the product properties associated with your catalog's base product type (except ID), including custom properties you created.
  - For a custom product type, Commerce displays all the custom product properties associated with the product type you selected. None of the base product type properties are available in this list.
  - For Base SKU, Commerce displays all the SKU properties associated with the base product type, including custom SKU properties you created.
  - For a custom product type SKU or Variant, Commerce displays all the SKU and variant properties associated with the product type you selected. None of the base SKU properties are available in this list.
4. Select an operator that links the property to a value that you will specify in the next step.

The operators you see depend on the kind of property you selected as an attribute. For example, if you select the base product type property Arrival Date, the available operators are Before and After.

5. Select or enter a value for the property.  
For some values, such as variant values, Commerce displays a list for you to choose from. (If you selected a custom product type SKU or Variant, the list includes both SKU values and variant values, with any SKU values appearing first in the list.) For others, such as Availability Date or Brand, you must type in a value. The rule editor does not validate any text or numeric values you type, so take care when you enter values and make sure you test promotions before they go live. The rule editor also does validate date values.
6. Click **Done** when you finish creating the rule.
7. If you create more than one rule for an included or excluded items list, select one of the following Rule Matching options to specify how the rules in this set behave together:
  - **Match Any Rule:** (default) If an item in a shopper's cart matches any rule in the set, that rule applies.
  - **Match All Rules:** If an item in a shopper's cart matches all the rules in the set, all the rules apply. If the item matches only some of the rules but not all, none of the rules apply.
8. Click **Save**.

## Exclude promotions

Exclusion rules prevent customers from taking advantage of unintended synergy among your promotions by letting you specify promotions that can never be combined with the current promotion.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

For example, if a promotion offers 25% off all soccer equipment, you might want to specify that another promotion, which offers 10% off all items in your catalog, cannot be combined with it.

Keep the following in mind when you create exclusion rules for a promotion:

- Excluded promotions must have a lower priority than the promotion that is excluding them.
- Use caution when excluding promotions, to prevent confusion as to exactly when promotions apply.
- If a promotion has already been applied to an order and that promotion excludes another promotion, the excluded promotion cannot be re-included by any promotions that apply later in the pricing process.
- Exclusion rules for individual promotions are evaluated in addition to any stacking rule exclusions. See [Manage promotions with stacking rules](#) for more information.

To select promotions to exclude from the current promotion, follow these steps:

1. On a promotion's details page, click **Exclusion Rules**.
2. Click the **Edit** button next to the **Promotions to Exclude** box.

3. Select a promotion from the list. You can filter the list by typing or pasting some text in the **Promotions** box.  
The filter control matches letters or numbers that you type, wherever they appear in the name or ID, not just at the beginning. Usually, as you type more characters, there are fewer matches. When you see the item you want, select it.  
The list contains the type of promotions you can exclude based on priority:
  - Item promotions can exclude other item promotions, plus order and shipping promotions
  - Order promotions can exclude other order promotions, plus shipping promotions.
  - Shipping promotions can exclude only other shipping promotions.
4. Click **Add Selected**.
5. Click **Done** when you finish adding promotions to exclude.

## Add a coupon code to a promotion

Coupons make promotions available only to shoppers who enter a valid coupon code at checkout.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The administration interface lets you assign only a single coupon or coupon batch to each promotion. However, you can use the Admin API to associate multiple promotions with a coupon or coupon batch. See [Assign and manage coupons](#) for more information.

You can create a single coupon that has one code or a batch of coupons that each has a unique code all based on a prefix that you specify. If you add a coupon to a promotion, shoppers must provide a valid coupon code to apply the promotion to their order.

You cannot edit a coupon code after you create it but you can delete it and create a new one. Coupon codes are case sensitive and must be unique across all promotions, even promotions that are not enabled.

On the Marketing page, you can create one coupon or batch per promotion. However, you can use the Admin API to associate more than one coupon or batch with a promotion. If a promotion has multiple coupons or coupon batches associated with it, the promotion's Availability page displays the number of coupons and coupon batches, plus the ID for the first of each. See [Assign and manage coupons](#) for more information.

**Important:** If you delete all a promotion's coupons, Commerce automatically disables the promotion until you associate it with at least one coupon or coupon batch and then re-enable it by selecting the Enabled checkbox on the promotion's details page. See [Enable and disable promotions](#) for more information.

By default, any shopper who has a valid coupon code can use it, but you can restrict coupon usage in the following ways:

- Limit the number of times a coupon code can be redeemed during the life of the promotion. This limitation applies to the code itself, not to individual shoppers who redeem it.
- Limit the number of times a shopper can apply a coupon code to an order.

- Specify that a coupon code can be used only by registered shoppers. (By default, a coupon can also be used by anonymous shoppers.) You can also limit the number of orders to which a registered shopper can apply the code.

To create a coupon or batch, follow these steps:

1. On the **Marketing** page, click the promotion you want to associate with a coupon code.
2. On the promotion's **Availability** tab, click **Create Coupon**.
3. Create a single coupon or a batch of coupon codes:  
Select **Single Code** to create a coupon with a one code, then enter the coupon code. (Each coupon code must be unique; you cannot use the same one for multiple promotions.)  
  
Select **Batch of Codes** to create a batch of unique coupon codes, then enter a prefix for the codes. (Each prefix must be unique; you cannot use the same one for multiple promotions.) Enter the number of coupon codes to create.
4. Enter the number of times a code can be used or select **Unlimited** to create a coupon or batch that has unlimited use during the time that the promotion is enabled.
5. Under **Number of Uses Per Order**, enter the number of times a shopper can redeem this promotion on a single order or select **Unlimited** to allow unlimited uses on a single order.
6. Click **Create**.  
Commerce creates the coupon or batch and displays options that let you further limit its use:
7. Select **Registered Shoppers Only** to restrict coupon redemption to registered shoppers. (See [Understand the different types of shopper](#) to learn the difference between registered and anonymous shoppers.)
8. Specify how many times (that is, on how many orders) a registered shopper can redeem the coupon. Under **Grant to a registered shopper more than once**, select **No** to limit the coupon to a single redemption or select **Yes** to let a registered shopper redeem the coupon more than once. If you select **Yes**, enter the number of valid orders on which a shopper can redeem the coupon.  
When you grant a coupon to a registered shopper more than once, Commerce adds a copy of the promotion to the the shopper's profile for every grant.  
  
Each grant applies to one order, not to one discount. If you entered a number greater than one for **Number of Uses Per Order** to allow the promotion to discount a single order multiple times, using the promotion on that order still counts as one grant.

### View and export coupon batches

You can view information about coupons within a coupon batch by exporting the batch to CSV format. The exported spreadsheet includes each code in the batch, the coupon's ID, the prefix you specified for the codes, the maximum number of uses, and the promotion to which the coupon is assigned.

To view and export a coupon batch, follow these steps:

1. On the Promotions page, click the promotion whose coupon batch you want to export.
2. On the promotion's Availability tab, the **Export** button next to the coupon code.
3. Follow your Web browser prompts to open or save the file.

## Manage promotions with stacking rules

Stacking rules prevent shoppers from taking advantage of unintended synergy among your promotions by combining certain offers.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This section includes the following topics:

- [Understand stacking rules](#)
- [Create stacking rules](#)

### Understand stacking rules

Each stacking rule includes a number of promotions that you want to treat as a group. Rules are intended to prevent simple combination strategies, for example to keep customers from combining buy one get one offers with gift-with-purchase offers. In this example, you could add all your buy one get one promotions to one stacking rule and all your gift-with-purchase promotions to another. Then you specify that the buy one get one stacking rule cannot be combined with the gift-with-purchase rule.

Stacking rules have the following behavior:

- Each promotion can be associated with only one stacking rule. If a promotion is already part of a stacking rule and you add it to another, Commerce automatically removes it from the first rule.
- Within a stacking rule, promotions are applied in order, based on their priority. See [Understand promotions](#) for more information about promotion priority.
- If an order qualifies for more than one promotion, and those promotions are in mutually exclusive stacking rules, the promotion with the highest priority is applied, and all other promotions the order qualifies for are skipped.
- In addition to stacking rules, each promotion's exclusion rules allow you to define individual promotions that cannot be combined with it. Exclusion rules override stacking rules. For example, if Promotion A excludes Promotion B, those promotions cannot be combined, even if they are in the same stacking rule or stacking rules that combine with each other. See [Exclude promotions](#) for more information.
- If a promotion has already been applied to an order and that promotion excludes another promotion, the excluded promotion cannot be re-included by any promotions that apply later in the pricing process.

### Create stacking rules

To create a new stacking rule, follow these steps:

1. On the Promotions page, click **Stacking Rules**.
2. Click the **New Rule** button to display the details page for the rule.
3. Enter a name for the new rule.
4. Specify promotions to add to the rule.
  - Click **Edit** and select promotions to add to the rule. You can filter the list by typing or pasting some text in the Promotions box.

The filter control matches letters or numbers that you type, wherever they appear in the name or ID, not just at the beginning. Usually, as you type more characters, there are fewer matches. When you see the item you want, select it.

- Click **Add Selected**.
  - Click **Done** when you finish adding promotions to the rule.
5. Specify the maximum number of promotions that can be applied to an order from this rule. The default value is **Unlimited**.  
If you specify a maximum number of promotions, Commerce evaluates the rule's promotions in order, based on their priority. See [Understand promotions](#) for more information about promotion priority.
  6. Click the **Create** button.

## Manage upsell messages

Upsell messages let you alert shoppers to promotions and show shoppers when they are close to fulfilling a promotion's buy or spend condition.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

For example, suppose your store is running a Gift with Item Purchase promotion that offers a free team scarf with every two jerseys from the same team shop. When a shopper begins checkout with a cart that contains one jersey, the cart page could display the following message: Wait! Buy one more jersey to get a free scarf! When the shopper adds a second jersey to the cart, the free gift is added and the message could change to: Enjoy your free scarf!

This section describes upsell messages and explains how to create them in the administration interface. To learn how to customize widgets and elements so you can display the messages on your storefront, see [Set up promotion upsell messages](#). This section includes the following topics:

- [Understand upsell messages](#)
- [Understand tags](#)
- [Create upsell messages](#)
- [Localize upsell messages](#)
- [Delete upsell messages](#)

### Understand upsell messages

Each promotion can have one set of upsell messages. Each set of upsell messages can contain one each of the following three types of messages:

- **Not Qualified:** This is a global message that alerts shoppers to a promotion. For example, Free US Flat Rate Shipping On Orders Over \$75.
- **Partially Qualified:** This message appears when a shopper has partially qualified for the promotion. For example, Spend Just \$10 More For Free Shipping!
- **Success:** This message appears when the shopper has qualified for the promotion. For example, Congratulations! Your Order Ships For Free!

**Important:** If a promotion requires a coupon code, shoppers will not see any of its upsell messages, including the Not Qualified message, until they enter the coupon code in the

shopping cart. See [Add a coupon code to a promotion](#) for more information about promotions that require coupons.

This section describes each type of upsell message you can create in the administration interface.

### Not Qualified message

The Not Qualified message alerts shoppers to a promotion. You can show the message to all shoppers who can access the promotion, even if they have not yet started to qualify for it. Display a Not Qualified message where it can be easily seen by shoppers, for example, in a banner at the top of each page on your storefront.

### Partially Qualified message

The Partially Qualified message appears when a shopper begins to qualify for the promotion. Partially Qualified messages are triggered by a value you specify, often called a closeness qualifier. For example, suppose a promotion offers free shipping when a shopper spends \$75 anywhere in the store and you want to display the Partially Qualified message when a shopper places anything in their cart. Set this value to 1 to display the message when any item that costs \$1 or more is added to the cart. To display the message only when a shopper needs to spend \$25 or less to qualify for the promotion, set the value to 50.

Partially Qualified messages include variables that represent values to display in the message. When the message is displayed on the storefront, Commerce replaces the variables with the actual values that represent a shopper's cart and its qualification for the promotion.

The following table describes each variable and lists the promotion templates for which it is available.

Variable	Description	Promotion Templates
{{AmountSpent}} {{AmountStillNeeded}}	{{AmountSpent}} specifies the shopper's current qualifying spend amount. {{AmountStillNeeded}} specifies the minimum spend amount to qualify for the promotion minus the shopper's current qualifying spend amount. <b>Note:</b> Commerce automatically adds the appropriate currency symbol and separator to the amounts specified by these variables.	Spend Y Get Gift with Purchase
		Spend Y in X Get Item Discount Spend Y in X Get Order Discount Spend Y for Order Discount Spend Y Get Shipping Discount Spend Y in X Shipping Discount
{{QuantityBought}} {{QuantityStillNeeded}}	{{QuantityBought}} specifies the number of qualifying items in the shopper's cart. {{QuantityStillNeeded}} specifies the minimum number of items to qualify for the promotion minus the number of qualifying items in the shopper's cart.	Buy One Get One
		Gift With Item Purchase Buy X Get Order Discount Buy X Get Shipping Discount

For promotions whose Partially Qualified messages use the `{{QuantityBought}}` and `{{QuantityStillNeeded}}` variables, Commerce does not change the message text based on singular or plural quantities. For example, suppose a promotion offers 10% off with the purchase of three toys and the message displays when a shopper adds one toy to the cart. The message “Buy 2 more toys to get 10% off!” makes sense, but when the shopper adds a second toy to the cart, the message changes to “Buy 1 more toys to get 10% off!” A better message in this instance is one that accommodates one item or multiple items. For example, “Toy Sale! Buy `{{QuantityStillNeeded}}` more to get 10% off.”

You cannot create a Partially Qualified message for the following types of promotions, because they do not require buy or spend conditions:

- Get Item Discount
- Get Shipping Discount
- Gift with Item Purchase if the buy condition is set to Give Gift with Any Order.

### Success message

The Success message lets a shopper know they have successfully qualified for the promotion. The success message is displayed when the shopper's cart qualifies for the promotion.

### Understand tags

Tags are strings that establish a relationship between upsell messages and the widgets that will display them on your storefront. You add tags to upsell messages when you create them on a promotion's Messaging tab. Then storefront developers add the tags to widgets and that will display the messages to shoppers.

You can assign one or more tags to a single upsell message. You can create and save a message without adding tags to it, but a message with no tags cannot be displayed on your storefront.

Once you create a tag, it is available to all upsell messages in all promotions. You can assign the same tag to more than one message, including messages for different promotions. This can be useful if, you create similar promotions for different audiences or different sites. For example, you can assign the tag `home` to Not Qualified messages you want to display on your store's Home page to alert shoppers to promotions. Similarly, you can assign the tag `cart` to Partially Qualified messages so shoppers can see how close they are to qualifying when they go to check out.

If you assign the same tag to all three of a promotion's upsell messages, the messages replace each other on the storefront wherever the tag displays them. For example, suppose you assign the tag `FreeShip` to all three upsell messages for a promotion that offers free shipping to any shopper who spends \$150 on a single order. You configure the Partially Qualified message so that it appears when the value of a shopper's cart is at least \$10. You add the `FreeShip` tag to a banner on your storefront. When a shopper arrives at the site, they see the Not Qualified message (FREE U.S. Flat Rate shipping when you spend \$150). In the banner. When the shopper places an item priced at \$49.99 in the cart, the Not Qualified message is replaced by the Partially Qualified message (Only \$50.01 away from FREE U.S. Flat Rate shipping!). When the shopper places another item, priced at \$75 in the cart, the Partially Qualified message is replaced by the Success message (Your order qualifies for FREE U.S. Flat Rate shipping!). If the shopper removes one of the items from the cart, the Success message is once again replaced by the Partially Qualified message.

For more information about how Commerce determines which messages to display for a specific tag, see [Set up promotion upsell messages](#).

Keep the following in mind when you create tags:

- Tags are case sensitive; for example, Commerce treats banner and BANNER as two different tags.
- Do not use the following characters in tags: < > { } {{ }} “
- Tags must be published before widgets can use them on your storefront. See [Publish Changes](#) for more information.

You cannot delete tags in the administration interface. You must use the Admin API messageTags endpoints to delete tags. See [Set up promotion upsell messages](#) for more information.

### Create upsell messages

This section describes how to create upsell messages and tags in the administration interface. To learn how to customize widgets and elements so you can display the messages on your storefront, see [Set up promotion upsell messages](#).

You create the messages on a promotion's details page, with an HTML editor called CKEditor. You can write, update, and apply rich-text formatting to upsell messages.

To create upsell messages for a promotion:

1. On a promotion's details page, click Messaging.
2. Enter and format the text for each message type.
3. Create or select tags to add to each message.
  - Click the Tag box and begin typing to display a list of existing tags. You can filter the list by typing or pasting more text in the box.
  - To add a tag from the list, select it and press Enter.
  - To add a new tag, continue typing the text for the tag and then press Enter.
4. For Partially Qualified messages, enter an amount that will trigger display of the message.
5. Click Create to save the message.
6. Publish your changes.

If you edit a promotion, check its upsell messages to see if they need to be updated. Changing a promotion's condition or offer without changing its upsell messages can cause unexpected results. For example, suppose a promotion offers free shipping when a shopper spends \$100 and its Partially Qualified message is configured to appear when the shopper has spent \$60. If you change the promotion's condition to offer free shipping when the shopper spends \$50, the unchanged Partially Qualified message might never appear, and when it does, it will present incorrect information.

### Localize upsell messages

You can translate the text of Not Qualified, Partially Qualified, and Success messages the same way you translate other text that appears on your storefront. (See [Translate store text](#) for more information.) You cannot translate tags or the variables you use with Partially Qualified messages.

Commerce does not convert minimum spend amounts in promotions and upsell messages across different currencies your store supports. If your store supports

multiple currencies, create a separate version of each minimum-spend promotion for each currency. See [Understand currency-specific promotions](#) for more information.

### Delete upsell messages

You can delete one or more upsell messages from a promotion. Deleting a promotion also deletes its upsell messages. Deleting upsell messages does not delete any tags assigned to them. You must use the Admin API to delete tags. See [Set up promotion upsell messages](#) for more information about deleting tags.

To delete an upsell message from a promotion:

1. On a promotion's details page, click Messaging.
2. Click the Delete icon for the message you want to delete.
3. Confirm that you want to delete the message.
4. Publish your changes.

# Define Audiences

Defining an audience allows you to target content to certain groups of shoppers. You define an audience by creating a set of rules based on attributes of the shopper profile. The audience can then be used by other tools for personalizing the shopper's experience.

This section describes how to work with audiences on the Marketing page.

## Understand audience definitions

An audience represents a segment of the shoppers that visit your store.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You define these audiences in the Audience window by creating rules that include or exclude shoppers according to their profile attributes. For example, you could create an audience called Student Females Outside Texas that includes female shoppers that have an .edu email address, but excludes people living in Texas. The rules that define this audience might look something like this:

Include these people:

- People whose Gender is `Female`
- and whose Email Address ends with `.edu`
- and whose Shipping Address State is `not Texas`

After you define this audience, you can deliver personalized content to shoppers who match Student Females Outside Texas criteria.

To comply with the European Union General Data Protection Regulation (GDPR), a shopper may be required to provide consent to have their shopper profile data used for personalization. If a registered shopper is required to provide GDPR profile personalization consent (if the GDPR profile personalization site setting is set to true for that site) and does not, the non-consenting shopper is not recognized as a member of any audience that uses shopper profile data even though they may meet the audience rules criteria. For information on GDPR consent and profile-based personalization, see [Manage the Use of Personal Data](#).

### Parts of an audience definition

An audience definition is composed of the following parts:

- **Display Name** This is the name that appears in administration interfaces.
- **ID** This ID is automatically generated from the display name that you provide. You can override the generated one if you want and create your own ID.
- **Rules** This set of rules consist of one or more rules that you define to include or exclude shoppers.

- **Enabled/Disabled** This determines if an audience can be used in production. No shopper is considered a member of a disabled audience even if the audience is in use by a content variation slot, a promotion, or an experiment.
- **Visitor Type** This determines if an audience includes only anonymous shoppers, only registered shoppers or all shoppers (registered and anonymous)
- **Match All Rules/Match Any Rules** toggle. Whether a shopper must match all of the audience rules to be considered a member of the audience, or whether matching at least one of the rules is sufficient.
- **Capture reporting data for this audience** This determines whether membership in this audience should be evaluated and recorded for reporting purposes, when a shopper submits an order.

### Attribute categories

Commerce groups attributes into categories.

Attribute category	Description
Account	Attributes of shoppers who have logged in using contact credentials that have been defined as part of a business account. This category only appears if account-based shopping has been enabled in your environment. Contact your Oracle account manager for more details on how to activate this functionality.
Revenue	The revenue information of shoppers, including their recent purchases, the frequency of their purchase and the monetary value of both individual and all purchases.
Engagement	The frequency and number of visits made to the site by the shopper.
Geolocation	The geographical location of the shopper, which are attributes associated with the shopper's current location.
Entry Page	The Entry Page is a landing page on the Oracle Commerce site or a Referring site. It enables merchants to automatically apply promotions for shoppers visiting from a particular referring site, and provide a different experience for segments of shoppers landing directly on a particular page of the website.
Entry Page Query Parameter	Entry page attributes that can be used in rules to more effectively personalize site experiences. For most merchants the majority of site visits start at another place, for example, another site, a Google search leading to a shopper clicking on a Pay Per Click (PPC) ad, a marketing email or a Facebook ad. Marketers can use UTM parameters (used by Google Analytics and other systems) or custom query parameters to pass context for a site visit from an external site, a PPC ad, a marketing email, or another source. You can define your own custom query parameters if you use systems other than Google Analytics or have more complex needs.

Attribute category	Description
Browsing	Shopper browsing behavior, that is, views of products or collections, in the current visit. Tracking shopper browsing behavior enables merchants to design appropriate site experiences for those shoppers. For example, merchants can promote a product or a collection of products to regular viewers of the product or collection of products, or suggest a product to a shopper before checkout.
Device	Attributes of the device (such as a computer, tablet, or phone) the shopper is using to access the site.
Shopper Profile	Attributes of individual registered shoppers who have logged in to a personal account
Audience	Audience attributes are existing audiences that can be used in rules to categorize shoppers who are members of existing audiences. This category only appears as a choice in the interface after you have defined at least one audience.

#### Attributes available in all categories

The attributes listed in the following table are in both the shopper profile and account categories. In the shopper profile category, these attributes belong to the individual shopper. In the account category, these attributes belong to the account.

Attribute	Description
Shipping Address City	City for the shopper's default shipping address.
Shipping Address State	State for the shopper's default shipping address.
Shipping Address Postal Code	Postal or zip code for the shopper's default shipping address.
Shipping Address Country	Country for the shopper's default shipping address.
Registration date	The date that the shopper's profile was created.

#### Attributes only available in the engagement category

The following attributes are available only in the engagement category.

Attribute	Description
First visit date	<p>The date of the shopper's first visit to a site. For the site on which the shopper registered, the first visit date is the same as the registration date.</p> <p><b>Note:</b> If a shopper's registration date is before the current release, the first visit date is the shopper's first visit after the shopper upgrades to the current release.</p>
Previous visit date	<p>For a currently logged in shopper, the date of the visit before the current one. For a shopper who is not logged in, the date of the visit before the last one.</p> <p><b>Note:</b> Another attribute, Last visit date, is the date of the current visit for a currently logged in shopper, or the date of the last visit for a shopper who is not logged in.</p>

Attribute	Description
Number of Visits	The anonymous or registered shopper's number of visits to a site. The number includes the current visit. For registered users who existed before the 18D release, the number of visits is set to the number of orders made. For anonymous shoppers who existed before 18D, the default number of visits is set to 2.

#### Attributes only available in the revenue category

The following are attributes that are available in the revenue category.

The following attributes are available for both logged-in shoppers and anonymous shoppers: First Purchase Date, Last Purchase Date, Last Purchase Amount, Lifetime Average Order Value, Lifetime Spend, and Number of orders. For additional information on these attributes, refer to [Qualifying orders](#).

Attribute	Description	Site-Specific
First purchase date	The date of the shopper's first order. Order must be a qualifying order.	Yes
Last purchase date	The date of the shopper's last order. Order must be a qualifying order.	Yes
Last purchase amount	Total of the shopper's last order, including tax and shipping. Order must be a qualifying order.	Yes
Lifetime average order value	Average of the shopper's order totals, including tax and shipping. Orders must be qualifying orders.	Yes
Lifetime spend	Grand total, including tax and shipping, of the shopper's order totals. Orders must be qualifying orders.	Yes
Number of orders	Number of orders for this shopper. Orders must be qualifying orders.	Yes

#### Attributes only available in the shopper profile category

The attributes listed in the following table are only available in the shopper profile category.

Attribute	Description	Site-specific (if multiple sites exist)
Date of Birth	The shopper's date of birth	No
Email address	The shopper's email address	No
Receive email	A shopper can opt in/opt out of email notifications	No
Gender	The shopper's gender. You can only use this attribute in a rule if you are collecting gender information in a custom widget.	No

Attribute	Description	Site-specific (if multiple sites exist)
Currency	<p>The currency used when making orders. Mandatory for these properties:</p> <ul style="list-style-type: none"> <li>Lifetime average order value</li> <li>Lifetime spend</li> <li>Last purchase amount</li> </ul> <p>When the user creates a rule with a currency property, the currency is initially set to the currency of the default price list group of the default site.</p>	Yes

**Note:** If you use different default currencies on different sites, and you want to create audiences based on Lifetime Spend or Lifetime Average Order Value, define an audience for each site (currency). For example, you can define an audience “High Spenders USD” with the rule “Lifetime Spend > 1000” and another audience “High Spenders euro” with the rule “Lifetime Spend > 940”.

### Qualifying orders

A qualifying order must meet the following conditions.

- The order uses the shopper’s lifetime currency. The shopper lifetime currency is set to the currency of the first order made in a monetary currency. If a shopper subsequently makes an order in a different monetary currency, the value of that order will not be included in monetary lifetime order values.  
Note that if a site’s default currency is monetary, and shoppers can use loyalty points to pay for some or all of an order, then Lifetime spend and Lifetime average order value attributes reflect only the monetary portion of the total - even if this total consists only of tax and shipping.
- The order is in one of the following states:
  - SUBMITTED  
The order has completed the purchase process and has been submitted to the order management system.
  - PROCESSING  
The order is being processed by the order management system.
  - NO\_PENDING\_ACTION  
The order has been fulfilled, and processing of the order is complete.
- Each payment associated with the order is in one of the following payment states:
  - AUTHORIZED  
The payment has been authorized and can be debited.
  - SETTLED  
The payment has been debited successfully.
  - PAYMENT\_DEFERRED  
Only applicable for invoice and PO orders where an invoice is sent to the shopper.

For more information on order and payment states, see Manage Orders.

**Attributes only available in the account category**

The attributes listed in the following table are only available in the account category.

Attribute	Description
Customer Type	The type of industry to which this customer belongs.
Name	Name of the account
Type	The type of organization, for example, department or division. This cannot be a null value.
Billing Address City	City where shopper's bills are sent.
Billing Address State	State where shopper's bills are sent.
Billing Address Postal Code	Postal code or zip code where shopper's bills are sent.
Billing Address Country	Country where shopper's bills are sent.

**Attributes only available in the geolocation category**

The attributes listed in the following table are available in the geolocation category.

Attribute	Description
Latitude	Truncated latitude, that is, the integer portion plus first two decimal points. For example, North of 36 degrees North is represented by the following: Attribute: Latitude, Operator: North Of, Value: 36.00
Longitude	Truncated longitude, that is, the integer portion plus first two decimal points. For example, US states between 165 degrees West and 105 degrees West is represented by the following: Attribute: Longitude, Operator: Westward between, Start Value: 165.00 West, End Value: 105.00 West
Place	A place can be a country, region or city. Start entering the name of the place, then use typeahead to select the right value. <b>Note:</b> Region differ in granularity by country. For example, in the United States, regions are equivalent to States; but in the United Kingdom they are equivalent to England, Wales and other regions. Only cities worldwide with a population of more than 100,000 people are included.
Timezone	Time zone is formatted as offset from GMT plus time zone and geographic area. For example, GMT-5 EST Eastern Standard Time.

**Attributes only available in the entry page category**

The attributes listed in the following table are available in the entry page category.

Attribute	Description
Landing page URL	This can be used to present a personalized experience to shoppers landing on a particular set of landing pages on the site. For example, landing page URL contains <i>holiday</i> .
Referring site	If a customer reaches a Commerce site from a link on a third party site, that site is the referring site. <b>Note:</b> Audience rules based on the referring site URL do not function correctly for shoppers browsing in Mozilla Firefox using private browsing mode.

#### Attributes only available in the entry page query parameters category

The attributes listed in the following table are available in the entry page query parameter category. The data type for these attributes is a string property that can have multiple values at a time. In addition to the available UTM parameters, you can also create custom query parameters and set a value for each parameter, if you use systems other than Google Analytics or have more complex needs.

Attribute	Description
utm_campaign	Campaign name, which is commonly used by marketers to uniquely identify a marketing campaign.
utm_source	Identifies where the traffic is coming from, for example, email marketing, Pay Per Click (PPC), social, organic search and third party sites. source is typically something like Google, Facebook or Twitter, or the name of an affiliate, ad platform, or publisher. It's used to indicate the context the user was in when they clicked a link.
utm_term	Indicates the paid keyword used. Term is often used for paid search terms and keywords to identify the audience at a finer grain than the campaign, when you purchase multiple terms for the same campaign.
utm_medium	The advertising or marketing medium, for example, email marketing, special offers, Pay Per Click (PPC), social, or third party site. It can also be used for the channel, for example, mobile, web, or kiosk.
utm_content	Content is often used with paid ads to represent the content of the ad, or with click-throughs to represent the content of the call to action (CTA) that the user clicked.

#### Attributes only available in the browsing category

The attributes listed in the following table are available in the browsing category.

Attribute	Description
Device Type	The type of device, for example, Mobile or Non-Mobile.
Operating System	The operating system of the device, for example, Android or iOS.
Product Page	An individual product. <b>Note:</b> Viewing a list of products within collection pages or clicking the Quick View of a product does not qualify as a product page view.
Product Name	Products whose names contain a localized string, for example, Vitamin C.
Product Criteria	Any combination of product brand, collection and product type. You do not need to specify a value for every field. <b>Note:</b> Number of views is being defined as unique views of products. Viewing the same product multiple times in a visit counts as one view.
Collection Page	An individual collection, for example, the Vitamins collection.
Collection Name	Collections whose names contain a localized string. <b>Note:</b> Number of views is being defined as unique views of collections. Viewing the same collection multiple times in a visit counts as one view.

### Types of behavioral audience rules

You can define three types of behavioral audience rules:

- **Precise** attributes match views of individual products or collections. Product Page and Collection Page are precise attributes. For example, a rule that includes shoppers who viewed the product page for NH Ultra Vitamin C 100 tablets two or more times in the current visit:  
Attribute: Product Page, Operator: viewed, Product: NH Ultra Vitamin C 100 tablets, Number of Views:  $\geq 2$
- **Broad** attributes match views of products or collections where the name matches a specified string. Product Name and Collection Name are broad attributes. For example, a rule that includes shoppers who viewed at least three collections whose name contain "Vitamin" three or more times in the current visit:  
Attribute: Collection Name, Operator: viewed, Name: Vitamin, Number of Views:  $\geq 3$
- **Powerful** attributes use product criteria to specify products which match any combination of brand, collection and product type. Product Criteria is a powerful attribute. For example, a rule that includes shoppers who viewed at least two products whose brand is Ultra and in the Vitamin collection:  
Attribute: Product Criteria, Operator: viewed, Brand: Ultra, Collection: Vitamins, Number of Views:  $\geq 2$

### The language picker

The language picker is displayed on the Product Name, Collection Name and Product Criteria attribute pages. The language picker contains a list of applicable store content languages (as defined in Settings > Location). The default value is the store content language in use at the time when the rule is created. Once you select a language, the value is used for the entire session in the current visit. For example, if the selected language is English, the rule will match the English name of the product to the string. If only one language is defined for store content, the language string is displayed.

### Use gender in rules for audiences

If you want to define an audience that uses the gender attribute in the rule, you must be sure that your store includes a gender element that a shopper can use to provide gender data. You can add this element by customizing a widget that is deployed in your store.

Gender is included as a property in the user view model which is available to all widgets. You can add gender to a widget by updating the HTML in the widget's template. For example,

```
<div class="form-group row">
  <div class="controls col-md-12">
    <label class="control-label inline" for="CC-userRegistration-
gender">Gender</label>
    <select class="col-md-5 form-control" data-bind="value:gender">
      <option value="" disabled selected>Select your gender</option>
      <option value="male">Male</option>
      <option value="female">Female</option>
      <option value="unspecified">Unspecified</option>
    </select>
  </div>
</div>
```

For information about updating the HTML in a widget or stack, see [Modify a component's code](#).

### Use numbers in rules for audiences

If you want to define an audience that uses a numeric attribute in a rule, note the following:

- You can only enter one number in a value field. You cannot enter a list of numbers.
- The number cannot be less than zero.
- The Between operator is inclusive. For the rule to be a match, a value must be equal to or between the low and high values.

### Use dates in rules for audiences

If you want to define an audience that uses a date attribute in a rule, note that date values are represented as a series of values for each date unit: year, month, and day. When a rule with a date is evaluated, only the individual date unit that is specified is the unit that is changed.

The following example illustrates how rules with date properties are evaluated.

Let's say that today's date is May 5, 2017. This date can be expressed in these date units:

Year = 2017

Month =5

Day = 5

In a rule with “More than 3 months ago”, “month” is the specified unit, so 3 is subtracted from the month unit:

Year = 2017

Month = 2 (that is, 5-3)

Day = 5

Therefore, any date before February 5, 2017 evaluates as true.

Months have different numbers of days, so let's look at another example, where this difference can affect how your rule is evaluated. Let's say that today is May 30, 2017. In the same rule with “More than 3 months ago,” “month” is still the specified unit, so 3 is again subtracted from the month unit:

Year = 2017

Month = 2 (that is, 5-3)

Day = 30

A date of February 30, 2017 does not exist, but the rule can still evaluate dates. In this case all days in February would evaluate as true.

### **Weeks and date attributes**

Remember that date values are represented as a series of values for each date unit: year, month, and day. There is no week unit. Weeks are the equivalent of seven days. For example, “more than 3 weeks ago,” is the same as “more than 21 days ago.”

### **Timestamps and the date attribute**

Even though rules do not include timestamps in any of the available rule operators for dates, timestamps do affect how a rule is evaluated.

For example, let's say that the rule for an audience is “Last Purchase Date is Less than 1 day ago”. The current date and time is March 15, 2017, 12:00 PM GMT. The rule evaluation will calculate a date exactly 1 day from the current date and time, which will be March 14, 2017, 12:00 PM GMT. If Last Purchase Date is equal to March 14, 2017, 11:00 AM GMT, the rule evaluates as true. If Last Purchase Date is equal to March 14, 2017, 1:00 PM GMT, the rule evaluates as false.

Note that all time is evaluated in GMT.

### **Between operator in rules with date attributes**

Just like with number attributes, when a date attribute uses a Between operator, the operator is inclusive. For the rule to be a match, a value must be between or equal to one of the low and high date values.

### **Custom properties**

You can create custom properties using the Admin API and include them as attributes in your rules when you define an audience. Custom properties are available in shopper profile and account categories, and can be created as custom string property or custom property for rich text fragment (custom rich text property. For example, `partnerCustomerData` contains the value: `partner=AirPortugal` ). The custom property:

- Must be a string, Boolean, date, numeric, or rich text data type.

- Must have `audienceVisibility` set to all for shopper profile properties, and to b2b for account properties.
- Can have appropriate value up to 1,000 characters if it's a custom rich text property.
- Is not used in the rules for calculating audience size if it's a custom rich text property.

The `audienceVisibility` attribute determines whether or not a property appears as a choice in the Attributes field of the audience interface.

- For shopper profile properties, see Manage Shopper Profiles.
- For account properties, see Manage an Account-based Storefront.

### Estimated audience size

The Estimated audience size under Rules displays an estimate of how many users are in a specific audience. It returns the number of registered shoppers that match any or all of the rules depending on the current value of the Rule Matching selection list. Anonymous shoppers are not included in the estimates. In a multiple-site environment, the audience size is estimated for the default site. You can select an alternative site to see the impact on estimates.

Each successive rule shows the new size of the audience with that rule added.

- For Match Any Rule, each successive rule adds just those shoppers who satisfy that rule but did not satisfy any of the previous ones. The audience can only grow or stay the same size as rules are added, and each new size shows that growth.
- For Match All Rules, each successive rule adds a new restriction to the audience, removing shoppers who satisfied the previous rules but do not satisfy the new one. The audience can only decrease or stay the same size as rules are added, and each new size shows that decrease.

Changing the order of the rules affects the size estimates per rule on the Audiences page, but does not affect the audience size and shoppers evaluated as being members of the audience. To see the accurate size of a rule on the Audiences page, create an audience with only that rule.

If the GDPR profile personalization site setting is set to true for that site, audience size estimate takes GDPR into consideration for the numerator only in calculations. For example, among 100 shoppers, 40 have provided GDPR consent for that site, and 25 are in the audience. Commerce displays:

- Audience size estimate of 25 shoppers for the site
- Audience size estimate of 25 shoppers for the site

Percentage value of shoppers as 25% (based on 25/100)

For information on GDPR consent and profile-based personalization, see Understand consent and profile-based personalization in Manage the Use of Personal Data.

### Create audiences for anniversaries

You can define audiences that include people for whom the anniversary of an event is upcoming. The event can be any date-valued profile property, such as a birthday, the anniversary of their first purchase, or the anniversary of their enrollment in a loyalty program. You can identify visitors for whom the anniversary of an event occurs today, during the current week, during the current month, or within a specified number of days from now.

## View the list of audiences

The Audiences page displays a list of all the audiences that have been defined for your store. You can view the name, description and usage information of each audience. You can sort and filter the list.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Click the **Marketing** icon and then click **Audiences**. You must be assigned the Admin or Marketing role. Each audience entry displays the following information:

- **Audience Name** - short, descriptive display name that identifies the audience
- **Description** - longer description that explains the use or details of the audience
- **Audience Usage** – the users and the number of consumers of the audience

The list displays all audiences by default. The All Audiences view includes both enabled and disabled audiences and regardless of its inclusion in reporting (a line chart icon next to an audience indicates the audience is used in reporting). An audience does not need to be published to appear in the list. You can change this view by clicking All Audiences and selecting another view:

- **Enabled Audiences** includes only audiences that are available for targeting.
- **Disabled Audiences** includes audiences that are not available for targeting content.
- **Audiences Used in Reports** includes audiences for which membership is evaluated and recorded for reporting purposes, when a shopper submits an order.

The list can be sorted by clicking the **Audience Name** or **Description** column labels. You can filter the list by starting to type an audience name or description in the **Filter** list box. Sorting or filtering always resets your view of the list to the first page.

## Create an audience

You can create a new audience on the Audiences page.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Follow these instructions to create an audience.

1. On the **Marketing** page, click **Audiences**.
2. Click **New Audience**.
3. In the **Audience Display Name** field, enter a unique short descriptive name of no more than 50 characters that describes the audience. This name displays in the administration interfaces.

**Note:** You cannot reuse the name of a deleted audience.

For example, if you are targeting female students that are not in Texas, you can enter Student Females outside Texas.

After you finish typing and move to another field, the Audience ID field automatically fills with an ID generated from the Audience Display Name.

Commerce uses this ID internally. This ID is regenerated whenever you update the Audience Display Name field.

4. (Optional) Edit the automatically generated ID in the **Audience ID** field. You can edit an ID until you click **Create**.

An ID can only contain alphanumeric characters. It cannot contain spaces, special characters, or non-Latin characters.

5. (Optional) In the Audience Description field, enter a description that helps you to identify the audience in the administration interface.

The description should help you distinguish this audience from others, especially if you have exclusions. For example, "Female students and educators with edu addresses. This audience excludes shipping addresses in Texas.

6. (Optional) If you do not want to enable the audience right away, deselect Audience Enabled.

For example, you might want to disable an audience if you are creating a seasonal audience, and that season has not started yet.

7. (Optional) If you want to evaluate membership in this audience and record it for reporting purposes when an order is placed, select Capture reporting data for this audience.

If you have defined a large number of audiences, evaluating audience membership for all of them may adversely affect performance. You can use this check box to restrict the set of audiences for which membership is evaluated for reporting purposes.

8. In the **Visitor Type** field, select:

**All shoppers** – Both registered and non-registered shoppers.

**Anonymous shoppers** – Shopper who have not registered as a user for the site.

**Registered shoppers** – Shopper who have registered as a user for the site.

9. In the Rule Matching field, select:

**Match Any Rule** – A shopper must match at least one rule in order to be a member of this audience.

**Match All Rules** – A shopper must match all rules in order to be a member of this audience.

10. Click **New Rule**.

11. Select a category. See [Attribute categories](#) for more information.

12. Select the attribute, operator, and value you want to use. See these sections for descriptions of the available attributes:

- [Attributes available in all categories](#)
- [Attributes only available in the shopper profile category](#)
- [Attributes only available in the account category](#)

If you selected Audience as a category in the previous step, then the Attribute field automatically fills with the Membership attribute and you only have to set an operator and values, that is, one or more audiences.

The selections in the Operator and Values drop-down lists change depending on the attribute that you select. If the attribute has a limited set of values, the Value list includes all of your possible choices. If the attribute has an unlimited number of values, you can type a unique value directly into the list.

13. Click **Done**.

14. (Optional) If you have more rules to add, click **New Rule**.

An audience can have a maximum of 100 rules.

15. When you have finished adding rules, click **Create**.

The audience is immediately available for use in personalization. The audience is not available in a production environment until it has been published.

## Update an audience

You can update an audience by changing the display name or description, or by adding, editing, or removing rules. You cannot change an audience ID.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

To update an audience, follow these steps:

1. On the **Marketing** page, click **Audiences**.
2. (Optional) Change the view by clicking **All Audiences** and selecting another view.
3. Click the audience that you want to update.
4. Edit the **Audience Name** or **Audience Description** fields. The **Audience ID** field is read-only.
5. Add a rule by clicking **New Rule** just like you do when you initially create an audience. See [Create an audience](#).

An audience can have a maximum of 100 rules.

6. Edit a rule by clicking **Edit** next to the rule that you want to edit. Before you begin making changes, note the following.
  - If you change the Category, then the Attribute field is reset for attributes that are appropriate for that category. The rest of the rule is removed. If you changed the Category by mistake, cancel the edit to avoid having to enter the attributes again.
  - If you change the Attribute, then the Operator field is reset for operators that are appropriate for that attribute and the Value field is cleared.

Click **Done** when you are finished.

7. Click **Save**.

Changes to the audience name and description take effect for use in the audience definition interface. Rule changes do not go live until you publish them. See [Publish Changes](#).

## Copy an existing audience

Creating a new audience based on an existing one lets you easily create a number of similar audiences and lets you reuse audiences that successfully met your needs in the past.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

When you copy an existing audience, the following values are automatically copied to the new audience:

- Audience Display Name  
By default, this value will be set to the name of the audience that was copied, followed by (Copy). For example, New Students (Copy).
- Audience Description
- Rules

When you copy an existing audience, the following values are not copied to the new audience:

- Audience ID  
A new audience ID is generated from the new audience display name. For example, a display name of New Students (Copy) generates an ID of NewStudentsCopy.
- Enabled status  
When you copy an audience, the new audience is automatically enabled even if the source audience was not enabled.

To copy an existing audience, follow these steps:

1. On the **Marketing** page, click **Audiences**.
2. Click the row of the audience to copy and then click **Copy**.  
Click anywhere in the row except on the link that is the audience name. Clicking that link opens the existing audience.
3. Edit the **Audience Display Name**.  
After you finish editing and move to another field, the **Audience ID** automatically fills with an ID generated from the Audience Display Name.
4. (Optional) Edit the automatically generated ID in the **Audience ID** field. You can edit an ID until you click **Create**.  
Just like when you create an audience, an ID can only contain alphanumeric characters. It cannot contain spaces, special characters, or non-Latin characters.
5. Edit the Audience Description, Enabled Status, and any rules that you want to change for the new audience.
6. Click **Create** and then click **Save**.

## Disable an audience

You might want to disable an audience if for example it is an audience for a seasonal content and that season has passed.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You can also disable an audience if you learn that you made a mistake in the audience definition and you want to temporarily turn it off.

1. On the **Marketing** page, click **Audiences**.
2. (Optional) Change the view by clicking **All Audiences** and selecting another view.
3. Click the audience that you want to disable

#### 4. Deselect **Audience Enabled**.

Disabling the audience takes effect immediately in the audience definition interface. The audience is not disabled in a production environment until you publish your changes.

## Delete an audience

If you delete an audience, it cannot be reinstated.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Any association that an audience has with targeted content is also removed when you delete the audience. You cannot reuse the audience name or ID. If you want to reuse an audience at another time, you should consider disabling the audience instead of deleting it. See [Disable an audience](#).

1. On the **Marketing** page, click **Audiences**.
2. Click the audience that you want to delete.
3. Click **Delete**.
4. Confirm the deletion.

When an audience is deleted, it no longer appears in the audience definition interface, and no shopper will be considered a member of the audience. However, your site will continue to function. You can delete an audience first and remove all uses of it later. The audience is not deleted from your production environment until you publish your changes.

## View audience usage

On the Audience Usage page, you can see which slots, audiences and promotions are using an audience so that you have a full understanding before making a change, including deletion of an audience, which may have unintentional consequences.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You can also navigate to users of an audience directly from the Audience Usage page.

To view audience usage, follow these steps:

1. On the **Marketing** page, click **Audiences**.
2. Click the name of an existing audience then the **Audience Usage** tab.  
You can see the name, type and description of users of that audience.
3. To navigate to a user of an audience, click the name of that user. For example, Fall Student Promotion.

## Add personalization to headless applications

You can configure headless applications, such as native OS apps or custom web apps, to establish a visit context for each shopper by evaluating the shopper's audience membership.



*This section applies to Storefront Classic only.*

Audiences allow you to target content to certain groups of shoppers. You define an audience by creating a set of rules based on attributes of the shopper profile. See [Define Audiences](#) for information about audiences. Custom (that is, headless) applications call `/ccstore/v1/audienceContext` endpoints to use existing audiences to personalize content.

Before you begin adding personalization to a headless application, make sure that the following tasks are already complete:

- Use the Commerce administration interface to create audiences and set locales and site settings.
- Use the `/ccadmin/v1/profiles` endpoint to create shopper profiles.
- Make sure the custom application can call the Commerce REST APIs.
- Make sure the custom application conforms to the Internet Engineering Task Force (IETF) cookie spec RFC 6265. The application must be able to store cookies specified in REST responses and send them back in its REST requests.

### View audience membership

You can use the REST API to pass a set of candidate audience IDs as query string parameters, and get a response that includes the subset of IDs (if any) that pertain to audiences a shopper belongs to. The must contain one or more of the following to identify the shopper:

- Access token returned by the `/login` endpoint if the shopper is logged in or the soft-login cookie returned from the `/login` endpoint if the shopper logged in previously. If the request does not include either of these, the shopper is considered anonymous.
- Visit and visitor ID headers.
- `x-ccsite` header that identifies the site.

For example:

```
GET
/ccstore/v1/audienceMembership?filter=audience123,audience234,audience345
Authorization: Bearer <access_token>

x-ccsite: siteUS
X-CCVisitId: <visit ID>
X-CCVisitorId: <visitor ID>
Cookie: SOFT_LOGIN=plM0UbcY.... <encrypted profile ID>
```

The following is an example of the response returned:

```
200 OK
{
  "audienceMembership": ["audience234", "audience345"]
}
```

## Shopper Profile rules

The Shopper Profile category includes attributes of individual registered shoppers who have logged in to a personal account. See [Understand audience definitions](#) for details about the available Shopper Profile attributes.

In order to personalize based on these profile attributes, the shopper must have a profile. Once a shopper has a registered profile, the custom application can log in the shopper by using the `ccstore/v1/login` endpoint. This endpoint sets a persistent cookie called `SOFT_LOGIN` that expires after 14 months. In order to personalize based in profile attributes, the call to `/audienceMembership` must contain either the access token or the `SOFT_LOGIN` cookie. Without either of these, the shopper is considered to be anonymous.

## Geolocation rules

The Geolocation category includes attributes that identify the current geographical location of the shopper. See [Understand audience definitions](#) for details about the available Geolocation attributes.

If the custom application sends its requests through a content delivery network, like the storefront application does, then those requests, including the one to `/audienceMembership`, will include an additional header. For example:

X-Akamai-Edgescape:

```
georegion=263,country_code=US,region_code=MA,city=CAMBRIDGE,dma=506,pms  
a=1120,areacode=617,county=MIDDLESEX,fips=25017,lat=42.3933,long=-71.13  
33,timezone=EST,zip=02138-02142+02238-02239,continent=NA  
    ,throughput=vhigh,asnum=21399
```

This header is all the `/audienceMembership` endpoint needs in order to determine membership for Audiences with Geolocation rules. Otherwise, you must use the Store API to communicate geolocation data to the storefront server. Issue a `PUT` request to `ccstore/v1/audienceContext/currentSession/geolocation/current`. For example:

PUT

```
ccstore/v1/audienceContext/currentSession/geolocation/current  
Authorization: Bearer <access_token>
```

```
X-CCVisitId: <visit ID>
```

```
{  
  "country_code": "US",  
  "region_code": "CA",  
  "city": "SAN DIEGO",  
  "timezone": "(GMT+11:00)",  
  "latitude": -25.4  
}
```

This request must include the `X-CCVisitId` header, which specifies the visit ID that is unique to a user session. The storefront server uses the value of this header as the

key to the cache where this data is being stored. The same visit ID must be sent in the `/audienceMembership` call, even if the shopper is not currently logged in.

All the fields in the request are optional. The custom application sends only the fields used in the audience rules required for personalization. There is one exception: If a city is used in a place rule, `country_code` must be sent along with `city` to disambiguate the city. To find the place fields for any city, region, or country, query the `/ccadmin/v1/places` endpoint.

### Entry Page and Entry Page Query Parameter Rules

Entry Page and Entry Page Query Parameter attributes specify how the shopper arrived at the storefront. These rules can be based on landing page URL, referring site, or a variety of default UTM and custom query string parameters. See [Understand audience definitions](#) for details about these attributes.

Send Entry Page and Entry Page Query Parameter information to the server by issuing a `PUT` request to `ccstore/v1/audienceContext/currentSession/entryPage/current`. For example:

```
PUT
ccstore/v1/audienceContext/currentSession/entryPage/current

{
  "URL": "?a=a1&c=c1&d=d1&a=a2&e=",
  "Referer": "http://myserver.example.com"
}
```

Both the landing page URL (`URL`) and referring site (`Referer`) fields are optional. The request needs to send only the data to determine membership based on Entry Page and Entry Page Query Parameter audience rules. Note that query parameters are conveyed in the `URL` field. If audience rules depend only on the parameters and not the actual landing page URL, the value for the `URL` field can omit the URL as long as it contains the parameters starting with a `?` character.

This request must include the `X-CCVisitId` header, which specifies the visit ID that is unique to a user session. The storefront server uses the value of this header as the key to the cache where this data is being stored. The same visit ID must be sent in the `/audienceMembership` call, even if the shopper is not currently logged in.

### Device rules

Device attributes specify the type of device (such as a computer, tablet, or phone) and operating system (such as iOS or Android) the shopper is using to access the site. See [Understand audience definitions](#) for details about Device attributes.

Send device information to the server by issuing a `PUT` request to `ccstore/v1/audienceContext/currentSession/deviceType/current`. For example:

```
PUT
ccstore/v1/audienceContext/currentSession/deviceType/current

{
  "deviceType": "Mobile",
  "deviceOS": "iOS"
}
```

This request must include the `X-CCVisitId` header, which specifies the visit ID that is unique to a user session. The storefront server uses the value of this header as the key to the cache where this data is being stored. The same visit ID must be sent in the `/audienceMembership` call, even if the shopper is not currently logged in.

### Send information in a single request

You can send geolocation, entry page, query parameter, and device information in a single request by issuing a `PUT` request to `ccstore/v1/audienceContext/currentSession`. For example:

```
PUT
ccstore/v1/audienceContext/currentSession

{
  "geolocation": {
    "country_code": "US",
    "region_code": "CA",
    "city": "SAN DIEGO",
    "timezone": "(GMT+11:00)",
    "latitude": -25.4
  },
  "deviceData": {
    "deviceType": "Mobile",
    "deviceOS": "iOS"
  },
  "entryPage": {
    "URL": "?a=a1&c=c1&d=d1&a=a2&e=",
    "Referer": "http://myserver.example.com"
  }
}
```

Sending a `PUT` request to the base `ccstore/v1/audienceContext/currentSession` endpoint will replace all the data for each of the child endpoints, so use this endpoint only if you want to send all the data at once.

### Browsing rules

Browsing attributes let you track shopper browsing behavior, that is, views of products or collections, in the current visit. See [Understand audience definitions](#) for details about Browsing attributes.

The `ccstore/v1/audienceContext/addBrowsingEvent` endpoint caches behavioral events. The custom application must call this endpoint with a `X-CCVisitId` header and pass in the ID of the viewed item, the catalog ID, and whether the viewed item was a product or collection.

## Configure Tax Processing

Commerce integrates with both Avalara AvaTax and Vertex O Series to automatically calculate sales tax in the shopping cart. Commerce uses the Avalara integration by default, but you can easily switch to the Vertex integration.

If you process taxes with a different tax processor, you can use webhooks to integrate with your tax processor so it calculates taxes in the shopping cart. You can also disable all tax processor integration if you use an OMS or other external service to handle tax processing.

Some shoppers may have tax exempt status for certain purchases. For example, individuals working for a charitable organization may be exempt from sales tax on items used in running the charity. To learn how to configure Commerce and your tax processor to handle tax exemptions, see [Integrate with an external tax processor](#).

If you run multiple sites within a single instance of Commerce, these sites share the same tax processor settings, but each site can have its own ship-from address. See [Run Multiple Stores from One Commerce Instance](#) for more information about creating sites.

If you are using a loyalty program, you can configure tax processing to convert to and from loyalty points currency. For information on loyalty programs, refer to [Work with Loyalty Programs](#).

## Understand tax processor integrations

Commerce does not configure taxes, but integrates with tax processors that calculate sales tax in the shopping cart.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You must have an active account for the tax processor you choose to integrate with Commerce, including for the built-in Avalara and Vertex integrations.

Commerce automatically uses the tax processor you have enabled to calculate taxes for every order placed on your store. The tax processor calculates sales tax as part of the pricing operation. When the shopping cart is priced with a request to include tax pricing (when the shopper begins the checkout process and when the order is submitted), Commerce sends the order information to the tax processor, which calculates the total tax amount and sends it back to Commerce. The response breaks down the tax into individual components, for example, the total tax amount might include sales tax assessed by both the state and county. Widgets on the checkout page automatically display the tax information.

Commerce is not involved in the settlement process and is not the system of record for any aspect of orders, including taxes. Commerce issues Sales Order calls (instead of Invoice calls) to tax providers to get the tax in a response.

Commerce uses a fallback method for calculating taxes when it cannot connect to your tax processor's web service in the event of an outage. See [Monitor tax processors](#) for details about fallback tax calculation and information about configuring its settings.

If you want to display SKU prices with tax included, for example prices that include VAT, create a price group for those tax-inclusive prices. See [Configure Price Groups](#) for more information. If your store uses price groups with tax-inclusive prices, you may need to update your account on your tax processor's site. For example, if your store uses tax-inclusive prices, you must activate Avalara AvaTax with Global for your AvaTax account.

## Understand the Tax Code property

Each product and shipping method you create in Commerce has a Tax Code property.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Tax processors that integrate with Commerce use the value of the Tax Code property when they calculate tax for each product or shipping method. The value you enter for the Tax Code depends on your tax processor.

- For Avalara AvaTax, it is the Avalara tax code, also called goods and services type. For example, if your store sells gift cards, the value of the gift card product's Tax Code property can be the Avalara tax code for Gift Certificates or Electronically Delivered Gift Cards. For more information about tax codes in AvaTax, go to the Avalara Help Center at <https://help.avalara.com> and search for tax codes.
- For Vertex O Series, it is the code you assigned to a taxability category in Vertex O Series. For example, if your store sells gift cards, the value of the gift card product's Tax Code property is the code you assigned to the Gift Certificates/Cards tax category in Vertex O Series.

Tax Code is not a required property; Commerce allows you to leave Tax Code blank when you create a product or shipping method. However, it is best practice to assign a Tax Code to every product and shipping method you create. Otherwise, the tax calculations may return unexpected results, such as a higher-than-anticipated tax amount. For example, if you leave a product or shipping method's Tax Code property blank, Vertex calculates the tax at the maximum rate that guarantees compliance.

## Configure the AvaTax integration

The Avalara AvaTax integration is the default tax processor integration.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Commerce uses the tax processing settings you add when you configure the integration when it communicates with Avalara during tax calculations. See [Understand tax processor integrations](#) for overview information about all tax processor integrations.

You must have an active AvaTax account to use this integration. To learn how to sign up for an account and configure it, go to <http://www.avalara.com>.

**Important:** As a merchant, it is your responsibility to add the appropriate nexus jurisdictions to your AvaTax company tax profile. (You configure your company profile in your Avalara AvaTax Admin console.) Nexus jurisdictions tell AvaTax where and when to calculate and report tax. All sales that occur in jurisdictions you have not configured in AvaTax result in a tax calculation that returns a value of zero tax.

Commerce is not responsible for configuring or validating nexus jurisdictions. Visit the Avalara Help Center at <https://help.avalara.com> to learn about nexus jurisdictions.

Before you begin, make sure you have the following information for your AvaTax account:

- The company code.
- The account number.
- The license key.

To configure the Avalara tax processing settings, follow these steps:

1. Click the **Settings** icon, then select **Tax Processing**.
2. Select **Avalara** from the **Tax Processor** list.  
By default, the **Enable Tax Processor** checkbox is selected for Avalara.
3. (Optional) Select **Show Tax Summary** to display an order's tax amount in the cart, checkout, and order summary pages, or deselect it to hide the tax summary. This checkbox is selected by default.  
If your store's prices include tax, such as VAT, you likely do not want to display the tax summary. However, if prices do not include tax, you should always display a tax summary.  
  
This setting has no effect on the display of the tax summary in the emails your store sends to customers. To learn how to remove the tax summary line from the order summaries in emails, see [Customize tax display in templates](#).
4. Enter your Avalara Account Information.
5. Click **Save**.

The following table describes the Avalara Account Information properties.

Property	Description
Merchant ID	The company code for your Avalara AvaTax account.
Username	The account number for your Avalara AvaTax account.
Password	The license key for your Avalara AvaTax account.
URL	The web service URL for Avalara AvaTax.

## Configure the Vertex O Series integration

The Avalara AvaTax integration is the default tax processor integration, but you can easily switch to the Vertex O Series integration.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Commerce uses the tax processing settings you add when you configure the integration when it communicates with Vertex during tax calculations. See [Understand tax processor integrations](#) for overview information about all tax processor integrations.

You must have an active Vertex O Series account to use this integration. To learn how to sign up for an account and configure it, go to <http://www.vertexinc.com>.

**Important:** As a merchant, it is your responsibility to add the appropriate tax jurisdictions to your Vertex O Series taxpayer profile. (You set up your taxpayer profile in the My Enterprise section of Vertex Central.) Jurisdictions you add to your taxpayer profile tell Vertex O Series

where and when to calculate and report tax. All sales that occur in jurisdictions you have not configured in Vertex O Series result in a tax calculation that returns a value of zero tax. Commerce is not responsible for configuring or validating jurisdictions. You can find information about nexus and tax jurisdictions in the Vertex documentation, which is available when you log into Vertex Central.

Before you begin, make sure you have the following information for your Vertex O Series account on hand:

- The taxpayer code.
- The trusted ID.
- The username and password.

To configure the Vertex tax processing settings, follow these steps:

1. Click the **Settings** icon, then select **Tax Processing**.
2. Select **Vertex** from the **Tax Processor** list and select the **Enable Tax Processor** checkbox.
3. (Optional) Select **Show Tax Summary** to display an order's tax amount in the cart, checkout, and order summary pages, or deselect it to hide the tax summary. This checkbox is selected by default.  
If your store's prices include tax, such as VAT, you likely do not want to display the tax summary. However, if prices do not include tax, you should always display a tax summary.

This setting has no effect on the display of the tax summary in the emails your store sends to customers. To learn how to remove the tax summary line from the order summaries in emails, see *Customize tax display in templates*.

4. Enter your Vertex Account Information.
5. Click **Save**.

The following table describes the Vertex Account Information properties.

Property	Description
Trust ID	Your Vertex Trusted ID.
Merchant ID	Your unique merchant ID.
Username	The username for your Vertex O Series account.
Password	The password for your Vertex O Series account.
URL	The dedicated host-instance URL you received from Vertex.

## Integrate with an external tax processor

If you have an account with a tax processor other than Avalara AvaTax or Vertex O Series, you can configure an integration that tells Commerce to use your tax processor to perform tax calculations.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

To learn how to integrate with another tax processor, see *Configure Tax Processors*.

## Configure Ship from Warehouse Locations

The Ship from Warehouse Location properties specify an address from which items sold on your store are shipped.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The tax processor uses this information when calculating taxes.

- In the Avalara AvaTax, this address is referred to as a warehouse location.
- In Vertex O Series, this address is referred to as the physical origin.

If you run multiple sites within a single instance of Commerce, each site can have its own ship-from address. For example, suppose you run two sites, one that sells items in the United States, and another that sells items in France. For the US store, items would ship from your warehouse in Chicago; for the French store, items would ship from your warehouse in Paris.

Although tax processor settings take effect immediately, changes to the ship-from address must be published. This is because they are associated with a site, not with a tax processor.

To configure the Ship from Warehouse Location settings, follow these steps:

1. Click the **Settings** icon then select **Tax Processing**.
2. If you run multiple sites from a single Commerce instance, select the site whose address you want to configure.
3. Enter your **Ship from Warehouse Location Information**.
4. Click **Save**.
5. Publish your changes.

The following table describes the Ship from Warehouse Location properties. Commerce does not validate any of the address details; for example, it does not check to make sure the Postal/ZIP Code you entered is valid for the Province/State.

Property	Description
Country	The country where the ship-from warehouse is located.
Address Line 1	First line of the address where the ship-from warehouse is located. For example, 1000 Smith Street.
Address Line 2	Second line of the address where the ship-from warehouse is located. For example, 4th Floor.
Address Line 3	Third line of the address where the ship-from warehouse is located. For example, Suite 403.
City	Name of the city where the ship-from warehouse is located. This property is required if no Postal/ZIP Code is specified.
Province/State	Province or State where the ship-from warehouse is located. This property is required if no Postal/ZIP Code is specified.
Postal/ZIP Code	Postal/ZIP code for the ship-from warehouse location.

## Disable all tax processors

If your tax calculations are handled externally, such as in your order management system, you can disable all tax processor integrations that calculate tax in the shopping cart.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

To disable all tax processor integrations, follow these steps:

1. Click the **Settings** icon, then select **Tax Processing**.
2. In the **Tax Processors** list, select **None**.
3. Click **Save**.

# Add personalization to headless applications

You can configure headless applications, such as native OS apps or custom web apps, to establish a visit context for each shopper by evaluating the shopper's audience membership.



*This section applies to Storefront Classic only.*

Audiences allow you to target content to certain groups of shoppers. You define an audience by creating a set of rules based on attributes of the shopper profile. See [Define Audiences](#) for information about audiences. Custom (that is, headless) applications call `/ccstore/v1/audienceContext` endpoints to use existing audiences to personalize content.

Before you begin adding personalization to a headless application, make sure that the following tasks are already complete:

- Use the Commerce administration interface to create audiences and set locales and site settings.
- Use the `/ccadmin/v1/profiles` endpoint to create shopper profiles.
- Make sure the custom application can call the Commerce REST APIs.
- Make sure the custom application conforms to the Internet Engineering Task Force (IETF) cookie spec RFC 6265. The application must be able to store cookies specified in REST responses and send them back in its REST requests.

## View audience membership

You can use the REST API to pass a set of candidate audience IDs as query string parameters, and get a response that includes the subset of IDs (if any) that pertain to audiences a shopper belongs to. The must contain one or more of the following to identify the shopper:

- Access token returned by the `/login` endpoint if the shopper is logged in or the soft-login cookie returned from the `/login` endpoint if the shopper logged in previously. If the request does not include either of these, the shopper is considered anonymous.
- Visit and visitor ID headers.
- `x-ccsite` header that identifies the site.

For example:

GET

```
/ccstore/v1/audienceMembership?filter=audience123,audience234,audience345
Authorization: Bearer <access_token>

x-ccsite: siteUS
X-CCVisitId: <visit ID>
X-CCVisitorId: <visitor ID>
Cookie: SOFT_LOGIN=plM0UbcY.... <encrypted profile ID>
```

The following is an example of the response returned:

```
200 OK
{
  "audienceMembership": ["audience234", "audience345"]
}
```

### Shopper Profile rules

The Shopper Profile category includes attributes of individual registered shoppers who have logged in to a personal account. See [Understand audience definitions](#) for details about the available Shopper Profile attributes.

In order to personalize based on these profile attributes, the shopper must have a profile. Once a shopper has a registered profile, the custom application can log in the shopper by using the `ccstore/v1/login` endpoint. This endpoint sets a persistent cookie called `SOFT_LOGIN` that expires after 14 months. In order to personalize based in profile attributes, the call to `/audienceMembership` must contain either the access token or the `SOFT_LOGIN` cookie. Without either of these, the shopper is considered to be anonymous.

### Geolocation rules

The Geolocation category includes attributes that identify the current geographical location of the shopper. See [Understand audience definitions](#) for details about the available Geolocation attributes.

If the custom application sends its requests through a content delivery network, like the storefront application does, then those requests, including the one to `/audienceMembership`, will include an additional header. For example:

X-Akamai-Edgescape:

```
georegion=263,country_code=US,region_code=MA,city=CAMBRIDGE,dma=506,pms
a=1120,areacode=617,county=MIDDLESEX,fips=25017,lat=42.3933,long=-71.13
33,timezone=EST,zip=02138-02142+02238-02239,continent=NA
,throughput=vhigh,asnum=21399
```

This header is all the `/audienceMembership` endpoint needs in order to determine membership for Audiences with Geolocation rules. Otherwise, you must use the Store API to communicate geolocation data to the storefront server. Issue a `PUT` request to `ccstore/v1/audienceContext/currentSession/geolocation/current`. For example:

```
PUT
ccstore/v1/audienceContext/currentSession/geolocation/current
Authorization: Bearer <access_token>

X-CCVisitId: <visit ID>

{
  "country_code": "US",
  "region_code": "CA",
  "city": "SAN DIEGO",
  "timezone": "(GMT+11:00)",
```

```

    "latitude": -25.4
  }

```

This request must include the `X-CCVisitId` header, which specifies the visit ID that is unique to a user session. The storefront server uses the value of this header as the key to the cache where this data is being stored. The same visit ID must be sent in the `/audienceMembership` call, even if the shopper is not currently logged in.

All the fields in the request are optional. The custom application sends only the fields used in the audience rules required for personalization. There is one exception: If a city is used in a place rule, `country_code` must be sent along with `city` to disambiguate the city. To find the place fields for any city, region, or country, query the `/ccadmin/v1/places` endpoint.

### Entry Page and Entry Page Query Parameter Rules

Entry Page and Entry Page Query Parameter attributes specify how the shopper arrived at the storefront. These rules can be based on landing page URL, referring site, or a variety of default UTM and custom query string parameters. See [Understand audience definitions](#) for details about these attributes.

Send Entry Page and Entry Page Query Parameter information to the server by issuing a `PUT` request to `ccstore/v1/audienceContext/currentSession/entryPage/current`. For example:

```

PUT
ccstore/v1/audienceContext/currentSession/entryPage/current

{
  "URL": "?a=a1&c=c1&d=d1&a=a2&e=",
  "Referer": "http://myserver.example.com"
}

```

Both the landing page URL (`URL`) and referring site (`Referer`) fields are optional. The request needs to send only the data to determine membership based on Entry Page and Entry Page Query Parameter audience rules. Note that query parameters are conveyed in the URL field. If audience rules depend only on the parameters and not the actual landing page URL, the value for the URL field can omit the URL as long as it contains the parameters starting with a `?` character.

This request must include the `X-CCVisitId` header, which specifies the visit ID that is unique to a user session. The storefront server uses the value of this header as the key to the cache where this data is being stored. The same visit ID must be sent in the `/audienceMembership` call, even if the shopper is not currently logged in.

### Device rules

Device attributes specify the type of device (such as a computer, tablet, or phone) and operating system (such as iOS or Android) the shopper is using to access the site. See [Understand audience definitions](#) for details about Device attributes.

Send device information to the server by issuing a `PUT` request to `ccstore/v1/audienceContext/currentSession/deviceType/current`. For example:

```

PUT
ccstore/v1/audienceContext/currentSession/deviceType/current

```

```
{
  "deviceType": "Mobile",
  "deviceOS": "iOS"
}
```

This request must include the `X-CCVisitId` header, which specifies the visit ID that is unique to a user session. The storefront server uses the value of this header as the key to the cache where this data is being stored. The same visit ID must be sent in the `/audienceMembership` call, even if the shopper is not currently logged in.

### Send information in a single request

You can send geolocation, entry page, query parameter, and device information in a single request by issuing a `PUT` request to `ccstore/v1/audienceContext/currentSession`. For example:

```
PUT
ccstore/v1/audienceContext/currentSession

{
  "geolocation": {
    "country_code": "US",
    "region_code": "CA",
    "city": "SAN DIEGO",
    "timezone": "(GMT+11:00)",
    "latitude": -25.4
  },
  "deviceData": {
    "deviceType": "Mobile",
    "deviceOS": "iOS"
  },
  "entryPage": {
    "URL": "?a=a1&c=c1&d=d1&a=a2&e=",
    "Referer": "http://myserver.example.com"
  }
}
```

Sending a `PUT` request to the base `ccstore/v1/audienceContext/currentSession` endpoint will replace all the data for each of the child endpoints, so use this endpoint only if you want to send all the data at once.

### Browsing rules

Browsing attributes let you track shopper browsing behavior, that is, views of products or collections, in the current visit. See [Understand audience definitions](#) for details about Browsing attributes.

The `ccstore/v1/audienceContext/addBrowsingEvent` endpoint caches behavioral events. The custom application must call this endpoint with a `X-CCVisitId` header and pass in the ID of the viewed item, the catalog ID, and whether the viewed item was a product or collection.

# Configure Payment Processing

Commerce includes several built-in integrations with payment gateways that let your store accept various payment methods, including credit cards and PayPal payments.

In addition to the built-in integrations described in this section, you can use tools that Commerce provides to create custom integrations with other payment gateways. See [Create a Credit Card Payment Gateway Integration](#) for information about creating custom integrations for a number of payment gateways.

If you run multiple sites within a single instance of Commerce, each site can use different payment methods. The payment methods you configure are available to every site, but you can assign a different subset of them to each site. Each new site you create automatically inherits its payment methods from the default site, though you can change them on the Payment Processing page. See [Configure Sites](#) to learn how to create multiple sites.

## Configure payment settings

Before your store can accept payments, you must specify types of payments you accept and countries from which you accept payments. You must also configure a payment gateway.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You must configure the following information in order for your store to accept payments:

- **Billing countries:** Countries from which your store accepts payments. The country in a shopper's billing address must be one of the billing countries you specify. Otherwise, the order cannot be placed.
- **Payment types:** The types of credit cards your store accepts. These selections should correspond with the payment selections you made in CyberSource or Chase Paymentech when you configured your merchant account.
- **Account information** for your payment gateway.

To configure payment settings, follow these steps:

1. Click the **Settings** icon, then select **Payment Processing**.
2. If you run multiple sites from a single Commerce instance, select the site whose payment methods you want to configure.
3. Select the payment types your store accepts.
4. Select one or more billing countries your store accepts and then click **Save**.
5. (Optional) Select a default billing country.

When a shopper checks out on your store, the default billing country is automatically selected and appears at the top of the list of available billing countries.

The default billing country you select must be one of the billing countries you selected in step 3. Otherwise, the storefront will not display the default country you selected.

6. Click the **Payment Gateways** tab and configure one or more gateways.

## Configure the CyberSource integration

The CyberSource integration lets your store accept credit card payments.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

To use the integration, you must have both a CyberSource merchant account and an activated CyberSource Secure Acceptance Checkout API profile. If you do not already have a CyberSource account, go to [www.cybersource.com/register](http://www.cybersource.com/register) to obtain an evaluation account. An evaluation account lets you configure and test the CyberSource integration. You will need to register for a paid merchant account (including both Payment Gateway and Tokenization) before your store can go live and accept payments from shoppers.

CyberSource Secure Acceptance Checkout API allows Commerce to send payment card data directly from a shopper's browser to CyberSource. No credit card data is ever stored on Oracle servers. CyberSource securely stores all the card information, replacing it with a unique identifier called a payment token. The payment token is stored on CyberSource servers and in a property of the associated order on Oracle servers. The token is used in all processing tasks associated with the order, including settlement, refunds, and shipping.

To learn how to create a Secure Acceptance Checkout API profile, see *Create a Checkout API Profile* in the *Secure Acceptance Checkout API Integration Guide*. This guide is available on the CyberSource website.

**Note:** Commerce uses HMAC-SHA256 to generate the request signature and validate the response signature for requests and responses sent as part of the CyberSource integration. For more information, see [Secure Your Service](#).

### Configure Oracle Commerce settings

This section describes how to configure the CyberSource integration in Oracle Commerce. Make sure you have your CyberSource account information on hand when you perform the following steps.

1. Click the **Settings** icon, then select **Payment Processing**.
2. On the **Payment Gateways** tab, select **CyberSource**.
3. Under **Account Information**, click **Use CyberSource** and enter your CyberSource account information.
4. Select one of the following environments and then enter your security keys for the Secure Acceptance Checkout API. Each environment requires its own security key. You cannot use the same security key for more than one environment.  
Preview: Your store's preview environment  
Agent: The Commerce Agent Console  
Storefront: Your production storefront
5. Click **Save**.

### Account Information

These properties identify your CyberSource account. All properties are required.

Property	Description
Merchant ID	Merchant ID for your CyberSource account.
First Name	First name and surname for the contact.
Last Name	This is usually the name of the person listed as the contact in your CyberSource account, but it can be different.
Username	Login name for your CyberSource account.

### Security Keys for Secure Acceptance

These properties identify your CyberSource Secure Acceptance Checkout API profile. If you configure properties for both the Storefront and Agent configurations, use the same properties for both. All properties are required.

Property	Description
Profile ID	The ID for your CyberSource Secure Acceptance Checkout API profile.
Access Key	Authenticates your account with CyberSource.
Secret Key	The secret key associated with the access key you entered. The secret key signs the transaction data and is required for each transaction.
SOP URL	<p>The URL used to send the form to CyberSource for processing the payment.</p> <p>For test and preview environments, set this to:</p> <pre>https:// testsecureacceptance.cybersource.com/ silent/embedded/pay</pre> <p>For production environments, set this to:</p> <pre>https:// secureacceptance.cybersource.com/ silent/embedded/pay</pre>

### Test the CyberSource integration

Once the CyberSource integration is configured, you should be able to go to your store and place a test transaction. If the transactions are successful, the orders will be visible in Oracle Commerce reports in the CyberSource Business Center under Transaction Search.

**Note:** You cannot place test transactions in preview mode; you must place them from your store. See [Preview your store](#) for information about preview mode.

The following page provides a list of test credit card numbers:

```
https://www.cybersource.com/developers/other_resources/quick_references/  
test_cc_numbers/
```

Note that to enable communication between CyberSource and your Commerce sites, you must add the appropriate URL and HTTP methods to the `allowedOriginMethods` property of each site object, and then publish your changes. For example, for a site whose ID is `siteUK`:

```
PUT /ccadmin/v1/sites/siteUK HTTP/1.1
Authorization: Bearer <access_token>
x-ccasset-language: en

{
  "properties": {
    "allowedOriginMethods": {
      "https://testsecureacceptance.cybersource.com": "GET,PUT,POST,OPTIONS"
    }
  }
}
```

For more information, see CORS support.

## Configure the PayPal integration

The PayPal Express Checkout integration lets your customers pay for purchases with their PayPal accounts.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

To use the integration, you must have either a Business or Premier PayPal account. You should also have a PayPal Sandbox account with two test accounts.

You can configure the integration so that PayPal captures funds at the same time the payment is authorized or you can capture funds later, for example, your order management system can capture funds when the order ships.

For more information about PayPal Express Checkout, see *Getting Started with Express Checkout* in the PayPal developer documentation.

### Configure PayPal settings

To configure the PayPal settings, follow these steps:

1. Click the **Settings** icon, then select **Payment Processing**.
2. On the **Payment Gateways** tab, under **Payment Gateways**, select **PayPal**.
3. Under **Account information**, click **Use PayPal**.
4. Enter your PayPal merchant account information.
5. Click **Save**.

### Account Information

These properties identify your PayPal account. All properties are required.

Property	Description
Client ID	(Required) The API client ID for your PayPal account.
Secret Key	(Required) The API secret key for your PayPal account.
Production	If this setting is turned on, transactions occur on the live PayPal production environment. If this setting is turned off (default), transactions occur on the PayPal Sandbox, a virtual testing environment.
Capture Payment Action	Specify when PayPal should capture funds: Order Placed: (default) PayPal authorizes payment and captures funds when the order is submitted. Order Shipped: PayPal authorizes payment when the order is submitted but does not capture payment. You are responsible for making sure PayPal captures payment at a later time, ideally, when the order ships. For more information, see <a href="#">Capture Payments Later</a> in the PayPal developer documentation.

#### Understand PayPal requirements for account-based storefronts

Account-based storefronts have an additional requirement for shoppers who use PayPal as their payment method. For more information, see [Ensure PayPal shoppers provide first and last name](#).

## Configure the Chase Paymentech integration

The Chase Paymentech integration lets your store accept credit cards.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

To use the integration, you must have a Chase Paymentech merchant account.

The integration allows Commerce to send payment card details from a shopper's browser to an Oracle server, which then sends the card details to Chase Paymentech, where the specified transaction (authorization, void, or refund) is performed. No credit card data is ever stored on Oracle servers. The Chase Paymentech response contains an authorization code and transaction reference number, which are stored in a property of the associated order on Oracle servers.

The gateway does not support tokenization via the Orbital Customer Profile Management. Therefore, a shopper who provided credit card details when submitting an order must provide the details again for subsequent transactions, such as obtaining a refund.

**Note:** Commerce uses HMAC-SHA256 to generate the request signature and validate the response signature for requests and responses sent as part of the payment gateway integrations. For more information, see [Secure Your Service](#).

The gateway does not support Address Verification Service (AVS), so to make sure cards are not automatically declined you must do one of the following on your Orbital Virtual Terminal:

- Turn off mandatory AVS checking.

- Configure your Merchant Selectable Response (MSR) settings to handle the AVS response codes so that a card is not automatically declined for “information not available” or “AVS not supported” codes. For more information about the response codes, see *AVS Response Codes* on the Chase Paymentech Support Center.

### Configure Chase Paymentech credit card settings

To configure the Chase Paymentech Credit Cards gateway settings, follow these steps:

1. Click the **Settings** icon then select **Payment Processing**.
2. On the **Payment Gateways** tab, under **Payment Gateways**, select **Chase Paymentech Credit Cards**.
3. Click **Payment Gateway Enabled**.
4. Select the environment to work in.  
Preview: Your store’s preview environment  
Agent: The Commerce Agent Console  
Storefront: Your production storefront
5. Enter your Chase Paymentech account information.
6. Click **Save**.

### Chase Paymentech Account Information

These properties identify your Chase Paymentech account. All properties are required.

Property	Description
Username	Login name for your Chase Paymentech account.
Merchant ID	Gateway merchant account number for your Chase Paymentech account.
Merchant Secret Key	The secret key associated with your Merchant ID. The secret key signs the transaction data and is required for each transaction.
Environment	Specifies where transactions occur: Sandbox: (default) Transactions occur on the Chase Paymentech Sandbox, a virtual testing environment. Production: Transactions occur on the live Chase Paymentech production environment.

# Configure Shopper Settings

Shopper settings let you configure registration details, password policies, and session length for registered customers. You do not have to publish changes you make to shopper settings; they take effect as soon as you save them.

**Note:** The Commerce APIs provide endpoints that you can use to create custom properties for shopper profiles that you can display on your store or use internally in the administration interface. See [Manage Shopper Profiles](#) for more information.

In addition to these Shopper Settings, you can also restrict guest checkout. See [Restrict guest checkout](#) for more information.

## Configure the password policy

Password management is an important part of administering any site that includes personal information.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This section describes the password management features included as part of Commerce and includes the following topics:

- [Configure strong passwords](#)
- [Force all passwords to expire](#)
- [Understand how forgotten passwords are handled](#)

### Configure strong passwords

Strong password checking lets you define criteria for new passwords; for example, you can specify that new passwords cannot be duplicates of old ones or contain the same characters as login names.

To configure strong passwords, follow these steps:

1. Click the **Settings** icon, then **sShopper Settings**.
2. Select one or more strong password settings.
  - If you select **Minimum Password Length**, enter a number that specifies the minimum number of characters.
  - If you select **Must Include a Symbol Character**, enter, or add to, a list of symbols.
  - If you select **Cannot Be A Previous Password**, enter a number that specifies how many most recent passwords cannot be used.
  - If you select **Expire Password**, enter a number that specifies the number of days until a new password expires.
3. Click **Save**.

### Force all passwords to expire

In some cases, you may want to force the passwords of all registered users to expire at the same time. Registered shoppers will have to reset their passwords the next time they log in.

To force all passwords to expire, follow these steps:

1. Click the **menu** icon, then select **Settings**.
2. Select **Shopper Settings** from the **Settings** list.
3. Click the **Expire All Passwords** button.
4. Confirm that you want to force all passwords to expire immediately.

### Understand how forgotten passwords are handled

Registered shoppers who cannot remember their passwords can use the Forgotten Password feature in the storefront to set a new password. The process works as follows:

1. The shopper clicks the **Forgotten Password** link in the login screen and enters his or her email address.  
The system validates that the email address matches an existing shopper profile. If no match is found, the system does nothing, and the shopper does not receive an email.
2. The shopper clicks the **Send Request** button. A one-time use link is sent by the system to their email address.
3. Once the shopper receives the link and opens it, they are prompted to create and confirm their new password.

## Configure the logged-in shopper session

You can configure shopper sessions to automatically expire after a specified period of inactivity.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The logged-out shopper can still access most areas of the store but must log in again to access secure pages, such as their profile or the checkout page. This is sometimes referred to as soft login.

To configure the logged-in shopper session, follow these steps:

1. Click the **Settings** icon, then select **Shopper Settings**.  
When running multiple sites from your Oracle Commerce instance, your configurations will be applied by site. Choose your site from the site picker at the top of the Settings menu options.
2. Under **Shopper Session**, click **Logged-In User Session Timeout**.
3. Enter a number that specifies the session length, in minutes.
4. Click **Save**.

## Configure guest checkout

You can require that anonymous shoppers log into their accounts before they check out.

 *This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This feature can be used for anonymous shoppers who will log into either an individual account or a business account.

To prevent guest checkout, follow these steps:

1. Click the **Settings** icon, then select **Shopper Settings**.

When running multiple sites from your Oracle Commerce instance, your configurations will be applied by site. Choose a site from the site picker at the top of the Settings menu options.

2. Under **Guest Checkout**, uncheck the **Allow** checkbox.

In addition to selecting this setting, your pages must be modified at a widget code-level to restrict access to the Checkout UI itself. For details on doing so, see [Manage Guest Checkout](#).

## Disable soft login

A logged-out shopper can still see personalized content based on their profile.

 *This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This is referred to as soft login. Soft login allows a registered shopper who is returning to the site to be identified and their site experience to be personalized.

Soft login is a per site setting, and is enabled by default. You can use the `/ccadmin/v1/merchant/profilePolicies` REST API endpoint to disable it. See [Create a shopper profile](#) for details.

A shopper who is soft logged-in must log in to access their account page or to create an order.

## Configure account-based shoppers

You can allow a prospective account-based shopper to request registration of a new account on your store.

 *This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Enabling this feature lets a shopper submit an account registration request for a new account by providing required business details. The information is reviewed by an administrator from the merchant side after the shopper submits the required details, and, if needed, the administrator may request additional details such as credit checks. The registration request is then either approved or rejected. If the request is approved, the new contact for the account is activated.

To configure the account-based shoppers feature, follow these steps:

1. Click the **Settings** icon, then select **Shopper Settings**.  
When running multiple sites from your Oracle Commerce instance, your configurations will be applied by site. Choose a site from the site picker at the top of the Settings menu options.
2. Click from the **Settings** list.
3. Select **Account-based Shoppers - Allow** requests to register a new business Account
4. Click **Save**.

The following provides additional details on what happens if this feature enabled:

- The Accounts page of the administrator user interface now includes a Registration Requests tab. This area lets you view, search, and work with account registration requests. For further details, refer to [Configure Business Accounts](#).
- A Register for an account link appears on the Log In dialog box that is launched from the Contact Login (for Managed Accounts) element of the Header widget. Clicking the link displays a new business-to-business registration request form dialog that the registrant fills in.
- The Store API for submitting a registration request can return a successful status.

The following provides additional details on what happens if this feature is disabled:

- The Register for an account link does not appear on the Log In dialog box that is launched from the Contact Login (for Managed Accounts) element of the Header widget.
- If a prospective shopper is in the process of filling out a Register form and submits it, they see the “Account registration is not available” error.
- If there are registration requests with statuses of New, Review, More Info Needed, or Rejected, the Registration Requests area remains in the Accounts area of the UI.
- If there are no registration requests with statuses of New, Review, More Info Needed, or Rejected, the Registration Requests area is hidden.
- The Store API to submit a registration request returns the error, “Account registration is not available.”

**Note:** To enable the store user interface to allow account-based shoppers to submit an account registration request, make sure you have a Contact Login element to the Header widget in your site Home layout. For further details, refer to [Create Page Layouts that Support Different Types of Shoppers](#).

## Configure shopper registration

You can configure shopper registration so that a shopper does not create a password on the storefront, but instead completes registration by clicking a secure link in an email your store sends to an email address the shopper provides.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This section describes how to enable and configure the secure registration flow for shoppers. This feature is enabled by default for all new Commerce customers, starting with Release 20.1.0. To support backward compatibility, the feature remains disabled if

you upgraded to this release from Commerce 19.5.9 or earlier, though you can follow the procedures in this chapter to enable and configure secure registration flow.

### Understand secure shopper registration

Prior to Commerce 20A, a shopper who created a new account entered a name, email address, and password as part of the registration request on the storefront. Now, when the secure shopper registration flow is enabled, a shopper enters just a name and email address, then submits the request. Commerce creates a shopper profile with an auto-generated password and sends a New Account email with a secure, tokenized link. The shopper clicks the link, then enters new password details to complete the registration.

When the secure registration flow is not enabled, a shopper who tries to create a new account using an email address from an existing shopper profile sees a warning that the email address is already associated with an account. When the secure registration flow is enabled, Commerce does not display a warning, but sends a Forgotten Password email with a secure, tokenized link. You can customize the Forgotten Password email template with text that explains that the email address is already assigned to an account.

Similarly, if your store supports account-based commerce and a shopper tries to submit a new account-registration request with an email address from an existing personal account, Commerce no longer displays a warning that the address is already associated with a shopper profile.

### Enable the secure registration flow

To enable the secure registration flow, use the `/ccadmin/v1/merchant/profilePolicies` endpoint in the Admin API to set the `enableProfileRegistrationEmailCheck` property to `true`. For example:

```
PUT /ccadmin/v1/merchant/profilePolicies HTTP/1.1
Authorization: Bearer <access_token>

{
  "enableProfileRegistrationEmailCheck": true
}
```

See [Use the REST APIs](#) for information you need to know before using the APIs.

### Configure email templates

To implement the secure registration flow, you must enable the Forgotten Password and New Account emails. If you are upgrading from release 19.5.9 or earlier, you must download the latest versions of these email templates. The latest version of the New Account template includes code to render the tokenized link and additional strings to support the new registration flow. The latest version of the Forgotten Password template includes code that displays a new customizable string if a shopper tried to register with an existing email address.

Once you have downloaded the templates, customize them and then upload them. See [Customize Email Templates](#) for more information.

### Update widgets

To implement the secure registration flow, make sure your layouts include the latest version of the Login Checkout/Registration element. To replace a component with the latest version, see [Upgrade deployed widgets](#).

# Configure Email Settings

Commerce lets you configure and automatically send different types of email notifications to customers. In order to send email to customers, you must have an account with an email service.

For information about customizing the templates for emails your store sends, see [Customize Email Templates](#).

## Enable the types of email your store sends

You can use the Email Settings option in the administration interface to configure and automatically send many types of emails from your store.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Commerce includes templates for the following types of email:

- Reset Password emails are sent when customers click the Forgotten Password link.
- Abandoned Order emails remind customers that they left unpurchased items in their shopping carts. You can configure settings that determine when Abandoned Order notifications are sent. See [Configure Abandoned Cart settings](#) for more information. In addition, you can include product recommendations in Abandoned Order emails. For information about product recommendations, see [Display product recommendations](#). To learn how to customize email templates to include recommendations, see [Customize Email Templates](#).
- Items Shipped emails let customers know that their orders have shipped. This notification is sent when Commerce receives confirmation from your order fulfillment system that an order has shipped.
- Order Placed emails let customers know that an order has been submitted for fulfillment. This notification is usually sent as soon as an order is submitted, though if you specified a remorse period, the email is sent as soon as the time you specified for the remorse period has passed. See [Understand the remorse period](#) for more information about remorse periods.
- New Account emails are sent when customers have registered on the storefront. You can include product recommendations in New Account emails. For information about product recommendations, see [Display product recommendations](#).
- Back-in-stock email notifications are sent to shoppers after they have clicked the Notify Me link when viewing a product that is out of stock, and they have provided their email address. The Notify Me email template must be enabled, and configured, in order for the back-in-stock email notifications to be sent when those products become available. See [Understand back in stock notifications](#) for more information. These email notifications are part of the built-in back in stock functionality. If your Commerce environment integrates with an external system to track and notify shoppers about inventory changes, enable the Inventory Update webhook, which notifies the external system when SKUs are back in stock. See [Understand webhooks](#) for more information.

- For details about Wish List emails, see [Configure Wish Lists](#).
- For additional types of email you can send, see later in this topic.

You can customize each type of email your store sends. For example, you can edit the text or change the colors and fonts to match those of your store, add a company name and logo to email templates for account-based storefronts, or add site details if your Commerce instance runs multiple sites. See [Customize Email Templates](#) for more information.

In order to send email to customers, you must enable the email type, and specify the name and email address that appears in the From field of that type of email. You can specify a different name and email address for each type of email you enable.

To enable a type of email, follow these steps:

1. Click the **Settings** icon, then select **Email Settings**.
2. If you run multiple sites from a single Commerce instance, select the site whose email types you want to configure and enable.
3. Select the email type you want to set up.
4. Click **Enabled**.
5. (Optional) In the From Name field, enter a display name for the sender.
6. In the From Email field, enter a valid email address to use as the sender.  
**Important:** The address you enter must be a valid, active email account capable of receiving messages. If you use Oracle to send transactional emails or other outbound email for your Commerce site, which is typical, invalid sender email addresses will result in an email block. If you use another email service, an invalid email address will result in bounces; a high number of bounces may cause the service to suspend your email account.  
To test the address you want to use, send an email to it from any account and verify it does not bounce.
7. Click **Save**.

If your environment includes the Commerce Agent Console, you can also send the following types of email.

- Agent Cancel Order emails are sent when an agent cancels an order during the remorse period.
- Agent Edit Order emails are sent when an agent amends an order during the remorse period.
- Agent Forgot Password emails are sent when an agent resets a customer's password.
- Agent Return Order emails are sent when an agent processes a return.
- Agent Return Order Refund emails are sent when an agent processes a return with a manual refund.
- Agent Shopper Registration emails are sent to customers who agents register on your site.

If you are creating an account-based storefront, you can also send the following types of email:

- Account Assignment Changed emails are sent when an active contact has been added to an account. This could happen because a new active contact is added to

an account or an existing active contact has been moved from one account to another. This email is also sent when an inactive contact that is already associated with an account is activated or when a contact is removed from an account. The email contains a link that the contact can click to set a new password for logging in to the storefront. You can cut down on the number of emails contacts receive when you make multiple account and role assignment changes at the same time. See [Customize Email Templates](#) for more information.

- Role Assignment Changed emails are sent when one or more roles are added or removed from a contact.
- Contact Deactivated emails are sent to contacts when they are removed from the system and are no longer associated with any accounts.
- Account Deactivated emails are sent to all contacts associated with an account when that account has been deactivated.
- Account Activated or New Contract Added emails are sent to all contacts associated with an account when the account is activated, a contract is added, or if the account is moved to a new parent, where it inherits the parent's contracts by default.  
**Note:** Emails are sent only when the account is active and has at least one contract.
- A number of emails notify contacts about events related to order approvals. For more information about these types of emails, see [Notify users of order approval-related events](#).

If you are creating a storefront that lets account-based shoppers submit a new account registration request for business accounts, you can also send the following specific types of email that are specific to that process. For further details on the new account registration request process, refer to [Configure Business Accounts](#).

- New registration requests emails are sent to business users with the administrator or account manager privilege.
- Account Request Approved - Manager emails are sent to administrators and account managers.
- Account Request Rejected - Manager emails are sent to administrators and account managers.
- Account Request Acknowledgment - User emails are sent to the account requester to let them know that their account request has been received and is under review.
- Account Request Approved - User emails are sent to the account requester to let them know that their account request has been approved.
- Account Request Rejected - User emails are sent to the account requester to let them know that their account request has been rejected.
- Account Assignment Changed emails are sent to a user when they become a new active contact. In this case, the account registration requester has been successfully added to an account as an active contact. The email contains a link that the contact can click to set a new password for logging in to the storefront. The email also instructs the user to contact their organization if additional access information is needed.

If you are creating a storefront that lets an existing account-based shopper (contact) or a non-account-based shopper submit a contact registration request, you can also send the following types of email that are specific to that process. For further details on the contact registration request process, refer to [Configure Business Accounts](#).

**Note:** The templates for these emails can be found by going to the administration interface and clicking on the administration menu. Next, click Settings > Email Settings. All templates

associated with contact request registration can be found in the Templates section of the Email Settings page. All associated template names start with “Contact Request...”

- Email containing list of new contact registration requests - These are emails that are sent to Administrators, Delegated Administrators, and Account Managers that provide lists of new self-registration requests. Each email includes (at most) 25 contact self-registration requests and contains summary information about each new request. Also, for each account that has requests, an email is also sent to all Delegated Administrators on the account. The Administrators/Account Managers emails have a link to the Accounts Administration Page to obtain more details, a requested account ID, and a requested account name. The Delegated Administrator emails do not have this additional information.
- Email to Delegated Administrators requesting they check on a contact registration request – When an Administrator assigns a new account and saves the request, updates the account on a request, and/or saves the request without accepting or rejecting it, Commerce sends an email to the account's Delegated Administrators so that they will know to check for a request that needs attention.
- Emails to Administrators, Delegated Administrators, and Account Managers when a contact request is accepted - When a contact self-registration request is accepted (approved), one email is sent to all active internal users with the Administrator and/or Account Manager privilege (if the approval was performed in the Administrator user interface or via an Administrator endpoint). An email is also sent to all Delegated Administrators on the account (regardless of where the approval was performed).
- Emails to Administrators, Delegated Administrators, and Account Managers when a contact request is rejected - When a contact self-registration request is rejected, one email is sent to all active internal users with the Administrator and/or Account Manager privilege (if the rejection was performed in the Administrator user interface or via an Administrator endpoint). An email is also sent to all Delegated Administrators on the account (regardless of where the rejection was performed).
- Email to a requester when Commerce receives a contact registration request - When a new contact self-registration request is received, an email is sent to the requester to communicate that the request has been received and is under review.
- Email to a requester when a contact registration request is approved - When a new contact self-registration request is approved, an email is sent to the requester to communicate that the request was approved. It also informs them that they will receive a separate email with additional information, including login information, if needed.
- Email to a requester when a contact registration request is rejected - When a new contact self-registration request is rejected. It may also contain comments on why the request was rejected
- Email to a requester when they have been activated as a contact - When the contact is activated, an “Account Assignment Changed” email is sent to the contact just as for any other newly activated contact who belongs to an account.

If your store allows shoppers to create and share purchase lists, you can enable emails to be sent to purchase list recipients. To enable this feature, go to the Settings section of the administration user interface. In the Email Settings area of Settings, add a new template named “Purchase List Shared.”

The types of emails sent out with shared purchase lists include the following:

- An email that notifies a registered shopper that they are the recipient of a purchase list being shared by another registered shopper. It tells them that they have been granted access to purchase list XYZ (purchase list name). If the purchase list has a description they will also see the purchase list description. There may also be list creator/owner comments in the email.  
It tells them that to access the purchase list, they need to view it on their profile on their site.  
**Note:** Site is the name (with a link to the correct URL) of the site from which the owner shared the purchase list. The system does not take into consideration any restrictions on the sites where the purchase list can be viewed.
- An email that notifies an account based contact that they are the recipient of a purchase list being shared by another account based contact. It tells them that they have been granted access to purchase list XYZ (purchase list name). If the purchase list has a description they will also see the purchase list description. There may also be list creator/owner comments in the email.  
The system determines which site to include in the email as follows:
  - If the site from which the owner shared the purchase list currently has a contract with the account in whose context the list was shared (which will always be the case when the list is shared from the provided widget), then that site will be included in the email. Otherwise, the email includes any site that has a contract with the account in whose context the list was shared.
  - If the account in whose context the purchase list was shared has no sites with contracts, an email is not sent and the purchase list is not shared. The system also returns an error to the list creator.
  - The system does not take into consideration any restrictions on the sites where the purchase list can be viewed.

## Configure Abandoned Cart settings

If you enable Abandoned Order emails, you can specify the number of days that must pass before a shopping cart is considered abandoned and the minimum value that the cart must contain before an Abandoned Order email is sent.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

To customize Abandoned Cart settings, follow these steps:

1. Click the **Settings** icon, then select **Order Settings**.  
When running multiple sites from your Oracle Commerce instance, your configurations will be applied by site. Choose a site from the site picker at the top of the Settings menu options.
2. Under **Abandoned Cart Settings**, enter an integer for the number of days after which a shopping cart is considered abandoned. The default setting is 7 days.
3. (Optional) Enter a value that specifies the minimum amount that the cart must be worth in order for the system to send an Abandoned Cart email. The default setting is 0.
4. If you have configured the Cart Idle webhook, enter an integer for the number of minutes after which a shopping cart is considered idle. The default setting is 20 minutes. See Use Webhooks for more information about the Cart Idle webhook.
5. Click **Save**.

## Ensure emails are not rejected as spam

You must work with your email service provider to ensure your site can send and receive emails correctly.

 *This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

In addition to completing general configuration, make sure the Sender Policy Framework (SPF) record is configured appropriately for your domain to prevent emails that your store sends from being rejected as spam.

To do so, add the following entry to the TXT record in your domain's DNS zone file:

```
"include:_spf.atoracle.com"
```

Refer to <http://www.openspf.org/> for more information on the Sender Policy Framework.

## Configure an Alternate SMTP Email Relay

The REST APIs provided with Oracle Commerce allows you to use an alternate Simple Mail Transfer Protocol (SMTP) relay to send email messages.

 *This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Oracle Commerce provides a default fully managed email service. However, if necessary due to your own corporate policies or needs, you can use an alternative SMTP email relay. When you use your own SMTP Relay, you assume full responsibility for any deliverability concerns. Oracle Commerce's responsibility in this situation is limited to attempting to deliver the message to your SMTP relay. Deliverability includes making sure your email is not treated as spam as discussed in [Ensure emails are not rejected as spam](#).

When you set up an SMTP email service property, your `emailSMTPHost` is added to the proxy and SMTP traffic is routed through the proxy so that it can reach your SMTP relay.

Commerce allows you to use the REST API to configure your email service types. For example, if you issue a GET command to the `/ccadmin/v1/email` endpoint, and you will see the default setting:

```
GET /ccadmin/v1/email

{"emailServiceProperties":{
  "emailServiceType" : "DEFAULT"
}}
```

The response contains two JSON objects: the `emailServiceProperties` that contains the email service settings, and an `emailNotificationTypes` object, which contains information on the available email types and their site-specific settings. For example:

```
{
  "emailServiceProperties": {
    "emailServiceType": "DEFAULT"
  },
  "links": [
    {
      "rel": "self",
      "href": "/email"
    }
  ],
  "emailNotificationTypes": {
    "ccadmin_user_password_reset_v1": {
      "recommendationsSupported": false,
      "displayName": "Oracle Commerce Administrator Password Reset",
      "description": null,
      "recommendationsStrategy": null,
      "version": 1,
      "enabled": false,
      "fromEmail": null,
      "recommendationsAllowAnyStrategy": true,
      "recommendationsRestriction": null,
      "fromName": null,
      "recommendationsAllowRestrictions": true,
      "includeRecommendations": false,
      "id": "ccadmin_user_password_reset_v1",
      "recommendationsPermittedStrategies": [],
      "numberOfRecommendations": 12
    },
    "placed_order_v1": {
      "recommendationsSupported": false,
      "displayName": "Order Placed",
      "description": null,
      "recommendationsStrategy": null,
      "version": 1,
      "enabled": false,
      "fromEmail": null,
      "recommendationsAllowAnyStrategy": true,
      "recommendationsRestriction": null,
      "fromName": null,
      "recommendationsAllowRestrictions": true,
      "includeRecommendations": false,
      "id": "placed_order_v1",
      "recommendationsPermittedStrategies": [],
      "numberOfRecommendations": 12
    }
  }
}
```

**Important:** Some of the configuration's details are not included in the response for security reasons.

For information on working with email notifications, refer to [Enable the types of email your store sends](#).

Note that the endpoint configuration uses the site context specified using the `X-CCSite` request header or the `occsite` query parameter. Omitting the site will display all of the settings for your default site.

To set the SMTP email service type, issue a `POST` command to the `/ccadmin/v1/email` endpoint and include the following properties:

- `emailSMTPPort` - Indicates the port to use when communicating with the SMTP host. The port number should be either 465 or 587 and match the `emailSMTPAuthMethod`. Note that you can specify an SMTP server in the `allowedURLs` property by adding its domain name, such as `smtp.example.com`.
- `emailSMTPHost` - The SMTP host name.
- `emailServiceType` - This property is set to either `DEFAULT` or `SMTP`.
- `emailSMTPAuthMethod` - This identifies the authorization method as either `SSL` or `TLS`. This property indicates if the authorization method used by your SMTP server uses Secure Sockets Layer (SSL with port 465, legacy) or Transport Layer Security (TLS with port 587, modern).
- `emailSMTPUsername` - The name used to log into the SMTP server.
- `emailSMTPPassword` - The user password for the SMTP Server. This field will not be displayed when you issue a `GET` command.

For example:

```
"emailServiceProperties":{
  "emailSMTPPort": "587",
  "emailSMTPHost": "smtp.myrelayservice.com",
  "emailServiceType": "SMTP",
  "emailSMTPAuthMethod": "TLS",
  "emailSMTPUsername": "smtpadmin",
  "emailSMTPPassword": "smtpadminpassword"
}
```

If you issue a `POST` command to the `/ccadmin/v1/email` endpoint without passing in `"emailServiceType": "SMTP"` an error occurs indicating that you cannot change settings when the email service type is set to `DEFAULT`. If you do not provide all of the required settings described earlier, you will also get an error.

Once you have issued a `POST` command to the endpoint with the required properties, all email will switch to use the newly configured SMTP server.

Note that the endpoint configuration uses the site context specified using the `X-CCSite` request header or the `occsite` query parameter. Omitting the site applies all of the settings for your default site.

To switch back the email service type to use the default email service, issue a `PUT` command to the `/ccadmin/v1/email` endpoint:

```
PUT /ccadmin/v1/email

"emailServiceProperties":{
```

```
    "emailServiceType" : "DEFAULT"  
  }
```

Your SMTP configuration settings will be reset to their default, internal values.

# Configure Internal User Accounts

Each person who works with the Commerce tools must have a valid user account to access the system. One default Administrator account is included with your Commerce instance. Only administrators can create and work with user accounts.

The Administrator account allows a designated person at your organization to log in and create accounts for other users. The administrator must create an account for each internal user who needs access to the system. The materials you receive from Oracle after you subscribe to the Commerce service include instructions for creating accounts. If you need an account or need changes made to an existing account, consult the administrator at your site.

**Note:** You do not have to publish new user accounts or changes you make to existing ones. Changes to details like a user's name are available as soon as you save them. For information on when to change a user's access control, refer to [Edit user profiles](#).

## Understand role-based access control

You can control your internal user's access to specific catalogs and price groups.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You have a great deal of flexibility in setting up access control to align with the way that your business users work within your organization. You can configure access for situations where your business runs multiple country or brand sites that use different catalogs and price groups and are managed by separate teams. Or in situations where your business sells to multiple accounts, you can configure access for the teams that manage their catalogs and price groups.

You can enhance access control in these situations by creating security criteria that grant or deny the ability to update specific catalogs or price groups. By adding security criteria to roles, and then assigning the roles to your users, you can allow your users to make changes only to the catalog assets and prices for which they are authorized.

By using multiple roles, privileges and security criteria, you can provide multiple levels of access. For example, a graphic designer needs different access to the administration interface than a merchandiser who sets up catalogs. Creating specific access controls ensures that internal users have the correct access and abilities to perform their jobs effectively.

### Consider access control settings

When configuring access control, it's important to take the following into consideration:

1. Make sure that your access control strategy is easy to understand and easy to implement. Overly complex access control strategies will be hard to maintain as your environment grows.
2. Identify functions that the internal users perform, and what access is required. You can set up restrictions to various data or areas to the administration interface depending on the user's tasks.

3. Identify roles that the internal users can be given. For example, is the user a designer, a merchandiser or an administrator? These can all be roles that indicate the user performs a specific task. A designer does not need access to all administrative functions, but does need access to Design, Preview and Publishing areas of the administrative interface.
4. Determine if there are security criteria necessary for controlling access. For example, to limit the catalogs that a merchandiser has access to, you could create a security criterion that identifies the specific catalog. This allows the merchandiser to access only the specific catalog.
5. Create custom roles that contain security criteria created using the API, as well as privileges. For information on working with the API, refer to [Implement Access Control for Internal Users](#).

### Understand roles

Everyone who works with the administration interface or Agent Console must have a valid user profile to access the system. There is a single default Administrator profile included with your instance. Only administrators can create and work with user profiles. Note that you do not need to publish user profiles when you create or update them.

Each internal user is assigned a role, or multiple roles, which in turn, contains privileges. Roles can also contain security criteria and access rights. Entities within a role grant or deny access.

You must assign each user one or more roles. A role can contain privileges, security criteria and/or generic access right entities. You cannot assign one of these entities directly to a user, instead you assign a role that contains these entities. Commerce includes a set of predefined roles, each containing a single privilege. You cannot add privileges to, remove privileges from, or delete a predefined role.

Roles can determine whether to display a particular layout or content slot variant to a user. This functionality is primarily used in the Agent Console. For additional information, refer to [Work with role-based layouts](#). Roles can also be used to grant read or write access to a property.

The User Management area of the administration interface, which is available only to users that have the Administrator privilege, allows you to assign roles to users. Note that you cannot create or edit the contents of a role using the administration interface. To do this, you must use the Admin API, which is described in [Implement Access Control for Internal Users](#).

### Understand privileges

Privileges grant access to areas of the administration interface or Agent Console. For example, the Catalog privilege provides access to the Catalog area of the administration interface. A user needs at least one privilege to gain access to the administration interface. Note that privileges cannot be edited or deleted. All privileges are predefined; you cannot create a privilege.

Users can have multiple privileges across different roles. The user has all of the privileges conferred by all of their assigned roles. For example, you could assign a user a Dashboard privilege that allows access to the administration interface, as well as the Agent privilege that enables access to the Agent Console. These privileges could be assigned to a user by means of a single role, or two roles.

The following table describes the access provided by the Commerce privileges. Note that these privileges, and the roles that contain them, are separate from the roles that are available for account-based storefront contacts.

Privilege	Access
Administrator	Full access to the administration interface.
CS Agent	Full access to the Agent Console, with the exception of Manual Adjustments. Note: This privilege is available only if the Agent Console is available in your environment.
CS Agent Supervisor	Full access to the Agent Console. Note: This privilege is available only if the Agent Console is available in your environment.
Account Manager	Full access to the Accounts page. Note: This feature may not be enabled in your environment, refer to <a href="#">Configure Business Accounts</a> for information.
Catalog	Full access to the Catalog page (you must also assign the Media role if the user will upload images for products, SKUs, and collections).
Dashboard	Read access to the summary reports on the dashboard. The dashboard is the landing page for the administration interface that users see when they log into Commerce. All of the privileges that control access to the administration interface allow the user to see the dashboard. However only Dashboard or Administrator privilege allows a user to see the summary reports. A user who can see the summary reports on the dashboard requires the Reporting or Administrator role to view the full reports.
Design	Full access to the Design page.
Marketing	Full access to the Marketing page.
Media	Full access to the Media page.
Operations	Full access to the Operations page.
Preview	Access to the Preview button.
Publishing	Full access to the Publishing page.
Reporting	Full access to the Reporting page.
Search	Full access to the Search page.
Settings	Full access to all Settings pages except Access Control, Extensions, Extension Settings, Email Settings and Web APIs (access to those settings is granted by the Administrator privilege).

Refer to [Configure Business Accounts](#) for additional information on roles for storefront contacts.

### Validate of privileges and roles

The following are validations that the system performs for all privileges and roles based upon the action you perform:

- Create/Update Profile - The system validates that the profile has at least one role that contains at least one privilege
- Update Profile - The system verifies that you are not removing the Administrator privilege from yourself
- Delete Role - The system verifies that the user will still have the Administrator privilege when the role is deleted. Note that predefined roles cannot be deleted.

## Understand security criteria

Security criteria restricts a user's ability to update specific catalogs or price groups. For example, a user with the Catalog privilege might also have a security criterion that narrows catalog access allowing the ability to update only `CatalogA` and no other catalogs. A user's security criteria acts as a filter that narrows the specific data accessible with their assigned privilege. Security criteria restricts update access but does not restrict read-only access.

Using security criteria is optional. You can use them to prevent certain users from updating specific catalogs or price groups. Note that to create, update or delete security criteria, add them to roles or remove them from roles, you must use the API. Refer to *Implement Access Control for Internal Users* for additional information on working with the APIs.

A given security criterion applies either to catalogs or to price groups. There are three types of security criteria that narrow user access:

- **Grant:** This grants update access to one or more specific catalogs or price groups. For example a user who has a single `Grant` security criteria for Catalogs A and B can update Catalogs A and B but cannot update any other catalogs.
- **Deny:** This denies access to one or more specific catalogs or price groups. For example, a user who has a single `Deny` security criteria for Catalogs C and D can update all catalogs except catalogs C and D.
- **Grant None:** This denies update access to all catalogs or price groups. A user with a `Grant None` security criteria for catalogs cannot update any catalogs.

Price group security criteria applies not only to updating the properties of a price group, but also updating all of the prices within the price group. For example, a security criterion that grants update access to `PriceGroup1` allows a user to update the properties of `PriceGroup1`, as well as all the prices within `PriceGroup1`. Note that update access to each price group is independent of access to any other price group, even if you are using price group hierarchies. Anyone who has update access to the Catalog privilege, and has update access to at least one price group, can create a price group.

Catalog security criteria applies not only to updating the properties of the catalog, but also updating all of the collections, products and SKUs within the catalog. For example, a security criterion that grants update access to `Catalog A` also grants access to the collections, products and SKUs within `Catalog A`. Any user that has the Catalog privilege can create or update a product type. Similarly, any user who has the Catalog privilege, and has update access to at least one catalog, can create a catalog.

When working with catalog hierarchy and shared items, the following rules apply:

1. If you have access to at least one parent of an item, then you have access to the item. If a product is shared by two catalogs, and you have update access to one parent of the product, then you can update the product.
2. To link an item to a parent, you need access to both the item and to its destination parent.
3. To unlink an item from a parent, you need access to that parent.
4. To delete an item, you need access to all of its parents. If it has no parent, you require access to the item itself.

Note that in this case, parent indicates an immediate parent, which can be a catalog, a collection or a product.

You can create, update or delete an unassigned product or collection if you have the Catalog privilege and access to at least one catalog. You can also link unassigned collections to the catalog.

A product or collection that belongs to both an unassigned collection and an assigned collection of a catalog is subject to the rules stated earlier but without counting the unassigned collection as a parent. For example, if product P belongs to both the unassigned collection C1 and the assigned collection C2, the user must have access to C2 to update product P, even though they have access to unassigned collections.

Access to a legacy secondary catalog and access to its primary catalog are independent of one another. The primary and secondary catalogs are treated the same as any other catalogs, with respect to access control.

Access to an independent catalog automatically gives a user access to all of the filtered catalogs on which the independent catalog is based. It is also possible to give a user access to a filtered catalog, but not to its base independent catalog. The following table shows the access control rules regarding filtered catalogs and their base independent catalogs:

Capability	Available to user with access to base independent catalog?	Available to user with access to filtered catalog but not based independent catalog?
Control if a product in the base independent catalog appears by default in all filtered catalogs.	Yes	No
Determine to which catalogs a product in the base independent catalog is directly linked.	Yes	No
Determine if a product in the base independent catalog appears in the filtered catalog.	Yes	Yes
Determine if a product in the base independent catalog appears in a different filtered catalog.	Yes	No
Update any other product property for any product in the base independent catalog. This does not include the properties listed earlier.	Yes	Yes
Update a property of the filtered catalog.	Yes	Yes
Delete the filtered catalog.	Yes	Yes
Delete a product that is in the base independent catalog.	Yes, if the user has access to all of the immediate parents of the product.	No
Link or unlink a product in the base independent catalog to or from a parent collection.	Yes	No
Create a product in the base independent catalog.	Yes	No

Capability	Available to user with access to base independent catalog?	Available to user with access to filtered catalog but not based independent catalog?
Create any catalog, including creating a filtered catalog in any base independent catalog.	Yes	Yes
Create, update, link, unlink or delete a collection in the base independent catalog.	Yes, although link and delete actions may require access to other parent catalogs of the collection.	No
Create, update or delete SKUs under a product in the base independent catalog.	Yes	No

When working with products and media, the user needs access to a product to perform the following media-related operations:

- Add a media item to the product from the Media Library. To upload new media items to the product, the user also needs the Media privilege
- Update the product-specific override values of the properties of a media item assigned to the product. For example, Alt Text or Title
- Remove the product-specific override values of the properties of a media item assigned to the product. For example, resetting the properties to their default values
- Reorder the media items assigned to the product
- Specify which media item is the primary one for the product
- Remove a media item from the product

Access to a product's prices is controlled separately from access to the product itself. A user with the Catalog privilege can update a product's prices without having access to the product itself, as long as the user has access to the price group in which the prices reside. Access to a product does not provide access to its prices. Only access to a price group allows a user to update prices. The same applies to SKUs and their prices. Note the following:

- To create a product, or update a product that was imported without prices, a user must have access to every price group for which the `includeAllProducts` flag is set.
- To delete a product, a user needs access to all price groups containing prices for the product.

Security criteria apply when catalog assets and prices are imported, either using the Import function in the UI, or when a logged-in user performs a bulk import. Bulk imports performed by registered applications are not subject to security criteria. If you use catalog security criteria, it is recommended that you use APIs rather than the UI for any catalog imports. This allows you to receive information about any records that fail to import due to access restrictions.

### Combine security criteria

A user can have multiple security criteria within one role, or across different roles. The following examples show the effects of having multiple security criteria:

- A user with Grant access to PriceGroup1 and PriceGroup2 can update both PriceGroup1 and PriceGroup2
- A user with Grant access to Catalog 1 and Catalog2 can update Catalog2, Catalog2, and catalog assets whose immediate parents belong to Catalog1 or Catalog2
- A user with Deny access to PriceGroup1 and PriceGroup2 cannot update PriceGroup1 or PriceGroup2
- A user with Deny access to Catalog1 and Catalog2 cannot update Catalog1, Catalog2 or any catalog assets whose immediate parents belong only to Catalog1 or Catalog2

For example, consider the following rules. Note that in each of the following rules, the assets are either catalogs or price groups:

- **Grant Asset1 + Deny Asset2 = Grant Asset1**
- **Grant Asset1 + Deny Asset1 = Grant None**
- **Grant Asset1 + Deny Asset1 + Grant Asset2 + Deny Asset3 = Grant Asset2** (Grant and Deny Asset1 cancel themselves out.)
- **Grant None + any other security criteria = Grant None**

### Understand system-generated roles

If a user with security criteria creates a catalog or price group, the system may generate a role for that user to ensure that he or she has access to the asset just created. The system-generated role contains a security criterion that grants access to the catalog or price group. If the user subsequently creates another catalog or price group, the system adds a security criterion to the role, granting access to the new asset.

System-generated roles are visible in the Advanced section of the user's details in the User Management area of the administration console. System-generated roles function the same as other roles, except that the system may keep adding security criteria.

### Generic access rights

The access control described here does not modify existing functionality related to access rights and the property-level access control that you use to meet the requirements of the General Data Protection Regulation (GDPR). However, if you use APIs it is important to note that privileges are a type of access right. Therefore non-privilege access rights are referred to as generic access rights. If a role contains generic access rights, they are visible in the **Advanced** section of the role's details in the User Management area of the administration console. Refer to [Implement Access Control for Internal Users](#) for more information on using generic access rights to control access to the properties of data items.

### Understand when access control takes effect

Changes to the contents of a user's access takes effect as follows:

1. Changes to a user's security criteria take effect the next time the user logs in. The user's access to specific catalogs or price groups does not change during their current session
2. Changes to a user's privileges take effect immediately, whenever any aspect of the UI or functionality checks for privileges
3. Changes to a user's generic access rights take effect immediately, when the user tries to access a property that is subject to access rights

## View role contents

All internal users must have at least one privilege, and therefore at least one role, to gain access to the administration interface.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

When creating new or editing existing users, you must assign them roles. Roles can contain privileges that grants the user access to various functions. To view the available roles, use the User Management area of the administration console.

Note that roles and roles and security criteria cannot be created in the administration console, to create roles and security criteria, you must use the Admin API. For information on using the API, refer to Implement Access Control for Internal Users. In the User Management area of the administration console, you can assign roles to users and view the contents of roles.

To view a user's roles:

1. Select **User Management** from the administration console. This displays the User Management screen.
2. You can select a user based upon specific roles by using the **All Roles** dropdown and selecting or entering the roles. This will display all users that have this role. Or you can select a user alphabetically, or by whether or not they are internally or externally managed.
3. When the user's page has opened, in addition to their email and name information, you will see all of the roles associated with the user listed under the Roles section. You can add or remove roles by clicking **Edit List**.
4. Select the roles to add or remove.
5. Click **Done** to save the changes.

You can review or edit any system-generated roles using the **Advanced** section of the User Management page. System-generated roles are roles that the system creates for a user to ensure that they have access to any catalog or price group they may have created. The system-generated role also contains a security criterion that grants access to the catalog or price group the user created.

You can review the roles themselves by selecting the role listed next to a user's name in the User Management screen. This displays the name of the role, a description and the privileges and security criteria contained in the role. Use the Advanced button to see the any generic access rights contained in the role. Roles and security criteria can only be created using the API. Refer to Implement Access Control for Internal Users for information on working with the API for access control.

## Create new user profiles

One default Administrator profile is included with your Commerce instance, but you can add as many internal user profiles (including administrators) as you need.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Only administrators can create and work with user accounts.

In order to comply with the Payment Card Industry Data Security Standard (PCI DSS), Commerce secures all logins to the administration interface with multi-factor strong authentication. This means that each user must enter their username and password, plus a one-time passcode, each time they log into the administration interface. See [Access the Commerce administration interface](#) to learn about setup tasks new users must perform before they can log into the administration interface for the first time.

Administrators do not assign login passwords to user profiles. Once you create a new profile, Commerce sends an email to the address you added to the profile. The email includes a link that the user clicks to set their password. If the link has expired when the user clicks it, Commerce displays a page where the user can request a new link.

The password must be at least eight characters long and contain at least one number, one uppercase letter, and one lowercase letter. It cannot contain the email address and cannot match any of the last four passwords.

In addition, the password is checked against a dictionary of weak passwords that Commerce maintains. If a user attempts to set a password that matches one of the entries in this dictionary, the password is rejected. The dictionary is the same one used for shopper passwords, as described in the [Create a shopper profile](#). Note, however, that additional entries created using the `updateRestrictedWords` endpoint in the Admin API are applied only to shopper passwords, and not to passwords for internal users.

To create a new user profile, follow these steps:

1. Click the **User Management** icon.
2. Click **New User**.
3. Enter the information that identifies the new user and select an appropriate role. See the table that follows this procedure for information about each field.
4. Click **Save**.

The following table describes the properties that identify a Commerce user profile. All properties are required.

Property	Description
Email	The user's email address. This usually functions as the username during login, and is the address where the password link is sent.
Roles	Assign one or more roles to the profile. See <a href="#">Understand Role-based Access Control</a> for more information.
First Name	The user's first name.
Last Name	The user's last name.

Note that a user's page contains a read-only **Externally Managed** checkbox. This checkbox is selected by default if the user's details are managed in an external system. If a user is managed externally, the only change that can be made in **User Management** is the ability to identify which roles are assigned to the user.

## Edit user profiles

You can edit a profile's first name, last name, email address, and assigned roles.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You can also reset the password for the profile and the secret key that links the profile to Oracle Mobile Authenticator.

To edit a user profile, follow these steps:

1. Click the **User Management** icon.
2. Click the name of the user whose profile you want to change.
3. Once you have made your changes, click **Save**.

To edit roles to the user profile, click **Edit List** under Roles. The list of assigned roles appears in the **Selections** pane. Search for a name or ID of a role to see it displayed in the search results. Double click on the role to add it to the selection. To delete a selection, select the X next to its name. Note that you can only create roles using the API. For information on using the API to create roles, refer to [Implement Access Control for Internal Users](#).

The user can change the password at any time by clicking the **Forgot Password?** link on the administration interface login page and entering the email address associated with their profile, as described in the previous section. You can also force them to reset it.

To force a user to reset their password, follow these steps:

1. Click the **User Management** icon.
2. Click the name of the user.
3. Click **Reset Password**.
4. At the prompt, click **Reset** to confirm.  
Commerce sends a link to the email address associated with the user's profile that the user can click to reset their password.

You can reset the secret key that links a user's profile with Oracle Mobile Authenticator (OMA). You will need to reset the key if the original link in the user's email has expired. When you reset a user's secret key, they cannot log into the administration interface again until they reconfigure OMA as described in [Add your Commerce profile to Oracle Mobile Authenticator](#).

To reset a user's secret key, follow these steps:

1. Click the **User Management** icon.
2. Click the name of the user.
3. Click **Reset Key**.
4. At the prompt, click **Reset to confirm**.  
Commerce sends a message to the email address associated with the profile. The message includes several ways that the user can associate the new key with OMA. See [Access the Commerce administration interface](#) for more information.

### Understand access control changes

Whenever you change a user's security criteria, the change occurs the next time that the user logs in. While the user is logged in, access to specific catalogs or price groups does not change.

When you change a user's privileges, the change occurs immediately, meaning any time system checks for privileges, it will retrieve the new privileges.

## Deactivate and reactivate user profiles

You cannot delete internal user profiles but you can deactivate them.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Deactivated profiles cannot be used to access the service. Keep the following in mind before you deactivate user profiles:

- Only users with the Administrator role can deactivate and reactivate profiles.
- You cannot deactivate the last user with the Administrator privilege.
- You cannot deactivate the profile you are currently logged in with.
- You can reactivate any deactivated profile.
- Commerce does not notify users when their profiles are deactivated or reactivated.
- Deactivating a profile does not automatically expire its password or secret key.

To deactivate a user profile, follow these steps:

1. Click the **User Management** icon.
2. Click the name of the user whose profile you want to deactivate.
3. Click the **Deactivate** button.
4. Confirm that you want to deactivate the profile.

To reactivate a user profile, follow these steps:

1. Click the **User Management** icon.
2. Click the name of the user whose profile you want to reactivate.
3. Click the **Reactivate** button.
4. Confirm that you want to reactivate the profile.

## Access the Commerce administration interface

All users who work in the administration interface must have an internal user profile and must understand how to log into the administration interface.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This section describes the tasks required to prepare your profile and access the administration interface:

- [Understand multi-factor authentication](#)
- [Prepare to use multi-factor authentication](#)
- [Download Oracle Mobile Authenticator](#)
- [Add your Commerce profile to Oracle Mobile Authenticator](#)
- [Create your password](#)

- [Log into the Commerce administration interface](#)

### Understand multi-factor authentication

Multi-factor authentication is an authentication mechanism that requires a user to present at least two of the following three types of credentials when logging into an account:

- Something you know, like a password.
- Something you have, like a smart card or a one-time passcode.
- Something you are, like your fingerprint.

The Payment Card Industry Data Security Standard (PCI DSS) requires multi-factor authentication for any user who accesses an administrative environment that handles card data. Multi-factor authentication helps keep intruders out by providing an extra layer of security when users require access to environments that contain sensitive information.

Commerce implements this requirement by ensuring that each internal user enters their username and password, plus a one-time passcode (generated by Oracle Mobile Authenticator) every time they log into the administration interface.

### Prepare to use multi-factor authentication

You will receive an automatically-generated email that contains the information you need to perform the steps to set up multi-factor authentication.

- If you are a new Commerce user, you will receive an automatically-generated email whose subject line is Set Up Your Oracle Commerce Login once a Commerce administrator has created your profile.
- If you are an existing Commerce user, you will receive an automatically-generated email with the subject line Your Oracle Commerce Secret Key Reset once your site has been updated to a release of Commerce that requires multi-factor authentication.

Your email contains the information you need to perform the following steps:

1. [Download Oracle Mobile Authenticator](#) to your iOS, Android, or Windows device.
2. [Add your Commerce](#) profile to Oracle Mobile Authenticator using the secret key in the email.
3. [Create your password](#) for your Commerce profile.
4. [Log into the Commerce](#) administration interface with your username, password, and a one-time passcode generated by Mobile Authenticator.

Keep the following information about the email in mind:

- You will receive a separate email for each of your environments and must follow this procedure for each one. For example, if you have three environments, you will need to follow the procedure three times – once for each environment – in order to access the administration interface in each environment.
- If you did not receive the automated email, check your spam or junk mail folder.

### Download Oracle Mobile Authenticator

Oracle Mobile Authenticator (OMA) is a free app that generates the one-time passcodes (unique, random numbers) you enter each time you log into the Commerce

administration interface. OMA does not require cell service or an internet connection to generate one-time passcodes.

OMA is available for Android, iOS, and Windows devices, including PCs running Windows 8.1+. The iOS app is available at the Apple app store, the Android app is available at the Google Play store, and the Windows app is available at the Microsoft store, all under the name Oracle Mobile Authenticator. Visit the appropriate app store for your device to learn about system requirements and download the app.

Download OMA to your device, launch it, and accept the end user license agreement. Then follow the instructions in [Add your Commerce profile to Oracle Mobile Authenticator](#) to link your Commerce profile to OMA.

### Add your Commerce profile to Oracle Mobile Authenticator

After you install the Oracle Mobile Authenticator (OMA), you need to link it to your Commerce profile. You do this by adding your profile's secret key to OMA. Make sure you have the email you received when your profile was created; it contains everything you need to access the Authenticator Details page, where you add your profile to OMA in one of the following ways:

[Scan the QR code](#)

[Click the Create an OMA Entry link](#)

[Enter the key manually](#)

#### Scan the QR code

If you are viewing the email on a device where OMA is not installed, like your computer, you can open OMA on your mobile device and scan the QR code that you access from the email. If you are unable to successfully scan the code, see [Click the Create an OMA Entry link](#) or [Enter the key manually](#) for alternate ways to add your profile to OMA.

1. Open the OMA app on your mobile device, then tap **Add Account**.
2. Open the Set Up Your Oracle Commerce Login email and click the Oracle Mobile Authenticator Setup link to open the **Authenticator Details** page.
3. Scan the QR code that appears on the page using your device's camera. Depending on your mobile device's security settings, you may be prompted to enter your user name and password.

After configuration is complete, the passcode generator screen begins displaying one-time passcodes.

If you scan an expired QR code, Commerce displays an error page. Contact your Commerce administrator, who can reset the secret key. Once the key is reset, you will receive another email.

Now you can continue to the steps in the next section, [Create your password](#).

#### Click the Create an OMA Entry link

If you are viewing the Commerce email on the same device where OMA is installed, you can simply click an enrollment link that opens the OMA app on your device and starts the configuration process.

1. Open the Set Up Your Oracle Commerce Login email on the device where OMA is installed and tap the Oracle Mobile Authenticator Setup link to open the Authenticator Details page.
2. Tap the Oracle Commerce link.

Depending on your mobile device's security settings, you may be prompted to enter your user name and password.

After configuration is complete, the passcode generator screen begins displaying one-time passcodes.

If you click an expired link, Commerce displays an error page. Contact your Commerce administrator, who can reset the secret key. Once the key is reset, you will receive another email.

Now you can continue to the steps in the next section, [Create your password](#).

### Enter the key manually

You can manually type or cut and paste the secret key into OMA.

To see the secret key, open the Set Up Your Oracle Commerce Login email and click the Oracle Mobile Authenticator Setup link to open the Authenticator Details page. The secret key is displayed at the bottom of the page.

To enter the secret key into OMA:

1. Open the OMA app on your device, then tap **Add Account**.  
Depending on your mobile device's security settings, you may be prompted to enter your user name and password.
2. Tap **Enter key manually**.
3. Under **Select Account Type**, tap **Oracle**.
4. In the **Account field**, enter **Commerce**.
5. In the **Key** field, enter the secret key.
6. Tap **Save**.  
After configuration is complete, the passcode generator screen begins displaying one-time passcodes.

### Create your password

Administrators do not assign login passwords to new user profiles. To create a password for your new profile, open the Set Up Your Oracle Commerce Login email and click the Create Password link. (If the link has expired when you click it, Commerce displays a page where you can request a new link. You will need to supply a one-time passcode when you reset your password. See [Log into the Commerce administration interface](#) for more information.)

Your password must be at least eight characters long and contain at least one number, one uppercase letter, and one lowercase letter. It cannot contain your email address. The password is also checked against a list of weak passwords that Commerce maintains. If you try to create a password that matches one of the entries in this dictionary, the password is rejected.

Now you can log into Commerce. See [Log into the Commerce administration interface](#) for details.

### Log into the Commerce administration interface

Once you have linked your Commerce profile to Oracle Mobile Authenticator (OMA) and created your password, you are ready to log into the administration interface.

**Important:** You must generate a new one-time passcode each time you log into the administration interface. This includes logging back in if you have been automatically logged out. Commerce does not currently mark a device as safe or save passcodes across sessions.

To log into the administration interface, follow these steps:

1. Navigate to the Commerce sign in page with the URL provided to you by your administrator.
2. Enter your username and password.
3. Launch the OMA app on the device where you installed it.  
A one-time passcode appears and the countdown begins until a new passcode is automatically generated.
4. On the Commerce sign in page, enter the code into the One-Time Passcode box and click Log In.

# Configure Shipping

A shipping method contains one or more shipping regions and shipping charges.

Your store must contain at least one shipping method that shoppers can select during checkout. If you create and enable more than one shipping method, shoppers choose from a list of the enabled shipping methods. Then, the selected method is associated with the shipping group selected in the shoppers' order.

If you run multiple sites within a single instance of Commerce, these sites can share shipping methods, or you can create site-specific shipping methods. See [Create a shipping method](#) for information about assigning shipping methods to specific sites. See [Configure Sites](#) to learn how to create multiple sites.

## Create shipping regions

Shipping regions specify geographic areas your store will ship to.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Grouping shipping destinations into regions makes it easier to create shipping methods. For example, to create a ground shipping method for a store based in the United States, start by creating a shipping region that includes the 48 contiguous U.S. states. When a customer enters a shipping address either at checkout or when creating a profile, the logic in the Customer Address widget allows the customer to pick from only countries and regions that are used in enabled shipping methods.

To create a shipping region, follow these steps:

1. Click the **Settings** icon, then select **Shipping Methods**.
2. Click **New Shipping Region**.
3. Enter a name for the shipping region.
4. Select one or more countries to ship to and then one or more regions within each selected country.

**Tip:** When you select a country, all its regions are automatically selected by default. To select only some regions, either deselect the regions you do not want to include or uncheck the **Select All** checkbox and then individually select regions.

5. Click **Save**.

## Create a shipping method

You must create at least one shipping method, even if your shipping is handled by a third-party fulfillment system.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Oracle Commerce supports the following shipping methods:

- Internally priced shipping method - A shipping method created in the administration interface whose price and availability is determined during checkout using internal rules.
- Externally priced shipping method - A shipping method created in the administration interface whose price and availability is determined using a combination of internal rules and the shipping calculator service. During checkout, Oracle Commerce determines which externally priced shipping methods are available based on internal rules. The available shipping methods and costs are sent to the shipping calculator service in the request. The shipping calculator service responds with some or all of the available methods and their prices and these available shipping methods are displayed to the shopper with the returned price. Refer to [Integrate with External Shipping Calculators and Use Webhooks](#) for complete information on using this method.
- External shipping method - A shipping method returned by the external shipping calculator service that does not have an internal representation in the administration interface. The price and availability are determined entirely by the service. Refer to [Integrate with External Shipping Calculators and Use Webhooks](#) for complete information on using this method.

To create a new shipping method using the administration interface, follow these steps:

1. Click the **Settings** icon, then select **Shipping Methods**.
2. Click **New Shipping Method**.
3. Select the type of shipping method that you want from the drop-down list.
4. Enter the information that identifies the new shipping method. See the table that follows this procedure to learn about the information to enter in each field.
5. Click **Save**.

The following table describes the properties that identify a shipping method.

Property	Description
Display Name	(Required) A name for the shipping method.
Description	A short description of the shipping method. This does not appear on your store.
Internal Name	A string that is hidden from shoppers that lets you create multiple shipping methods with the same display name. The internal name makes it easier to manage shipping methods when working with shipping methods in the administration interface, for example, when viewing your list of shipping methods or creating shipping promotions.
Tax Code	A tax code to assign to the shipping method that allows your tax processor to make the appropriate tax calculations. For more information, see <a href="#">Configure Tax Processing</a> .
Enabled	Select the checkbox to make the method available on your store. By default, shipping methods are enabled.

Property	Description
Use as fallback shipping method	If your store integrates with external calculators for shipping services (such as UPS, USPS, or FedEx), you can specify internal shipping methods that will be offered to shoppers when Commerce cannot connect to external shipping service's web service, for example, in the event of an outage. See <a href="#">Specify a fallback shipping method</a> for more information.
Eligible for Products with Shipping Surcharge	Select the checkbox to make the method available to ship products that have shipping surcharges.
Sites	<p>If you run multiple sites within a single instance of Commerce, you can make a shipping method available to all sites or only to sites you specify.</p> <p>Select the Applies to All Sites checkbox if you want this shipping method to be available on all sites. If you want this shipping method to be available only on specific sites, uncheck the checkbox and select sites in the box below it.</p>
Shipping Regions	(Required) The geographic regions for this shipping method. For more information, see <a href="#">Create Shipping Regions</a> .
Price Groups	Select the price groups this shipping method applies to. If you leave this field blank, the shipping method applies to all price groups.
Shipping Charges	<p>(Required) Shipping charges are based on order cost. You specify one or more cost ranges and assign a shipping charge to each range. For example, order totals up to \$50 cost \$5.95 to ship, order totals from 50.01 to \$74.99 cost \$9.50 to ship, and order totals of \$75 or more ship for free.</p> <p><b>Tip:</b> To create a shipping method that provides the same shipping cost on all orders (for example, to offer free shipping), enter a Range Start value of 0.00, leave the Range End value blank, and then enter a shipping cost.</p> <p><b>Note:</b> An externally priced shipping method can be created without specifying shipping charges, provided it is not a fallback shipping method.</p>

## Specify a fallback shipping method

If your store integrates with calculators for shipping services, you can specify internal shipping methods that will be offered to shoppers when Commerce cannot connect to the external shipping service, for example, in the event of an outage.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The fallback shipping methods are displayed on the storefront during the checkout process. This prevents errors during order processing and allows orders to progress to the next step.

You can mark any number of shipping methods as fallbacks. You might want to create a fallback method for each type of shipping method you expected to receive back from the external shipping service.

Internally priced shipping methods marked as fallback are returned only if Oracle Commerce cannot connect to an external shipping service. Externally priced shipping methods marked as fallback are returned in both cases: The external price and availability are used if the service responds and internal prices are used if the service does not respond.

See *Integrate with External Shipping Calculators* for more information about configuring when Commerce uses a fallback shipping method.

## Specify a default shipping country

You can optionally specify a default country that automatically appears in the shipping address and appears at the top of the list of available shipping countries during checkout.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The shopper can select a different shipping country.

To specify a default shipping country, follow these steps:

1. Click the **Settings** icon, then select **Shipping Methods**.
2. Select a default shipping country.

The default shipping country you select must be a country from one of your enabled shipping methods. Otherwise, the storefront will not display the default country you selected.

## Configure shipping surcharges

You can apply additional shipping charges to products because of size, weight, or special handling requirements.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The surcharge is a fixed, monetary amount that applies to a specific product. For example, a kayak can have a shipping surcharge of \$25, while a mattress, whose delivery includes removal of an old bed, might have a surcharge of \$75. A product's shipping surcharge is the same for each available shipping method.

Shipping surcharges are not affected by shipping promotions and are added to the order total during checkout, after discounts have been applied. For example, a shipping promotion offers free ground shipping on all orders over \$200. A shopper purchases a \$225 kayak with a \$25 shipping surcharge. The order meets the free-shipping promotion condition, so the \$30 ground shipping charge is removed, but the \$25 shipping surcharge remains.

To configure shipping surcharges, follow these steps:

1. Add the Shipping Surcharges property to the product types that you will use to create products that require surcharges. Shipping Surcharges is not a required property, so you can add it to a product type that you will use for other products. See [Create and edit product types](#) for information about adding properties to a product type.
2. Add a shipping surcharge amount when you create or edit a product. You can add the surcharge manually in the administration interface or by importing product details. See [Create and work with products](#) for information about creating individual products in your catalog. See [Import catalog items and inventory](#) for information about importing new and updated products.
3. Specify the shipping methods that are available for products that have shipping surcharges. See [Create a shipping method](#) for more information.

## Understand externally priced shipping methods

Externally priced shipping methods can be created to represent each shipping method that can be returned by your shipping calculator service.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This allows you to take advantage of Oracle Commerce's shipping promotion and tax calculation features.

Externally priced shipping methods are created in the administration interface and their price and availability are determined using a combination of internal rules and the shipping calculator service. During checkout, Oracle Commerce determines which externally priced shipping methods are available based on internal rules. The available shipping methods and costs are sent to the shipping calculator service in the request. The shipping calculator service responds with some or all of the available methods and their prices and these available shipping methods are displayed to the shopper with the returned price. Oracle Commerce applies shipping promotions and calculate taxes for externally priced shipping methods as it does for internally priced shipping methods. See [Work with external shipping methods](#) for more complete information on this subject.

You create an externally priced shipping method through the Shipping Methods page available from the Settings list. This is just like the existing internally priced shipping method except there is a selection in the dropdown list to indicate that it is externally priced. Since the externally priced shipping method is available in the administration interface in the same way as internally priced shipping methods, this also includes the “applies to shipping methods” picker in shipping promotions.

Externally priced shipping methods behave the same as internal shipping methods. Shipping promotions and taxes are applied to externally priced shipping methods the same way as they are to internal shipping methods. The store recognizes the shipping regions associated with externally priced shipping methods as it does internal shipping methods. The store should recognize the shipping regions associated with an externally priced shipping method that is considered unavailable based on internal rules but is returned by the shipping calculator. The service overrides the internal rules in this case and the resulting shipping method/storefront interface behaves the same as all other internal shipping methods. For more information about webhooks and the Shipping Calculator service, refer to [Use Webhooks](#).

You can also select “fallback” shipping methods for an externally priced shipping method. Fallback shipping methods are displayed only if the shipping calculator service fails (or does

not respond or responds improperly). This gives you the ability to still take orders if the shipping carrier service is having problems. Refer to [Specify a fallback shipping method](#) for more information on setting up fallback shipping methods. You can also refer to [Integrate with External Shipping Calculators](#) for more information about shipping calculators and about configuring when Commerce uses a fallback shipping method.

**Note:** Externally priced shipping methods are supported in the administration interface and the Admin API. These methods are not supported in the Agent Console. Merchants should not create externally priced shipping methods if they need to support the feature in Agent Console..

### Create an externally priced shipping method

To create a new externally priced shipping method in the administration interface, follow these steps:

1. Click the **Settings** icon, then select **Shipping Methods**.
2. Click **New Shipping Method**.
3. Select **Externally Priced** from the drop-down list.
4. Enter the information that identifies the new externally priced shipping method. See [Create a shipping method](#) to learn about the information to enter in each field. For more information on externally priced shipping methods and how they work differently from other shipping methods, refer to [Integrate with External Shipping Calculators](#).
5. Click **Save**.

# Configure Wish Lists

This section provides an overview of the wish list features in Commerce.

It describes how to implement and maintain wish lists for your store.

## Understand wish list features

Wish lists provide shoppers with the following:



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

- A way to create and manage a list of products they are considering buying. Included is the ability to save items in wish lists and purchase easily from them later.
- The ability to create and manage multiple wish lists so shoppers can better organize items they may want to purchase.
- The ability to share their wish lists.
- The opportunity for shoppers to add comments to items in their wish lists.
- A social experience where shoppers can receive feedback and suggestions from friends and family members they invite to their wish lists.
- Email notifications for key wish list-related activities.

Registered shoppers can participate in a variety of wish list activities, including:

- Creating wish lists with personalized names; the wish list privacy settings can be private, group, or shared. For more information, see [Understand private, group, and shared wish list privacy settings](#).
- Viewing up-to-date availability, price, and associated offers for the products included in a wish list.
- Using an Add to Wish List button or selector on a product details page to choose which wish list to add the product to; at this point, a new wish list can also be created.
- Adding a product from a wish list to a shopping cart for purchase.
- Editing and deleting owned wish lists.
- As a wish list owner: creating, editing, and deleting posts and comments.
- As a wish list member: adding a comment, deleting his or her comments, and deleting product posts he or she added along with all associated comments.
- Setting the priority and quantity for each product in a wish list.
- Sorting posts by date added and priority.
- Inviting friends to be a part of a wish list to encourage collaboration and feedback, and the sharing of products and gift ideas.
- Moving product posts from one wish list to another. When moving the post, the shopper can also create a new wish list for the post.

- Sharing wish list links via Facebook, Twitter, Pinterest, and email.  
If the Pinterest icon is not visible on the shopper wish list pages, in the Wish List layout, upgrade to the newest version of the Wish List Header widget.
- Subscribing or unsubscribing from wish list email notification in his or her storefront My Account settings. For more information, see [Enable wish list email settings](#).
- Adding and changing wish list owner profile pictures; the pictures are visible next to comments made by the owner or member.
- Receiving price change notifications on the product post.
- Email notifications indicating the product price in the currency chosen in the storefront.

Each shopper profile can have up to 50 wish lists. Each wish list can The number of product posts, text posts, and comments on an individual post is set to 100 per wish list.

### **Understand private, group, and shared wish list privacy settings**

A wish list owner can choose to designate a wish list as private, group, or shared.

A private wish list is visible only to the wish list owner.

A group wish list is visible to the wish list owner and people they invite as members. Owners and members can perform the following tasks in a group wish list:

- View the wish list.
- Add products to the wish list and delete any products they added. Deleting a product post deletes all its associated comments.
- Comment, delete, and edit their comments on a wish list; in addition, owners can delete any comments.

A shared wish list can be viewed by anyone who receives a link via Facebook, Twitter, Pinterest, or email. A wish list owner can share the link to any of their wish lists by clicking the Share button for Facebook, Twitter, Pinterest, or email. Once a wish list is shared, anyone with the link, whether logged in or anonymous, can also view the wish list. However, only members of the wish list can view, comment, delete, and add products to the wish list.

The link to a shared wish list can be passed on in other ways (for example, via private email) to other people. Anyone with the link can view the wish list. Members' comments on a group wish list, as well as their names, become public if the owner designates the wish list as shared. Oracle strongly recommends you add text to your Terms of Use notifying your customers about this behavior.

A wish list owner can edit the privacy mode of a wish list at any time. Changing the privacy setting from Shared or Group to Private makes the wish list viewable only by the owner.

To edit from Shared or Group to Private, the owner must first delete all members from the wish list. However, once changed to Private, the wish list content is retained. Member names are noted as being no longer a member, and a generic profile picture is displayed.

### **Share using email, Facebook, Pinterest, or Twitter**

To accommodate social sharing on your site, do the following:

1. Click the **Settings** icon, then click **Setup**.
2. Click the **URL Patterns** tab.
3. This step is optional if your URL patterns are correctly configured. On the URL Patterns page, for the Product Page URL, double-click the link in the Value column to open the New Value dialog. Edit the URL pattern using the available properties.  
URL patterns let you customize the URL structure for the different types of pages on your store. Select a page type and replace the components in the default pattern with values for a new custom pattern. For more information, see [Enter basic store information](#).  
  
The new value will be applied to your product details pages once you click the check mark at the top of the dialog. Click the x to cancel.
4. To add the social sharing links to your product details pages, in the administration interface, click **Design**.
5. Click the **Select Layout** tab. Click **Product**, and then click **Product Layout**.
6. Click the **Grid View** tab. In grid view, hover over the **Product Details** widget, and click the settings icon.
7. Depending on the types of social sharing you want to make available to your shoppers, add the following elements to the page:
  - To add email, Facebook, and Twitter icon links to product detail pages, add the Social Sharing element.
  - To add email, Facebook, Twitter, and Pinterest icon links to the product detail pages, add the Social Sharing 2 element.
8. Save your changes

For more information, see [Work with layout components](#).

Shoppers can share a wish list link using email, Facebook, Pinterest, or Twitter by doing the following:

1. If you have not already done so, set the privacy setting for the wish list to **Shared**. Make this change by doing one of the following:
  - Click the **lock** icon (Edit Wish List Settings) under the wish list name.
  - Click the **Wish** list actions arrow at the right side of the page, and click **Edit**.

Privacy settings are made per wish list. Setting the privacy setting for one wish list does not affect the privacy setting for any other wish list.
2. On the right-hand side of the page across from the **Wish List Owner** name, click the **Share by email**, **Share on Facebook** (if available), **Share on Pinterest**, or **Share on Twitter** icon.  
If the Facebook icon is absent to your shoppers, you must add a Facebook App Id by logging into the Commerce administration interface. See [Configure Facebook access and announcements](#) for more information. To display the Pinterest icon, place the latest version of the Wish List Header widget in the Wish List layout.
3. Follow the instructions to log into the email service, Facebook, Pinterest, or Twitter to send the link.

### Understand localization

Wish lists are localized as a part of the storefront localization. For more information, see [Localize Your Store](#).

## Implement wish lists

To use all the functionality of wish lists for your site, it is recommended you complete the following activities:

- Tailor your wish list appearance to match the rest of your storefront, using the Design page in the administration interface. For example, wish lists inherit the global style settings for color, font, and page layout. For more information, see [Design Your Store Layout](#).
- Add a Facebook App ID.
- Update the Wish List Header widget and Wish List Content widget in the Wish List layout.
- To include the Pin It on Pinterest icon, on the Product layout, update the Add Product to Wish List widget. Include the Social Sharing 2 element in the Product Details widget.
- To have price formatting and currency appear in email notifications, include the latest version of the Add Product to Wish List widget in the Product layout.
- Enable email settings.
- Update your email templates.
- Edit and use wish list widget content (optional).

## Configure Facebook access and announcements

Wish list owners and members can share links to products and invite friends via Facebook using their Facebook accounts.

To enable the Share Wish List on Facebook and Invite Facebook Friends features for your shoppers, do the following:

1. Make sure you have a Facebook App ID. To obtain a Facebook App ID, you must have a Facebook account and register to become a Facebook developer. Facebook provides information on how to set up your site to allow sharing to Facebook. For more information, visit [developers.facebook.com](https://developers.facebook.com).
2. Once you obtain a Facebook App ID, log into the Commerce administration interface.
3. Click the **Settings** icon, then select **Social Settings**.
4. In the Facebook App ID field, enter your ID, and click **Save**.
5. To configure your Facebook app as a Canvas app, log into your Facebook merchant account.
6. Create or edit your Canvas app, and enter the URL—`https://[your storefront host name]/facebook/`—as the Secure Canvas URL.

## Enable wish list email settings

For wish lists to function properly, enable wish list email types in the administration interface.

To enable wish list emails, see [Configure Email Settings](#).

Upon initial setup, emails sent by wish lists are text only. However, you can download any of the wish list email templates, update them, use HTML, and then re-upload them to fit with your business environment and strategies. For more information, see [Customize Email Templates](#).

Shoppers can opt to receive email notifications by doing one of the following:

- Click the **I want to get email updates** check box when creating an account.
- Click **My Account > My Details**, click **Edit** and select the **I Want to Get Email** checkbox. Click **Save**. **My Wish List Setting** is displayed. Under **Email Notification Settings**, click **Yes** for those emails they want to receive.

At any time, shoppers can edit the email notification settings in My Account.

The following table describes the types of email that are available for wish lists:

Email Type	Description
Wish List New Comment	Sent to all other members of a wish list when a member adds a comment to a product post. An email is not sent to the commenter.
Wish List New Member	Sent to all current members of a wish list to introduce a new member; this email is not sent to the new member.
Wish List New Post	<p>Sent to all other members of a wish list when a new product post is added to the wish list or a product is moved to an established or new wish list. If the product is already in the destination wish list, no email is sent.</p> <p>A product post is added when a shopper clicks the Add to Wish List button or selector on a product details page. An email is not sent to the poster.</p>

### Additional notification email template properties

You can optionally use sections to add and organize related content if another section heading is needed.

Additional properties are available in the wish list notification email templates should you want to customize your emails. For details about accessing the templates, see [Customize Email Templates](#).

You can make template changes for the following:

- New comment email
  - Wish list owner profile image URL
  - Profile image URL of shopper who added a comment
  - Product title
  - Image URL of the product associated with the comment
  - First and last name of the shopper who created the post associated with the comment
  - Full name of the email recipient
- New product post email

Ensure that the latest version of the Add Product to Wish List widget is added to the Product layout.

- Current price (list price or sale price as applicable)
- Profile image URL of shopper who added the product; if a profile image has not been selected, an image called no image is sent.
- Profile image of wish list owner
- Full name of the email recipient
- New member email
- Profile image URL of new member
- Profile image URL of wish list owner
- Full name of the email recipient

**Note:** If no profile image has been set by the shopper, a generic image URL is displayed.

#### Additional email properties

You can add properties to the following wish list email templates:

- Wish List New Comment
- Wish List New Member
- Wish List New Post

See Customize Email Templates to learn how to download and edit email templates.

## Edit wish list widget content

Wish list widgets let shoppers create and manage wish lists.



This section does not apply to Open Storefront Framework (OSF).

This section describes how to work with storefront classic widgets. To learn how to configure wish lists with Open Storefront Framework (OSF), see [Configure wish lists for OSF applications](#).

You can edit any of the following wish list widgets on the Design page in the administration interface:

- Wish List Content
- Wish List Header
- Wish List Notification Settings
- Wish List Settings
- Wish List Welcome
- Shopper Profile Wish List

The Wish List Welcome widget is useful as it controls content that introduces wish lists to your shoppers in a way that fits your brand and voice, and encourages customers to create wish lists. This brand information page is shown to shoppers prior to login. Once logged in, shoppers see their main wish list page.

The following layouts are affected by edits to the wish list widgets:

- For the Product Layout, use the Product Details widget, and Add to Wish List Button element for placement of the button.
- For the Wish List Layout, use the Wish List Welcome widget to include branding and other site-specific text. Other widgets that affect the Wish List Layout include the Wish List Invitation, Wish List Welcome, and Wish List Content widgets.

See [Customize layout components](#) for details about editing widgets.

### Configure Facebook announcements

In a Storefront Classic application, you can make changes to the content of the announcements your shoppers send to Facebook by editing the associated text snippets. This section describes how to edit the text snippets in the administration interface.

To view the editable text snippets:

1. On the **Design** page, click the **Developer** tab.
2. On the **Text Snippets** tab, select **Social** from the drop-down list.

You can change the values for the following keys by clicking the value and editing the new value field:

- socialFacebookInviteMessageText
- socialFacebookShareProductDescriptionText
- socialFacebookShareWishlistDescriptionText
- socialFacebookShareWishlistTitleText

The default text snippets are translated for all supported languages. If you make changes to the default text snippets, you must manually translate them into different languages your store supports. See [Customize your web store's text](#) for more information.

## Set up wish lists in a multiple site environment

Wish lists are not shared among sites and must be configured on a per-site basis.

If your environment supports multiple sites where wish lists are configured, a registered shopper can create wish lists on more than one site, but each wish list can be accessed only from the store where it was created.

**Note:** When you delete a site, its associated wish list environment is also deleted, along with its shopper content.

Follow these steps to configure a wish list for an existing site. (To learn how to create a site, see [Define a site](#).)

1. Click **Settings** icon, then select **Setup**.
2. Select a site from the drop-down list.
3. Click **Save**.

This action connects the site to the Oracle Commerce servers hosting the site wish lists.

4. (Optional) Click the **Settings** icon, then select **Email Settings** to configure the **Wish List New Comment**, **Wish List New Member**, and **Wish List New Post** email notifications. For more information, see [Enable wish list email settings](#).

## Configure wish lists for OSF applications

Commerce includes Open Storefront Application (OSF) widgets that let you add wish lists to your OSF applications.



This section applies Open Storefront Framework (OSF) only.

Wish list plug-ins are included with Commerce, but they are not enabled and are not available by default in the reference application.

This section describes how to add wish list functionality to an OSF application. This section is intended for developers who want to use OSF to create Commerce storefront applications. The procedures in this section assume that you have set up a working OSF development environment and have created an application where you will add wish lists. For more information, see [Understand the Open Storefront Framework](#).

### Add wishlist package dependencies to your application

Commerce provides a read-only npm (Node Package Manager) registry that you can access to obtain OSF packages and their dependencies.

1. Navigate to your `<workspace-dir>/packages/apps/<appname>` folder.
2. Run the following commands:

```
yarn add @oracle-cx-commerce/wishlist-endpoints
yarn add @oracle-cx-commerce/wishlist-actions
yarn install
```
3. Ensure wishlist dependencies are installed to your local `node_modules/@oracle-cx-commerce` folder.

### Add wish list plug-in exports to your application

You must export references that enable the application's endpoints to be accessed using dynamic imports.

1. Navigate to your `<workspace-dir>/packages/apps/<appname>/src/plugins/actions/index.js` file and add the following line. Make sure this line appears above default exports:

```
export * from '@oracle-cx-commerce/wishlist-actions'; //
```
2. Navigate to your `<workspace-dir>/packages/apps/<appname>/src/plugins/actions/meta.js` file and add the following line. Make sure this line appears above default exports:

```
export * from '@oracle-cx-commerce/wishlist-actions/meta'; //
```
3. Navigate to `<workspace-dir>/packages/apps/<appname>/src/plugins/endpoints/index.js` file and add the following line. Make sure this line appears above default exports:

```
export * from '@oracle-cx-commerce/wishlist-endpoints'; //
```
4. Navigate to `<workspace-dir>/packages/apps/<appname>/src/plugins/endpoints/meta.js` file and add the following line. Make sure this line appears above default exports:

```
export * from '@oracle-cx-commerce/wishlist-endpoints/meta'; //
```

### Allow shoppers to move items to a wish list from the cart

Once your OSF application has been built and deployed to the Commerce server environment, you can use the administration interface's Design page to enable the Move to Wish list functionality on the Cart page.

1. Log into Commerce and click the **Design** icon in the main menu. In the top-right corner of the Design page, you should see a dropdown menu where you can select a deployed OSF application.
2. Select your OSF application from the dropdown menu.
3. Use the **Filter Layouts** field to search for the **Cart Page** layout and then open the **Cart** container.
4. Click on **Settings** icon on the Cart Item Details layout.
5. Click the **Move to Wish List** checkbox.
6. Publish your changes.

### Understand wish list layouts and widgets

The wish list widgets let shoppers create and manage multiple wish lists. The OSF wish list widgets make use of the Commerce wish list service and interface with the corresponding Social Wish Lists API endpoints.

The wish list widgets let shoppers do the following tasks:

- Create, edit, and delete wish lists with different privacy settings: Private (Only the owner can see and add to the list.), Group (Only the owner and people they invite can see, comment on, and add items to the list.), and Shared (Anyone with a link can see the list, but only the owner and people they invite can comment on and add items to the list.)
- Add items from a product's Product Details Page to a new or existing wish list. (The default widgets do not support adding items to a wish list from the Product Listing Page, but you can extend them in your OSF workspace to add this functionality.)
- Move items from a wish list to the cart or from the cart to a wish list.
- Move items from one wish list to another.
- Edit or delete wish list items.
- Add comments to wish list items.
- Share wish lists with other people via a link or invite them to a wish list, where they can also edit and comment on the list.

**Note:** The default widgets do not support sharing via Facebook, Pinterest, or Twitter, or receiving automatic price change notifications for products in a wish list. Default wish lists also do not show item availability (stock status). However, you can extend the widgets in your OSF workspace to add this functionality. The out-of-the-box OSF wish list implementation also does not currently allow the wish list owner to manage wish list settings.

Commerce includes the following wish list layouts:

- Wish Lists
- Wish List Details
- Commerce includes the following wish list widgets:

- Add to Wish List (Add this to the Product Details container)
- Wish List Details
- Wish Lists
- Wish List Breadcrumbs

Detailed information about each widget's code, including actions, selectors, fetchers, and endpoints, is available in the JS API documentation that you can download from Oracle Customer Connect.

# Localize Your Store

You can translate your catalog and store content into multiple languages so a shopper can automatically see your store in the language specified by her browser's locale. A shopper can also manually select a language from a list of languages your store supports.

This section describes how to translate your store into other languages. For information about how to display your store's prices in different currencies, see [Configure Price Groups](#).

## Understand store localization

Each language Commerce supports matches an ISO locale. For example, English (Australian) matches the en\_AU locale.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You must assign a default language for each Commerce site you set up. You must create all catalog items in the site's default language and then translate them into the additional languages your site supports. See [Prepare your catalog for translation](#) and [Import translations for catalog items](#) for more information about translation. See [Enter basic store information](#) for more information about assigning default and additional languages to a site.

**Important:** Do not change your site's default language once you set it, especially if you have already created catalog items like products, SKUs, and collections.

You can translate the values for short-text and rich-text properties for all catalog items. For example:

- Product names, descriptions, and brands
- Collection names and descriptions
- Variant property names and values. For example, you can translate both the variant property name Color and all its values, like green, blue, and red.
- Although not part of your catalog, you can translate the shopper-visible properties for settings, for example, the names of shipping methods and promotions.

You can also translate store text that is not part of the catalog, for example, labels, messages, and help tips. See [Translate store text](#) for more information.

The shopper's browser locale controls the format of numbers, including dates and prices. You cannot manually change or customize number, date, or currency formats.

**Note:** Your store can support more than one currency. For information about selecting a default currency when you set up the store, see [Define additional store settings](#). For information about displaying prices in other currencies, see [Configure Price Groups](#).

Emails your store sends are already translated into all the languages that Commerce supports. You can customize the email text in all the languages your store supports. See [Configure Email Settings](#) for more information. Emails are sent in the language of the shopper's browser when the event that triggered the email took place. For example, if a

shopper places an order from a browser whose locale was set to ES, the service sends the Spanish translation of the Order Placed email.

## Select additional languages

The first step in translating your store is to select the additional languages you want your store to be displayed in.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Once you select additional languages, a new dropdown list appears at the top of the administration interface. When you are ready to translate components of your catalog and store into a new language, select that language from the list before you start translation tasks.

To select additional languages your store supports:

1. Click the **Settings** icon.
2. Select **Setup** from the **Settings** list.
3. On the **Location** tab, click the **Additional Store Languages** field and select a language. See [Languages supported by the storefront](#) for the available options. Repeat this step for each new language your store will support.

When you remove any of the additional languages, shoppers can no longer select them from the Language list on your store.

To remove a supported language from your store:

1. Click the **Settings** icon.
2. Select **Setup** from the **Settings** list.
3. On the **Location** tab, in the **Additional Store Languages** field, click the **X** icon in the corner of the language you want to remove.

### Languages supported by the storefront

The following languages are supported for use with Commerce. All languages in the list are available for use on the storefront translation and search input.

Arabic (ar), Catalan (ca), Indonesian (id), Malay (ms), and Vietnamese (vi) are not supported for the administration interface.

- Arabic – ar
- Bulgarian – bg
- Catalan – ca
- Chinese (Simplified) – zh\_Hans
- Chinese (Traditional) – zh\_Hant
- Croatian – hr
- Czech – cs
- Danish – da
- Dutch – nl

- English (Australian) – en\_AU
- English (Canadian) – en\_CA
- English (UK) – en\_GB
- English (US) – en\_US
- Estonian – et
- Finnish – fi
- French – fr
- French Canadian – fr\_CA
- German – de
- Greek – el
- Hungarian – hu
- Indonesian – id
- Italian – it
- Japanese – ja
- Korean – ko
- Latvian – lv
- Lithuanian – lt
- Malay – ms
- Norwegian – no
- Polish – pl
- Portuguese (Brazil) – pt\_BR
- Portuguese (Portugal) – pt\_PT
- Romanian – ro
- Russian – ru
- Serbian (Cyrillic) – sr\_RS
- Serbian (Latin) – sr\_Latn\_RS
- Slovenian – sl
- Spanish – es
- Swedish – sv
- Thai – th
- Turkish – tr
- Ukrainian – uk
- Vietnamese – vi

## Prepare your catalog for translation

Create all catalog items in your store's default language and then translate them into the additional languages your store supports.

 This section applies to Open Storefront Framework (OSF) and Storefront Classic.

Text for a short-text or rich-text properties can be translated when the property is marked as translatable in the product type. Some properties, such as the Base product's Name, Description, and Long Description properties, are marked as translatable by default. New properties you create are not marked as translatable by default. When you create new properties you can decide if they will contain translatable content and mark them accordingly. Once you mark a property as translatable, you cannot remove that setting. See [Create and edit product types](#) to learn how to mark properties as translatable.

**Note:** The names of collections and the names of shipping methods are automatically translatable; there is no setting to mark them as such.

## Import translations for catalog items

The easiest way to translate your catalog into the additional languages your store supports is to export products, variants, and collections in your store's default language, replace the translatable strings with localized text in the spreadsheets, and import them back into your catalog.

 This section applies to Open Storefront Framework (OSF) and Storefront Classic.

See [Import and Export Catalog Items and Inventory](#) for more information.

When you export catalog data for translation, you must select a language that the export supports. If you select a different language than your store's default language, `LOCALE` appears in the fifth column (cell E1) of the export spreadsheet and shows the ISO locale code for the language, for example, `LOCALE=fr`.

When you import the translations back into your catalog, make sure `LOCALE` appears in the fifth column (cell E1) of the import spreadsheet and shows the ISO locale format for the language you are importing, for example, `LOCALE=fr`.

**Note:** You cannot create new items when you import translations. All new items, even those created by import, must be created in your store's default language.

## Manually translate properties

You cannot import translations or other values for shopper-visible settings, such as the names of shipping methods, so you must manually translate them.

 This section applies to Open Storefront Framework (OSF) and Storefront Classic.

You can also manually translate properties for catalog items, though importing translations is recommended when working with a large number of properties. See [Import translations for catalog items](#) for more information.

To manually translate items:

1. Select the language to translate to from the content-language list at the top of the page.
2. Open the item whose properties you want to translate.

3. Fields for translatable properties that you have not yet translated into this language are blank.

**Note:** The untranslated names of product-type properties are not blank, but appear in the store's default language.

4. Enter the translated value for each translatable property on the page.
5. Click **Save**.

## Translate store text

Use text snippets to translate the text displayed on your store into the different languages your store supports.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Store text includes messages, labels, and help tips. You access and translate your store's text snippets on the **Design** page. See [Customize your web store's text](#) for more information about translating store text for Storefront Classic applications. See [Configure widgets](#) in the administration interface for information about translating store text for Open Storefront Framework applications.

## Configure the default locale for a site

By default, when a shopper visits an Oracle Commerce site, it displays in the browser's preferred language if that language is supported by the site. You can configure the site to display in the site's default language, even if it is not the browser's preferred language.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Each language Commerce supports matches an ISO locale. A site's default language is specified internally by its `defaultLocaleId` property. To override the browser's preferred language and display a site in the site's default language, use the Admin API to set the site object's `useDefaultSiteLocale` property to `TRUE`. (It is set to `FALSE` by default.)

Use the `updateSite` endpoint to modify the `useDefaultSiteLocale` property on an existing site. For example:

```
PUT /ccadmin/v1/sites/100002 HTTP/1.1
Authorization: Bearer <access_token>
x-ccasset-language: en
```

```
{
  "properties":
  {
    "useDefaultSiteLocale": "true"
  }
}
```

When you set a site's `useDefaultSiteLocale` property to `TRUE`, you must also make sure the site is using the most recent version of the Header widget and Language element.

See [Configure Sites](#) for more information about using the REST API to work with sites.

## Create items in the default locale of a site

In an environment with multiple Oracle Commerce sites, you can configure Commerce to allow merchandisers and developers to create new products, collections, and promotions in any site's default language.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

By default, when you to use the administration interface or the API endpoints to create products, collections, and promotions, the requests include validation that makes sure the new items are being created in the default locale of the default site. You must then manually translate these items to other supported languages.

You can, however, use the Admin API `saveAdminConfiguration` endpoint to configure Commerce so that it bypasses this validation, allowing the creation of products, collections, and promotions in the default language of a site instead. The endpoint's `overrideDefaultLocaleValidation` property is an array that contains one or more of the following strings: `createProduct`, `createCollection`, and `createPromotion`.

The following sample request configures Commerce to allow collections and products to be created in the default language of any site:

```
PUT /ccadmin/v1/merchant/adminConfiguration HTTP/1.1
Authorization: Bearer <access_token>
x-ccasset-language: en

{
  "overrideDefaultLocaleValidation": ["createCollection",
  "createProduct"]
}
```

## Use a specific locale code in a REST request

Requests can include the `x-ccasset-language` header to instruct the endpoint to use a specific locale code for content returned in the response.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The locale supplied in the header must be supported by your store. (See [Select additional languages](#) for more information.) The API endpoint documentation specifies if the `x-ccasset-language` header is required or optional for an endpoint. See [Learn about the APIs](#) for information about accessing the endpoint documentation.

## Troubleshoot translation issues

Many common translation issues have workarounds.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This list describes workarounds for common translation issues.

- If your store supports additional languages but you do not translate all the translatable shopper-visible properties, the untranslated strings will appear in the store's default language. This can result in multiple languages appearing on the same page. For example, if you translate product names but not descriptions, the name and description will appear in different languages on the product details page.
- When you select a default language for your store, select a language that specifies a neutral locale, not one that specifies a region-specific local. For example, select English not English (United States) or English (Canada). To support region-specific variants of the default language on your store, add them to the Additional Store Languages list. See [Select additional languages](#) for more information.

**Note:** In this release, there are no neutral-locale options for Chinese or Portuguese. You must select either Chinese (Simplified) or Chinese (Traditional) for Chinese and Portuguese (Portugal) or Portuguese (Brazil) for Portuguese.

## Configure Price Groups

A price group is a set of price lists (list price, sale price, and shipping surcharge), in a specific currency, for the products, SKUs, and shipping surcharges in a catalog.

Price groups let you price catalog items (products, SKUs, and shipping surcharges) in multiple currencies so a shopper can select from a list of currencies your store supports and see those prices on your store.

If a user does not have access to a price group, the following conditions apply:

- The editors for the price group and its prices are read-only
- Menu options for actions that the user is not authorized to perform may be hidden or disabled
- Some icons and menu options will change from Edit to View only

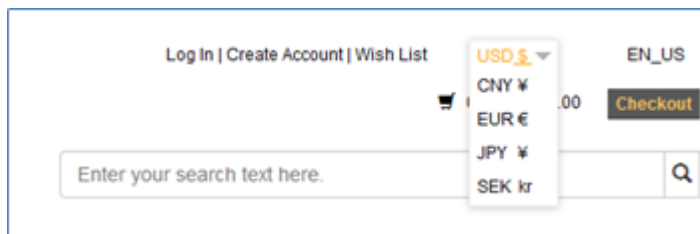
### Understand price groups

A price group is a set of price lists (list price, sale price, and shipping surcharge) in a specific currency for all products and SKUs in your catalog.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

When a shopper selects the currency for an active price group, your store displays all products and SKUs in that price group's prices. The following illustration shows the currency selector on a store that lets shoppers choose to see prices in several currencies.



Your Oracle Commerce instance comes with one configured price group, with the currency in US Dollars. You can edit this price group to give it a name that makes sense for your environment, for example the name of your store.

If your store supports multiple currencies, create one price group for each currency that you want customers on your store to be able to see. When your store supports multiple price groups, one price group is always the default, that is, the group whose currency and prices are displayed when an anonymous shopper (that is, a shopper who is not logged in) visits your store. While shoppers can change price groups by selecting a different currency, the default prices are always displayed when a shopper returns to your store for a new shopping session.

If your store supports account-based commerce, you can create unique price groups for each account registered on your store. See [Configure Business Accounts](#) for more information.

If your Commerce instance supports more than one store or site, you can create unique price groups for each site that runs on your instance. See [Run Multiple Stores from One Commerce Instance](#) for more information.

If your store supports a loyalty-points program, you use the Admin REST API to create a currency for loyalty points. Then you create and activate a price group for the points, just as you would any other currency your store supports. See [Create a custom currency for loyalty points](#) for details about creating a currency for loyalty points and assigning it to a price group.

Price groups are independent of the languages customers can view your store in. For example, if you translate your store into Japanese, but do not add a price group that shows prices in Yen, shoppers can view the store in Japanese but the prices remain in US Dollars. For information about how to translate your store into other languages, see [Localize Your Store](#).

To create a new price group:

1. Create a new price group. See [Create and edit price groups](#).
2. Add prices to each product in your catalog for the new price group. See [Manually add prices to products and SKUs](#) and [Import prices for products and SKUs](#).
3. Activate and display the price group. Optionally, make it the default price group so that its prices are the ones shoppers automatically see when they first visit your store. See [Activate price groups](#).
4. Publish your changes so they will appear on your store. See [Publish Changes](#). If direct price editing is enabled for your Commerce store, any price changes you make are available on the storefront without publishing. See [Update prices without publishing](#) for more information.

### Understand how price groups affect promotions

If your store uses price groups to support multiple currencies, you can specify that a promotion applies only to items purchased in specific currencies. For example, suppose you create a price group called GBP that lets shoppers view prices in British Pound Sterling. You can then create an order discount called "Spend £100, get £10 off" that applies only when a shopper displays your store's prices in British Pound Sterling and then purchases £100 worth of merchandise. See [Understand currency-specific promotions](#) for more information.

### Understand how price groups affect shipping methods

If your store uses price groups to support multiple currencies, you can specify that a shipping method applies only to items purchased in specific currencies. For example, suppose you create a Ground Shipping method that is valid only for delivery to the continental USA. In addition to specifying the appropriate shipping region, you might also want to make sure that the shipping method is available only when a shopper displays your store's prices in the default currency, US Dollars. See [Configure Shipping](#) for more information.

### Understand how to use price groups with loyalty programs

If your store supports a loyalty program, you use the Admin REST API to create a currency that represents loyalty points. Then you create and activate a price group for the points, just as you would any other currency your store supports. See [Work with Loyalty Programs](#) for details about creating a currency for loyalty points and assigning it to a price group.

If your store uses one of the built-in tax-processor integrations (Avalara AvaTax or Vertex O-Series), you can use the REST Admin API to convert the value of points-based orders to monetary currency so that your tax processor can calculate taxes for the order. (See [Work with Loyalty Programs](#) for more information.) or you can turn off tax calls for the points-based price group and make sure tax processing is handled externally, for example, in your order management system. (See [Create and edit price groups](#) for more information about configuring tax settings for price groups.)

## Create and edit price groups

A price group is a set of prices in a specific currency for products and SKUs in your catalog.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

To create a new price group:

1. On the **Catalog** page, click **Manage Catalogs** and select **Price Groups**.
2. On the **Price Groups** page, click the **Price Group** button.
3. Enter values for the price group's properties.
4. Click **Save**.

Property	Description
Name (required)	Short, descriptive name that identifies the price group. This name does not appear on your store. Each price group name must be unique within your store.
ID (required)	The ID that identifies the price group internally. Each price group ID must be unique within your store. Even after you delete a price group, you cannot assign its ID to another price group.
Inherit prices from	Use the drop-down menu to select a price group. This associates the new price group with an existing price group, creating a price group hierarchy. Prices from the new price group, or the child price group, will be inherited from this parent price group. See <a href="#">Work with price group inheritance</a> for more information.
Currency	The ISO currency associated with the prices in this price group.  If you created a custom currency for loyalty points, that currency is also available to assign to a price group. See <a href="#">Create a custom currency for loyalty points</a> for more information.

Property	Description
Tax Calculation	<p>Select one of the following options to specify whether calls are made to your tax processor for this price group:</p> <p>Calculate tax: Commerce calls the tax processor your store integrates with, which calculates and returns tax for prices in this price group. This option is selected by default.</p> <p>Do not calculate tax: Commerce does not call the tax processor your store integrates with and no tax is calculated for prices in this price group.</p> <p>This setting affects tax calculation only if your store uses one of the built-in tax-processor integrations (Avalara AvaTax or Vertex O-Series), or an external tax-processor integration configured with the REST API. If you turned off tax calculation by selecting None as the tax processor on the Tax Processing settings page, Commerce will not calculate taxes for a price group, even if you select Calculate tax here. See <a href="#">Configure Tax Processing</a> for more information.</p>
Status	Indicates if the price group is active.
Require all products to be in this price group.	Select this option to require that every product in your catalog has a corresponding list price in this price group before it can be activated. This option is selected by default and must be selected for the default price list.
Include tax in the prices	<p>Select this option to display all prices in the price group with tax (for example, VAT) included.</p> <p>The prices you assign to a tax-inclusive price group must already include a tax amount. If prices include tax, your integrated tax processor back-calculates taxes for each order. That means that when the call is made to the tax processor when the cart is priced, no tax is returned.</p> <p>Once you save a price group with this option selected, you cannot change this setting.</p> <p>If you select this option, you may also need to configure additional settings on your tax processor. See <a href="#">Configure Tax Processing</a> for more information.</p>

### Edit price groups

Once you create a price group, you can change its name. You cannot change its ID or the currency associated with it.

To edit a price group:

1. On the **Catalog** page, click **Manage Catalogs** and select **Price Groups**.
2. On the **Price Groups** page, click the name of the price group to edit.
3. Enter a new name.
4. Click **Save**.

### Delete price groups

To remove a price group from your system:

1. On the **Catalog** page, click **Manage Catalogs** and select **Price Groups**.
2. On the **Price Groups** page, click the name of the price group to delete.
3. Click **Delete**.

## Manually add prices to products and SKUs

You can manually add prices to products and SKUs by updating either your catalog or the price group itself.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

To add prices to individual items in your catalog, display the details page for a product and click the Price Groups tab. See [Create and work with products](#) for information about adding prices to a product or SKU.

To add prices to the price group, display the details page for a price group and click the Products link. A list of all products and SKUs in your catalog appears. You can add or change the list price, sale price, or shipping surcharge for products or SKUs in the list. See [Activate price groups](#) for information about displaying a price group's details.

### Format prices

When entering prices, keep in mind that the locale of the browser you use to access the Oracle Commerce administration interface controls number format and the price group's currency controls the precision specifier (the number of decimal places) in the prices shoppers see on your store. For example, suppose your browser's locale is US\_EN and you are adding prices for a price group whose currency is Japanese Yen (JPY). If you enter a price as 1240.89, Oracle Commerce displays the price as 1,241 because Japanese Yen does not display decimal places.

## Import prices for products and SKUs

The easiest way to add prices to products and SKUs is to export products and, if applicable, SKUs, add prices for each price group to the spreadsheet, and import them back into your catalog.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

See [Import and Export Catalog Items and Inventory](#) for more information.

When you look at the exported spreadsheet, you can see that the second row displays column headings that contain the internal names of the exported properties. Each price group has three column headings:

- PLG:<id>PriceGroup.ListPrice
- PLG:<id>PriceGroup.SalePrice
- PLG:<id>PriceGroup.ShippingSurcharge

In each column heading, <id> is the ID for the price group. For example, the column of list prices for the default price group has the heading

PLG:defaultPriceGroup.ListPrice.

Prices for the products or SKUs begin in the third row and continue for the remainder of the spreadsheet. If an item does not have a value for a property, the corresponding cell is blank.

Keep the following in mind when you import prices:

- Price groups are not dependent on languages (ISO formats) you may translate your store into. Therefore, when you import prices into your catalog, the `LOCALE` that appears in the fifth column (cell E1) of the import spreadsheet has no effect on the imported prices.
- If you create a new product via import, it must include a list price for each price group in your catalog, even for price groups that are not yet active.

If you have configured price list group inheritance, note that when you export a product or SKU whose price is inherited from a parent price list group, the prices will display in the spreadsheet as null.

## Activate price groups

Activating a price group makes its prices available to be displayed on your store.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Once a price group is active, you can add it to your store. Then shoppers can select a currency from a list of active currencies that appears at the top of each page of your store. Each currency in the list is associated with an active price group you chose to display.

**Note:** If your store supports account-based commerce, you can assign active price groups to accounts so logged-in contacts can see those prices. See [Configure Business Accounts](#) for more information.

To activate a price group:

1. On the **Catalog** page, click **Manage Catalogs** and select **Price Groups**.
2. On the **Price Groups** page, select the price group to activate.
3. Once the price group page is displayed, click the **Activate** button to activate.
4. Click **Save**.
5. To display prices from an active price group, add it to your store. See [Display active price groups](#) for more information.

If your catalog contains products when you create a price group and you chose to force the price group to include all products in your catalog, you cannot activate that price group until it contains list prices for all products and SKUs in your catalog. If you try to activate a price group and see an error message that says the group does not contain list prices for all your products, check to see which products do not have prices in the price group. You can check for missing prices in the following ways:

- Click the **Products** link on the price group's details page to see products and their prices. By default, all products are displayed. To show only products that do not

have list prices, select **Show Only Products With No Prices** from the dropdown list in the upper-right corner of the page. Then add the missing prices.

- Export all the products in your catalog. When you view the spreadsheet, you can easily see which products do not have list prices assigned from each price list.

For more information about adding missing prices, see [Manually add prices to products and SKUs](#) and [Import prices for products and SKUs](#).

### Display active price groups

Activating a price group does not automatically add it to your store. To display an active price group on your store, you must add it to your store's Setup settings. You can also change the default price group on the **Location** tab of your store's Setup settings page.

To display active price groups on your store:

1. Click the **Settings** icon.
2. Select **Setup** from the **Settings** list, then click the **Location** tab.
3. To change the default price group, select a price group from the **Default Price Group** drop-down list.  
Only price groups that include a list price for every product in your catalog are eligible to be the default price group.
4. To display an additional active price group that shoppers can select, add it to the **Additional Price Groups** field.  
To stop displaying a price group on your store, remove it from the **Additional Price Groups** field.  
**Note:** Price groups you add to the **Additional Price Groups** field can be seen and selected by all shoppers who visit your store. If your store uses account-based commerce and you have created price groups to associate only with specific accounts, do not select those price groups here. See [Configure Business Accounts](#) to learn how to display an active price group only to logged-in contacts from a specific account.
5. Click **Save**.
6. Publish your changes. See [Publish Changes](#) for more information.  
If direct price editing is enabled for your Commerce store, any price changes you make are available on the storefront without publishing. See [Update prices without publishing](#) for more information.

## Update prices without publishing

By default, when you create or modify product prices, the changes you make must be published before they take effect. You can optionally configure Oracle Commerce to make price changes directly on the storefront without publishing.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Publishing price changes works well for many merchants, particularly those that change their prices relatively infrequently. Some merchants, however, have a large number of products and change their prices frequently, in some cases updating prices several times a day. For these merchants, Oracle Commerce provides the ability to make price changes available on the storefront immediately, bypassing the publishing process.

To enable this feature, you use the `updateDirectPriceEdit` endpoint. For example:

```
PUT /ccadmin/v1/merchant/directPriceEdit HTTP 1.1
Authorization: Bearer <access_token>
Content-Type: application/json

{
  "enable": true
}
```

Note that if your stores have any unpublished price-related changes, you must publish them before attempting to set `enable` to `true`, or the call will fail.

### Use direct price editing

When direct price editing is enabled, if you create or modify a product (in the administration interface, using an endpoint, or through an import process), price changes you make are available on the storefront without publishing; they do not appear in the list of changes that are returned by REST endpoints or appear in the **Publishing** page of the administration interface. Other product changes, however, must still be published. As a result, prices may exist on your production system before the associated products do. These prices will be applied to the products when they are published.

When you publish changes, Oracle Commerce initiates an indexing operation so the search index is updated to reflect the changes. With direct price editing, though, prices on the production server can be changed without publishing, which means prices in the index may become out of date. To ensure the index is kept up to date, enabling direct price editing also sets up a schedule to perform incremental indexing every 15 minutes. However, if you have already used the `setSearchPartialSchedule` endpoint in the Search Data and Indexing API to set up a different incremental indexing schedule, then that schedule will remain in place instead.

### Disable direct price editing

You can disable direct price editing by using the `updateDirectPriceEdit` endpoint to set the `enable` property back to `false`. Doing this initiates publishing of all pending changes.

Note, however, that you should decide which mode makes sense for your stores, and continue to use it unless your business needs change. The feature is not designed to be turned on and off frequently. Disabling direct price editing may cause a considerable delay, because Oracle Commerce must then synchronize your publishing server with the prices on your production server.

Disabling direct price editing also cancels the incremental indexing schedule that was set up when direct price editing was enabled. However, if you used the `setSearchPartialSchedule` endpoint to create a different incremental indexing schedule, disabling direct price editing does not cancel that schedule.

## Work with price group inheritance

You can create parent-child relationships with price groups, which allow price groups to inherit prices for list, sale and shipping surcharge prices.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Price groups specify list prices, sale prices and shipping surcharge prices. Using price group inheritance allows you to define some customer-specific prices for some products and SKUs, while the rest of the prices are inherited from another price group. This feature is applicable for both consumer-based and account-based environments.

### Understand price group hierarchy

When you create a new price group, or edit an existing one, you can specify a price group from which to inherit prices. When you save a price group that inherits prices, known as a child price group, any prices that are not explicitly specified in the child will be inherited from the group you identify, known as the parent price group. Whenever you make a change in the parent price group, the changes will be reflected in any inherited prices in the child price group. For example, if you create a sale price in a parent price group, any children that inherit the sale price will reflect the price you created in the parent price group. The currency, the setting for tax calculation and the setting that determines if the SKU prices include tax are also set from the parent price group. Note that these settings cannot be changed once a price group is created. When choosing a new parent for an existing price group, your choices are limited to those price groups whose settings for these properties are the same as the existing price group.

Although child price groups can have only one unique parent price group, parent price groups can have more than one child. While child price groups may also have their own child price groups, the limit for the depth of price groups is three levels. Each price in a child price group is inherited unless the inherited price is overridden by a price that is explicitly added to the child.

Note that it is possible for a product or a SKU in a child price group to have a sale price that is greater than or equal to a list price. This may occur because one or both of the prices is inherited and sale price validation does not occur on child price groups when a change is made to its parent.

You can override the inherited list, sale, or shipping surcharge price for a product or SKU. Note that a SKU can inherit its price from its product or from the parent price group. Should a SKU price be empty in a child price group, the system will search for, and display a price by checking for the product price in the current price group, followed by the SKU price in the parent, and then repeating this sequence for increasingly higher levels of the price group. If no price is found, then the SKU price is marked as "None defined". A product or a SKU in a child price group must either have an inherited price or an explicitly specified override price. If you leave the price empty, it will be inherited. Therefore, there is no way to specify that the product or SKU has no price in the child price group, assuming that it has a price somewhere in the hierarchy above.

**Note:** If you are using Admin APIs to obtain product prices, for a SKU that does not contain a price in a child price group, the API returns the inherited price, if any; otherwise it returns an empty price.

### Create a new price group hierarchy

To create a price group hierarchy, use the Catalog button in the administration interface. For additional information on creating and editing price groups, refer to [Create and edit price groups](#):

1. Use the drop-down menu to select Price Groups.
2. Click the **Create New Price Group** button.

3. Provide the name, ID as usual.
4. Select the **Inherit prices from** check box. Use the drop-down menu to select the parent Price Group.
5. Select the rest of the options as needed. Note that the **Require all products to be in this price group** checkbox means that every product must have an explicitly specified list price in the price group. For the purposes of this checkbox, an inherited price would not be sufficient. For this reason, this flag is always set to `false` in a child price group.
6. Click the **Create** button to save the new price group.

You need to activate your price group for prices to be displayed on your store. Child price groups can only be active if the parent is active. Parent price groups cannot be deleted. For information on activating price groups, refer to [Activate price groups](#).

# Use Volume Pricing for Products

Many companies offer discounts to people who purchase products in volume.

Commerce supports this type of pricing for the products in your catalog. This section provides details on how volume pricing is specified for a product as well as information on how to make sure volume pricing appears correctly on your storefront.

## Understand volume pricing

You can specify volume pricing for a product in two ways, bulk pricing or tiered pricing.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

For bulk pricing, the same price is applied to the entire quantity of a product that is purchased but that price is determined by where the quantity purchased falls within the volume pricing structure. For example, consider the following volume prices:

1 – 10, \$2.00

11-20, \$1.90

21 – 50, \$1.80

51 – 200, \$1.70

If a shopper purchased 25 units of this product, the bulk price for the product would fall into the 21 – 50 level of the pricing structure, making the bulk price for this product calculate to 25 units at \$1.80 each.

For tiered pricing, the price of the product changes based on the quantity purchased within each level of the pricing structure. For example, using the same volume pricing structure above, if a shopper bought 25 units of this product, the tiered price would be calculated as follows:

10 units at \$2.00 (for the 1 – 10 level)

10 units at \$1.90 (for the 11 – 20 level)

5 units at \$1.80 (for the 21 – 50 level)

## Add volume prices to a product

You can specify volume prices for both the list price and sale price for a product.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Volume pricing can be used in any combination for the list and sale prices, for example, you can specify volume pricing for both the list and sale prices, or for only the list price, or for only the sale price.

To specify a volume price for a product:

1. Access the price group that contains the product. For details on how to do so, see [Edit price groups](#).
2. Click **Products** to view the products assigned to a price group.
3. Locate the product whose price you want to specify and click its **Edit** button. You see the **Edit Price** dialog box where you can specify the **List Price** and **Sale Price** for the product.
4. Enable the **Volume** option for the price you want to edit.
5. Specify whether the price you are defining is a bulk price (same price for all units ordered) or a tiered price (different prices for the units ordered, depending on the level of the pricing structure).
6. Define your volume pricing structure:
  - Enter a price for the lowest quantity level (currently, 1 and up).
  - Click the **Add** button to add a new level.
  - Enter the **Range Start** value and price for the new level. (Note that the Range End value for the previous level is automatically filled in, based on the starting value for the new level. For example, if the new level has a starting value of 11, the previous level is automatically filled in with an ending value of 10. This creates two levels, 1 – 10, and 11 and up.)
  - Add additional levels as necessary.
  - If you need to remove a level, click its **Remove** button.
  - When you are finished defining the volume pricing structure, click **Save**.
7. Publish your changes to the storefront. See [Publish Changes](#) for details.

If direct price editing is enabled for your Commerce store, any price changes you make, including adding volume prices, are available on the storefront without publishing. See [Update prices without publishing](#) for more information.

## Display volume pricing in a storefront

In order to display volume pricing in a storefront, you must use the set of widgets and elements that are volume-pricing enabled.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This section describes those widgets and elements and the layouts that use them. Note that Oracle recommends that you create clones of the out-of-the-box layouts and modify them to add volume pricing. This keeps the out-of-the-box layouts in their original form and available for future cloning and modification.

To add volume pricing to the Product Layout:

1. On the **Design** page, clone the **Product Layout**, give it a descriptive name, enable the **Make Default Layout** option, and save the clone.
2. Go to **Grid View** for the layout and modify the **Product Details** widget to include the **Volume Price** element. This adds a table similar to the following to the layout, which displays the volume pricing using columns for quantity and price and rows for each level of pricing:

Quantity	Price
1 - 4	\$50.00
5+	\$25.00

To add volume pricing to the **Order Details** Layout:

1. On the **Design** page, clone the layout, give it a descriptive name, enable the **Make Default Layout** option, and save the clone.
2. Go to **Grid View** for the layout, remove the instance of the **Order Details** widget and replace it with an instance of the **Order Details with Additional Info** widget.

To add volume pricing to the Order Confirmation Layout:

1. On the **Design** page, clone the layout, give it a descriptive name, enable the **Make Default Layout** option, and save the clone.
2. Go to **Grid View** for the layout, remove the instance of the **Order Details** widget, and replace it with an instance of the **Order Details with Additional Info** widget.

To add volume pricing to the Cart Layout and Cart Layout with Shipping layouts, you must upgrade the Shopping Cart widget used on those layouts to the latest version. If you have not modified the Shopping Cart widget, this is a simple matter of removing the existing instance of the widget and replacing it with the latest version. If you have modified the Shopping Cart widget, see [Upgrade deployed widgets](#) for details on upgrading an already deployed widget in Commerce.

## Understand volume price display in a product listing

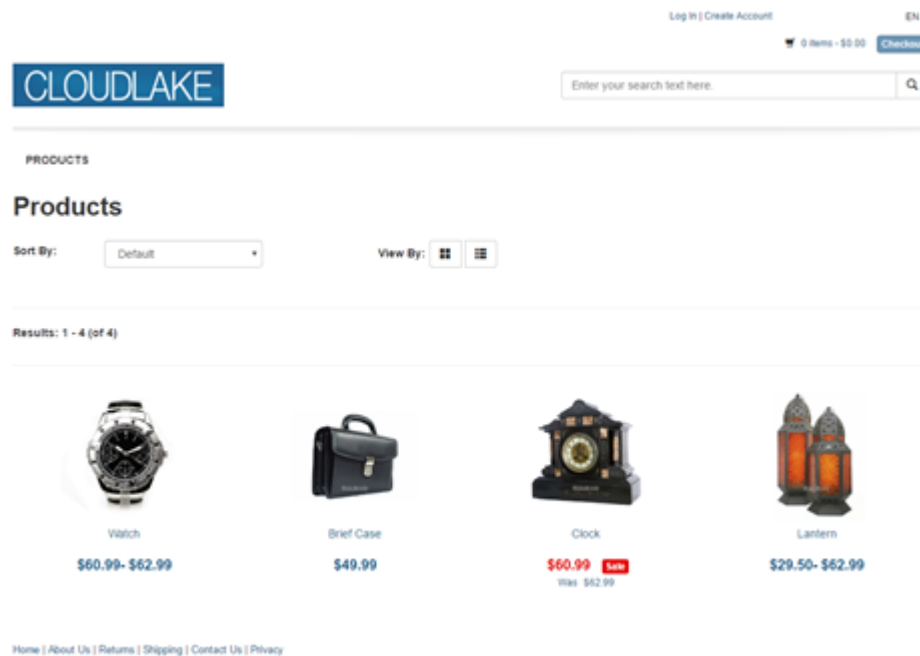
No modifications are necessary to add volume pricing to the Product Listing widget that can be included on the Collection Layout and Search Results Layout.



*This section applies to Storefront Classic only.*

If volume prices are available for a product, they will be taken into account in the product listing. The highest price (that is, the price associated with the smallest quantity purchased) is used for the product listing.

Depending on the configuration of a product, the prices displayed in a product listing can take several forms, an example of which is shown below.



In this illustration, the following prices are displayed:

- **Watch**  
This product has two variant child SKUs. One child SKU has a volume price whose highest value (lowest quantity) is \$60.99. The other child SKU has a volume price whose highest value of \$62.99. The product listing displays \$60.99 - \$62.99 for the price.
- **Brief Case**  
This product has a single non-variant child SKU. The child SKU has a volume price whose highest value is \$49.99. The product listing displays \$49.99 for the price.
- **Clock**  
This product has a single variant child SKU. The child SKU has one volume price set in the list price list and another set in the sale price list. The highest value in the sale volume price is \$60.99. This is displayed in red as the sale price. The highest value in the list volume price is \$62.99. This is displayed in the product listing as the non-sale price, that is, "Was \$62.99."
- **Lantern**  
This product has two variant child SKUs. One child SKU has a simple list price of \$29.50 and the other child SKU has a volume price whose highest value is \$62.99. The price is displayed as \$29.50 - \$62.99.

## Understand volume price display on the Product Layout

The behavior of the volume price table on the Product Layout is dictated by the type of product being displayed.



*This section applies to Storefront Classic only.*

### **Product with a single, non-variant SKU**

In this case, the volume price table shows the prices for the single, non-variant SKU. Because it is a non-variant SKU, no other pickers, such as color or size, are displayed.

### **Product with a single, variant SKU**

In this case, the volume price table is shown for the single, variant SKU. Other pickers are displayed; however, choosing values from them does not alter the volume price table.

### **Product with multiple, variant SKUs**

For a product with multiple, variant SKUs, there are several scenarios, described below.

#### **Multiple, variant SKUs use the same volume price values**

In this case, the volume price table is displayed for all SKUs but it does not change when a SKU variant is selected.

#### **Multiple, variant SKUs use different volume price values**

Your catalog may include a product with multiple, variant SKUs that use different volume price values, for example, SKU 1 uses volume price scheme A and SKU 2 uses volume price scheme B. In this case, the volume price table changes depending on the SKU that is currently selected on the Product Layout page.

#### **Some SKUs use volume pricing and some do not**

In this case, the volume price table is only displayed when a SKU is selected that uses a volume price.

### **Product with a single SKU and both list and sale prices**

For a product with a single SKU that has both list and sale prices, the sale price always takes priority and the volume price table is rendered when the sale price is specified using volume pricing. To break it down further, there are several scenarios:

- The single SKU has volume prices set in both the list and sale price lists. In this case, the volume price table is displayed but it is populated with the prices specified in the sale price list.
- The single SKU has a volume price set in the list price list and a non-volume price set in the sale price list. In this case, the volume price table does not appear on the Product Layout; only the non-volume sale price is rendered.
- The single SKU has a non-volume price set in the list price list and a volume price set in the sale price list. In this case, the volume price table appears on the Product Layout and contains the sale volume prices.

# Publish Changes

Most items that you create or change in Commerce do not appear on your store until you publish them. The topics in this section describe the publishing process.

## Understand publishing

Commerce saves publishable changes to named worksets. When you want to publish changes, you publish the workset that contains them. You can publish the changes in all worksets at once, or you can pick a specific workset to publish.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This section provides details about how Commerce handles publishable changes. See Understand worksets to learn about how Commerce uses worksets to organize those changes.

Keep the following points in mind as you prepare to publish changes:

- Commerce does not use versioning for items you edit and publish. There is only one version of each item in your system.  
For example, a merchandiser changes the long description and list price of a product and then saves his changes but does not publish the workset they are saved in. Later that day, his manager changes the product's list price again, saves her changes to the same workset and then publishes the workset. The most recent changes to the product—the merchandiser's long description and the manager's list price—are published.  
  
Similarly, a single item can be saved to multiple worksets. In this case, the most recent changes to the item, no matter which workset they are in, get published first. Looking at the previous example, suppose the merchandiser saved a product's new long description and price list in #julyWorkset and then his manager changed the product's price list again and saved the change in #default. No matter which of these worksets is published first, the result is the same: the merchandiser's long description and the manager's list price are published. Then Commerce removes the product from the workset that has not yet published.  
  
When you save changes to a publishable item in the administration interface, Commerce warns you if you another user saved changes to the item while you were editing it. For example, a merchandiser opens a product for editing and changes the long description and list price. While she is editing the product, her manager opens the product, changes the list price, and saves those changes. When the merchandiser goes to save her work, Commerce notifies her that someone else made changes to the item while she was editing it. She can choose to proceed saving and overwrite her manager's changes, continue editing the item, or discard her changes.
- You cannot roll back or undo published changes.
- Some changes do not need to be published, and take effect on your production server as soon as you save them. These changes are described later in this topic.
- Some changes must be published together to maintain the integrity of their relationships. These changes are described later in this topic.

- While changes are being published, you cannot work with any publishable items in the administration interface. Commerce displays a **Publish in Progress** message dialog to inform you of this state.  
Although you cannot use the administration interface, programs that implement the Commerce REST APIs might still attempt to update endpoints while changes are being published. During a publish operation, Commerce responds to all `PUT` or `POST` calls to endpoints that update publishable resources with HTTP status code 503, Service Unavailable.
- You can use the Commerce REST API to download information about recently published worksets. This can help you keep track of which changes were published. See [Publish changes using the REST API](#) for more information.

### Changes that do not require publishing

Not all changes you make are added to worksets for publishing. Some changes made in the administration interface take effect on your production storefront as soon as you save them. Some changes are automatically published during the next publish.

The following types of changes take effect as soon as you save them and are not added to worksets for publishing. Commerce lets you know you are making these types of changes by displaying a message in the changes tracker. See [Understand worksets](#) for more information.

- Shopper settings, such as changes to the password policy.
- Access control settings, such as changes to internal user profiles.
- Inventory updates.
- Account settings, for stores that support account-based commerce.
- If direct price editing is enabled for your Commerce store, any price changes you make are available on the storefront without publishing. See [Update prices without publishing](#) for more information.
- If direct catalog editing is enabled for your Commerce store, any catalog changes you make are available on the storefront without publishing. See [Edit catalog items without publishing](#) for more information.

The following types of changes are automatically published with the next workset or full publish that happens after they are saved. Commerce lets you know you are making these types of changes by displaying a message in the changes tracker. See [Understand worksets](#) for more information.

- Search settings, like index fields. Search settings do not appear in any workset changes list.
- Certain changes you make to the catalog, such as creating a new product type or changing a price list group, appear as a single item called Catalog Configuration. The Catalog Configuration item appears at the top of the changes list in every workset until it is published.

### Understand dependencies

Some Commerce items must be published together to maintain the integrity of their relationships. For example, if you update the description of a shipping method, Commerce must also publish the method's associated shipping regions, even if you did not make any changes to them. When you save changes to the shipping method, Commerce calculates the appropriate dependencies (the associated shipping regions) and also adds them to the same workset as the shipping method you saved.

Additionally, Commerce performs a final check before publishing a workset and displays dependencies that are not already in the changes list on the workset's **Review and Schedule** page. This list is populated by changes to dependencies that are saved in two different worksets. Consider the shipping method example described above. Both the shipping method and its associated shipping regions added to the same workset. But before that workset is published, suppose another user saves changes to one of the associated shipping regions in a different workset. The shipping method whose changes are saved in the first workset is not automatically added to the changes list in the second workset. But when the second workset is published, Commerce displays the shipping method as a dependency on that workset's **Review and Schedule** page.

## Understand worksets

A workset is a named group of changes that are published together. When you want to publish changes, you publish the workset that contains them. You can publish the changes in all worksets at once, or you can pick specific worksets to publish.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Worksets help you organize changes so you can more easily track and publish related items together. For example, suppose you are working on a holiday campaign that you want to go live at the end of November. You can create a workset called #holidayPromotions. Then, users who work on Commerce items that support the campaign, like promotions, and SKUs, collections, and layouts, can save their changes to this workset. Then, the workset can be published at a pre-scheduled time.

Commerce includes one workset, named #default. If you do not create any other worksets, Commerce automatically saves all publishable changes to #default.

When you save a change to a publishable item, Commerce automatically saves it to the active workset. If your Commerce environment includes multiple worksets, you can save your changes to a different workset or move saved changes from one workset to another, but all changes that require publishing are saved in at least one workset. There is no way to publish items outside of a workset.

Some Commerce items must be published together to maintain the integrity of their relationships. For example, if you update the description of a shipping method, Commerce must also publish the method's associated shipping regions, even if you did not make any changes to them. When you look at the workset that includes the shipping method, you will notice that it also contains the associated shipping regions. If you move the shipping method to a different workset, Commerce automatically moves the associated shipping regions.

### Understand who can create and publish worksets

Commerce administrators control each internal user's access to specific administration interface pages and tasks with roles and privileges. Only users who have the Publishing privilege assigned can create and publish worksets.

Any user who can edit Commerce items, such as catalogs, can view their changes in the workset that contains them, and can move their changes to a different existing workset.

For more information about privileges, see [Understand role-based access control](#).

## Save changes to worksets

When you log into the administration interface, you see the Changes tracker at the bottom of the main menu.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The Changes tracker is displayed only to users whose profiles allow them to edit publishable items. For example, a user who can edit catalog items will see the tracker but a user who can edit only accounts will not see it.

The information the tracker displays changes, depending on where you are working in the administration interface. See [Understand publishing](#) for more information about these kinds of changes.:

- When you navigate to a page where changes are always included in the next publish, the changes tracker displays the active workset as paused and notifies you that changes you make go live at the next publish.
- When you navigate to a page where changes do not require publishing, the changes tracker displays the active workset as paused and notifies you that changes you make go live as soon as you save them.

## Create and edit worksets

One default workset (named `#default`) comes with Commerce. Until you create your own worksets, all publishable changes are automatically saved in this default workset.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Remember that before you can create worksets, your Commerce user profile must have the Publishing privilege assigned. (See [Understand who can create and publish worksets](#) for more information.) All administration interface users who can access the Changes page can see all worksets, no matter who created them.

To create a workset:

1. On the **Changes** page, click **Publishing Schedule**.
2. Click **Add to Schedule** and select **New Workset**.
3. Enter a name for the workset.  
The name can be up to 25 characters long and can contain only letters, numbers, hyphens (-), and underscores (\_).  
  
Although not required, it is a good idea to assign unique workset names to make them easier to identify.  
  
Once a workset is created, you cannot change its name in the administration interface, though you can change it with the Admin REST API.
4. Click **Create**.  
The new workset appears in the publishing schedule, marked as Not Scheduled. Commerce adds a # symbol to the beginning of the name of every workset.

### Specify the active workset

Your changes are automatically saved in the active workset. Creating a new workset does not automatically make it the active workset. To make your new workset the active workset, select it from the **Active Worksets** dropdown list at the top of the **Changes** page.

### Move items to a different workset

You can move items from one workset to another, though you cannot simply remove them from their current workset without specifying a new home for them. If an item has dependencies, they are automatically moved to the other workset. To move items to a different workset:

1. On the **Changes** page, select a workset from the **Active Workset** dropdown list.
2. Select individual items to move or click the **Select Page** icon to select all the items in this workset.  
See [View changes in a workset](#) to learn how to sort and filter a workset to more easily find items to select.
3. Click the **Move** button.
4. Select a workset to move the changes to and then click **Move**.

### Delete a workset

You can delete only empty worksets. If you want to delete a workset that contains items, Commerce lets you select a new workset for them during the delete process. If you delete the active workset, the #default workset automatically becomes the active workset. You cannot delete the #default workset.

1. On the **Changes** page, click **Publishing Schedule**.
2. Click the **Delete Workset** icon for the workset. If the workset is empty, simply confirm that you want to delete it.
3. If the workset contains changes, select a workset to move them to and then click **Delete**.

Keep in mind that Commerce automatically deletes a workset (except #default, which is never deleted) once its contents have been successfully published.

### View the contents of a workset

To see the contents of the active workset, click it in the **Changes** tracker. Commerce displays the workset on the **Changes** page. To see the contents of a different workset, select it from the **Active Workset** dropdown list.

Each item in the workset list displays an icon you can click to see details about when changes were made and who made them:

- If only one author has made changes, the author's avatar appears in the icon.
- If two or more authors have made changes, the icon displays the number of authors.

Click the icon to see the names of authors who saved changes to the item since it was last published, as well as the date and time each change was made.

If an item is a member of more than one workset, the item also displays the number of worksets it belongs to. Click this link to see a list of all the worksets the item belongs to. See [Understand worksets](#) for more information about how Commerce publishes items that are in multiple worksets.

### Filter and sort items in a workset

The filtering features let you display a subset of a workset's items. Sorting lets you display items by date, from either newest or oldest. Filtering items in a workset is useful for tasks like selecting items to move to a different workset. However, filtering does not select specific items to publish; all items in a workset are published when that workset is published.

Select the **Filter By** check boxes along the left-hand side of the page to find specific types of items and changes in the workset. **Filter By** options include:

- Author: The user who made the change.
- Status: The type of change made to the item (edited, imported, new, and deleted).
- Area: The type of item (catalog, design, marketing, media, pricing, and setting).
- Application: The type of storefront application a design item belongs to (Storefront Classic or Open Storefront Framework).

Click **Clear Filters** to clear all check boxes and display all the items that were filtered out by the **Filter By** options.

To use the **Filter Change List** field, begin typing in the field. The list changes to include those items matching your criteria.

To sort the displayed items from newest or oldest, click the **Sort** dropdown at the top of the page and select a sort order.

## Schedule publishing

You can publish the active workset immediately or schedule a future date and time to publish it.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You can also schedule a full publish, which publishes all worksets at once.

### Publish a workset

You can publish the active workset immediately or schedule it to publish at a future time.

To schedule a publish:

1. Navigate to the **Changes** page of the workset you want to publish from the **Active Workset** dropdown list.
2. Click the **Publish Workset** button.  
Commerce displays the workset's **Review and Schedule** page.  
If the workset contains any dependencies, they are listed on this page. See
3. Specify when to publish the workset:  
To publish the workset right now, click **Publish Immediately**.  
To publish the workset at a future time, click the **Start Time** field to display a calendar/clock widget where you can pick a future date and time. (Click **Done** to close the widget.) Then click **Publish at Selected Time**.

If another publish has already been scheduled for the date and time you choose, Commerce displays an error and you cannot schedule the event until you pick a date and time that does not conflict with another scheduled publish. You can reschedule a workset publish by following these steps and publishing immediately or selecting a different time to publish.

### Schedule a full publish

A full publish targets all changes in all worksets. When a full publish runs, all unpublished worksets, even those that are not currently scheduled to publish, are published to your production storefront. When the full publish finishes, all worksets (except the `#default` workset) are removed from the schedule and deleted.

You can schedule a full publish to run one time, or you can create a schedule that runs full publishes at regular intervals, for example, nightly.

To schedule a full publish:

1. On the **Publishing Schedule** page, click **Add to Schedule** and select **Full Publish...** from the dropdown list.
2. In the **Schedule Full Publish** dialog, enter the following information:
  - A name for the publish event. The name is optional. If you do not enter a name, Commerce uses the default name, Unnamed publishing event.
  - If you are scheduling a one-time full publish event, set a start date and time, and ensure the **Repeat** field is set to None. The **Stop Time** field is disabled for one-time publish events.
  - If you are scheduling a recurring full publish, set a start date and time, and use the **Repeat** menu to select a time period—hourly, daily, weekly, monthly, or yearly. The dates and times you specify here use the time zone you configured on the Location tab on your store's Setup settings. For information on viewing and changing the time zone, see [Enter basic store information](#).
3. Click **Schedule**.  
The new event appears on the **Publishing Schedule** page.

Once you have scheduled a full publish, you cannot reschedule it. You must cancel it and then schedule a new one.

### Cancel a scheduled publish

You can cancel a scheduled workset publish or a full publish on the **Publishing Schedule** page.

- To cancel a full publish, click the event's **Delete from Schedule** icon.
- To cancel a workset publish, click the workset's **Unschedule Workset** icon. Canceling a publish does not delete the workset, but marks it as Not Scheduled in the Publishing Schedule.

## Publish changes using the REST API

In addition to publishing with the administration interface, you can use the Admin API to manage worksets, publish changes, and get information about recent publishing events.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You can use Admin API endpoints to perform tasks related to worksets and publishing, including:

- Create and manage worksets
- Specify a workset for a publishable item's changes
- Publish changes
- Download information about recently-published worksets

You can find detailed information about individual endpoints in the REST API documentation that is available through the Oracle Help Center. Be sure to select the version of the REST API documentation that matches the version of Oracle Commerce you are using.

### Manage worksets

The `Worksets` endpoints let you perform basic CRUD operations (create, read, update, and delete) on worksets.

- `createWorkset` creates a new workset with a name you specify.
- `deleteWorkset` deletes the workset whose ID you specify. A workset must be empty before you can delete it. You can use the `assignPublishingChangeList` endpoint to move changes from one workset to another.
- `getWorkset` returns the workset whose ID you specify.
- `listWorksets` returns a list of worksets. You can control the worksets returned in the response with query parameters.
- `updateWorkset` updates the name of the workset whose ID you specify.

### Specify a workset for an item

When you save a change to a publishable item in the administration interface, Commerce automatically saves it to the active workset. Endpoints that create or edit publishable items (for example, `updateProduct`), however, save changes to the default workset. To save changes to a different, existing workset, the request must include the `X-CC-Workset` header. For example, including the following header saves changes made by the request to the workset whose ID is `ws20001`.

```
"X-CC-Workset": "ws20001"
```

The `assignPublishingChangeList` endpoint moves a publishing change list and its dependencies from one workset to another. For example, the following request moves a publishing change list from the default workset to a workset whose ID is `ws20001`:

```
POST /ccadmin/v1/publishingChangeLists/assignPublishingChangeList

{
  "fromWorkset": "default",
  "toWorkset": "ws100001",
  "changeListId": "ijUCLwsUEiXLLuDjGWmrQriHM_10000"
}
```

You get `changeListId` and `fromWorkset` by sending a GET request to `/ccadmin/v1/publishingChanges` endpoint. You can control the items returned in the response with query parameters.

See [Understand worksets](#) for more information.

### Schedule publishing

You can publish a workset immediately or schedule a future date and time to publish it. Use the `publishChangeLists` endpoint to start or schedule a publish.

The following request publishes a workset immediately.

```
POST /ccadmin/v1/publishingChangeLists/publish
```

```
{
  "operationType": "selective_publish",
  "worksetId" : "default"
}
```

If the publish successfully starts, the endpoint returns a response similar to this:

```
{
  "publishRunning": true,
  "statusMessage": "A publish has been successfully initiated."
}
```

The following request schedules a worksheet publish for a future time.

```
POST /ccadmin/v1/publishingChangeLists/publish
```

```
{
  "operationType": "selective_publish",
  "dateTime": "2021-09-03T20:30:00.000Z",
  "worksetId" : "default",
  "eventName": "My publishing event"
}
```

If the publish is successfully scheduled, the endpoint returns the `repositoryId` for the publishing event.

```
{
  "repositoryId": "300001"
}
```

The following request schedules a full publish, which publishes all worksets at once. When a full publish runs, all unpublished worksets, even those that are not currently scheduled to publish, are published to your production storefront. When the full publish finishes, all worksets (except the `default` workset) are removed from the schedule and deleted.

```
POST /ccadmin/v1/publishingChangeLists/publish
```

```
{
  "operationType":"full_publish",
  "dateTime":"2021-09-03T20:30:00.000Z",
  "eventName":"Full event"
}
```

See [Schedule publishing](#) for details about publishing.

### Download information about recently published worksets

You can get information about publishing events that successfully completed during the last seven days with the Publishing History endpoints. The information returned by these endpoints helps you easily understand what items were published recently and provide an audit trail of what was changed on the storefront over the past week.

The Admin API includes the following Publishing History endpoints:

- `GET /ccadmin/v1/publishingHistory` returns an array of publishes from the last seven days. Each array includes high-level information about each publishing event in the array.
- `GET /ccadmin/v1/publishingHistory/{id}` provides the same information as `/ccadmin/v1/publishingHistory`, but for a specific publishing event.
- `GET /ccadmin/v1/publishingHistory/{id}/changes` provides detailed information about a specific publishing event.

Keep the following points in mind about how the Publishing History endpoints work:

- The endpoints return information about publishing events that completed successfully. No information about failed publishing events is returned.
- The endpoints do not return any information about changes made by direct catalog editing or direct price editing. For more information about these features, see [Edit catalog items without publishing](#) and [Update prices without publishing](#).
- The endpoint responses include same list of items that appear in a publishing change list. Secondary items, such as translations, are not returned in the responses.
- Certain changes you make to the catalog, such as creating a new product type or changing a price list group, appear as a single item called Catalog Configuration. Endpoint responses include these changes as individual items.

`GET /ccadmin/v1/publishingHistory` returns an array of publishes from the last seven days. For each publishing event returned, the response includes the name and profile type of the user who started the publish, the type of publish (`selective_publish` when a workset is published or `publish` when all worksets are published at once), the name and ID of the publishing event, the start and end date and time, the number of high-level items published, the name of the workset published (for a full publish, this value is `null`), and the names of users who made changes that were published.

`GET /ccadmin/v1/publishingHistory/{id}` returns information about a specific publishing event. The response includes the same information as the `/ccadmin/v1/publishingHistory` response, but for the specified event only. The sample request

GET /ccadmin/v1/publishingHistory/publish3002 returns details like the following in the response:

```
{
  "publishInitiator": "admin",
  "worksetName": "default",
  "eventName": "default",
  "numberOfHistoricalChanges": 1,
  "startTime": "2022-03-03T19:02:35.000Z",
  "operationType": "selective_publish",
  "id": "publish30002",
  "endTime": "2022-03-03T19:02:45.356Z",
  "publishInitiatorProfileType": "adminUI",
  "authors": [
    "admin:User,Admin"
  ],
  "worksetId": "default"
}
```

GET /ccadmin/v1/publishingHistory/{id}/changes returns an array of items published in a specific publishing event. For each published item returned, the response includes the ID of the publishing event, the display name and ID of the item, the name, ID, and profile type of the last author who changed the item, the date and time of the last change, the type of change (0 = update, 1 =delete, or 2 = create), the type of item changed (for example, product), an array of change details, with change time and author information for each change, and an array of the authors who changed the item.

The sample request GET /ccadmin/v1/publishingHistory/publish3002/changes returns details like the following in the response:

```
"items":[
  {
    "lastName":"User",
    "authorProfileType":"adminUI",
    "displayName":"The Girl with the Dragon Tattoo",
    "author":"admin",
    "changeType":0,
    "subsystem":"OCCS-Admin",
    "assetType":"product",
    "changeDetails":[
      {
        "changeTime":"2022-03-03T19:01:32.000Z",
        "author":"admin"
      },
      {
        "changeTime":"2022-03-03T19:01:39.000Z",
        "author":"admin"
      },
      {
        "changeTime":"2022-03-03T19:01:44.000Z",
        "author":"admin"
      }
    ],
    "changeTime":"2022-03-03T19:01:44.000Z",
  }
]
```

```

        "assetTypeDisplayName": "Product: Base Product",
        "firstName": "Admin",
        "assetId": "Product_36Exy",
        "id": "change30004",
        "authors": [
            "admin:User,Admin"
        ]
    }
}
}

```

### Use query parameters with Publishing History endpoints

The Commerce REST APIs support a number of query parameters that you can use to control what data is returned in `GET` endpoint responses. You can use query parameters to filter the publishing data returned in the endpoint responses or to page through the results. These can be useful when you publish frequently or have publishes that include a large number of changes.

This section includes sample requests that show query parameters that you might find useful for the Publishing History endpoints. For complete details about how to use query parameters with the REST APIs, see [REST API query parameters](#).

Depending on how often and how many changes you publish, the Publishing History responses can be quite large. To prevent the response from becoming too large, the number of items returned is limited by default to 250. You can override this value by using the `limit` query parameter to specify a different number. For example, the following call limits the number of publishes returned to 5.:

```
GET /ccadmin/v1/publishingHistory?limit=5
```

To page through the results, you can use the `offset` parameter. For example, suppose you have returned the first group of 250 publishes using this call:

```
GET /ccadmin/v1/publishingHistory
```

You can return the next group of 250 using the following call:

```
GET /ccadmin/v1/publishingHistory?offset=250
```

The default value of `offset` is 0, which means the listing begins with the first item. So setting `offset` to 250 means the listing begins with the 251st item. You can use `limit` and `offset` together. For example, to return the 401st through 600th publish:

```
GET /ccadmin/v1/publishingHistory?limit=200&offset=400
```

You can use the `fields` parameter to return only certain properties you explicitly specify. The following sample request returns an array of only the publish IDs and published workset names of the publishing events.

```
GET /ccadmin/v1/publishingHistory?fields=items.id,items.worksetName
```

You can use the `exclude` parameter to exclude certain properties from the response. For example, suppose you don't need to know anything about the authors for a publishing event. The following sample request excludes that information from the response:

```
GET /ccadmin/v1/publishingHistory/publish3002?exclude=items.authors
```

The following sample request returns an array that include changes made by the author Merchandising User.

```
GET /ccadmin/v1/publishingHistory?q=authors eq "User,Merchandising"
```

## Configure Business Accounts

Oracle Commerce allows you to create accounts for companies that do business with you, such as manufacturers, distributors, and wholesalers.

Each account represents a single organization and a unique customer. Only Commerce users whose accounts include the Administrator role can set up accounts for organizations, and work with these accounts using the administration interface. See [Understand Role-based Access Control](#) for more information.

**Note:** This feature may not be enabled in your environment.

With Oracle Commerce, you can also allow a prospective account-based shopper to submit a new account registration request for an account using the store. This feature lets a shopper submit a new account registration request by providing required business details. After submitting the required details, the information is reviewed by an administrator from the merchant side and, if needed, there may be a request for additional details such as credit checks and more. The request is then either approved or rejected. If the request is approved, the new contact for the account is activated.

### Understand accounts, contacts, and contracts

Account-based commerce uses a combination of accounts, contacts, and contracts to manage access to a storefront by companies that do business with you.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

In order to provide an organization with access to an account-based storefront, the organization needs an account on that storefront with pertinent details such as the organization name, logo, billing and shipping addresses, tax reference number, and so on.

An account can contain sub accounts that represent multiple hierarchies of organizational structure. For example, a principal account represents a company. That account can contain a number of sub accounts that represent divisions or business units, and each division sub account can contain a sub account for each department in the division. Sub accounts can automatically inherit account properties, billing and shipping addresses, and contract details from parent accounts. See [Work with accounts](#) for more information about creating accounts. See [Configure page layouts for account hierarchies](#) for information about how to configure layouts and widgets to support hierarchies.

Each account is associated with a list of contacts. A contact is an individual within an organization who is allowed to purchase from the account-based storefront. You create contacts in the Commerce administration interface, but you can also assign delegated administration privileges to contacts so they can create and manage other contacts. See [Understand delegated administration](#) and [Work with account contacts](#) for more information.

#### Work with Multiple Stores from One Commerce Instance

When working with multiple sites, accounts must be associated with a contract, which assigns a catalog and a group of price lists for a given site. A contract between the storefront

and the organization defines what products the organization can purchase on the site and how much it will pay for them. Note that before a contact can access a site, the contact's account must have an associated contract.

You can configure the following business account-specific information on a per site bases:

- contracts
- approval settings
- payment method types
- shipping methods

For additional information on working with multiple sites, refer to the [Run Multiple Stores from One Commerce Instance](#).

If a primary account includes sub accounts, each sub account automatically inherits its parent's contracts by default. See [Work with account contracts](#) for more information.

## Understand delegated administration

Once you set up an account for an organization, you can assign roles to contacts that allow them to manage certain aspects of their accounts.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Delegated administrators do not have access to the Commerce administration UI. Delegated administrators perform all account-management tasks on their My Account pages, which are available once they log into your store.

Changes saved by a delegated administrator or approver are immediately visible both on the storefront and in the Commerce administration interface.

See [Understand account-based roles](#) for details on the roles available to contacts.

## Work with accounts

Commerce administrators use the administration interface to work with accounts.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Administrators can create and modify accounts, as well as provide account information, such as addresses, contacts, contracts and logos. Accounts can access multiple sites. Once you have created an account, you can use the site selector to choose the site to work with. Once you have created account assets, such as a contact or a contract, you can indicate which sites to work with using the All Sites tab.

For a user to successfully log into a store, the account must be active, the user's contact should be active and the account should be associated with a valid contract. If a business has multiple entities, such as departments or divisions, that require a different set of products or prices, you can create a separate sub account for each entity.

Each contact can be associated with multiple principal accounts and sub accounts, though in the case where a contact is associated with more than one account, you can

assign a default account to each contact. When a contact that is associated with more than one account is logged into your online store, they can switch to any of their active accounts by selecting an account from a drop-down list in the store's header. They can add items to the cart for one account, then switch to another account and add items to that account's cart. The shopping cart for one account persists while a contact is shopping for another account.

Contacts must be created by either a Commerce administrator or another contact who is a designated administrator. Contacts cannot register on your store themselves.

### Create an account

You can specify whether a new account is a principal account or a sub account:

- A principal account is an account that does not have a parent account. It can be a stand-alone account or it can be the top-level account in an account hierarchy.
- A sub account is the child account of another account in an account hierarchy. When you create sub accounts, Commerce does not limit the depth of the hierarchy, but sub accounts inherit account properties only up to the 14th level.

To create a new principal account:

1. On the **Accounts List** page, click **New Account**.
2. Enter the information that identifies the new account. See the table that follows this procedure for information about each property.  
By default, **Principal Account** is already selected under **Location in Hierarchy**.
3. Click **Save**.
4. Now you can associate addresses, contacts, and contracts with the account you just created. See [Work with account addresses](#), [Work with account contacts](#), and [Work with account contracts](#) for more information. You can also work with an account's order approval settings. See [Use Order Approvals](#) for more information.

To create a new sub account:

1. On the **Accounts List** page, click **New Account**.
2. Enter a name for the account in the **Account Name** box.
3. Under **Location Hierarchy**, select **Sub Account**.
4. Click the **Edit** button next to the **Parent Account** box.
5. Select an account from the list. You can filter the list by typing or pasting some text in the Accounts box.  
The filter control matches letters or numbers that you type, wherever they appear in the name or ID, not just at the beginning. Usually, as you type more characters, there are fewer matches. When you see the account you want, select it.
6. Click **Done**.
7. By default, the sub account inherits its Description, Classification, DUNS Number, Account Type, Unique Identification Number, Tax Reference Number, VAT Reference Number, and Account Logo from the parent account. To replace an inherited value, uncheck the Inherit checkbox next to the property you want to change, and then enter the new information. See the table that follows this procedure for information about each property.
8. Click **Save**.
9. Now you can associate addresses, contacts, and contracts with the account you just created. See [Work with account addresses](#), [Work with account contacts](#), and [Work with](#)

[account contracts](#) for more information. You can also work with an account's order approval settings. See [Use Order Approvals](#) for more information.

The following table describes the properties that identify an account.

Property	Description
Account Logo	The logo to be associated with this account. See <a href="#">#GUID-51A1A670-5581-42A3-8827-58FA3D97DF07/TITLE_X5J_43Z_HHB</a> for more information.
Account Name	The name of the account. This field is required.
Account Type	The account type can be none, company, division, department or group. Default is set to none.
Active	Activates the new account. If an account is not active, none of the contacts associated with it will be able to log into the store.
Classification	Identifies the type of account: Standard, Preferred and Enterprise, OEM, Distributor and Supplier
Description	A description of the account.
DUNS Number	If used, a DUNS number is a unique nine-digit number employed by businesses who have established Dun & Bradstreet credit.
Location in Hierarchy	Indicates if this is a principal account or it is a sub-account.
Tax Reference Number	If used, a tax reference number associated with the account.
Unique Identification Number	If used, the account's Unique Identification Number.
VAT Reference Number	If used, the account's Value Added Tax identification number.
Additional Information	<p>If custom properties were created for accounts, they appear at the bottom of each account's General tab, in the Additional Information section.</p> <p>Custom account properties are created with the Commerce Admin API. Once a custom account property is created, the property is added to all accounts, including accounts that already existed when the custom property was created.</p> <p>For more information, see <a href="#">Create custom properties for accounts</a>.</p>

### Find accounts

You can search for an account by entering any part of the account name into the search field at the top of the Accounts List page.

You can search by multiple criteria, including custom properties, by following these steps:

1. Click the **advanced search** icon to the right of the search field to display the **Advanced Search** dialog.
2. Select a property from the drop-down list.  
You can search by account name, account ID, or any custom short text properties that have been added to the account.
3. Click **Add Criteria** to add another property to the search.  
Each search can contain up to five properties.
4. If you are searching on more than one property, select one of the following:
  - Match all: (default) Search results include the accounts that match all the search criteria. If an account matches some of the criteria but not all, it is not returned.
  - Match any: Search results include the accounts that match any search criteria.
5. Click **Search**.

### Associate a contact with an account

You can create contacts without associating them with an account by following the instructions described in [Work with account contacts](#). This section describes how to associate existing contacts with an account.

**Note:** A sub account does not inherit its parent account's contacts. You must add manually add contacts to a new sub account.

To associate a contact with an account:

1. On the **Accounts** page, click **Accounts List** and select the account to modify.
2. Click the **Contacts** tab.

From this screen you can create a new contact or associate an existing contact. When you add a contact to an account, Commerce sends an email to the contact's address that contains a link for setting a new password. The password must conform to the password policy you set on the Shopper Settings page. For more information, see [Configure Shopper Settings](#).

To create a new contact to associate with an account:

1. Select the **New Contact** button.
2. Enter the required fields, which include Last and First Name, and Email/Login ID.  
**Note:** You cannot modify the email address once the contact has been saved.
3. Verify that the account displayed is the correct account.
4. Click the **Active** check box to activate the contact.  
**Note:** Only active contacts can log into the store.
5. Click **Save**.

To associate an existing contact:

1. Select **Add Contact** button.
2. Select the contact from the table
3. You can search for a contact by entering the first name, last name or email address into the search field.
4. Click **Add**.

### Modify an account

Only an Oracle Commerce administrator can modify an account using the following steps:

1. On the **Accounts** page, click **Accounts List** and select the account to modify.
2. If you have multiple sites, use the **All Sites** tab to select the site associated with the account.
3. Enter the updated information for the account.
4. Click **Save**.

### Add account approval

You can add account approval limits to an account. Note that approval limits are site specific. Refer to the [Use Order Approvals](#) section for information on order approvals. Set the approval limits using the following steps:

1. On the **Accounts** page, click **Accounts List** and select the account to modify.
2. Select the **Approvals** tab.
3. Check the **Require approval** checkbox and set the approval limit.
4. If your environment uses an external service that can determine approval settings, select the check box. See [Use Webhooks](#) for information on extending the Order Approval services and working with webhook APIs.

### Add or change an account logo

Logos or media files must be loaded using the Media page before they can be associated with an account. Refer to the [Upload media files](#) section for information.

To add or change a logo, perform the following steps:

1. On the **Accounts** page, click **Accounts List** and select the account to modify.
2. Click the **Select Image** button.
3. Select the media file from the **Media Library**.
4. Click **Add**.
5. The image is displayed in the logo field.

You can delete the logo by clicking the **X** in the upper right corner.

### Move an account

You can move an account to a new position in its current hierarchy or you can move it to a different hierarchy. Keep the following in mind when you plan to move an account:

- You cannot make a parent account a sub account of any of its children. For example, you cannot make a principal account a sub account in its current hierarchy.
- You can move both principal and sub accounts to different hierarchies.
- Changing a sub account to a principal account moves it to the top of a new hierarchy.
- When you move a parent account, all its sub accounts move with it.

- Any account keeps its addresses, contracts, and contacts when you move it. If an account has no addresses and you move it to be a sub account, it automatically inherits any available addresses from its new parent.

To make a sub account a principal account:

1. On the **Accounts** page, click **Accounts List** and select the account to move.
2. Click **Principal Account** under **Location in Hierarchy**.
3. If the account inherited property values from its parent, you must replace those values. See [#GUID-51A1A670-5581-42A3-8827-58FA3D97DF07/GUID-E3CA4A72-A9F7-4247-9BED-57F8F4BA88FA](#) for details about account properties.

To move an account to a new parent:

1. On the **Accounts** page, click **Accounts List** and select the account to move.
2. If the account is currently a principal account, click **Sub Account** under **Location in Hierarchy**.
3. Click the **Edit** button next to the **Parent Account** box.
4. Select an account from the list. You can filter the list by typing or pasting some text in the Accounts box.  
The filter control matches letters or numbers that you type, wherever they appear in the name or ID, not just at the beginning. Usually, as you type more characters, there are fewer matches. When you see the account you want, select it.
5. Click **Done**.
6. By default, the moved account inherits its Description, Classification, DUNS Number, Account Type, Unique Identification Number, Tax Reference Number, VAT Reference Number, and Account Logo from the parent account. To replace an inherited value, uncheck the Inherit checkbox next to the property you want to change, and then enter the new information. See the table that follows this procedure for information about each property.
7. Click **Save**.

### Deactivate an account

You cannot delete an account; however you can deactivate an account. When an account has been deactivated, no contact that has been associated with the account will be allowed to log into the store.

1. On the **Accounts** page, click **Accounts List** and select the account to deactivate.
2. Uncheck the **Active** checkbox to indicate that the account has been deactivated.
3. Click **Save**.

### Associate shipping and payment methods with an account

When you create or update an account, you can specify shipping and payment methods used with the account. These methods can be set for accounts that are associated with a site.

Before you can associate any shipping or payment methods, you must configure the methods so that shoppers can use them. Shipping methods, which are configured using the Settings > Shipping Methods tab, are described in the [Configure Shipping](#). Payment methods are selected using the payment gateway tab in Settings > Payment Gateways. For information on configuring payment methods, refer to the [Configure Payment Processing](#).

To associate shipping and payment methods:

1. Select or create an account.
2. Select the Shipping/Payment tab.
3. If you click the **Use All of the Site Shipping Methods** checkbox, all of the shipping methods used on the currently selected site will be available and will be displayed.  
If you deselect the check box, add the shipping methods to use. You can select multiple methods
4. If you click the **Use All of the Site Payment Method Types** checkbox, all of the payment method types used on the currently selected site will be available. If you deselect the check box, add the payment method types to use. You can select multiple methods.

Note that if the shipping method or payment method type is added to a site in Settings, and you have not selected the associated Use all check box, you must manually add the new shipping or payment method to an account before shoppers can use it.

A shipping method or payment method type that is associated with an account/site pair cannot be removed or disabled. You can remove the association by going to the account's Shipping/Payment table, selecting the site and deleting the shipping or payment method.

## Work with account addresses

Each account can be associated with multiple addresses, such as billing and shipping addresses in different states.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

An account's addresses appear in the following places:

- The Managed Account Address Book is seen by each of the account's logged-in contacts. Contacts who are buyers can select billing and shipping addresses from the available account addresses when they place orders. Additionally, contacts who are delegated administrators and/or Account Address Managers can add and manage addresses for the account from their My Account page on the storefront.
- The Address pane in the Commerce administration interface. Only Commerce administrators can see and work with addresses here. Contacts who are delegated administrators cannot access the Commerce administration interface.

### Create account addresses

To create an address for an account:

1. Navigate to the account's Addresses page in the administration interface or on the storefront:
  - Commerce administrators in the administration interface: On the **Accounts** page, click the name of the account. Then click the **Addresses** button on the left-hand side of the screen.
  - Delegated administrators on the storefront: Click **My Account**, then click **Account Addresses**.
2. Click **New Address** and enter the address details.

The table that follows this procedure describes the Address properties. Address properties in this table are part of the default address format that ships with Commerce. If your Commerce environment includes custom address formats, different properties might be available when you create an address. Additionally, custom address formats might make some of the required properties in this table optional. Contact your Site Administrator for details about creating addresses with custom address formats.

3. Click **Save**.

Property	Description
Nickname	(Required) An internal name that identifies the address in both the administration console and contacts' account address book.  Nicknames do not have to be unique across addresses or accounts.
Company Name	(Required) The name of the company.
Phone Number	(Required) A phone number for the company.
Address Line 1	(Required) First line of the address. For example, 1000 Smith Street.
Address Line 2	Second line of the address. For example, 4th Floor.
City	(Required) Name of the city where the address is located.
Province/State	(Required) Province or State where the address is located.
Country	(Required) The country where the address is located.
Postal/ZIP Code	(Required) Postal/ZIP code for the address.
Type	Commerce includes two types of addresses by default: Billing and Shipping. Your environment might also contain custom address types that you can select from the <b>Type</b> list. You can assign more than one type to each address.
Default Shipping Address	When a contact checks out on your store, the default shipping address is automatically selected and appears at the top of the list of available shipping addresses.  Only one account address can be the default shipping address.  By default, a sub account inherits its parent's default shipping address. Changing the default shipping address for a sub account does not change it for the parent.
Default Billing Address	When a contact checks out on your store, the default billing address is automatically selected and appears at the top of the list of available billing addresses.  Only one address can be the default billing address.  By default, a sub account inherits its parent's default billing address. Changing the default billing address for a sub account does not change it for the parent.

### Edit or delete account addresses

To edit or delete an address:

1. Navigate to the account's Addresses page in the administration console or on the storefront:
  - Commerce administrators in the administration interface: On the **Accounts** page, click the name of the account. Then click the **Addresses** button on the left-hand side of the screen.
  - Delegated administrators or **Account Address Managers** on the storefront: Click **My Account**, then click **Account Addresses**.
2. Select the name of the account with the address to modify.
3. Make the edits to the address.
4. Once you have made your changes, click **Save**.
5. To delete the address, click the **delete** icon in the upper right corner of the address.

## Work with account contacts

Contacts are shoppers who perform various activities for the account.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Each contact can be associated with multiple principal accounts and sub accounts, though in the case where a contact is associated with more than one account, you can assign a default account to each contact.

When working with multiple sites in a single Commerce instance, before a contact can access a site, the contact's account must have an associated contract.

Contacts must be created by either a Commerce administrator or another contact who is a designated administrator. Contacts cannot register on your store themselves.

The list of an account's contacts appears in the following places:

- The My Account page seen by the account's delegated administrators. Delegated administrators can add and manage accounts for the account from their My Account page on the storefront.
- The Contacts pane in the Commerce administration interface. Only Commerce administrators can see and work with contacts here. Delegated administrators cannot access the Commerce administration interface.

### Understand account-based roles

Roles grant access permissions to account-based contacts. These roles allow you to specify the actions that each contact can perform. Note that a contact can have more than one assigned role. The following table describes the roles that you can assign to a contact:

Role	Description
Account Address Manager	Contacts that have the right to create, edit and delete account addresses. Additionally, these contacts have the ability to manage account addresses during the checkout process.
Administrator	Assigning this role lets you delegate some administrative tasks to a contact. Delegated administrators can create, and manage contacts for their accounts, including assigning and removing administrator and approver privileges for other contacts. They can also view, create, and manage addresses for their accounts, including specifying a default billing and shipping address for an account. Delegated administrators can only see and work with contacts and addresses for accounts to which they are assigned.
Approver	Assigning this role lets you delegate the task of approving orders to a contact. Approvers can view and approve any orders in their accounts that require approval, including their own orders. Approvers can only see and work with orders for accounts to which they are assigned. For further information, refer to the <a href="#">Use Order Approvals</a> section.
Buyer	The default role, which allows the contact to purchase items from the account-based catalog.
Profile Address Manager	Contacts that can create, edit and delete profile addresses. Additionally, these contacts have the ability to manage profile addresses during the checkout process.

To assign roles to a contact:

1. Create a new contact, or select a contact to work with.
2. Select **Accounts Membership**.
3. Click the **edit** icon.
4. Select the **Account Address Manager** or **Profile Address Manager Storefront Roles** and click **Save**.

For roles for internal users, see [Configure Internal User Accounts](#).

### Create a contact

Both Commerce administrators and contacts who are delegated administrators can create new contacts. Commerce administrators can create contacts for all accounts, as well as contacts that are not associated with any accounts. Delegated administrators can create new contacts only for their own accounts.

The process of creating a contact does not include assigning a password. When a contact is associated with an account, Commerce automatically sends an email to the contact that contains a link for setting a new password. The new password must conform to the password policy you set on the Shopper Settings page. For more information, see [Configure Shopper Settings](#).

In order for a contact to receive the email they use to create their password, your store must have an email service configured and you must customize and enable the Account Assignment Changed email template. For more information, see [Configure Email Settings](#).

To create a contact as part of an account:

1. Navigate to the account's **Contacts** page in the administration interface or on the storefront:
  - Commerce administrators in the administration interface: On the Accounts page, click the name of the account. Then click the **Contacts** button on the left-hand side of the screen.
  - Delegated administrators on the storefront: Click **My Account**, then click **Contacts**.
2. Click **New Contact** and enter the contact's details.
3. Click **Save**.
4. Click the **Account Memberships** link.
5. Select the storefront roles for this contact.
6. Save your changes.

### Edit a contact

You can edit a contact's first name, last name, account, active status, and the values of any custom properties. You cannot edit the email address or password. Contacts who forget their passwords must click the Forgotten Password link on the store's login page and enter their login email address. Commerce sends a link to the email address. The contact clicks the link to reset their password. If the link has expired when the contact clicks it, they see a page where they can request a new link.

To edit a contact do the following:

1. Click the **Settings** icon, then click **Accounts**.
2. Click the **New Contact** button.
3. Enter the information for the new contact. See the two tables that follow this procedure for information about each field.
4. Once you have made your changes, click **Save**.  
Refer to the [Configure the password policy](#) for information on resetting contact passwords.

The following table describes the contact's General properties.

Property	Description
Last Name	The last name of the contact. This field is required.
First Name	The first name of the contact. This field is required.

Property	Description
Email Address/Login ID	<p>The email address of the contact. The contact uses this email address to log into your store. This is also the address where Commerce sends email that the contact uses to set their password. This field is required.</p> <p><b>Note:</b> Once the contact has been created, you cannot modify the Email Address/Login ID.</p>
Active	<p>Specifies whether the contact is active. Only active contacts can log into the store, see catalogs and prices associated with their accounts. Active contacts are active on all accounts they are associated with.</p>
Additional Information	<p>If custom properties were created for shopper profiles, they appear at the bottom of each contact's General tab, in the Additional Information section.</p> <p>Custom profile properties are created with the Commerce Admin API. Once a custom profile property is created, the property is added to all shopper profiles, including any profiles that already existed before the custom property was created. For more information, see Add custom properties to a shopper type.</p> <p>Custom profile properties do not automatically appear on your store, for example, when a delegated administrator creates a new contact. To allow custom profile properties to be displayed and edited on your store, you must write custom widgets to retrieve the values of custom profile properties, and also set the values of any custom properties you have created. See Access custom properties using the UserViewModel for more information.</p>

The following table describes the contact's Account Memberships properties.

Property	Description
Default Account	<p>The account that this contact is automatically associated with when they log into your store. Each contact can be associated with only one default account.</p> <p>Only Commerce administrators see this property. Delegated administrators cannot assign a new contact to a different default account.</p>
Accounts	<p>All accounts with which this account is associated.</p> <p>Only Commerce administrators see this property. Delegated administrators cannot assign a new contact to accounts.</p>

Property	Description
Storefront Roles	<p>Specifies the contact's role for an account. You can assign different roles to a contact for each account they are associated with.</p> <p>Commerce administrators can assign roles to all contacts. Delegated administrators can assign storefront roles only to contacts in accounts for which they have the Administrator role.</p> <p>Refer to the <a href="#">Understand account-based roles</a> for detailed information on each role.</p>

### Find contacts

You can search for a contact by entering first name, last name, or email address into the search field at the top of the Contacts List page.

To search by multiple criteria, including custom properties, click the advanced search icon to the right of the search field to display the Advanced Search.

1. Select a property from the drop-down list.  
You can search by first name, last name, email address or any custom short text properties that have been added to profiles.
2. Click **Add Criteria** to add another property to the search.  
Each search can contain up to five properties.
3. If you are searching on more than one property, select one of the following:
  - **Match all:** (default) Search results include the contacts that match all the search criteria. If a contact matches some of the criteria but not all, it is not returned.
  - **Match any:** Search results include the contacts that match any search criteria.
4. Click **Search**.

### Deactivate a contact

You cannot delete a contact, but both Commerce administrators and delegated administrators can deactivate a contact. Contacts who are no longer active cannot log into any of the accounts to which they were assigned. See [#GUID-7293FC33-A16B-4C40-A4F3-150198E9F236/TITLE\\_MRM\\_MBF\\_3HB](#) for details about setting a contact's Active property.

Commerce administrators can also remove a contact's association with an account in the administration interface. See [#unique\\_226/unique\\_226\\_Connect\\_42\\_TITLE\\_DY4\\_MCZ\\_HHB](#) for more information.

### Allow contacts to create addresses

Business account contacts can be allowed to add or manage an account address or an individual shopper's address during the checkout process if they have been configured with the appropriate role.

This section describes how to work with Storefront Classic widgets. For details about corresponding OSF widgets, see Design Account-Based Storefront Pages.

To allow a contact to create a shopper's address when placing an order, assign that contact the Profile Address Manager Role. This role allows a contact to see, select and create a new profile address when they are working with profiles or placing an order. Note that this role is not required to see or select a profile when working with profiles or placing an order.)

A contact can also be allowed to create or edit an account address when working with a profile or placing an order. To do this, give the contact the Account Address Manager role. Note that this role is not required to see or select an account address when working within the profile or placing an order. It is possible for a contact to have both the Account Address Manager and Profile Address Manager roles. By default, the delegated administrator has both of these roles. Contacts do not have these roles by default.

When implementing this feature on the store front, you need to ensure that you have the latest version of the Managed Account Address widget, which allows contacts to manage addresses when placing an order, if they have been assigned the appropriate role. For information on the Managed Account Address Book widget, refer to the [Appendix: Layout Widgets and Elements](#).

Additionally, you must create a vertical tab on an instance of the profile layout and ensure that you have the latest version of Account Address Book widget, which allows the contact to manage addresses in the Profile area, if they have been assigned the appropriate role. For information on creating a vertical tab, refer to the [Add vertical tabs](#) section. For information on the Account Address Book widget, refer to the [Appendix: Layout Widgets and Elements](#).

## Work with account contracts

Contracts let you associate a particular catalog, price group, and other terms with each account.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Contracts can be created within the context of a published site. You can associate an account with more than one contract. This allows you to run multiple sites from a single Commerce instance. Note that a contact cannot access a site until a contract has been associated with the contact's account. For information on working with multiple sites, refer to [Run Multiple Stores from One Commerce Instance](#).

Once you have defined a contract for an account by associating the account with a catalog and a price group, you can change the catalog or price group but you cannot leave either field blank. To prevent a contract from being used, deactivate the account so that all transactions with the account stop. See [Deactivate an account](#) for more information.

If you enable Account Activated or New Contract Added emails, all contacts associated with an account are notified when a contract is added, or if the account is moved to a new parent, where it inherits the parent's contracts by default. See [Enable the types of email your store sends](#) for more information.

Commerce administrators create and manage contracts in the Commerce administration interface. Delegated administrators cannot perform these tasks.

### Create or update an account contract

To create a new contract or update an existing contract:

1. On the **Accounts** page, select the account whose contract you want to manage.
2. Click the **Contract** tab to see contract information for the site selected in the site selector.

3. If you are working with a sub account, it inherits its parent account's contract for the selected site by default. To replace an inherited contract, uncheck the **Inherit Contract** checkbox.
4. Enter or modify the information for the contract. See the table that follows this procedure for information about each field.
5. Click **Save**.

Property	Description
Catalog (required)	A catalog associated with this contract. Only published catalogs appear in the list of catalogs you can select from. See <a href="#">Manage Your Catalog</a> for more information.
Contract Description	A description of the contract.
Contract Name (required)	The name of the contract.
External Contract Reference	Alphanumeric value that allows you to store contract references from an external system.
Price List Group (required)	A price group associated with this contract. Only active, published price groups appear in the list of price groups you can select from. See <a href="#">Configure Price Groups</a> for information.
Site	Information on the site associated with this contract including the site name and URL. Note that only a published site can be associated with a contract.
Terms and Conditions	Text field to provide terms and conditions of the contract.

## Understand shoppers and new account registration requests

You can allow a prospective account-based shopper to request registration of a new store account.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Enabling this feature lets a shopper submit an account registration request for a new account by providing required business details. The information is reviewed by an administrator from the merchant side after the shopper submits the required details, and, if needed, the administrator may request additional details from the shopper such as credit checks. The registration request is then either approved or rejected. If the request is approved, the new contact for the account is activated.

An example of how the basic process works is provided in the list that follows. This high-level description is provided only as example and an introduction and does not necessarily mean that your process would work exactly this way.

For example, all of the emails that are sent during the approval/rejection process are only lightly touched upon in the example process flow. For more detail on the automated emails described in the process, refer to [Configure Email Settings](#).

- The administrator for the account-based shopper enables the ability for a shopper to request registration of a new store account in the Settings area of administrator user interface. Refer to [Configure Account-based Shoppers](#) in the Configure Shopper Settings section for more details.

- A prospective account-based shopper uses the store user interface to submit a new account registration request. When the registration request is received, its status at this point is New.
- The administrator sees the new registration request in the Registration Requests area of the Accounts page. Refer to [Work with account registration requests](#) for more information on how to view and work with these types of requests.
- The administrator opens the registration request and begins reviewing it.
- The administrator saves some review changes and/or explicitly sets the request status to Review.
- Another administrator reopens the registration request to review it and decides more information is needed before an approval decision can be made. This administrator can then change the status to More Info Needed.
- Outside of the store, the administrator emails the account requester asking for additional information.
- The account requester sends the administrator the required information and sends it back to the administrator.
- After reading the account requester's email, the other administrator opens the registration request, adds the new/missing information, and sets the registration request's status back to Review.
- The original administrator opens the registration request and makes a decision whether to accept or reject the account request.
- If the administrator accepts the registration request, an approval email is sent to the account requester. The registration request then disappears from the Registration Request list and appears in the Account list. The account requester then becomes a contact in the new account.
- If the administrator rejects the registration request, they can optionally enter comments to add to the rejection email.

The rejection email is sent to the account requester and the registration request remains in the Registration Request list with a status of Rejected.

## Submit new account registration information as a business shopper

Prospective account-based shoppers can submit a new account registration request using the store.



*This section applies to Storefront Classic only.*

This feature lets a shopper submit a new account registration request for a new account by providing required business details.

If account-based shoppers is enabled, the shopper who wants to submit a new account registration request clicks on the Register For An Account link found at the bottom of the Login dialog box. A form dialog box is presented where they provide their name, address, phone number, and some notes to accompany their request if needed.

**Note:** When the API is used to submit a new registration request with multiple addresses, each address must have a unique nickname. If multiple addresses are submitted with the

same nickname, only one is saved. The same is true when the API is used to create an account with multiple addresses.

They must also provide a Company Name and Name Of A Related Existing Account (if needed). Company Name is the name of the company for which the shopper is a business-to-business buyer. They are not registering as a regular consumer shopper. The company name will be pre-populated into the Account Name in the General tab (see below) of the registration request that the administrator sees. The Related Existing Account field is a piece of information provided by a prospective company buyer if, for example, they want to be a buyer who wants to register a new account for the Southern Division of a larger account that already exists. This is where they would indicate the name of the larger account that already exists. This field is optional.

After this information is entered correctly, the shopper requesting the account clicks Submit to begin the account request approval process. They receive a Thank You message that acknowledges that their request has been submitted and that they may be contacted if more information is needed. The shopper can also click Cancel to cancel the process.

Once an account request has been submitted, the administrator can go to the Registration Requests area on the Accounts area and view, update, accept, and reject account registration requests. Anyone with the administrator and/or account manager Role can view, update, accept, and reject registration requests.

## Work with account registration requests

When the shopper submits the requested initial information, the administrator can see the new registration request in the Registration Requests area of the Accounts page where they can then view, search, and work with account registration requests.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Anyone with the Administrator and/or Account Manager Role can view, update, accept, and reject registration requests.

After the initial submission of the required details by the shopper, the account request is reviewed from the merchant side by the administrator. At this point, the administrator may also request from the shopper additional details such as credit checks and more. Upon receipt of all the requested information, the administrator then either approve or reject the registration request. If the request is approved, the new contact with the account is activated and can then begin transacting business.

The new registration request list in the Registration Requests area of the Accounts page provides the information in a list divided into columns titled Company Name, Request ID (generated by the system), Request Date, and Status. The registration request list is paginated.

The Status of a request can be either New (the request is new and has not been viewed), Review (the request has been viewed or changed and needs to be acted upon), More Info Needed (the request has been viewed and an action needs to be taken to collect more account or shopper information before the request is approved or rejected), or Rejected (the account request has been rejected and no contact has been activated).

You can use the Commerce Admin REST API to add a custom rich-text property to accounts that gives administrators a place to log and track internal notes for

registration requests. See [Create custom properties for accounts](#) for an example that shows how to create and use this kind of custom property.

**Note:** As mentioned, custom properties can be introduced with the registration request once the request has been approved but they are not saved by default. If you wish to save these custom properties, you can use the Commerce Admin API to add custom properties to registration requests by using the `updateItemType` endpoint with the `organizationRequest` item type. For details on doing so, see [Use the REST APIs](#).

### Work with the account registration request list

The new registration request list in the Registration Requests area of the Accounts page lets you do the following:

- Filter the list by status. The default view of the list is to show all statuses.
- Use a `typeahead` search box. The placeholder text in the box is 'Filter account requests.' When you type a string, the list is filtered to records containing that string in the Company field.
- Sort the list by Request ID, Company, or Request Date. The default sort order is by Request date.
- Look at other pages of the list as the list is paginated as the list grows longer.

### Search for a specific registration request

In the search box found in the Registration Requests list view, you can search for registration requests by Company or by Request ID.

You can also use an Advanced Search control (same as found in the accounts and contacts user interfaces) to search for registration requests by creating expressions like the following:

```
<property 1> contains <value 1>
    <property 2> contains <value 2> ...
    <property 5> contains <value 5>
```

You can also specify "Match Any" or "Match All."

The properties available for this type of search must be:

- Of type string OR
- A custom string property of a registration request, account, or profile OR
- Properties such as Account, Name, Account Number, Company Name, Tax Reference Number, First Name, Last Name, Email Address, and more.

Also, the Advanced Search control feature presents you with an indented dropdown list of choices of string properties and custom properties to help you select fields that you may want to choose from other information groups. Use these steps:

1. Click the **advanced search** icon to the right of the search field to display the **Advanced Search** dialog.
2. Select a property from the drop-down list.
3. You can search by **Account**, **Contact**, and **Registration Request** information groups or any custom short text properties that have been added to the account.

4. Click **Add Criteria** to add another property to the search. Each search can contain up to five properties.
5. If you are searching on more than one property, select one of the following:
  - **Match all:** (default) Search results include the accounts that match all the search criteria. If an account matches some of the criteria but not all, it is not returned.
  - **Match any:** Search results include the accounts that match any search criteria.
6. Click **Search**.

You can also use a `typeahead` search box for an account by entering any part of the account name into the search field at the top of the Registration Requests page.

### View and edit account registration list request details

To look at and/or edit an actual new or existing registration request from the list in the Registration Requests area of the Accounts page, click the Registration ID (which is a link) of the request found in the list.

Each request displays four tabs of information. Some of the fields on the tabs can be viewed and some can be edited. These tabs are:

- Request tab containing the following fields:
  - Status – A dropdown list that can be used to change the status of the requests. The choices are New, Accept, Reject, More Info Needed, and Review.
  - Request ID, Registration Request Date, Site Where Request Originated, and Notes from the requester. These are all Read-only.
- General tab containing the following fields (grayed out if the account was rejected):
  - Company Name from Request and Related to Existing Account. These are Read-only.
  - Account Name. This is the Company Name provided by the requester.
  - Classification – This is a dropdown list to select details about the classification of the type of account.
  - Account Type - This is a dropdown list to select a specific type of account.
  - Tax Reference Number, DUNS Number, Unique Identification Number, and VAT Reference Number – These are all inherited from the Company Account.
- Contact tab containing the following fields (grayed out if the account was rejected):
  - First and Last Name – These are Read-only. For an existing contact, the First Name and Last Name stored in the system take precedence over those submitted, and are the ones displayed.
  - Email/Login ID – These are editable unless it is the email address of an existing account-based contact, in which case it is read-only in the UI. (It is editable via API in either case.). The administrator cannot change the email address to the email address or login ID of an existing shopper.
- Address tab containing the following fields (grayed out if the account was rejected). This page displays all addresses that have been submitted. By default, each address consists of the following editable properties. These address

properties are part of the default address format that ships with Commerce. If your Commerce environment includes custom address formats, different properties might be available on the Address tab. Additionally, custom address formats might make some of the required properties in this list optional. Contact your Site Administrator for details about creating addresses with custom address formats.

- Nickname
- Company
- Address 1
- Address 2
- City
- Zip/Postal Code
- Country
- State/Province
- Type
- Phone

If there is no address associated with the request, you are shown the message “This registration request does not have an associated address.”

Below the tabs, there is a **Cancel** button and a **Save** button. If you click **Cancel**, any changes you have made are discarded. There is no confirmation dialog. The Save button applies changes made in all tabs.

## Work with registration requests to review, change status, approve, and reject requests

When you have enabled Account-based Shoppers in the Shopping Settings areas and are able to view the registration requests, you can see these requests in the Registration Requests area of the Accounts page.

The following provides an example of the change/approval/rejection process that occurs with a new registration request.

When a new account request is received, the request enters the system with a status of New until you either change the status of the request and save it, or you open the request without changing it.

If you save changes that do not include a status change:

1. An error occurs and the detail view is kept open.
2. If the save is successful and the status is New, the status is then changed to Review. If there is an exception with provided addresses, then there may have to be some editing done in another dialog. Finally, close the detail view and return to the list view.

If you save changes that include a status change:

1. If there are changes other than the status change, save them.
2. If an error occurs, you see an error message but the detail view is kept open.
3. If the save is successful, you can move on to making the status change

If you make a status change of Review or More Info Needed

1. Change the status.
2. Close the detail view and return to the request list view.

If you choose Accept from the status dropdown list while making a status change:

1. You are given the option to provide comments that are added to the acceptance email sent to the shopper who made the request. The comments are limited to 1000 characters.
2. You are requested to **Click Accept** to Create this as a New Account. To edit the account after accepting it, select the account in the Accounts List.
3. If you chose Accept on the confirmation dialog, you are shown a confirmation dialog while making changes. Be sure to check the uniqueness of the account name. If it is a duplicate, you receive an error message that the account name already exists and that you should choose another one. You are also returned to the list view. Assuming the account name is unique, add the account to the Accounts UI. The contact is now an active contact on the account.
4. Close the detail view and return to the list view.
5. Remove the registration request from the list view. The account and contact are both inactive at this point. If the contact is already an active contact, that person remains active.
6. An approval email is sent to the shopper who submitted the registration request. If you click Cancel on the confirmation dialog, you are returned to the detail view.

If you chose Reject from the status dropdown:

1. You are given the option to provide comments optional comments that are added to the rejection email sent to the shopper who made the request. The comments are limited to 1000 characters.
2. You are requested to **Click Reject to Reject** the Registration Request. Once this request is rejected, it can no longer be edited or accepted.

If you click **Reject** on the confirmation dialog:

1. Change the status to Rejected.
2. Close the detail view and return to the list view.
3. The rejected registration request appears in the list.
4. All fields in the registration request become read-only. In the details view, all of the tabs besides the Request tab are grayed out.
5. A rejection email is sent to the shopper who submitted the registration request.
6. Clean up the entry after it is rejected. When a registration request is rejected, you can hard delete the pending contact and organization. Do not delete the contact if it is an existing contact.
7. The email address (username) of the contact is now free for re-use for a new account-based or regular (anonymous) contact.

## Understand contact registration requests

In addition to account registration requests, you can allow an existing account-based shopper (contact) or a registered non-account-based shopper to submit a contact registration request.

A registered non-account-based shopper can be defined as a shopper with an email address that is not registered. An existing account-based shopper would have an email address that was registered as part of their role as an account-based shopper.

**Note:** A logged-in account-based shopper can also submit a contact request with the email address of a different account-based contact or with an email address that does not exist in the system. A contact registration request cannot be submitted by/for an existing registered non-account-based shopper - that is, with the email address of an existing registered non-account-based shopper. If the email address is that of a registered non-account-based shopper, the system returns the error message that the email address must be new or be that of an existing account-based contact.

A contact registration request means that either type of shopper wishes to be added as a contact to an existing business account. The contact registration request is then either approved or rejected by a merchant administrator or by a delegated administrator. This type of request is not the same as an account registration request that is described in previous sections of this chapter. Unlike account registration requests, there is not an administrator user interface setting to enable or disable this feature.

The request process feature lets a shopper submit a request to be added as a contact to an existing business account by providing required contact and account details. The information is reviewed by an administrator or a delegated administrator from the merchant side after the shopper submits the required details. If needed, the administrator may request additional details from the shopper. Additional information that is needed must be requested and received separately from this feature either via a phone call or through emails. The contact registration request is then either approved or rejected. If the request is approved, the new contact for the account is activated and added to the account.

### Understand the contact registration request process flow

An example of how this basic contact registration request process works is provided in the procedural list that follows. Anyone with an Administrator, Delegated Administrator, and/or Account Manager Role can view, update, accept, and reject contact self-registration requests.

**Note:** This high-level description is provided only as example and an introduction and does not necessarily mean that your process would work exactly this way. For example, all of the emails that are sent during the approval/rejection process are only lightly touched upon in the example process flow. For more detail on the automated emails described in the process, refer to [Configure Email Settings](#).

- A registered non-account-based shopper or an existing account-based shopper uses the store interface (via a widget provided with the layout) to request to be added as a contact to Account A. Refer to Submit new contact registration information for additional details.
- The registered non-account-based shopper or an existing account-based shopper gets an email acknowledging that the request has been received. The request's status is New.
- The administrator or the delegated administrator for Account A are notified via an email that there is a new contact self-registration request that has been received.

- The administrator sees the new request in the Contact Registration Requests area of the Accounts administration user interface. The delegated administrator sees the request via a widget provided on the store.
- The administrator or the delegated administrator for Account A opens the registration request and begins reviewing it.
- The administrator or the delegated administrator for the account saves some changes and/or explicitly sets the status to "Review."
- The delegated administrator for the account decides more information is needed before an approval decision can be made and changes the status to "More Info Needed."
- Outside of Commerce, the delegated administrator emails the registered non-account-based shopper asking for information.
- The registered non-account-based shopper sends the delegated administrator an email with the required information.
- After reading the registered non-account-based shopper's email, the delegated administrator opens the request, adds some information, and sets the request's status to Review.
- The administrator or the delegated administrator opens the request and makes a decision.
- If they accept the request then
  - Optionally, they provide comments (if needed) to add to the approval email.
  - The request disappears from the Request list.
  - The registered non-account-based shopper receives an email indicating that the contact request is approved.
  - The shopper now appears as a contact in Account A.
- If the administrator or the delegated administrator rejects the request then
  - Optionally, they can provide comments to add to the rejection email.
  - The request remains in the Contact Registration Requests list with a status Rejected.
  - The shopper receives an email indicating that their request is rejected.

## Submit new contact registration information

Existing account-based shoppers (contacts) or registered non-account-based shoppers submit a new contact registration request using the store.



*This section applies to Storefront Classic only.*

This feature lets the shopper submit a new contact registration request by providing required business details through the store user interface.

To submit a new contact registration request using the store, do the following

- Login and a Register user interface will appear
- Select Join an existing business account
- Enter the following information in the Register user interface:

- First name of contact
- Last name of contact
- Email address of contact
- Account ID
- Any comments to be added to the request (entered in the Note field)
- Click **Submit** to submit the request or click **Cancel** if you wish to cancel the request.

Once a contact request has been submitted, the administrator can go to the Registration Requests area in the Accounts area and view, update, accept, and reject contact registration requests. A business user with Administrator or Account Manager role can view, update, accept, and reject registration requests in the Accounts area. A Delegated Administrator can perform the same functions using the Contact Registration Requests widget on the Storefront.

## Understand working with contact registration requests

When a shopper submits the required information for the contact registration request, an Administrator sees the new registration request in the Contact Requests area of the Accounts page, and can view, search, and work with contact registration requests there.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Both Contact Requests and Account Requests menu items appear as sub-items under Registration Requests in the Accounts navigation page in the administration user interface. Anyone with the Administrator and/or Account Manager Role can view, update, accept, and reject registration requests.

**Note:** The Contact Requests tab always appears in the user interface. The Account Requests tab will not appear if Account Registration is disabled in Settings and there are no account registration requests with a status of New, Review, More Info Needed, or Rejected.

After the initial submission of the required details by the shopper, the contact registration request is reviewed from the merchant side by the administrator (or delegated administrator). At this point, the administrator (or delegated administrator) may also request from the shopper additional details such as credit checks and more. Upon receipt of all the requested information, the administrator (or delegated administrator using the appropriate widgets on the storefront) then either approve or reject the registration request. If the request is approved, the new contact with the account is activated and can then begin transacting business.

### Work with the contact registration request list

The information in the new contact registration request list can be looked at by both Administrators and Delegated Administrators. The information that follows describes the differences in the information that is available to each separate Role.

Via the administration user interface, the new contact registration request list for Administrators in the Contact Requests area of the Accounts page provides the following information in a list divided into the following:

Column Head	Description
Request ID	Request ID generated by the system. This provides a link that opens the request details.
Requested Account ID	Account ID that the requester provided
Requested Account Name	Account Name that the requester provided
Email Address	Email address that the requester provided
Last Name	Last name that the requester provided
First Name	First name that the requester provided
Originating Site	Site on which the request originated (Site name - or, if name is unavailable, Site ID)
Request Date	Date when the request was received. (No timestamp is provided)
Status	Displays Status icon (for statuses of "Rejected" and "More Info Needed")  The Status of a request can be either New (the request is new and has not been viewed), Review (the request has been viewed or changed and needs to be acted upon), More Info Needed (the request has been viewed and an action needs to be taken to collect more account or shopper information before the request is approved or rejected), or Rejected (the contact registration request has been rejected and no contact has been activated).  The status is the same regardless of which Admin is viewing it.

You can also do the following with the new contact registration request list:

- Filter the list by status. The default view of the list is to show all statuses.
- Use a typeahead search box. The placeholder text in the box is "Search for registration request." When you type a string, the list is filtered to records containing that string in the Company field.
- Sort the list by the following:
  - Email address: A-Z or Z-A
  - First name: A-Z or Z-A
  - Last name: A-Z or Z-A
  - Request date: Newest or Oldest
  - Request ID: A-Z or Z-A
  - Requested account name: A-Z or Z-A

The default sort order is by Request date: Newest.

- Look at other pages of the list as the list is paginated as the list grows longer.

Column Head	Description
Request ID	Request ID generated by the system. This provides a link that opens the request details.
Email Address	Email address that the requester provided

Column Head	Description
Last Name	Last name that the requester provided
First Name	First name that the requester provided
Originating Site	Site on which the request originated (Site name - or, if name is unavailable, Site ID)
Request Date	Date when the request was received. (No timestamp is provided)
Status	Displays Status icon (for statuses of "Rejected" and "More Info Needed")  The Status of a request can be either New (the request is new and has not been viewed), Review (the request has been viewed or changed and needs to be acted upon), More Info Needed (the request has been viewed and an action needs to be taken to collect more account or shopper information before the request is approved or rejected), or Rejected (the contact registration request has been rejected and no contact has been activated).  The status is the same regardless of which Admin is viewing it.

The Delegated Administrator can also do the following with the information that they are allowed to view:

- Filter the list by status. The default view of the list is to show all statuses.
- Use a typeahead search box. The placeholder text in the box is "Search for registration request." When you type a string, the list is filtered to records containing that string in the Company field.
- Sort the list by the following:
  - Email address: A-Z or Z-A
  - First name: A-Z or Z-A
  - Last name: A-Z or Z-A
  - Request date: Newest or Oldest
  - Request ID: A-Z or Z-A

The default sort order is by Request date: Newest.

- Look at other pages of the list as the list is paginated as the list grows longer.

### Search for a specific registration request

As an Administrator in the Contact Request list view, you have access to Advanced Search in the administrator user interface via a typeahead search box.

**Note:** This functionality is not available for Delegated Administrators in the store's Registration Requests widget.

The placeholder text is "Filter contact requests." When you type a string, the Contact Request list is filtered to records containing that string in the Last Name field.

You can also use an Advanced Search control (same as found in the accounts, contacts, and contact registration user interfaces) to search for contact registration requests by creating expressions like the following:

```
<property 1> contains <value 1>
<property 2> contains <value 2>
...
<property 5> contains <value 5>
```

You can also specify “Match Any” or “Match All.”

The properties available for this type of search must be:

- Of type string OR
- A custom string property of a contact registration request, account, or profile OR
- Queryable static string properties that include:
  - Last Name
  - Email Address
  - First Name
  - Contact Registration Request Property ID
  - Request ID
  - Requested Account ID
  - Requested Account Name
  - Approver Comments
  - Notes from the Requester

Also, the Advanced Search control feature presents you with dropdown lists of two groups of properties with the headers Contact and Request.

The group and the order of the properties for each header are as follows:

- Under the Contact header:
  - The Contact static properties listed above, in alphabetical order
  - Any Contact dynamic properties, in alphabetical order
- Under the Request header:
  - The Request static properties listed above, in alphabetical order
  - Any Request custom properties, in alphabetical order

When you use the extended search control, keep in mind the following:

- The first row is populated with the “Last Name” property.
- The “contains” operator is not shown; it is implicit.
- Multiple terms with the same property are supported.
- “Match All” is the default.
- When an extended search is in effect, the text, “Advanced Search Results Shown” appears in the search box.

- After you perform an extended search, the next time you open the Extended Search control, the criteria from your last search is displayed. This is true even if you have performed simple searches since performing the extended search. The criteria persist until you perform another extended search.
- The Extended Search control allows at most 5 criteria.

You cannot search for registration requests via store APIs.

### View and edit contact registration request details

Contact registration request details be looked at and/or edited by both Administrators and Delegated Administrators. Administrators use the Contact Requests area of the Accounts page in the administrator's user interface to view, search, and work with contact registration requests. A Delegated Administrator can perform the same functions using the Contact Registration Requests widget on the store.

The information that follows describes the differences in the information that is available for viewing and editing for each separate Role.

To look at and/or edit an actual new or existing contact registration request as an **Administrator**, click the Request ID (which is a link) of the request found in the Contacts Requests area of the Accounts page. When you do that you see a detail view that combines the following information:

- Data received from the requester
- All custom contact self-registration request properties
- Selected static contact (profile) properties
- All custom contact (profile) properties

Each request displays two tabs of information: Request and Contact. Some of the fields on the tabs can be viewed and some can be edited. The following contains more details on the information found on each tab:

- Request tab containing the following fields:
  - Status – A dropdown list that can be used to change the status of the requests. The choices are New, Accept, Reject, More Info Needed, and Review.

The dropdown shows New when the request is first opened. Once the status changes, the New status is removed from the dropdown. If the profile has been deleted, the Status can only be changed to Reject.

This field is Editable except if the Status is Rejected it becomes read-only. Also, if the contact has been deleted, the Status can only be changed to Rejected.

- Request ID - Read-only.
- Request Date - Read-only in the user interface but editable via API.
- Site Where Request Originated - URL, Read-only in the user interface but editable via API.
- Notes from the requester - Read-only in the user interface but editable via API.
- Rejection comments - Read-only in the user interface but editable via API. Displayed only if the request was rejected.
- Any custom properties that exist – Editable unless the Status is Rejected.
- Contact tab containing the following fields:

**Note:** This tab is grayed out if the profile has been deleted. This would occur either via the Agent API (for GDPR reasons) or because the request was rejected and the contact was new.

- First Name – Read only. For an existing contact, the First Name stored in Commerce takes precedence over the submitted First Name and is displayed here.
- Last Name – Read only. For an existing contact, the Last Name stored in Commerce takes precedence over the submitted Last Name and is displayed here.
- Email/Login ID – Read-only.
- Requested Account ID - Read-only in the user interface but editable via API.
- Requested Account Name - Read-only in the user interface but editable via API.
- Account Name - Accessed via the picker. Editable unless the status is Rejected. This is the name of the account to which the contact will actually be added. This name will be pre-populated in the field with the requested account if the system identified the account.
- Any custom properties that exist – Editable unless the Status is Rejected. If the email address is that of an existing contact, the existing contact's property values take precedence over the submitted values and are the ones displayed.

If you click Cancel, any changes you have made are discarded. The Save button applies changes made in all tabs.

**Note:** The previous fields described list fields that are displayed in the administration interface. The following fields can be edited only in the REST API:

- `approverComments` (listed above as Rejection Comments, but the field is also editable by API on an approved request)
- `approvedBy`
- `approvedSource`

As a **Delegated Administrator**, you can look at and/or edit the following information in a contact request that you are working on. Each request displays two tabs of information: Request and Contact. Some of the fields on the tabs can be viewed and some can be edited. The following contains more details on the information found on each tab:

- Request tab containing the following fields:
  - Status – A dropdown list that can be used to change the status of the requests. The choices are New, Accept, Reject, More Info Needed, and Review.

The dropdown shows New when the request is first opened. Once the status changes, the New status is removed from the dropdown. If the profile has been deleted, the Status can only be changed to Reject.

This field is Editable except if the Status is Rejected it becomes read-only. Also, if the contact has been deleted, the Status can only be changed to Rejected.

- Request ID - Read-only.
- Request Date - Read-only in the user interface but editable via API.

- Site Where Request Originated - URL, Read-only in the user interface but editable via API.
- Notes from the requester - Read-only in the user interface but editable via API.
- Rejection comments - Read-only in the user interface but editable via API. Displayed only if the request was rejected.
- Contact tab containing the following fields:

**Note:** This tab is grayed out if the profile was deleted. This would occur either via the Agent API (for GDPR reasons) or because the request was rejected and the contact was new.

- First Name – Read only. For an existing contact, the First Name stored in Commerce takes precedence over the submitted First Name and is displayed here.
- Last Name – Read only. For an existing contact, the Last Name stored in Commerce takes precedence over the submitted Last Name and is displayed here.
- Email/Login ID – Read-only.

If you click Cancel, any changes you have made are discarded. The Save button applies changes made in all tabs.

**Note:** The previous fields described list fields that are displayed in the Delegated Administrator user interface. The following fields are editable via API:

- `approverComments` (listed above as Rejection Comments, but the field is also editable by API on an approved request)
- `approvedBy`
- `approvedSource`

## Work with contact requests to review, change status, approve, and reject

Submitted contact registration requests can be seen in the Contact Requests area of the Accounts page.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The following information provides an example of an Administrator's or Delegated Administrator's change/approval/rejection process that occurs when working with a new contact registration request. When a new contact request is received, the request enters the system with a status of New until you either change the status of the request and save it, or you open the request without changing it.

- If you save changes that do not include a status change
  - If an error occurs you receive an error message and the detail view is kept open.
  - If the save is successful and the status is New, the status is then changed to Review. If there is an exception with provided addresses, then there may have to be some editing done in another dialog. Finally, the detail view closes and you are returned to the list view.
- If you choose Accept from the status dropdown list while making a status change and have clicked Accept to confirm the choice:

- You are given the option to provide comments that are added to the acceptance email sent to the shopper who made the request. The comments are limited to 1000 characters.
- Validations are performed on the information if it is accepted.
- If there is an error, an error message is displayed and you are returned to the details view.
- If there are no errors, the contact is added to the account. The detail view is closed and you are returned to the list view. The request is removed from the list view.
- If the contact is new, it is activated. If it is an existing active contact, it is left active. If it is an existing inactive contact, it is left inactive.
- An approval email is sent to the shopper who submitted the request.
- If you click **Cancel** on the confirmation dialog, you are returned to the detail view.
- If you select Reject from the status dropdown list:
  - You are given the option to provide comments that are added to the rejection email sent to the shopper who made the request. The comments are limited to 1000 characters.
  - Validations are performed on the information that is rejected.
  - If there is an error, an error message is displayed and you are returned to the details view.
  - If there are no errors, the status is changed to Rejected.
  - The detail view is closed and you are returned to the list view.
  - The rejected request is kept in the list.
  - All fields in the request are made read-only.
  - In the details view, The “Contact” tab is grayed out (unless the contact is an existing contact).
  - The shopper who submitted the request is sent a rejection email.
  - You must clean up the entry after it is rejected. When a contact request is rejected, you can hard delete the pending contact and organization. Do not delete the contact if it is an existing contact.
  - If you click Cancel on the confirmation dialog, you are returned to the detail view.

A contact self-registration request does not ever need to have a Review or More Info Needed status. You can open a new request, make changes, change the status to Accept or Reject, and Save. In the example just described, the contact request goes from New to Rejected, or from New to adding the contact to the account.

### Store the source of an approval or rejection

When a request is approved or rejected, Commerce stores the value of a source property that indicates where the approval or rejection came from. These are the options:

- If the administrator approved or rejected the request in the administrator user interface, the system, “Administrator” is stored as the source.

- If the request was approved or rejected using the Admin endpoint, Commerce stores “Administrator” as the source by default, or stores any string value provided in the call.
- If the request was approved or rejected in the store user interface or by the store API, Commerce stores “Delegated Administrator” as the source.
- If the request was approved or rejected in the Agent user interface or by the Agent API, Commerce stores “Agent” as the source.
- If the request was approved or rejected by an external system, Commerce stores the string value provided in the call (if provided).

**Note:** Source values that are provided are not localizable.

### Understand more about working with contact requests

The following provides some additional information about working with contacts and new contact registration requests:

- There is only one version of a contact. Therefore, an update to a contact’s details made in one place (the Accounts user interface, the Account Registration user interface, or the Contact Registration Request user interface) appears in all the user interfaces.
- Re-using a contact with a pending contact registration request - If a shopper who is not yet a business account contact has a contact registration request pending, and the Administrator or Delegated Administrator wants to add the shopper to an existing account, the Merchant Administrator must either approve the request and then add the contact, or reject the request and then create the new contact.

If the Merchant Administrator tries to create a new contact, and the email address is that of a contact registration request pending, the message, “The email address you entered has a pending contact registration request. To add the user to an account, you must first approve or reject the request” is displayed.

If the Delegated Administrator tries to create a new contact, and the email address is that of a contact registration request pending, the message, “The email address you entered has a pending contact registration request. You or the merchant must accept or reject the request before you can add the user to an account” is displayed.

In a configuration where account-based shoppers and registered non-account-based shoppers coexist, if a shopper (or an API) tries to create a new registered non-account-based shopper profile using an email address that has a pending business account contact registration request, the message: “You cannot use this email address at the moment. Please contact the system administrator” is displayed

- Cleaning up after a rejected request and re-using the contact - When a registration request is rejected, you must hard delete the pending contact. (Do not delete the contact if it is an existing contact.). After that is done the email address (username) of the contact is now free for re-use for a new business account contact and registered non-account-based shopper contact.

## Delete contact information

When you delete a contact’s profile to comply with the European Union General Data Protection Regulation (GDPR) right to erasure, you must also remove personal information about the contact that appears in orders and other items, such as purchase lists.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You should redact these account-based commerce items before deleting the contact's profile.

This section describes how to prepare for deleting a contact's profile and delete or redact account-based commerce items that contain the contact's personal information. See [Delete shopper information](#) for information about deleting profiles for contacts, redacting orders, and redacting registration requests.

### Delete purchase lists as an agent or administrator

Purchase lists (personal or shared) let shoppers quickly access frequently purchased items. If a contact has created (and possibly shared) purchase lists, delete them before you delete the contact's profile. You can delete purchase lists in the Commerce Agent Console or with the Agent API. Keep in mind the following:

- You (the Administrator) should ask the person to delete any purchase lists she created, before you delete their profile.
- The Commerce Agent Console or the Agent API can be used to delete the list even if the purchase list is shared.
- When a shared purchase list is deleted, the recipients of a shared list do not receive an email notification.
- To delete a purchase list in the Agent Console, find the contact's profile page and click the Purchase Lists tab. See [View customer results in Search for customers](#) for more information.
- To delete a purchase list with the Agent API, use the `deletePurchaseList` endpoint. (If for business reasons you do not want to delete purchase lists, you can redact them instead.) See [Delete or redact purchase lists in Delete shopper information](#) for more information.

See [Enable Purchase Lists](#) for details about purchase lists and shared purchase lists.

### Prepare to delete the profile for an approver

The order approvals feature for account-based storefronts lets administrators enable order approvals for an account and specify a purchase limit. When a contact within the account creates an order that exceeds the purchase limit, the order is sent to an approver for confirmation before it is submitted.

If a contact is assigned the Approver role, they can approve orders for their account. Before you delete the profile for a contact who is an approver, perform the following tasks:

- Remove the Approver role from the contact for all accounts before deleting the profile. (A contact's profile cannot be deleted if the contact has the Approver role for any account.) See [Manage approvers for an account](#) for more information.

**Important:** Make sure each account still has at least one approver left. You cannot remove the Approver role from the last approver on the account or deactivate the last approver on the account if there are orders pending approval or the order approval feature is enabled.

- Use the Admin API to remove the approver's ID from all orders they approved using the Admin API. See [Delete an approver in Delete shopper information](#) for more information.

### Deactivate scheduled orders

Scheduled orders let shoppers create an order and a schedule that determines the frequency used to fill the order in the future. If a contact has created scheduled orders, deactivate them before you delete the contact's profile so that the orders will no longer be placed. Once scheduled orders are deactivated, you can either delete or redact them. See [Delete or redact scheduled orders](#) in [Delete shopper information](#) for more information.

You can deactivate scheduled orders in the Commerce Agent Console or with the Agent API:

- To deactivate a scheduled order in the Agent Console, find the contact's profile page and click the Scheduled Orders tab. See [Schedule an order](#) in [Understand punchout orders](#) for more information.
- To deactivate a scheduled order with the Agent API, use the `updateScheduledOrder` endpoint. See [Understand Extension Features](#) for details about using the REST APIs.

See [Create Scheduled Orders](#) for details about scheduled orders.

# Create Page Layouts that Support Different Types of Shoppers

Commerce supports different types of shoppers including anonymous shoppers, individual shoppers and account-based shoppers.

The page layouts that you create must take these shoppers types into account and present UI features that are appropriate for their tasks.

**Note:** The account-based commerce feature may not be enabled in your environment. Contact your Oracle account manager for more details on how to activate this functionality.

## Understand the different types of shopper

Different types of shoppers, for example, shoppers with personal or business accounts, can have different experiences on your storefront.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Commerce supports several types of shopper.

- Anonymous shoppers have not logged in and are not associated with a saved profile. These shoppers are also called guest shoppers.
- Registered shoppers are shoppers who log in to a personal account. These shoppers are allowed to self-register and manage their own billing and shipping addresses.
- Account-based shoppers are shoppers who log in using contact credentials that have been defined as part of a business account. They use account-level billing and shipping addresses that have been created by a merchant administrator. Account-based shoppers need to be given special roles in order to create and manage personal addresses, and/or create and manage account-level addresses. Refer to [Work with account contacts](#) and [Work with account addresses](#) for more information.

Account-based shoppers can be added to a business account by an administrator in Commerce. There is also an option for an account-based shopper to submit a new account registration request which is then either approved or rejected by an administrator for the account. The shopper requests a new account by providing required business details. After submitting the required details, the information is reviewed by an account administrator. If needed, there may also be a request for additional details such as credit checks and other information. The request is then either approved or rejected. If the request is approved, the new contact with account is activated and can then begin transacting business with the account. After the shopper has been approved, they become an account-based shopper who logs in using contact credentials that have been defined as part of a business account. Refer to [Configure Account-based Shoppers](#) and [Configure Business Accounts](#) for more details.

In Commerce, an anonymous shopper can browse and add items to her cart. The anonymous shopper will see products in the default catalog and prices from the default price list group. Registered shoppers will also see products from the default catalog and default

price list group, while account-based shoppers will see the catalog and price list group assigned to their business account.

If an anonymous shopper logs in to a business account, the login triggers a comparison between the items in the shopper's cart and the products available in the business account's assigned catalog. If items exist in the cart that are not present in the business account's catalog, those items are removed and the shopper is notified.

If an anonymous shopper logs into a personal account, no comparison is necessary because anonymous shoppers and registered shoppers use the same catalog and price list group.

Understanding the types of shoppers your storefront must support is critical to designing page layouts properly and making appropriate choices about the widgets you use. The following sections describe settings you can use to control the storefront experience for different types of shoppers.

## Create cloned layouts

As you create your layouts to support different types of shoppers, remember that Oracle recommends that you avoid modifying the out-of-the-box page layouts.



*This section applies to Storefront Classic only.*

Instead, create clones of those layouts and modify them. As you modify your page layouts, keep in mind the following questions for each type of shopper your storefront supports:

- Which types of shopper should be able to view the layout? For example, do you need one version of a layout for anonymous shoppers and a second version for account-based shoppers?
- Does the layout contain content that is inappropriate for a given type of shopper? For example, if your storefront requires a shopper to log in before being able to see the catalog or search for items and add them to the cart, then you should consider a layout for anonymous shoppers that removes access on the Home page to catalog, search, and cart information.

## Restrict guest checkout

Your site can require that anonymous shoppers log in before they check out.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

This feature can be used for anonymous shoppers who will log into either an individual account or a business account.

To prevent guest checkout:

1. Click the **Settings** icon.  
When running multiple sites from your Oracle Commerce instance, your configurations will be applied by site. Choose your site from the site picker at the top of the Settings menu options.
2. Click **Shopper Settings**.
3. Under Guest Checkout, clear the **Allow** checkbox.

In addition to selecting this setting, your pages must be modified at a widget code-level to restrict access to the Checkout UI itself. For details on doing so, see [Manage Guest Checkout](#).

## Manage pages for account-based shoppers

This section provides guidance on how you can manage pages for account-based shoppers.



*This section applies to Storefront Classic only.*

### Restrict a page layout to account-based shoppers

When you clone a page layout, you can configure the new layout with one of the following options:

- “Make Default Layout” defines the layout as the default. It is this layout that is rendered for anonymous shoppers and registered shoppers.
- “Display layout to account shoppers only” restricts the layout to account-based shoppers only.

Using these two settings, you can design a set of layouts for your anonymous and registered shoppers and another set for your account-based shoppers. Note that this may not be required for all layouts; in other words, if a layout does not need different content for the various shoppers types, you can have one default layout for all of them.

### Restrict self-registration for account-based shoppers

Some out-of-the-box widgets allow self-registration while others do not. These widgets should be used appropriately, depending on the types of shopper your storefront supports. Specifically, shoppers should not be allowed to self-register for a business account. In the case of a storefront that supports both individual shoppers and account-based shoppers, your UI should make it clear that any self-registration activity creates an individual shopper account, not a business account (see [Note about preventing self-registration in account-based storefronts](#) for more details). The following widget elements affect self-registration:

- The Login/Registration element in the Header widget allows self-registration while the Contact Login (for Managed Accounts) element does not.
- The Registration Button element on the Wish List Welcome widget, available on the Wish List Layout, allows self-registration. This element can be removed for pages that must prevent account-based shoppers from self-registering.

### Restrict address editing for account-based shoppers

Some out-of-the-box widgets allow shoppers to modify their billing and shipping addresses while others do not. In account-based storefronts, addresses are managed at the account level and shoppers should not be allowed to modify them. As such, these widgets should be used appropriately, depending on the types of shopper your storefront supports. The following widgets affect address editing:

- The Customer Address Book widget, on the Checkout Layout and Checkout Layout with GiftCard layouts, allows address creation and editing. By contrast, the Account Address Book widget on these layouts allows a contact to choose an address from those defined for the account and to specify a person to ship to but further editing of the address is not available.

- The Customer Profile Widget on the Profile Layout allows customers to edit their billing and shipping addresses. To restrict address editing, account-based storefronts must create a new profile widget that displays profile information but does not enable address editing. For details on creating the new profile widget, see [Manage account-based shopper profiles](#).

### **Ensure account-specific catalogs and price groups are displayed for account-based shoppers**

When they are created, business accounts are assigned a catalog and price group. In the storefront, account-based shoppers should be shown the catalog and price group assigned to their business account. To ensure that the correct catalog and price group is shown to an account-based shopper, you must use the latest version of the Collection Navigation widget on the Home Layout and the Shopping Cart widgets on the Cart Layout. Server side code automatically determines which catalog and price group to show and passes it to the storefront. The storefront then displays the catalog and price group it has been passed, via these two widgets. For instructions on how to check which version you are using, see [Design Your Store Layout](#). If you are not using the latest version, you must upgrade to it. See [Upgrade deployed widgets](#) for instructions on how to do so.

### **Display company name and logo to account-based shoppers**

There are two places where you can choose to add a company name and logo to an account-based storefront:

- To the header in the storefront page layouts, using the Company Name and Company logo elements in the Header widget.
- To the email templates used to generate automated email notifications. See the [Add company name and logo to account-based email templates](#) section in [Customize Email Templates](#) for details on how to do this.

## Configure page layouts for account hierarchies

Account hierarchy allows you to configure your storefront so that changes that you make to one account can be seen by other accounts.



*This section applies to Storefront Classic only.*

Oracle recommends that you clone the out-of-the-box layouts and then make your changes to the clones. If your site only supports account-based shoppers, you can mark the clones as the defaults and make the account hierarchy changes to those pages. If your site must support both account-based shoppers and other, non-account affiliated shoppers, then you will need two versions of the pages, one marked as default for the non-account affiliated shoppers and the other marked as “Display layout to account shoppers only” for the account-based shoppers. In this scenario, you would make the account hierarchy changes to the pages designed for the account-based shoppers.

See [Configure Business Accounts](#) to learn how to create an account hierarchy and assign contacts to multiple accounts.

The modifications described in the sections below involve making sure you are using the correct version of some of the out-of-the-box widgets. A widget's About tab,

accessed by viewing a widget's settings, tells you which version you are using. To replace a widget with the latest version, see [Upgrade deployed widgets](#).

### Header widget for account hierarchies

Make sure you are using version 6 or later of the Header widget on all pages that use it. Also, make sure the Contact Login (for Managed Accounts) element is included in your Header widget instance. This element provides a picker that allows an account-based shopper to switch to any active account he belongs to.

### Checkout layout for account hierarchies

On the Checkout layout, make sure you are using version 3 or later of the Managed Account Address Book widget. This version allows the account-based shopper to view default, local, and inherited account-level addresses when specifying the billing and shipping address for the order.

### Profile layout for account hierarchies

On the Profile layout, make sure you are using the correct versions of the following:

- Account Addresses widget (version 3 or later). This version allows the delegated administrator to view an account's default, local, and inherited addresses.
- Account Contacts widget (version 3 or later). This version does the following:
  - Informs the delegated administrator if a contact belongs to multiple accounts.
  - Prevents the delegated administrator from deactivating a contact if the contact belongs to multiple accounts.
  - Limits the delegated administrator to removing a contact from the current account only.

The Account Addresses and Account Contacts widgets are described in [Add delegated administration to your storefront](#).

### Order Details and Scheduled Order layouts for account hierarchies

On the Order Details layout, make sure you are using one of the following:

- Version 6 or later of the Order Details widget, or
- Version 4 or later of the Order Details with Additional Info widget

These versions prompt the shopper to switch accounts if she attempts to view details for an order that was placed under an account other than the one she is currently logged into.

For the same reason, make sure you are using version 3 or later of the Scheduled Order widget on the Scheduled Order layout if your storefront includes the scheduled orders feature. See [Create Scheduled Orders](#) for more information.

## Manage page layouts to support account and contact registration requests

You can allow a prospective account-based shopper to request registration of a new store account.



*This section applies to Storefront Classic only.*

Enabling this feature lets a shopper submit an account registration request for a new account by providing required business details. The information is then reviewed by an administrator from the merchant side after the shopper submits the required details, and, if needed, the administrator may request additional details such as credit checks. The account registration request is then either approved or rejected. If the request is approved, the new contact for the account is activated. Refer to [Configure Business Accounts](#) to learn more about account registration requests.

You can also allow an existing account-based shopper (contact) or a registered non-account-based shopper to submit a contact registration request. A registered non-account-based shopper can be defined as a shopper with an email address that is not registered. An existing account-based shopper would have an email address that was registered as part of their role as an account-based shopper. The contact request process feature lets a shopper submit a request to be added as a contact to an existing business account by providing required contact and account details. The information is reviewed by an administrator or a delegated administrator from the merchant side after the shopper submits the required details. If needed, the administrator may request additional details from the shopper such as credit checks. The contact registration request is then either approved or rejected. If the request is approved, the new contact for the account is activated and added to the account. Refer to [Configure Business Accounts](#) to learn more about contact registration requests.

To manage and configure page layouts for account-based shopping that supports account registration requests and contact registration requests, do the following:

- Enable the store user interface to allow business shoppers to submit an account registration request for a new account by providing required business details. Do this by making sure you have a Contact Login (for Managed Accounts) element in the Header widget in your site Home layout. That way, when an anonymous shopper or an account-based shopper logs in, a Contact Login (for Managed Accounts) element displays a Register link that allows the shopper to submit contact registration requests. For further details, refer to [Customize your store layouts](#) for information on using different elements in your layouts.
- Make sure you have enabled the account registration feature in the Settings area of Administrator user interface. Refer to [Configure Account-based Shoppers](#) in the Configure Shopper Settings section for more details.
- Configure the correct automated emails that are generated during the account registration request and contact registration request approval/rejection process. Refer to [Configure Email Settings](#) for more information.
- If you want Delegated Administrators to be able to manage contact registration requests, add the Contact Registration Requests layout to the Profile Navigation - Account Shoppers widget, and configure the layout to appear to shoppers with the Administrator role.

## Use Order Approvals

Commerce includes an order approvals feature for account-based storefronts.

This feature allows an administrator to enable order approvals for an account and specify a purchase limit. When a contact within the account creates an order that exceeds the purchase limit, the order is sent to an approver for confirmation before it is submitted.

You can also integrate with an external system that determines if an order requires approval. This is useful if you want to use the system to create more complex rules than a simple purchase limit to determine if an order requires approval. For example, you might want all orders that include specific items or that are shipped to certain addresses to require approval. See [Enable Order Approvals](#) to learn how to integrate with an external system for order approvals.

The sections in this chapter describe how to accomplish various order approval-related tasks in both the Commerce administration interface and the storefront. Note that, for the storefront tasks, this section assumes that order approvals have been properly configured on the storefront side. For details on how to do this, see [Enable Order Approvals](#).

### Understand order approvals

When a shopper places an order that requires approval, that order is not submitted until the approval has been given.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Approvers are notified, via email, when orders come in that require approval. An approver can log in and see all orders that require approval for their account.

If the order is approved, what happens next depends on the type of payment method the shopper needs to use. Commerce cannot store credit card information, so it cannot maintain credit card information for the time period in between when the order is placed and when the order is approved. Therefore, if the shopper needs to use a credit card for payment, she must return to the order's details after the order has been approved and provide credit card payment information. The amount of time the shopper has to make payment on an approved order is configured via the Price Hold Period, described in [Set a price hold period](#). Other than payment information, the shopper should not be able to modify any other order details. Limiting the shopper's order editing ability requires some customization of the checkout layout, described in [Manage the checkout flow for orders requiring approval](#).

If the shopper used a deferred payment method like invoice or cash when placing the order, no additional payment details are needed and the order is submitted immediately upon approval.

When an approver approves an order that needs payment, an email is sent to the shopper notifying her that the order has been approved and she should provide payment information. When an approver approves an order that does not need payment, the standard order placed email is sent to the shopper, telling her that the order has been submitted.

If the approver rejects the order, the shopper is notified via email. Rejected orders cannot be modified or re-submitted. However, the shopper can view the rejected order's details and add its items to a new shopping cart to form the basis of a modified order that can pass approval.

## Enable or disable order approvals

Order approval settings are defined at the account level and apply to all contacts within the account.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The order approval feature can be enabled or disabled either in the administration interface or on the storefront, but not both. If you configure the order approval settings from the storefront, the corresponding settings in the administration interface become read-only.

**Note:** This section describes how to enable or disable the order approval feature when you set a purchase limit in Commerce. To set upCommerce the order approval feature using the Order Approval webhook to integrate with an external system, see [Enable Order Approvals](#).

Order approvals can only be enabled if at least one contact in the account has the Approver role. See [Manage approvers for an account](#) for details on how to assign that role. When order approvals are disabled, the change only affects new orders. Existing orders that require approval continue to require approval.

To enable or disable order approvals in the administration interface:

1. Click the **Accounts** icon.
2. Select the account to be modified.
3. Click the **Approvals** tab.
4. If you are using multiple sites, select the name of the site. Approvals are site-specific.
5. If you are using an external approval system, select the Use external service to determine approval settings check box. Note that when this option is selected, the default Require Approval option is disabled.
6. Enable the Require approval option and set the purchase limit above which orders require approval. See [Understand the purchase limit for order approvals](#) for more details.

Before you can enable order approvals from the storefront, you must set an option in the administration interface that gives control of the order approvals setting to the storefront administrator. Note that when you set the option, the order approvals settings in the administration interface become read-only.

To enable or disable order approvals in the storefront:

1. Click the **Accounts** icon.
2. Select the **account** to be modified.
3. Click the Approvals tab.
4. If you are using multiple sites, provide the name of the site, as approvals are site-specific.

5. Enable the administrator at the account can manage approvals option and click **Save**.
6. On the storefront, log in as an administrator.
7. Click the **My Account** link.
8. Click the **Order Approval Settings** tab.  
**Note:** The **Order Approval Settings** tab must be configured on the storefront before you can use it and it also may use a different name if your implementation team chose to use a different one.
9. Enable the **Require Approvals** option and set the purchase limit above which orders require approval. See [Understand the purchase limit for order approvals](#) for more details.

## Understand the purchase limit for order approvals

The purchase limit sets a value.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Orders that exceed this value require approval. If a purchase limit is not defined, no orders require approval. If a purchase limit is set to 0, all orders require approval. There is one purchase limit for the entire account and it applies to all contacts in the account, regardless of role (buyer, approver, or administrator). The currency for the purchase limit value is determined by the price list group associated with the account's contract. In other words, if an account's contract is associated with a price list group that uses Euros, then the purchase limit is also in Euros.

If an account has multiple contracts, you must select a site when setting a purchase limit. The purchase limit applies to any orders submitted by buyers on the associated site.

**Note:** Display of a contact's purchase limit is not included in the out-of-the-box widgets, however, you can write custom widget code to display this information. See [Display a contact's purchase limit in a widget](#) for more information.

## Set a price hold period

You can set a price hold period, after which an approved order that is pending payment is canceled by the system.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The time count starts from when an order is approved. The notification email that is sent to a shopper after an order is approved includes an expiration date and time that is based on the price hold period. The shopper must pay for the order by this expiration date and time.

After the specified amount of time has passed, the order is marked for cancellation. To handle the actual removal of these orders, a scheduled service runs that identifies orders that have been marked for cancellation and then removes them. See [Set the frequency of canceled order clean up](#) for more information on this service.

The price hold is site-specific and applies to all accounts. The default setting is that there is no time limit. An order that has been canceled because of the time limit has a "Removed" status, which is the same as any other canceled order. Coupons that have been redeemed as part of a canceled order are not released.

To set the price hold period:

1. Click the **Settings** icon.
2. Select the Site.
3. Click **Payment Processing**.
4. Click the Setup tab.
5. Enter a number of days and hours for the **Price Hold Period** and click **Save**.

**Note:** When the Price Hold Period is modified, the new time limit applies to all orders, existing and new. This means that the expiration date and time that a contact sees in the “Order Approved” notification email may become stale if the time limit has been changed after the contact has viewed the email. See [Notify users of order approval-related events](#) for more information about the “Order Approved” notification email.

## Manage approvers for an account

You must assign the Approver role to users you want to be able to approve orders.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

An approver can:

- View all orders requiring approval for their account.
- Approve any order requiring approval, including those that were submitted before the approver was assigned the Approver role.
- Approve their own orders.

An administrator assigning roles:

- Can assign the Approver role to himself.
- Cannot remove the Approver role from the last approver on the account or deactivate the last approver on the account if there are orders pending approval or the order approval feature is enabled.

To assign the approver role in the administration interface:

1. In the administration interface, click the **Accounts** icon.
2. Select the account to be modified.
3. Click the **Contacts** tab.
4. Select the contact you want to assign the Approver role to, click the Approver role, then save the contact.

To assign the approver role in the storefront:

1. On the storefront, log in as an administrator.
2. Click the **My Account** link.
3. Click the **Account Contacts** tab.
4. Select the contact you want to assign the Approver role to, click the Approver role, then Save the contact.

## Understand how approvers approve and reject orders

Order approval and rejection happens on the storefront, after order approval has been enabled and orders have been submitted that require approval.



*This section applies to Storefront Classic only.*

An approver can see a list of all orders pending approval, even those that were created before he became an approver.

To approve or reject orders:

1. On the storefront, log in as an approver.
2. Click the **My Account** link.
3. Click the **Orders Pending Approval** tab.  
**Note:** The **Orders Pending Approval** tab must be configured on the storefront before you can use it and it also may use a different name if your implementation team chose to use a different one. See Allow a delegated administrator to control order approvals for more information.
4. Click the order ID to view the details for an order that needs approval.
5. Provide any optional comments and then click either **Reject** or **Approve** to reject or approve the order, respectively. An email notification is sent to the shopper after an order has been approved or rejected.

## Understand the effect of order approvals on scheduled orders

A scheduled order requires approval if one instance of the scheduled order exceeds the purchase limit.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

When a scheduled order is approved, the approval applies to every instance of the order created based on the schedule. The approval will persist even if the prices of the schedule order change. Conversely, if Commerce determines that a new scheduled order does not require approval, that determination persists even if the prices change in the schedule order and cause its total value to exceed the purchase limit at some point in the future.

The approval status of a scheduled order affects what the shopper can do with the order. When a scheduled order has been approved, the order is locked down and the only elements that can be edited are the schedule, the active or inactive setting, and the payment method. Note that a scheduled order does not go back for re-approval if the schedule is edited.

When a scheduled order has been rejected, none of the order's instances will be allowed to proceed and the order cannot be edited. When a scheduled order is pending approval, its contents will be repriced when the order's details are viewed. The shopper can modify the schedule and the active/inactive setting of a scheduled order that is pending approval.

**Note:** Scheduled orders that already exist when the order approval feature is enabled are allowed to proceed without approval.

## Notify users of order approval-related events

Emails are sent to approvers and shoppers to notify them of various order approval-related events.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

You can enable or disable these emails in the administration interface (see [Configure Email Settings](#) for more information). The order approval-related emails include the following:

- The Order Pending For Approval email is sent to all approvers when an order is placed that requires approval.
- The Order Approved email is sent to the shopper when an order is approved and needs payment. Note that this email provides the shopper with an expiration date and time, after which the order is canceled if payment has not been made. See [Set a price hold period](#) for more information.
- The Order Placed email is sent to the shopper when an order is approved that does not require payment. In this case, the order is submitted immediately upon approval and the shopper is notified via the Order Placed email.
- The Order Rejected email is sent to the shopper when an order is rejected.
- The Store Cancel Order email is sent to the shopper when an order is canceled because it exceeds the price hold period.
- The Payment Failure email is sent to the shopper when an approved order that has been paid for encounters a payment error.

Clicking the order link in any of these emails will take the shopper or approver to the Order Details page for the order. From this page, the approver can approve or reject the order and provide optional comments. Also from the details page, the shopper can provide payment for an order that has been approved. For an order that has been rejected, a shopper can choose to add the order's items to a new shopping cart to form the basis of a modified order that can pass approval.

You can modify the out-of-the-box email templates so that they match your storefront's look and feel. See the Customize Email Templates for detailed information.

# Run Multiple Stores from One Commerce Instance

Your Commerce instance initially has a single site, or store; you can, however, run multiple sites from a single Commerce instance.

Each site corresponds to a store and can have its own catalog. For example, if your company has multiple brands, you can have one site per brand. You could also have a site whose catalog includes items for sale in one country and another site whose catalog includes items for sale in a different country.

This section discusses what you need to know before running multiple sites in your Commerce instance.

## Understand what is shared among sites

If you choose to run multiple sites from a single Commerce instance, you should be aware that some content and configuration is shared among the sites and some is not.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

The following list describes what is shared by all of the sites in your Commerce instance:

- Tax processors are shared by all sites, but you can assign a different warehouse ship-from address to each site.
- A shopper's profile is shared by all sites. This means that a shopper uses the same credentials to log in on each site. If the shopper changes sites, he must log in each time but he will use the same credentials. It also means that any billing or shipping addresses added to a shopper's profile are available to all sites.  
Note that, while profiles are shared across sites, the values of certain properties in the profile can be site-specific. See [Create a shopper profile](#) for more details.
- Translations are shared by all sites. You can, however, specify different locales for each site.
- There is one search index for all sites and they share thesaurus entries, keyword redirects, and searchable field ranking lists.

Features and settings not included in this list can be configured on a per site basis. For example, catalogs, price groups, shipping methods, page layouts, promotions, email templates, and so on can be configured on a per site basis. For site-specific information on these features, refer to their documentation in [Understand Oracle Commerce](#) and [Understand Extension Features](#).

### Understand what is shared among business account sites

When your environment is configured to use business accounts, a contact's profile is shared across sites. However, before a contact can log into a site and make purchases, the contact's account, must have an associated contract for each site. When you create a contract for an account, contacts can log into the site and make purchases using the product catalog and

prices that have been assigned to their account. To enable a contact access to any site, the account must have a contract for the site.

Note that accounts can be associated with multiple contracts (one contract for each site), which allows you to have accounts that span multiple sites from a single Commerce instance.

The following account-based entities are shared across sites:

- contacts
- the contact's roles
- addresses
- account properties, including name, location in hierarchy, status, description, classification, type, DUNS number, Tax Reference number, Unique Identification number, VAT reference number and the account logo

For information on working with business accounts, refer to the [Configure Business Accounts](#) section.

## Define a site

A number of tasks required for creating and managing sites in a Commerce instance can be done in the Commerce administration UI, though other tasks, such as enabling a site, are developer tasks that must be done via the Admin REST API.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

Only users with the Administrator or Settings roles can create and manage sites. See [Configure Internal User Accounts](#) for information about assigning roles to users.

### Create a site

This section describes how to create a new site in the administration interface. Sites you create in the administration interface are not automatically enabled. To enable a new site, you must use the Admin REST API. See [Configure Sites](#) to learn how to enable sites.

When you create a new site in the administration interface, you must give it a Site Title and Site Base URL. Commerce automatically assigns it an ID, which is not visible in the administration interface, but which you can access with the Admin REST API.

To create a new site:

1. Click the **Settings** icon.
2. Click the + button next to the **Setup** menu item to display the Create Site dialog.
3. Enter the following required information for the new site, then click Save:  
Site Title: Provides the default value of the <title> tag for all your store's pages, including the store's home page.  
Site Base URL: Provides the base string value for absolute URL link generation, for example, for sitemap URLs.
4. Enter additional information about the store for the new site. See [Enter basic store information](#) for details.

## Change the default site

To simplify site creation, Commerce designates one site as the default site. When you create a new site in the administration interface, you must give it a unique Site Title and Site Base URL. Commerce automatically assigns it an ID, which is not visible in the UI. The new site inherits all its other properties from the default site, though you can change them on the Settings Setup page.

In addition to serving as a template for site creation, the default site is used as the destination for requests to your Commerce instance when a URL cannot be otherwise resolved. For example, if a shopper tries to access a store with a URL that does not match the production URL (the primary URL for accessing the site) or any of the additional production URLs (alternate URLs that can be used to access the site), Commerce displays the home page of the default site.

There is always one default site in an individual instance of Commerce. Initially, this is the site included with each Commerce instance. This site's initial Site Title is Commerce Site and its internal ID is siteUS. Once you have created other sites, you can change which site is the default. A site must be enabled before you can make it the default. Sites you create in the administration interface are not automatically enabled. To enable a new site, you must use the Admin REST API. See *Configure Sites in Configure Sites* to learn how to enable sites.

To change the default site:

1. Click the **Settings** icon.
2. Select **Setup** from the list of settings.
3. Pick a site to make the default from the list that appears above the settings list.
4. On the **General** tab, select the **Make Default Site** checkbox and then click **Save**.

## Delete a site

Deleting a site may affect many aspects of your store, including orders, reports, and a number of store settings. You should not delete a site that is currently in use with your production environment. You cannot delete the default site. If you want to delete the site that is currently the default, first make a different site the default.

To delete a site:

1. Click the **Settings** icon.
2. Select **Setup** from the list of settings.
3. Pick a site to delete from the list that appears above the settings list.
4. On the **General** tab, click **Delete**.
5. Click **Continue** in the **Warning** box to confirm that you want to delete the site.
6. Click **Save** on the **General** tab.

# View, preview, and publish sites

When a shopper views a site, the Commerce server detects the site from the URL and only returns content appropriate for that site.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

When you preview your sites in the administration interface, you can choose which site to view. When you publish changes, changes you have made for all sites are published, meaning you cannot filter the updates-to-publish list by site.

# Accessibility Tasks

Oracle's goal is to make its products, services, and supporting documentation accessible to all users, including users that are disabled.

To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program website at <http://www.oracle.com/us/corporate/accessibility/index.html>.

## About keyboard shortcuts

Commerce supports standard keyboard shortcuts that are used in many software applications.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

In addition, the service provides its own shortcuts, which are described in this section.

### Navigate the UI

The following table describes keyboard shortcuts you can use to navigate the Commerce administration interface.

Keyboard Shortcut	Result
Ctrl+`	Opens the main menu.
Tab	Navigates to the next focusable element. <b>Note:</b> Use the right and left arrow keys to navigate among the Home, Preview, Language, and User icons that appear at the top right of every page in the administration interface.
Shift+Tab	Navigates to the previous focusable element.

**Note:** For keyboard users navigating the administration interface in Firefox on a Mac, tabbing to the Forgot Password? link on the login screen does not work as expected. To fix this issue, follow these steps:

1. Select **System Preferences** on the Mac.
2. Select **Keyboard** and display the **Shortcuts** tab.
3. Select the **All Controls** option.

### Select items

The following table describes the keyboard shortcuts you can use to select navigable items. You can then move the selected items. For example, you might want to select several items to move to a different collection.

Keyboard Shortcut	Result
Space	Selects the item that has focus. To deselect a selected item, press Space again.
't' + 'w'	Opens the component library within the design layout's Grid View.

### Move and act on selected items

The following table describes the keyboard shortcuts you can use to act on selected items.

Keyboard Shortcut	Result
Down Arrow	Moves selected items down in a list or grid.
Up Arrow	Moves selected items up in a list or grid.
Left Arrow	Moves selected items to the left.
Right Arrow	Moves selected items to the right.
Enter	Triggers the associated action when the focus is on a link, image, or button.
Esc	Closes the dialog that has focus. Discards unsaved changes.

### Work with rich text fields

Some text editing fields in Commerce, for example the text fields for content-type widgets such as the About Us Web Content widget, use a third-party editing tool, CKEditor. These fields have their own set of keyboard shortcuts. For information, refer to the CKEditor documentation.

# Secure Your Service

This section describes the security features built into Commerce, including the administration interface and the storefront. It also lists the tasks you must complete to secure the service yourself. It is extremely important to review and follow the directions in this section before starting to use Commerce.

In addition, it is recommended that you become familiar with the general guidelines Oracle provides for securing all Cloud services. This information is available through the Cloud Help Center.

## Understand security features

This section describes the security features of Commerce.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

### Password security

Passwords for administration interface users and shoppers accessing the storefront are implemented using techniques that meet Oracle's software security standards. See [Secure your Commerce logins](#) for information on changing the initial password for the administration interface.

### User authentication

Internal users who want to access the administration interface provide their login credentials through an HTTPS request, which obtains an OAuth 2.0 bearer token. The token is then used to verify the authenticity of the user for subsequent requests. Registered shoppers requiring access to secure pages, such as their profile or checkout, are authenticated in the same way. See [Configure Shopper Settings](#) for information about configuring the length of a logged-in shopper session.

The administration interface automatically logs users out after a period of inactivity, to comply with the Payment Card Industry Data Security Standard (PCI DSS). By default, this period is 15 minutes. You can change this value by setting the `sessionTimeout` parameter using the `saveAdminConfiguration` endpoint in the Admin API. For example, to change the period to 30 minutes:

```
PUT /ccadmin/v1/merchant/adminConfiguration HTTP/1.1
Authorization: Bearer <access_token>
Content-Type: application/json

{
  "sessionTimeout": 30
}
```

You can set `sessionTimeout` to any integer from 3 to 120. Note that this timeout period also applies to the access token that is returned when logging into the Admin API with login credentials. See [Use the REST APIs](#) for information about logging into the REST APIs.

### Payment gateway integrations

As explained in this guide, Commerce has built-in integrations with CyberSource and Chase Paymentech for credit card processing. The security key and account information required for these integrations are encrypted using a symmetric 256-bit AES key. For more information on the secure handling of credit and debit card data, refer to [Configure Payment Processing](#).

Oracle Commerce integrates with PayPal Express Checkout. Calls to PayPal are not encrypted for transmission, as the merchant ID and secret key are never exposed on the storefront. (All calls to PayPal are made over HTTPS and performed on the server side.) For more information, refer to [Configure the PayPal integration](#).

### Web Service APIs

Commerce includes REST web service APIs you can use to provide integrations and extensions of the administration interface and the storefront. These APIs are implemented using Jersey (JAX-RS) version 1.14.

The APIs use the OAuth 2.0 security framework for data exchange.

Developers register their application in Commerce, which generates a JWT (JSON Web Token) application key. If necessary, the key can be regenerated to revoke existing access. For more information, refer to [Register applications](#).

### Customer accounts

Shoppers can choose to become registered customers by creating accounts through your storefront. You configure the password requirements (for example, length and case) on the Shopper Settings page in the Commerce administration interface. It is highly recommended that you familiarize yourself with guidelines for strong passwords and set your storefront's requirements accordingly.

If necessary, you can revoke account access for all registered customers by expiring all passwords. For more information, refer to [Configure Shopper Settings](#).

Account information for registered customers is stored in a database-backed Commerce profile repository.

### Webhooks

As described in this guide, Commerce can use webhooks to send JSON notifications to specified URLs each time an event occurs, for example, each time a shopper completes an order. The webhook contents are signed using HMAC and hashed using SHA256 and a secret key specific to your implementation. The key can be regenerated if necessary. For more information, refer to [Use Webhooks](#).

### PCI DSS compliance

Not all external systems you integrate with Oracle Commerce will comply with the Payment Card Industry Data Security Standard (PCI DSS). Oracle Commerce provides webhooks that exclude payment details from the order data you send to

systems that do not comply with PCI DSS. For more information, refer to Understand webhooks and PCI DSS compliance.

### CORS support

For security purposes, web browsers implement the same-domain policy, which prevents JavaScript on a page served from one domain from accessing resources on another domain. In some cases, you may want to selectively override this policy to allow specific domains to access data on your sites.

To make this access possible, Commerce supports CORS (cross-origin resource sharing), which is a standard mechanism for implementing cross-domain requests. For more information, refer to CORS support.

## Perform security tasks

This section lists the tasks you must perform to harden the security of your instance of Commerce.



*This section applies to Open Storefront Framework (OSF) and Storefront Classic.*

### Obtain an SSL certificate

The storefront uses SSL to encrypt sensitive data while it is being communicated between the web server and the customer's browser. To activate SSL and correctly identify your company with your storefront, an SSL certificate is required.

You must obtain an SSL certificate for your company so it can be installed on the web server. After the certificate is installed, the customer's browser displays several trust indicators, including the HTTPS URL protocol and the padlock icon, when he or she visits your store. For more information, contact your Oracle Support representative.

### Secure your Commerce logins

A username and password are required to access the Commerce administration interface. You receive one initial username and password from Oracle as part of the process of setting up your service. Change the password immediately by following these steps:

1. Log into the Commerce administration interface.
2. Click the **Settings** icon and select **Access Control**.
3. Click the name of the initial user.
4. Ensure the **Email Address** field contains a valid email address to which you have access.  
**Note:** If you add or change the email address, and then click Save, you may have to refresh the Access Control page for the new value to appear.
5. Click **Reset User Password**.
6. The system sends an email to the specified address. Use the link contained in the email to change the password.

All administration interface passwords automatically expire after 90 days. After this period, users will be unable to access the service until they reset their passwords. To do so, they should click the Can't Sign In link on the login page and follow instructions.

If your service has been upgraded from a previous release, the 90-day period starts after the upgrade.

User accounts are locked after six unsuccessful attempts to access the system.

Refer to [Create new user profiles](#) for instructions on how to create additional user accounts and for information on the different access levels you can assign. It is highly recommended that you give each user the least amount of access he or she requires. Commerce enforces the password requirements described in [Create new user profiles](#), but you should ensure additional secure practices around login credentials, for example by not emailing passwords to new users and by recommending regular password changes.

Ensure that accounts are deactivated promptly if they are no longer needed, for example when an employee leaves the company. See [Deactivate and reactivate user profiles](#).

### **Implement Storefront Single Sign-On**

Oracle Commerce enables you to integrate customer logins on your storefront with an external customer data store or identity management tool. For example, suppose you have an existing informational website with a large number of customer accounts. When you create a new Commerce site, you may want to provide existing customers with accounts on the commerce site. . For more information, refer to Implement storefront SSO for account-based shoppers.

# A

## Appendix: Layout Widgets and Elements

This section summarizes each of the widget types, accompanied by a brief outline of the relevant page layouts, and any associated elements, that can be found within the Design page.



*This section applies to Storefront Classic only.*

### Account Addresses

This widget is used in account-based storefronts.



*This section applies to Storefront Classic only.*

It allows all contacts to view account and profile addresses. Contacts with the Administrator, or Account Address Manager roles can create, edits, and delete account address, and specify a default billing/shipping address for the account. It also allows contacts who have the Profile Address Manager role to create, edit, and delete profile addresses.

In order to use this widget, a vertical tab stack must be created with the Account Addresses widget placed on a tab. This widget is read-only unless it is being used by the Profile Address Manager role and/or the Account Address Manager role.

It is available for the Shopper Profile layout.

### Account Contacts

This widget is used in account-based storefronts.



*This section applies to Storefront Classic only.*

It provides the Administrator with an interface for viewing, adding, removing, and modifying account contacts. Using this widget, the Administrator can also activate a contact as well as assign roles to a contact.

In order to use this widget, a vertical tab stack must be created with the Account Contacts widget placed on a tab that is accessible to contacts with the Administrator role only.

It is available for the Shopper Profile layout.

### Account Details

This widget enables the shopper to enter their account details, including their name and email address, and is used for shopper profile information in account-based storefronts.



*This section applies to Storefront Classic only.*

It is available for the Shopper Profile layout.

## Address Book

This widget enables the shopper to enter their address details, and is used for shopper profile information in account-based storefronts.



*This section applies to Storefront Classic only.*

It is available for the Shopper Profile layout.

## Add Product to Wish List

This widget enables the shopper to add a product to their wish list.



*This section applies to Storefront Classic only.*

It is available for the Product layout.

## Assets

This widget enables the shopper to see any assets that are associated with the shopper's account.



*This section applies to Storefront Classic only.*

It is available for the Assets layout.

## Asset Details

This widget enables the shopper to view the details for an asset selected from the Assets layout.



*This section applies to Storefront Classic only.*

It is available for the Asset Details layout.

## Breadcrumb

This widget enables the shopper to see breadcrumbs showing category hierarchies for both categories and products.



*This section applies to Storefront Classic only.*

Breadcrumbs help the shopper to navigate back to a category or product.

It is available for the Product, Search Results, and Collection layouts.

The following elements are available for the Breadcrumb widget:

- Breadcrumb Links

- Image
- Rich text
- Text

## Cart Shipping

This widget enables the shopper to enter shipping address details and select a shipping method so they can see an estimate of shipping costs, including taxes etc.



*This section applies to Storefront Classic only.*

It is available for the Cart layout.

The following elements are available for the Cart Shipping widget:

- Image
- Rich Text
- Shipping Address
- Shipping Methods
- Shipping Options
- Shipping Title
- Text

## Cart Summary

This widget enables the shopper to view a summary of the products added to their shopping cart.



*This section applies to Storefront Classic only.*

It is available for the Checkout layout.

## Category Content

This widget displays images, collection descriptions and collection long descriptions for a selected category.



*This section applies to Storefront Classic only.*

It is available for the Collection layout.

## Checkout Schedule Orders

This widget creates a scheduled order on a checkout page.



*This section applies to Storefront Classic only.*

The widget identifies things such as the scheduled order name and ID, next order date, schedule details, order contents, and so on. It is available on the Scheduled Order Layout.

See Configure page layouts for scheduled orders for more information.

## Collection

This widget displays items grouped together into a collection, for example, shoes, furniture, clocks etc.



*This section applies to Storefront Classic only.*

It is available for all layouts.

## Collection Navigation

This widget enables the shopper to navigate to a collection of items, and specifically provides category navigation for larger catalogs.



*This section applies to Storefront Classic only.*

It is available for all layouts.

## Collection Navigation Basic

This widget enables the shopper to navigate to a collection of items, and specifically provides category navigation for smaller catalogs.



*This section applies to Storefront Classic only.*

It is available for all layouts.

## Content Item

This widget is used to retrieve data from a content management tool.

After entering the URL and access token for the CaaS server, from where the data is retrieved, an asset ID is used to retrieve the particular content item.

It is available for all layouts.

## Customer Address

This widget enables the shopper to enter their shipping and billing addresses.



*This section applies to Storefront Classic only.*

It is available for the Checkout layout.

## Checkout Address Book

This widget provides the shopper with the ability to look-up and select saved shipping addresses.



*This section applies to Storefront Classic only.*

It is available for the Checkout layout.

**Important:** Account-based storefronts cannot use the Customer Address Book widget. This widget allows shoppers to edit their billing and shipping addresses. In account-based storefronts, shoppers require certain roles in order to manage profile and account addresses. The Managed Account Address Book widget enforces these role requirements, so it should be used instead of the Customer Address Book widget for the checkout flow in account-based storefronts.

See the [Create Page Layouts that Support Different Types of Shoppers](#) chapter for more details.

## Customer Profile

This widget gives the shopper access to their personal details.



*This section applies to Storefront Classic only.*

It is available for the Profile layout. **Note:** This widget may be affected in future releases by deprecations to default functionality.

**Important:** Account-based storefronts cannot use the Customer Profile widget. This widget allows shoppers to edit their billing and shipping addresses. In account-based storefronts, shoppers must have specific roles in order to create and edit addresses. Therefore, the Customer Profile widget is inappropriate for account-based storefronts. Instead, for an account-based storefront, use a Profile layout with a vertical tab stack with widgets appropriate to account-based shoppers, including the Account Addresses widget.

See the [Create Page Layouts that Support Different Types of Shoppers](#) chapter for more details.

## CyberSource Payment Authorization

This widget provides the ability to enter form data to be used for authenticating payments.



*This section applies to Storefront Classic only.*

It is available for the Payer Authentication layout.

## Footer

This widget provides a consistent footer throughout the web store, giving access to common links.

Generally, footers may include privacy policy details, contact information, shipping links, sign-ups, social links and copyright information.

It is available for all layouts.

## Guided Navigation

This widget allows the shopper to refine any given search, based on the search results.



*This section applies to Storefront Classic only.*

Search refinements are displayed based on the entered 'search' term.

It is available for the following layouts:

- Collection Layout
- Search Results Layout

## Gift Card

This widget enables the shopper to use a gift card as payment for their cart items.



*This section applies to Storefront Classic only.*

It is available for the Checkout layout.

The following elements are available for the Gift Card widget:

- Gift Card Fields
- Image
- Rich Text
- Text

## Header

This widget provides a consistent header throughout the web store, giving access to common links such as the store logo, sign-in/register links, and shopping cart access.



*This section applies to Storefront Classic only.*

It is available for all layouts.

The following elements are available for the Header widget:

- Cart link
- Currency
- Image
- Language

**Note:** You can use the Hreflang Groups endpoints in the Admin API to create groupings of sites and languages to use in hreflang tags on your pages. If you

use this feature, you will need to customize the language picker that is implemented by the Language element. See *REST API for Oracle Commerce* for more information about the Hreflang Groups endpoints.

- Links
- Login/registration
- Logo
- Rich Text
- Search
- Text

**Note:** When adding your company logo, you must delete the pre-loaded logo element and replace it with a logo image. To do so, drag the Image element to the widget row, upload a new image of your logo, and configure the image as required.

These elements are also available for the Header widget but should only be used in account-based storefronts (see the [Create Page Layouts that Support Different Types of Shoppers](#) chapter for more details):

- Contact Login (for Managed Accounts)
- Company Logo
- Company Name

## Hero

This widget is used for displaying marketing images.



*This section applies to Storefront Classic only.*

It is available for all layouts.

## Login/Registration Checkout

This widget enables the shopper to either log in or register their details during checkout.



*This section applies to Storefront Classic only.*

It is available for the Checkout layout.

## Loyalty Details

This widget enables a registered shopper to view information on the status of their loyalty program, including, points accumulated, points available for spending, points already spent, and so on.



*This section applies to Storefront Classic only.*

One loyalty program is detailed per shopper, however, this can be modified to display all of a shopper's loyalty programs memberships. For further information, refer to Work with Loyalty Programs.

It is available for all layouts.

## Loyalty Payment

This widget informs the shopper that they have made a payment using their loyalty points.



*This section applies to Storefront Classic only.*

In order to use loyalty points as a payment, the loyalty point gateway must be enabled. Details on how to integrate with a gateway for paying with loyalty points is described in [Work with Loyalty Programs](#).

It is available for the Checkout layout.

## Managed Account Address Book

This widget is used in account-based storefronts.



*This section applies to Storefront Classic only.*

This widget is used in account-based storefronts. It provides the shopper with the ability to look up and select shipping addresses saved for the account they are associated with; see the [Create Page Layouts that Support Different Types of Shoppers](#) chapter for more details.

It is available for the Checkout layout.

## No Search Results

This widget enables the shopper to clearly see that no search results were found.



*This section applies to Storefront Classic only.*

It is available for the No Search Results layout.

## Notifications

This widget provides the shopper with notifications related to their actions, for example, confirmation and validation messages.




*This section applies to Storefront Classic only.*

It is available for all layouts.

## Order Approvals

This widget allows an approver to approve or reject an order and provide comments when viewing an order's details.

 *This section applies to Storefront Classic only.*


Note that Order Approvals widget only appears in the storefront when an approver is viewing an order's details. Otherwise, it is hidden.

It is available for the following layouts:

- Scheduled Order Layout
- Order Details Layout

## Order Approval Settings

This widget provides the delegated administrator with an interface for enabling and disabling order approvals and setting the purchase limit.


 *This section applies to Storefront Classic only.*

In order to use this widget, a vertical tab stack must be created with the Order Approval Settings widget placed on a tab that is accessible to approvers only.

It is available for the Profile layout.

## Order Confirmation


This widget enables the shopper to see order confirmation details upon placing an order.

 *This section applies to Storefront Classic only.*

It is available for the Order Confirmation layout.

## Order Confirmation Summary


This widget enables the shopper to see a summary of their order upon placing an order.

 *This section applies to Storefront Classic only.*

It is available for the Order Confirmation layout.

## Order Confirmation with Additional Info

This widget enables the shopper to view information related to invoice payment selection and purchase order number(s) on the order confirmation page.

 *This section applies to Storefront Classic only.*

It is available for the following layouts:

- Order Confirmation Layout
- Order Details Layout

## Order Details

This widget provides the shopper with details related to their order including date, status, product details etc.



*This section applies to Storefront Classic only.*

It is available for the Order Details layout.

The Order Details widget also enables you to choose whether or not to provide shoppers with the ability to add a purchase list, or to cancel/return orders.

**Note:** For shopper-initiated cancellations/returns:

- In order to use the cancellations/returns feature, the latest version of the Order Details widget must be utilized. This release of Oracle Commerce automatically contains the latest version, however, if you are running an older version of Commerce you must ensure the Order Details widget is upgraded. See [Upgrade deployed widgets](#) for details on replacing a widget with the latest version.
- As the cancellations/returns feature is disabled by default, you must enable these options within the Order Details widget to avail of the feature.
- Once shopper initiated returns are enabled, you will see the Return Items button within the Order History Details widget.
- Once shopper initiated cancellations are enabled, you will see the Cancel button within the Order History Details widget.
- Either shoppers or agents can begin the cancellation/returns process. Refer to Cancel an order for details on agent-initiated cancellations/returns.

## Order Details with Additional Info

This widget enables the shopper to view information related to invoice payment selection and purchase order number(s) on the order details page.



*This section applies to Storefront Classic only.*

It is available for the Order Details layout.

## Order History

This widget provides the shopper with a summary of their previous orders.



*This section applies to Storefront Classic only.*

If you are running more than one site, the Order History widget displays information that is site-specific.

It is available for the following layouts:

- Shopper Profile Layout
- Order History Layout

## Order Summary

This widget enables the shopper to review their order from the cart page before proceeding to checkout.



*This section applies to Storefront Classic only.*

It is available for the Cart layout.

## Order Summary Checkout

This widget enables the shopper to review their order from the checkout page and then place their order.



*This section applies to Storefront Classic only.*

Additionally, they may have an option to checkout with PayPal.

It is available for the Checkout layout.

## Orders Pending Approval

This widget allows an approver to view a list of orders pending approval.



*This section applies to Storefront Classic only.*

In order to use this widget, a vertical tab stack must be created with the Orders Pending Approval widget placed on a tab that is accessible to approvers only.

It is available for the Profile layout.

## Overlaid Guided Navigation

The Guided Navigation widget allows the shopper to refine their search, based on the search results.



*This section applies to Storefront Classic only.*

Search refinements are displayed based on the entered 'search' term.

This widget is optimized for mobile display.

It is available for the Collection, and Search Results layouts.

## Page Not Found

This widget displays a message to the shopper that the page they searched for has not been found.



*This section applies to Storefront Classic only.*

It is available for the Error layout.

## Pay After Approval

This widget is used in account-based storefronts.



*This section applies to Storefront Classic only.*

It provides the shopper with the ability to place an order, wait for the order to be approved, and then make the payment once approval has been granted for that order.

It is available for the Checkout layout.

## Payment Details

This widget enables the shopper to select their payment type and enter their card payment details.



*This section applies to Storefront Classic only.*

It is available for the Checkout layout.

## Payment Methods (Formerly Split Payments Widget)

The Payment Methods widget enables shoppers to pay for orders by choosing from a variety of available payment methods, and is available as a component on the Checkout layouts.



*This section applies to Storefront Classic only.*

It allows shoppers to choose between single or split payments, and encompasses a range of functionality that is specific to several individual widgets in Commerce. For example, enabling the shopper to select their payment type, enter their card payment details, and using a gift card as a payment method. The individual widgets that combine to form the range of functions contained in the Payment Methods widget include:

- Split Payments
- Payment Details
- Gift Card
- Payment Gateway Options

**Note:** If required, you can continue to use these widgets independently.

## Payment Gateway Options

This widget provides the shopper with a list of payment gateway options for checkout.



*This section applies to Storefront Classic only.*

It is available for the Checkout layout.

The following elements are available for the Payment Gateway Options widget:

- Cash Payment
- Image
- Rich Text
- Text

## Product Details

This widget displays the details of a product to the shopper.



*This section applies to Storefront Classic only.*

This can include: image, description, variant detail, quantity, and stock indicator.

This widget also allows the shopper to add an item to their cart and share on social media or email.

It is available for any layout.

The following elements are available for the Product Details widget:

- Add to Cart Button
- Add to Wish List Button
- Alternate Image Selector
- Back
- Description
- Image
- Inventory status (Refer to [Customize inventory status messaging](#) for details.)
- Long Description
- Name
- Price
- Product Image
- Product Quantity
- Rich Text
- Shipping Surcharge
- Social Sharing
- Text
- Variant options
- Volume Pricing

## Product Listing

This widget displays a list of products relevant to the shopper's navigation context.



*This section applies to Storefront Classic only.*

When directly navigating via a collection, this widget displays products belonging to that collection. When navigating via a search, this widget displays a list of products matching the given search term. Each product is shown with the product image, name, and price.

It is available for the Collection, and Search Results layouts.

You can configure a number of settings for this widget, including Display Options, and Web Application Configuration options.

For information on how to use this widget in popup stacks, see [Add Popup stacks](#).

### Support generic sort on the product listing widget

The `ProductListing` widget uses `productListingViewModel` to fetch products, pagination, scroll and sort. You can enable the sort to use any product property as the sort parameter using this code in the product-listing widget:

```
widget.listingViewModel().useGenericSort = true;
```


You will need to update the sort options with the required parameters, described in the following table. For example if you want to add the sort option as `displayName` property, you might use the following:

```
var sortOptions = [{
    "id": "displayName",
    "displayText": Name - Asc,
    "order": ko.observable("asc"),
    "maintainSortOrder": true,
    "serverOnly": true
}];
```

Parameter	Description
id	This must be same as the property name on the product on which you want to sort. This can also be a dynamic property.
displayText	This is the localized value of what you want to display in the widget.
Order	Either asc for ascending sort order or desc for descending sort order.
maintainSortOrder	Set to true if you want the view models to use the parameter set for Order. If set to false, the order will default to asc for ascending order.
serverOnly	Set to true for sorting on the server side. Set to false to sort on client side within the available data.

## Product Recommendations

This widget enables personalized shopper product recommendations to be displayed to the shopper.

 *This section applies to Storefront Classic only.*

It is available for all layouts.


The following elements are available for the Product Recommendations widget:

- Recommendations Title
- Recommendations Carousel
- Image
- Text
- Rich Text

For information on how to use this widget, see [Display product recommendations](#).

## Product Social Meta Tags

This widget provides meta tag support for structured data markup on web pages as well as other applications.


 *This section applies to Storefront Classic only.*

It provides Open Graph (OG) protocol meta tags to control the content displayed when a page is shared on Facebook. Additional meta tags are included for use with search engine optimization (Schema.org, Pinterest, and Twitter). The meta tags provided in this widget are a subset of the meta tags available. Consult your company's development team for more details on how to tailor this widget to your business needs.

It is available for the Product layout.

## Product Quick View

This widget displays summarized details of a product to the shopper in the form of a popup page.

 *This section applies to Storefront Classic only.*


This can include: image, description, name, and price.

It is available for the Collection, and Search Results layouts.

For information on how to use this widget, see [Add popup stacks](#).

## Promotion

This widget enables the shopper to apply a promotional coupon to their order.

 *This section applies to Storefront Classic only.*

It is available for the Checkout and Cart layouts.

## Purchase Lists

The widget displays a list of purchase lists, and allows a shopper to select a purchase list to modify, and use a search box to search for products.



*This section applies to Storefront Classic only.*

It is available for the Profile layout.

Refer to Enable Purchase Lists for further details.

## Purchase List Details

This widget displays details of individual purchase lists, and displays the details of an individual purchase list.



*This section applies to Storefront Classic only.*

All items are selected by default for addition into the cart. A shopper can select specific items to add to the cart or modify the quantities of the selected items. This widget also allows a shopper to search for and select products.

The widget also allows a purchase list creator to share a purchase list. You can share purchase lists with registered shoppers and account-based contacts.

This widget is available in the Purchase List Details layout.

Refer to Enable Purchase Lists for further details.

## Quick Order

This widget enables shoppers to quickly add known items to their shopping cart by entering a combination of product name, and/or SKU ID, either in their entirety, or part thereof.



*This section applies to Storefront Classic only.*

Shoppers can also import items to a Quick Order form from a CSV file.

In order to use the Quick Order layout/widget, the following tasks must be performed:

1. Any product property that you would like a shopper to be able to search for on the quick order page must be visible on the storefront and marked as “Allow Property to be Searched” in the product type in the catalog. Refer to the [Property types](#) section of this document for further information.
2. Add the properties from the previous step to the TypeAhead searchable field ranking list, as described in the [Add fields to the searchable field ranking list](#), and [Understand the searchable field rank](#) sections of this document.
3. You have the option to configure the maximum number of items to add to the cart, and the default number of rows that appear on the Quick Order widget within the widget Settings.

4. Place the Quick Order widget in a popup stack. Refer to the [Add popup stacks](#) section of this document for further information.

This widget is available for all layouts.

### Bulk import using CSV file

To import items using a CSV file, the shopper would click on the Import file button, browse to a CSV file, and select it.

Each row of the import file must contain two columns:

- SKU ID (string)
- Quantity (numeric)

You can specify a maximum number of items that the shopper can import. If the number of items in your CSV file exceeds the configured maximum, an error message will display.

## Quote Details

This widget provides the shopper with the details of a quote which they have previously requested.



*This section applies to Storefront Classic only.*

It is available for the Order Details layout.

## Related Products

This widget provides the shopper with related product recommendations, as defined by the merchant.



*This section applies to Storefront Classic only.*

**Note:** Only one instance of this widget should be included in the layout as multiple instances can display redundant recommendations.

It is available for the Product layout.

The following elements are available for the Related Products widget:

- Related Products Title
- Related Products Carousel
- Image
- Rich Text
- Text

## Return Items

This widget enables the shopper to initiate returns for returnable items.



*This section applies to Storefront Classic only.*

It is used when shoppers click the Return Items button whilst viewing past orders on the Order Details widget.

It is automatically available on the Return Items layout for the latest version of Commerce. However, if you are running an older version of Commerce, you must ensure that you drag the Return Items widget to the Return Items layout as this layout will appear blank in older versions. See [Upgrade deployed widgets](#) for further details on replacing a widget with the latest version.

## Return Item Details

This widget lists the details of items that have been returned by the shopper.



*This section applies to Storefront Classic only.*

It is available on the Order Details layout.

## Request Quote

This widget enables the shopper to request a quote for their order.



*This section applies to Storefront Classic only.*

It is available for all layouts.

## Review Order

This widget enables the shopper to review their order before placement.



*This section applies to Storefront Classic only.*

It is available for the Checkout layout.

## Scheduled Order

This widget displays the details of a scheduled order such as the scheduled order name and ID, next order date, schedule details, order contents, and so on.



*This section applies to Storefront Classic only.*

It is available on the Scheduled Order Layout. See [Configure page layouts](#) for scheduled orders for more information.

## Scheduled Order List

This widget displays a list of scheduled orders created by the current shopper.




*This section applies to Storefront Classic only.*

It is available on the Profile Layout. See Configure page layouts for scheduled orders for more information.

## Scheduled Order - Checkout


This widget presents UI controls to the shopper that capture the schedule information for a scheduled order, including a name for the scheduled order, the start and end dates, the frequency, and the option to suspend the scheduled order.

 *This section applies to Storefront Classic only.*

It is available for the page types within the Checkout layout. See Configure page layouts for scheduled orders for more information.

## Search Results


This widget displays search results – in a similar way to the Product Listing widget.

 *This section applies to Storefront Classic only.*

It is available for the Search Results layout.

## Shopping Cart

This widget enables the shopper to view the items added to their shopping cart.


 *This section applies to Storefront Classic only.*

The shopper can also use this widget to amend the cart details.

It is available for the Cart layout.

## Split Payments


This widget enables the shopper to pay for an order using multiple payment methods.

 *This section applies to Storefront Classic only.*

It is available for the Checkout layout.

## Update Password

This widget enables the shopper to update their password by entering their current password and then updating this to a new one, and is used in account-based storefronts

 *This section applies to Storefront Classic only.*

It is available for the Shopper Profile layout.

## Web Content

This widget allows the merchant to display HTML content.



*This section applies to Storefront Classic only.*

This includes About Us, Contact Us, Privacy, Returns and Shipping web content.

It is available for all layouts.

The following elements are available for the Web Content widget:

- Image
- Rich Text
- Text

Within the Settings tab of each of the Web Content instances you can access a rich text editor from the Element Library. (If you are using Version 2 of this widget, then it contains by default a single rich text element which is accessed upon opening the element in the Layout tab.) This allows you to make style configurations, view source content, and insert images via a URL.

To add an image via a URL:

1. Find and open your preferred image in the **Media** page.
2. Copy the image location path.
3. Open the **Image Properties** icon within the relevant Web Content Widget instance **Settings** tab.
4. Paste the URL in the Image Info tab URL text box.  
**Note:** When adding an image URL you must add a `'/file'` immediately before the file name. For example, `'/general/aboutus.jpg'` would become `'/file/general/aboutus.jpg'`.
5. Click **OK** to confirm.

## Wish List Canvas

This logical widget allows a shopper to create an article page (a static text page) for Facebook Canvas display.




*This section applies to Storefront Classic only.*

The associated page is shown exclusively on Facebook.

It is available in Components for use in the Wish List layout.

## Wish List Content

This widget works together with the Wish List Header widget to display the appropriate wish list to the shopper.


 *This section applies to Storefront Classic only.*

In the administration interface, Layout preview, only the logged out state of this widget is displayed, showing no content. In the Storefront preview, providing an example of when the shopper is logged in, the contents of widget are then visible.

It is available in Components for use in the Wish List layout.

## Wish List Header

This widget provides wish list management features that include the uploading of a profile image, selecting the wish list to be displayed, and creating a wish list.

 *This section applies to Storefront Classic only.*


In Layout preview, only the logged out state of this widget is displayed: an empty line. In Storefront preview, when the shopper is logged in, this widget is visible. When not logged in, this widget is not visible.

This widget works with the Wish List Content widget to display the appropriate wish list to the shopper.

It is available in Components for use in the Wish List layout.

## Wish List Invitation

This widget is a logical widget with no UI, handling the wish list acceptance flow.

 *This section applies to Storefront Classic only.*


It creates a link to the shopper's email client so the shopper can send an invitation to a family member/friend to view their wish list. This widget is included by default. Nothing needs to be configured to enable it. However, if customization is desired, make changes to the widget through the Design page.

The wish list invite acceptance flow involves logging out the current user and triggering the invitation modal. Once the invitee logs back in to create a new account (for new users) or logs in as a registered shopper, the link validates the invitation token and joins the new member to the associated wish list. The widget handles the behavior of members accessing a wish list.

It is available in Components for use in the Wish List layout.

## Wish List Notification Settings

This widget allows shoppers to opt in/opt out of their wish list email notifications.

 *This section applies to Storefront Classic only.*

Notifications include:

- Comment and product.
- New member.

The logged out state is shown in the preview.

It is available in Components for use in the Shopper Profile layout, the Wish List Profile layout, found under Shopper Wish List Profile.

## Wish List Settings Header

This widget displays the title and Back to My Account button for the Wish List Settings page.



*This section applies to Storefront Classic only.*

It is available in Components for use in the Wish List Profile layout, found under Shopper Wish List Profile.

## Wish List Welcome

This widget allows the merchant to provide general welcome information to a shopper about the wish list capability on their site, such as messaging to encourage wish list creation, wish list features, and benefits of having a wish list.



*This section applies to Storefront Classic only.*

In the administration interface, Layout preview, only the logged out state of this widget is displayed, showing the introductory welcome message that a non-logged-in shopper sees when accessing a wish list, as well as log in and create an account buttons.

The Wish List Welcome and Wish List Content Header widgets are associated. The Wish List Welcome widget displays the logged out UI. The Wish list Header and Wish list Content widgets show the logged in UI. The Wish List Header widget determines which wish list to show, and Wish list Content widget shows the wish list determined by the Wish List Header widget.

It is available in Components for use in the Wish List layout.