

This preparation guide contains a list of topics you need to know to prepare for nopCommerce certified developer program.

General nopCommerce knowledge. Basics and configuration

- Describe how to manage catalog in nopCommerce (categories, manufacturers, products)
- Describe all available types of attributes in nopCommerce (product, specification, checkout, customer, address attributes)
- Describe how to configure a store (settings, languages, currencies, shipping, taxes, etc)
- Describe how to manage message templates, email accounts, newsletter subscribers, campaigns
- Describe how to manage discounts
- Describe how gift cards work
- Describe how affiliate program works
- Describe how vendors are managed in nopCommerce
- Describe how order management work
- Describe available security options in nopCommerce (ACL, system and activity log, security settings)
- Describe available content management options in nopCommerce (news, blog, forums, topics, polls)
- Describe what reports are available in nopCommerce
- Describe the upgrade workflow (to the latest version)

The best way to prepare answer questions in this topic is to read our user guide available at <http://docs.nopcommerce.com/display/nc/User+Guide> (for store owners and managers)

nopCommerce application programming interface (API)

- Briefly describe each project in solution (Nop.Core, Nop.Data, Nop.Web, etc)
- Describe how URL routing works in nopCommerce. Demonstrate how to add a new route
- Describe what the search engine friendly URL is and how it's implemented
- Explain how to add a new setting in nopCommerce
- Describe how to implement and register a new schedule task
- Explain how events work and how to subscribe to them
- Describe how input validation works in nopCommerce
- Explain how DI/IOC works in nopCommerce (IDependencyRegistrar interface)
- Explain how entity localization works (e.g. product names)
- Describe the structure of tables in which customer information is stored

Working with database

- List supported databases
- Describe how nopCommerce works with database tables (Entity Framework, stored procedures)
- Describe where database connection string is stored
- Describe IRepository and IDbContext interfaces and how they could be used
- Describe how run a stored procedure or custom SQL command
- Explain how to add a new property to an existing entity (e.g. Product)
- Describe what entities (classes derived from BaseEntity) exist in nopCommerce

Plugin development

- Describe typical nopCommerce plugin structure
- Describe the steps needed to create and register a new plugin
- Explain what information is stored in Description.txt files
- Describe main types of plugins - IPaymentMethod, IShippingRateComputationMethod, ITaxProvider, IWidgetPlugin, IDiscountRequirementRule, IMiscPlugin interfaces
- Explain each method and property of IPaymentMethod interface (payment plugins)
- Describe where plugins views (cshtml files) should be stored stores. Demonstrate how to return them from controllers
- Describe how to put additional logic when installing or uninstalling a plugin.

Security in nopCommerce

- Describe how ACL (admin area > configuration > access control list) can be used
- Describe how to configure and enable SSL in nopCommerce
- Explain what reRaptcha is and how to configure it
- Describe the difference between system log and activity log
- Describe where system log is stored

Widgets and user interface. Theme development

- Describe the concept of themes in nopCommerce
- You should understand what responsive design is
- Describe the concept of templates in nopCommerce (product, category, manufacturer, vendor templates)
- Describe what widgets are and how to use them
- Explain how to reference javascript and CSS file in cshtml views
- Describe how to use javascript and CSS bundling in nopCommerce
- Describe how to add a new menu item in admin area menu
- Explain how exactly RTL (right-to-left) is supported in nopCommerce

Workflow and checkout

- Describe how order management work
- Explain how reward points work
- Describe how to configure recurring product and how to manage recurring payments
- Describe how nopCommerce calculates shipping and tax rates
- Explain the difference between multi-step and one-page checkout. Identify which cshtml files are used in multi-step checkout and which ones in one-page checkout in \Views\Checkout directory
- Briefly describe methods of OrderProcessingService class
- Describe the difference between payment statuses (pending, authorized, paid, refunded, voided)
- Explain the difference between all payment method types (standard, redirection, button)
- Describe the structure of tables in which order information is stored
- Explain where and how already chosen product attributes of shopping cart items are stored. Describe how to parse and render them

Caching in nopCommerce

- Describe the difference between cache managers (implement ICacheManager interface) in nopCommerce
- Describe how to enable and configure Redis caching
- Explain how to register (inject) a static cache manager (data cached between HTTP requests)

Windows Azure and nopCommerce

- Describe how to set up a site in Windows Azure (web sites)
- Explain how to enable and configure BLOB storage in nopCommerce
- Describe how to enable and configure distributed caching and sessions (Redis)
- Explain how to configure scheduled tasks for web farms