Magento® **U**

Magento® U

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Overview: Why Use the VM?

When you attend a Magento U course you have two options for doing the exercises for the course:

- Install and use the Magento U virtual machine (VM)
- Use your own functioning development environment, including web server and IDE, for your Magento U coursework

Instructions for downloading the Magento U VM are provided in the following section. If you want to use your own development environment, system requirements are included after the VM installation instructions.

> **Important:** Magento U will not be responsible for debugging any problems that might occur because of using your own setup. You should be familiar with administering it on your own, and capable of resolving issues in a timely manner without our assistance.

Magento U Virtual Machine Installation Instructions

The Magento U VM disk image provides Magento U students the shortest path to fulfill the technical requirements for participating in Magento U courses. The Magento U VM disk image contains a preconfigured web development environment including Apache web server, MySQL, and Magento Enterprise Edition version 1.13.1.0 preinstalled.

> **Important:** By downloading the Magento U virtual machine using the link provided below, you are agreeing to the "MAGENTO® ENTERPRISE EDITION TRAINING LICENSE AGREEMENT" contained at the end of this document.

Magento U Virtual Machine Setup with Vagrant

Prerequisites:

- Install Vagrant (from **http://www.vagrantup.com/**)
- Install VirtualBox (from **http://virtualbox.org/**)

For Microsoft Windows:

- Install 7-Zip (from http://www.7-zip.org/)
- **Optional:** Install an SSH client (for example PuTTY from http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html)

Downloading the Magento U VM Archive

Download the Magento-U VM archive from http://magento-u.magento.com/magento-u/magento-course-vm/

After unpacking the archive, you will find a directory named magento-u-vm.

Starting the Virtual Machine

1. Open a terminal and navigate into the directory magento-u-vm.
2. Run the command 'vagrant up'.

    The first time vagrant will take a couple of minutes to prepare the VM image on your machine, but after that it will start faster.

    📝 **Note:** There will be no window displaying the VM desktop, because Vagrant runs virtual machines in "headless" mode.

Stopping the Virtual Machine

1. Open a terminal and navigate into the directory magento-u-vm.
2. Run the command 'vagrant halt'.

How Can I Tell if the VM Is Running?

1. Open a terminal and navigate into the directory magento-u-vm.
2. Run the command 'vagrant status'.

Browser Access

1. While the VM is running, use a browser to navigate to the URL http://192.168.56.101/magento/htdocs
2. To access the Magento Admin panel, append **/admin** to the URL.

    The **Magento admin password** is **password123**.

If you know how to do so, you can add an entry for the domain name magento.dev with the IP address 192.168.56.101 to the hosts file on your system, and then use http://magento.dev/ to access Magento.

📝 **Note:** Magento U does not offer support for setting up custom domain names using the hosts file. Refer to http://en.wikipedia.org/wiki/Hosts_(file)#Location_in_the_file_system for more information.

Accessing Magento Source Code

After you have started the VM once, you can find the Magento source code in the directory magento-u-vm/magento/htdocs. It will be available there even if the VM is shut down.

We suggest that you open a project in your IDE and choose the directory magento-u-vm/magento as the project root directory.

Choosing an IDE for Magento

You can use any editor to do Magento development, but it has proven to be a great time saver to use a full-fledged PHP IDE. We recommend NetBeans (free, https://netbeans.org/) or PHPStorm (commercial, http://www.jetbrains.com/phpstorm/). The time spent learning to use the IDE of your choice is well invested.

It is recommended that you create a project in your IDE using the existing source code with the project root directory magento-u-vm/magento.

Accessing MySQL

You can access the MySQL server on the virtual machine with a client of your choice using these connection parameters:

- User: root
- Password: password123
- Host: 192.168.56.101

For convenience, PhpMyAdmin is also provided on the VM image and can be accessed using the URL http://192.168.56.101/phpmyadmin/.

Command-Line Access

You can access the VM via command line by running 'vagrant ssh'. No password is required to log in.

If you want to install new packages on the VM, you can run commands as root using sudo, which also does not require a password.

Command-Line Access from Microsoft Windows

Microsoft Windows doesn't come with a native SSH client, so you will need to install one. Many Windows programs come bundled with an SSH command-line client, for example git. However, if vagrant can't find an ssh executable, it outputs the login credentials instead. Those login credentials can then be used with a GUI client like PuTTY for ssh access.

> **Note:** You can use the vagrant private key file insecure_private_key for password-less login with PuTTY. The file can be found in the .vagrant directory in your home folder. To use it, you need to convert it into the PuTTY .ppk private key file format using the PuTTYgen tool.

Troubleshooting: Memory Requirement

If your host machine can't spare 2 GB of RAM for the VM, edit the file `Vagrantfile` before running 'vagrant up', and set the value of the line

```
virtualbox.customize ["modifyvm", :id, "--memory", "2048"]
```

to

```
virtualbox.customize ["modifyvm", :id, "--memory", "1024"]
```

The VM will still run, but it will be slower than it would with more memory.

Reinstalling the VM Image

If you want to reinstall the VM, be sure to first completely remove all traces from the old installation:

1. Remove the magento folder from the .vagrant.d/boxes in your home directory
2. Remove the VM from VirtualBox

3. Remove empty directories from the VirtualBox VMs folder in your home directory
4. Remove the .vagrant folder from your previous magento-u-vm directory

Then reinstall the VM according to the instructions.

Removing the Virtual Machine

1. Open a terminal and navigate into the directory magento-u-vm.
2. Run the command 'vagrant destroy'.

⚠ **Important**: You will lose your current state of the VM if you remove it. When you run 'vagrant up' again you will have a fresh VM instance.

📝 **Note:** If you remove the VM, the Magento source code in the directory magento-u-vm/magento/htdocs is not deleted and will not be reverted by 'vagrant destroy' followed by 'vagrant up'.

Magento U System Requirements

If you choose to participate in our trainings using a custom development environment instead of the provided virtual machine image, the following system requirements must be met.

⚠ **Important:** Magento U will not be responsible for debugging any problems that might occur because of using your own setup. You should be familiar with administering it on your own, and capable of resolving issues in a timely manner without our assistance.

There are several requirements and some additional recommendations. All are detailed in the following sections.

Required

In addition to a **preinstalled Magento instance using the supplied EE_Lite source code archive with sample data,** the following system requirements must be met:

- Apache web server with the following settings:

    - `MultiViews` option turned off
    - `AllowOverrides All` set for the Magento directory
    - `mod_rewrite` must be enabled

- The `mod_php` module must be at least version 5.3.3 or 5.4, but **not** 5.5 or newer.

- The following PHP extensions must be active for `mod_php`:

    `curl`, `dom`, `gd`, `hash`, `iconv`, `mcrypt`, `pcre`, `pdo`, `pdo_mysql`, `simplexml`

- In addition to the PHP executed by the web server, `php-cli` (command-line interface) must also be installed with at least version 5.3.3 or 5.4, but **not** 5.5 or newer. **Note**: Please do not confuse `php-cli` with `php-cgi`.

    Running the command `$ php --version` should give you output similar to the following:

    ```
    $ php --version
    PHP 5.4.13 (cli) (built: Apr 17 2013 16:21:01)
    ```

- **In addition to all PHP extensions listed above,** the `pcntl` extension must also be active for `php-cli`. This will be the case for most installations of `php-cli` by default.

  You can check the availability of the `pcntl` extension by running the following command:

  `$ php -i | grep "pcntl support"`

  `pcntl support => enabled`

Recommended

- **To be able to run test scripts,** `PHPUnit` needs to be installed. Refer to http://phpunit.de/manual/current/en/installation.html for a list of options how to install it. When using `composer` to install `PHPUnit`, also install the `PHP_Invoker` library.
- Installing Xdebug 2.2.3 (or later) is **not required but highly recommended.**

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