Linux

Install Basic Operating System

Advanced Linux system administrator skills are required, please read carefully. Selecting all the default configurations during the operating system installation may not be correct.

The latest version of RedHat Enterprise Linux 6 or CentOS 6 64-bit should be downloaded and installed. Do not install a default LAMP environment or other server packages, those will be taken care of in later steps of the HUBzero install.

Hubzero packaging support is for the amd64 (64 bit) Intel architecture only.

System reboots are required to complete the installation. Be sure to remove the install disk or reset your server's boot media before rebooting.

The precise server configuration (such as disk partitioning, networking, etc) is dependent on how the hub is to be used and what hardware is being used, all the possible configuration options are not specifically outlined here. This installation guide outlines a very basic configuration but may not be suitable for larger sites. For larger sites, it is generally expected that the hub will be managed by an experienced Linux administrator who can help setup your site to meet your specific requirements.

All hardware, filesystem partitions, RAID configurations, backup models, security models, etc. and base configurations of the hosts email server, SSH server, network, etc. are the responsibility of the system administrator managing the host.

The following instructions only instruct how to install Hubzero software. At a minimum a "Basic Server" host, ideally from a minimal ISO, is required with network access.

The Hubzero software expects to be installed on a headless server without a Graphical User Interface.

Configure Networking and DNS

Configure you host's network as desired. A **FQDN and an SSL certificate for the domain is required**. A static IP is highly recommended (a common basic configuration for a web server) as well.

The Hubzero middleware uses an IP addresses in the 192.168.0.0/16 subnet, do not use a conflicting host IP during network configuration.

Set hostname

Throughout this documentation you will see specific instructions for running commands, with part of the text highlighted. The highlighted text should be modified to your local configuration choices. (e.g. replace "example.com" with the fully qualified hostname of your machine).

HUBzero expects the `hostname` command to return the fully qualified hostname for the system. This step may be skipped if previously configured.

```
sudo hostname hubdomain.org
```

Make the change permanent (or manually edit /etc/sysconfig/network):

```
sudo sed -i "s/HOSTNAME=.*/HOSTNAM
E=hubdomain.org/g" /etc/sysconfig/network
```

Delete local Users

HUBzero reserves all user ids from 1000 up for hub accounts. As part of the app middleware every account must map to a corresponding system account. Therefore when starting up a hub it is required to remove all accounts that have user ids 1000 or greater. New RedHat/CentOS installations typically do not setup a non root account during setup, but if you have any accounts added to the system, those accounts can be removed as follows:

```
sudo userdel username
sudo rm -fr /home/username
```

If you require additional system accounts, they should use user and group ids in the range of 500-999 (these will not interfere with hub operations).

Update the initial OS install

```
sudo yum update -y
```

Disable SELinux

Hubzero does not currently support SELinux. Since the default install of RHEL turns it on, we have to turn it off.

```
sudo sed -i 's/^SELINUX=.*/SELINUX=disabled/g' /etc/selinux/config
```

Reboot the system for this change to take effect

```
sudo reboot
```

Yum repository setup

Configure the hubzero repository configuration package

For RedHat Enterprise Linux 6

```
sudo rpm -Uvh http://packages.hubzero.org/rpm/julian-el6/hubzero-julian-repo-2.2.5-1.el6.noarch.rpm
```

```
sudo rpm -Uvh http://download.fedoraproject.org/pub/epel/6/x86_64/epel-release-6-8.noarch.rpm
```

```
sudo subscription-manager repos --enable rhel-server-rhscl-6-rpms
```

```
sudo subscription-manager repos --enable rhel-6-server-optional-rpms
```

For CentOS 6

```
sudo rpm -Uvh http://packages.hubzero.org/rpm/julian-el6/hubzero-julian-repo-2.2.5-1.el6.noarch.rpm
```

```
sudo sh -c "cat > /etc/yum.repos.d/rh-php56.repo << 'EOT'
[hubzero-php56]
name=Hubzero PHP56
baseurl=http://packages.hubzero.org/rpm/rh-php56/6Server
enabled=1
```

```
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-SIG-SCLo
EOT"
```

```
sudo yum install -y epel-release centos-release-scl-rh
```

Install Support Packages

```
sudo yum install -y sudo dirmngr software-properties-common
```