





# Magento<sup>®</sup> U



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## Introduction

This study guide is intended to help you prepare for the Magento® 2 Certified Solution Specialist Exam. For each content area of the exam, the Study Guide details the topics—skills and knowledge—that are tested by the exam. For each content area, it provides questions that you should ask yourself as you study Magento architecture, functionality, and business usage. References to Magento user guides, Magento U classes, ecommerce trends and definitions, and third-party resources and materials are provided to help you find answers to these questions in preparation for taking the actual exam.

This study guide is continually being revised and improved. When preparing for the exam, remember to check the website for the latest version.

# What Is a Magento 2 Solution Specialist?

A Magento 2 Solution Specialist is an expert user of the Magento 2 Commerce platform. Drawing on a deep background in business and ecommerce, the Magento 2 Solution Specialist can efficiently align business objectives with Magento 2 functionality, optimize use of native features, and avoid unnecessary customization. Whether as a merchant, a manager, a consultant, or an analyst, the Magento 2 Solution Specialist knows how to make the best use of Magento 2 technology.

## Who Should Take This Test?

- Business Analysts
- Account Managers
- Project Managers
- QA Engineers
- User Experience Designers
- Web Designers
- Ecommerce Consultants
- Ecommerce Strategists
- Magento Platform Users



# **Prerequisites**

The questions in the Magento 2 Certified Solution Specialist Exam exam assume that you have a solid product knowledge of Magento 2 Open Source (formerly Community Edition/CE) and Magento 2 Commerce (formerly Enterprise Edition/EE), including systems functionality, basics of system architecture, an understanding of integration, and the most popular third-party modules included in the standard Magento 2 installation. You also need to understand the differences between Magento 1 and Magento 2, including changes in terminology.

In addition to Magento-specific knowledge, a Solution Specialist should understand basic ecommerce terms and have a good understanding of typical business usage scenarios and trends. As ecommerce is an IT industry, it is also important to demonstrate a solid knowledge of the most common software development methodologies, techniques of building software, and methods of gathering business and system requirements. You should also have a basic understanding of networking, cloud, and server infrastructure. Lastly, all ecommerce takes place within the legislative structure of the countries that merchants operate within and sell to, so a Solution Specialist is also expected to have a basic understanding of the laws concerning privacy and online trading in the US and Europe, as well as other major trading nations.

You can prepare for the exam by reviewing the most recent versions of Magento reference materials:

<u>Magento Open Source User Guide and Magento Commerce User Guide available on the Magento website</u>



# **Exam Description**

The Magento Certified Solution Specialist Exam is a computer-based test consisting of 70 multiple-choice questions. You will have 90 minutes to complete the exam. The exam is based on the content areas listed below. All questions are based on Magento Open Source (formerly Community Edition/CE) v2.x and/or Magento Commerce (formerly Enterprise Edition/EE) v2.x.

Note: All questions assume the default state of native Magento installations, except where specified in the question.

To prepare for the exam, read through the content descriptions in this guide to determine which areas you need to review. You will not have access to any resources or references during the exam.

This table shows the four content areas of the exam and the approximate percentage of questions you can expect in each area.

Content Area	Approximate Percentage of Exam
Ecommerce	23%
Magento architecture	24%
Magento 2 features and functionality	30%
Applying Magento knowledge to business goals	23%



# **Exam Content: Knowledge and Skills**

You are a good candidate for the Magento Solution Specialist Certification if you have knowledge and experience in the following areas:

#### 1. Ecommerce, including:

- Online merchandising
- Security
- User experience
- Laws and regulations
- System development
- Omnichannel (inventory management, B2B, Magento Order Management, Ship from Store, etc.)
- Data analytics and testing
- Taxes (including EU and US tax laws)

#### 2. Magento 2 architecture, including:

- Basic concepts in Magento architecture (MVVM, templates and layouts, open source)
- Magento API and integration with third-party systems
- Websites, stores, and store views
- Magento edition differences (Commerce, Open Source)
- Magento Commerce (Cloud)
- Magento solutions (Bluefoot, B2B)
- Search architecture
- Infrastructure requirements for a Magento site
- Cookies



- 3. Magento 2 features and functionality, including:
- Magento Admin: Concepts, features, and usage
- Content staging and previews
- Catalog
- Shopping cart
- Payment methods
- Shipping
- Checkout
- Order processing (order management, fulfillment, order statuses)

- Security
- Extensions and customizations
- Customers, customer groups, and customer segments
- Using CMS (blocks, banners, pages)
- Promotions and pricing rules
- Import and export (of customers, orders, products)
- Reporting
- Transactional emails and templates
- 4. Application of Magento 2 knowledge to business goals, including:
  - · Requirements gathering
  - Internationalization / multisite
  - Third-party integrations
  - Promotions (customer segments, related products, etc.)
  - Customer loyalty
  - Laws and regulations
  - · Catalog management
  - User experience
  - Customization vs. native features
  - Returns
  - Checkout
  - Conversion rate enhancement



#### **Content Area 1: Ecommerce**

The ecommerce section covers generic knowledge related to ecommerce and IT systems development. It tests how well you know current methods of selling online, including:

- Enabling an online business
- Setting up and running a web store
- Inventory and product catalog management
- Security
- Complex inventory management
- System development lifecycles
- Laws and regulations
- Analytics
- SEO

Security, both of systems and of data, is an important aspect of an online business. This section includes questions about key aspects of ecommerce security, including payment systems industry standards, data privacy policies for online stores, and customer data security practices.

Other questions test general knowledge of IT system development methodologies. You might be asked to explain SCRUM, Agile, and Waterfall methodologies and the differences between them.

Exam questions on the above topics are not Magento-specific but seek to probe your knowledge of ecommerce as a field.

This content area comprises approximately 23% of the exam. Questions are drawn randomly from the following topics and objectives.

#### 1.1 Online Merchandising

- Marketing strategies: Omnichannel, multichannel, SEO, affiliate marketing, social marketing, email marketing, etc.
- Basic steps of setting up a new online store: Platform selection, hosting, deployment, and maintenance
- Search strategies: Keyword search, auto-suggest, auto-complete, and guided navigation
- Upselling and cross-selling in ecommerce
- SEO in ecommerce

#### 1.2 Security

- User data security standards in different markets (USA, Canada, Australia, Europe)
- PCI standards and processes
- PA-DSS / PCI-DSS rules and practices
- TLS (SSL) usage in ecommerce



#### 1.3 User Experience

- Usability principles and issues in ecommerce
- Building a good user experience in ecommerce best practices
- Navigation best practices

#### 1.4 Laws and Regulations

- Disability compliance issues (ADA and its international equivalents)
- US and EU privacy and data protection regulations

#### 1.5 System Development

- Agile, SCRUM, Waterfall IT systems development processes and practices
- Basic terms and core constituents of system development lifecycles
- Best practices in testing

#### 1.6 Omnichannel (Inventory Management, B2B, Magento Order Management)

- Complex inventory management
- Drop ship
- Buy-on-line / pick-up-in-store
- Magento Order Management

#### 1.7 Data Analytics and Testing

- Google Universal Analytics
- A/B testing
- Optimization
- Personalization

#### 1.8 Taxes

- US and EU tax regulations
- VAT
- Digital VAT
- In-state and out-of-state taxes
- Cross-border taxes

#### Questions to ask yourself while studying:

- What is the difference between omnichannel and multichannel retailing?
- How can you set up a product catalog for best search results, taking into account issues of duplicate content, meta content, meta title, keyword search terms in product description, attribute weight, and so on?
- What is a "canonical link element"?



- What "social merchandising" techniques and tools are used in ecommerce?
- When is TLS (SSL) required when transacting data online?
- What is PA-DSS? When should PA-DSS be applied?
- What are typical omnichannel challenges?
- What is the process for getting a site certified as PCI-compliant?
- What are best practices for protecting ecommerce user data?
- What are the best usability practices when building an online catalog and checkout system?
- What are the main characteristics of Agile and Waterfall development methodologies?
- What are SMART requirements?
- What are the requirements of the European Union "cookie law"?
- What does the acronym MOSCOW stand for? How is it used?

#### References:

- Magento Open Source and Magento Commerce User Guides; Magento Resources: Support,
   Documentation, and Forum
- Magento Resource Library (eBooks)
- <u>E-Commerce Search Strategies: How Faceted Navigation and Apache Solr/Lucene Open Source Search Help Buyers Find What They Need (white paper)</u>
- Magento U: Requirements Gathering for Successful Magento 2 Implementations

## **Content Area 2: Magento 2 Architecture**

To be certified as a Magento 2 Solutions Specialist, you must have an excellent understanding of Magento 2 system architecture, including the language and framework of the Magento 2 application and the software required to host and run it. This section of the exam tests your knowledge of Magento 2 data models and architecture concepts, including MVVM; some questions may ask whether a functional change requires a customization (code change) or whether it could be achieved with native Magento functionality.

Note: This section aims to verify that candidates have the level of knowledge needed to help a business achieve its goals using Magento; it does not require or verify the deep technical knowledge required for Magento architects and developers.

This section also tests your knowledge of the main functional differences between Magento Commerce (formerly Enterprise Edition/EE) and Magento Open Source (formerly Community Edition/CE).

This content area comprises approximately 24% of the exam. Questions are drawn randomly from the following topics and objectives.

#### 2.1 Basic Concepts: MVVM Templates and Layouts, Open Source

- Architecture in Magento 2 What is it and how is it used in the Magento 2 application?
- Database sharding and Varnish caching
- Templates and layouts in Magento 2: Basic responsibilities and roles when executing Magento code



- Extending Magento 2 functionality with a code change or enabling an extension: Basic ideas and process steps
- Configuring site design using options found in the Admin under Content > Design > Configuration
- Installing and enabling/disabling Magento 2 extensions
- Using Bluefoot

#### 2.2 Magento APIs and Third-Party Integration

- Types of API
- API authentication
- API users
- Differences between Magento 1 and Magento 2 integration options
- Third-party integrations with Magento Open Source and Magento Commerce

#### 2.3 Magento Websites, Stores, and Store Views

- Website, store, and store view configuration
- The application of scope to websites, stores, and store views
- Display of product catalogs in websites, stores, and store views
- Administration of websites, stores, and store views
- Localization, taxes, and pricing in websites, stores, and store views
- Product attribute scope

#### 2.4 Magento Edition Differences (Open Source, Commerce)

- Advantages and disadvantages of each edition
- Cache, indexing, search, and other feature differences

#### 2.5 Magento Commerce (Cloud)

- Features and functions
- Advantages
- Differences from other Magento editions

#### 2.6 Magento Solutions

- Bluefoot
- B2B
- Magento Business Intelligence

#### 2.7 Search Architecture

- Solr
- Elasticsearch



#### 2.8 Infrastructure Requirements

- Caching, Varnish, Redis, Memcached
- Sessions
- Database sharding

#### 2.9 Cookies

Cookie use and handling

#### Questions to ask yourself while studying:

- What are the unique advantages of Magento 2 architecture when building a site?
- What are the two methods available in the Magento 2 Admin (in the Content section) to change the design of a site?
- How can you change the layout of catalog pages using Magento 2 Admin functionality?
- How is product data constructed in Magento 2 (product attributes, inventory, price, images, etc.)?
- When does product inventory change (decrease) during the ordering process? How can an administrator control the inventory change?
- What is the Returns (RMA) functionality in Magento 2, and what are the RMA types?
- What are the required attributes for creating a CMS page using Magento Admin functionality?
- What is the process for creating a product, and which catalog data is used in this process?
- How is the price defined for a product, and what methods are available for changing product price using Magento 2 Admin functionality?
- What are main differences in Magento indexing between Magento Open Source 2.x and Magento Commerce 2.x? Between Magento 1 and Magento 2?
- What marketing and merchandising features are available only in Magento Commerce?
- What payment methods and payment functionality are available in Magento Commerce but not in Magento Open Source?
- What are the features and functions of Magento Commerce (Cloud)?
- What are the differences between Elasticsearch and Solr?
- What is caching and why is it important?
- When would you recommend sharding a database?
- What is Bluefoot?
- What functions are included in B2B? In Magento Business Intelligence?
- How are cookies used in Magento 2?
- Which customer data is saved in cookies, and how is it used in the storefront using Magento native functionality?
- What is Swagger, and how is it used in Magento?

#### References:

- Magento Open Source and Magento Commerce User Guides; Magento 2 Resources: Support, Documentation, and Forum
- Magento U courses: eCommerce with Magento 2; Managing your Magento 2 Store; Stepping Up Sales with Magento Promotions and Discounts



## **Content Area 3: Magento 2 Features and Functionality**

Knowing how to build a business solution with Magento 2 requires a solid knowledge of the application itself. This section tests your knowledge of the features and functionality of Magento Commerce and Magento Open Source.

This study guide lists some examples of questions you might have on the exam, but any aspect of Magento 2 features and functionality may be asked about. To do well on this section, you should have a solid understanding of Magento 2 features and the ways in which different modules and functionality could be used to support different business requirements.

This content area comprises approximately 30% of the exam. Questions are drawn randomly from the following topics and objectives.

#### 3.1 Magento Admin: Concepts, Features, and Usage

- Sections of the Admin
- User roles and role scope
- Grids and views

#### 3.2 Content Staging and Previews

- Staging timelines
- Viewing staged content

#### 3.3 Catalog

- Product types
- Product creation
- Product attributes and attribute sets
- Product videos
- Categories
- Visual merchandiser

#### 3.4 Shopping Cart

- Pricing and tax display
- Registered customers
- Guest customers
- Wish list shopping cart options
- Shopping cart gift options

#### 3.5 Payment Methods

- PayPal
- Native payment options



- Braintree
- Third-party payment
- Reward points

#### 3.6 Shipping

- Native shipping methods
- Free shipping
- Third-party shipping

#### 3.7 Checkout

- Data flow
- Tax calculation
- Price calculation

### 3.8 Order Processing (Order Management, Fulfilment, Order Statuses)

- Orders
- Invoices
- Shipments
- Credit memos
- Returns (RMAs)

#### 3.9 Security

- TLS (SSL)
- PCI-DSS / PA-DSS
- Patching
- Security alerting
- Backups

#### 3.10 Extensions and Customizations

- Marketplace
- Installation
- Differences between Magento 1 Marketplace and Magento 2 Marketplace

#### 3.11 Customers (Segments, Groups)

- Customer groups
- Customer segments
- Customer attributes
- Customer account features and functionality (wish lists, gift registry, returns)



#### 3.12 Using CMS

- CMS pages and blocks
- Widgets
- Banners

#### 3.13 Promotions and Pricing Rules (Catalog Rules, Shopping Cart Rules)

- Catalog price rules
- Shopping cart price rules
- Product relations (related products, upsells, cross-sells)
- Reward points
- Coupons

#### 3.14 Import and Export (of Customers, Orders, Products)

#### 3.15 Reporting

- Magento reporting
- Magento Business Intelligence reporting

#### 3.16 Transactional Emails

#### Questions to ask yourself while studying Magento features and functionality:

#### 3.1 Magento Admin: Concepts, Features, and Usage

 How is role scope used? In which section of the Admin are most initial configuration options located?

#### 3.2 Content Staging and Previews

- How do you set a banner to appear on a specific date?
- How do you preview the result of setting content to appear at a future time?

#### 3.3 Catalog

- What are the different product types in Magento Commerce?
- What are the minimum attributes to create a simple product?
- What is the product attribute set used for in Magento 2? Can you have different product types using the same attribute set?
- What is the process of creating layered navigation (including category creation and attributes, product attribute types, and product—category associations)?
- What are the different ways in which an Admin user can update product inventory?



- How can you display associated products in the cart and on the product page?
- How can you create page redirects for specific search requests?
- Can a customer submit a JPG image with a product review?
- What are the options for displaying a product video?

#### 3.4 Shopping Cart

- How can you create a product discount to have it automatically added in the shopping cart?
- Can guest customers place orders?
- Can customers ship products to multiple addresses using native Magento 2 functionality?
- How can a customer register an account when placing an order?
- Can shopping cart products be shared among different websites?
- What are the different shopping cart promotion types, and how can shoppers apply them as discounts?
- How does the persistent shopping cart option work in Magento 2?
- Does Magento Commerce functionality allow merchants to contact shoppers about their abandoned shopping carts?

#### 3.5 Payment Methods

- What are the different payment types available in Magento Commerce? Are all the same payment types available in Magento Open Source?
- Does Magento 2 save credit card numbers in the database when the Authorize. Net payment method is used?
- For which product types can the Magento 2 recurring profile be enabled?
- Where can the PayPal Express payment method be used on a Magento 2 site (on which pages)?
- What is the difference between the Authorize Only and Authorize and Capture payment actions?

#### 3.6 Shipping

- Can a storefront customer select a delivery date when placing an order with the Table Rates shipping option?
- What shipping methods are available natively in Magento Commerce?
- What options are available for offering a customer free shipping when placing an order?
- How is the shipping cost calculated for the DHL and Table Rates methods?

#### 3.7 Checkout

- Which product types do not require any shipping cost?
- Can a customer apply a coupon on the order review page?
- Is it possible to change product quantity during checkout, on the order review page?
- What is a gift certificate, and how can it be used?



#### 3.8 Order Processing (Order Management, Fulfilment, Order Statuses)

- When an order is saved in the Magento 2 database, what triggers a confirmation email to a customer who pays using PayPal Express? (Logging in to the PayPal account? Clicking the Checkout button? Clicking the Purchase button?)
- When an Admin user is editing a pending order, which order data can be changed?
- What are the different order statuses available in Magento 2, and how can they be managed by a store owner?
- What are the different methods of creating an order in Magento 2 (such as one-page checkout, multiple addresses checkout, backend create order, Web Services API, etc.)?
- Does Magento 2 native logic allow for partial shipment or partial payment of an order, and if so, what are the conditions for using this functionality?
- When processing an order, at what point does the order become complete?

#### 3.9 Security

- What are three major security features in native Magento Commerce, and are the same features available in Magento Open Source?
- What is the data encryption / hashing key management method used in Magento Commerce? Is the same method used in Magento Open Source?

#### 3.10 Extensions and Customizations

- Where can a merchant find Magento 2 extensions?
- What are the two ways of installing an extension in Magento 2?
- How can a Magento 2 Admin user disable an extension using Admin functionality?
- When is a customization required?

#### 3.11 Customers (Segments, Groups)

- How can customer groups be used in assigning discounts?
- What are the differences between customer segments and customer groups?
- Using Magento Commerce native functionality, how could you display a personalized banner targeted to customers who match specific conditions?

#### 3.12 Using CMS

- How can you display a telephone number in a page footer using Admin functionality?
- Does a layout change of a category page from one column to three columns require a customization?
- What does the Activate Bluefoot Button do?
- Which of the following changes requires a code customization: Displaying a banner in the page content area, changing a footer link, changing a product page layout from one column to two
- Does creating a product price attribute require a customization, or can this be achieved using native Magento 2 functionality?



- Could you create a "How did you hear about us?" customer attribute to collect customer data during purchase and export it to a CSV file using native functionality?
- Which Magento 2 feature can be used to display different content depending on customer type/group?

#### 3.13 Promotions and Pricing Rules (Catalog Rules, Shopping Cart Rules)

- How can product attributes be used when creating shopping cart discounts?
- How is the use of shopping cart coupon codes tracked with Magento 2 native logic?
- What are the three common methods of creating product price discounts?
- How could you create a product price discount and display a related "on sale" banner on listing pages using Magento Commerce functionality?

#### 3.14 Import and Export (of Customers, Orders, Products)

- Which customer and product data can be imported and exported using Magento 2 native logic?
- What is the process of creating a product in Magento 2 using product import functionality?
- What product types can be created in Magento Commerce 2.x using product import functionality?
- Can you add an image to a product using Magento 2 product import functionality?

#### 3.15 Reporting

- If several reports are not up-to-date, how can you remedy this?
- In which formats can the Abandoned Carts report data be exported?

#### 3.16 Transactional Emails

- Transactional email templates are comprised of a mixture of which three languages?
- Where do you set an email action against a template?

#### References:

- Magento Open Source and Magento Commerce User Guides; Magento 2 Resources: Support,
   Documentation, and Forum
- Magento U courses: eCommerce with Magento; Managing your Magento 2 Store; Stepping Up Sales with Magento Promotions and Discounts



## **Content Area 4: Application of Knowledge to Business Goals**

This section tests your ability to apply your knowledge of Magento 2 functionality to specific situations and to respond to typical customer questions. For example, a Magento 2 Solutions Specialist should have the ability to map customer needs to native Magento 2 functionality, where this is possible, or to propose an alternative solution – either a Magento 2 extension or a customization – when native functionality will not meet the requirements.

Note: This section aims to verify that candidates have the level of knowledge needed to help a business achieve its goals using Magento; it does not require or verify the deep technical knowledge required for Magento architects and developers.

This content area requires solid Magento 2 product knowledge, including a clear understanding of how to leverage Magento 2 features for online business, how Magento 2 can be integrated with third-party solutions, and different approaches to extending Magento 2 functionality.

This section comprises approximately 23% of the exam. Questions are drawn randomly from the following topics and objectives.

#### 4.1 Requirements Gathering

- Determining client needs
- Requirements gathering techniques

#### 4.2 Internationalization / Multisite

- Multisite infrastructure
- · Websites, stores, and store views
- Localization
- International taxes
- Multisite shipping

#### 4.3 Third-Party Integrations

- OMS
- Centralized inventory
- ERP
- Financial systems
- PIM, etc.

#### 4.4 Promotions

- Customer segments
- Related products



#### 4.5 Customer Loyalty

- Reward points
- Gift accounts

#### 4.6 Laws and Regulations

- Distance selling
- PCI-DSS
- VAT and digital VAT
- Cross-border trade

#### 4.7 Catalog Management

- High SKU catalogs
- High volume sales

#### 4.8 User Experience

#### 4.9 Customization vs. Native features

- Repurposing native functions
- Customization strategies

#### 4.10 Returns (RMA)

#### 4.11 Checkout

#### 4.13 Conversion Rate Enhancement

- Shopping cart fields and configuration
- SEO, native features, and common methodologies

#### Questions to ask yourself while studying:

- What are some of the methods used to gather requirements?
- In a multisite infrastructure, what is the reach of "Global" scope?
- What is required to display prices in several currencies?
- Why would a merchant enable cross-border taxes?
- What is meant by "Master Data Record"?
- How might customer segmentation be used with product discounts?
- What is Personally Identifiable Information?
- How do the European Union (EU) requirements for data protection differ from US requirements?
- What are VAT and digital VAT?



- Does a software company based in the US need to charge EU customers VAT on its downloadable products?
- In UX terms, what is meant by a "Persona"?
- In UX terms, what is meant by a triple A ("AAA") rating?
- A customer wants to display a CMS block on category pages. What would be the most efficient way to implement that?
- What payment method(s) would you recommend as the easiest technical solution to satisfy PCI requirements?
- A customer wants the ability to preview product information pages in the production environment before making them live. Which Magento Commerce feature would you recommend to satisfy this need?
- A merchant uses a Magento 2 system, along with other online interfaces, as part of a
  multichannel business, and the merchant uses a business intelligence application to aggregate
  data from all these systems. Which native features would allow the merchant to integrate
  Magento with this application?
- In what two ways can a Returns process be invoked?
- A merchant wants to integrate Magento 2 with an order management system. What native features would they need to use to achieve this?
- A merchant has left all the image alt tags blank throughout the site. Why is this a bad idea, and what would you recommend?

#### References:

- Magento Open Source and Magento Commerce User Guides; Magento 2 Resources: Support,
   Documentation, and Forum
- <u>Magento U courses: eCommerce with Magento; Managing your Magento 2 Store; Stepping Up</u> Sales with Magento Promotions and Discounts
- Magento U course: Requirements Gathering for Successful Magento 2 Implementations