

# Linux

## RHEL install

The packaging of HUBzero for RedHat Enterprise Linux (or CentOS) 6.8 is currently in **BETA** status, please report any issues you find.

RHEL (or CentOS) 6.8 64-bit should be downloaded and installed. To obtain a copy, login to the RHN and follow the install directions. Do not worry at this point of trying to install a basic LAMP environment or other server packages, those will be taken care of in later steps of the HUBzero install. Generally, default selections are satisfactory unless otherwise noted. Select a "Basic Server" setup when prompted during the installation.

Note: Hubzero has packaging support for amd64 (64 bit) Intel architecture only.

When the installation is complete, your system will reboot. 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.

## Disable SELinux

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

```
edit /etc/selinux/config and change the line that reads
```

```
SELINUX=enforcing  
to  
SELINUX=disabled
```

Reboot the system for this change to take effect

### Set hostname

*Optional.* This step is only required if you didn't specify the fully qualified domain name during setup.

HUBzero expects the `hostname` command to return the fully qualified hostname for the system.

```
# hostname hubdomain.org
```

In order to make the change permanent, edit the `/etc/sysconfig/network` file's `HOSTNAME` entry similar to the following:

```
HOSTNAME=hubdomain.org
```

### 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 RHEL installations typically do not new setup a non root account during setup, but if you have any accounts added to the system, those accounts can be removed as follows:

```
# deluser username  
# rm -fr /home/username
```

If you require additional system accounts, they can be numbered between 500-999 without interfering with hub operations.

### Configure Networking

*Optional.* This step is required only if you didn't configure networking during installation.

For help with RHEL networking setup, refer to the [Red Hat guide on Network Interfaces](#).

A typical scenario to setup networking is covered below. This general setup assumes you have a static IP address and basic network configuration available from a system administrator.

### **/etc/sysconfig/network-scripts/ifcfg-X**

On most systems, X will be eth0, but if you have multiple network interfaces you'll notice additional entries. A typical ifcfg-eth0 file for a static IP address looks something like this:

```
DEVICE=eth0
BOOTPROTO=static
HWADDR=xx:xx:xx:xx:xx:xx
IPADDR=192.168.1.128
NETMASK=255.255.255.0
GATEWAY=192.168.1.1
ONBOOT=yes
```

Even though we used a private address range (192.168.0.0) which is usually used for dynamic IP setups, it is still a valid static IP setup. If you need an internet accessible hub, you'll ask your network administrator for the necessary IP addresses.

## DNS

The file used to setup DNS for your hub, or any linux machine for that matter is:

**/etc/resolv.conf**

A typical setup for DNS is below.

```
nameserver 8.8.8.8
nameserver 192.168.1.1
```

If you are setting up a static IP address for your hub, you should be able to get DNS server settings from your network administrator. If you are using DHCP for your server, this file has likely already been setup with your network DHCP server.

## Yum repository setup

Download the hubzero repository configuration file

```
# wget -O /etc/yum.repos.d/hubzero.repo https://packages.hubzero.org/rpm/hubzero.repo
```

Import the hubzero repository public signing key

```
# rpm --import http://packages.hubzero.org/rpm/hubzero-rpm-key-pub
```

In addition to the hubzero RPM repositories, you'll need several other repositories added to download other software later in this guide.

For RedHat 6

```
# rpm -Uvh http://download.fedoraproject.org/pub/epel/6/x86_64/epel-release-6-8.noarch.rpm
# subscription-manager repos --enable rhel-server-rhsc1-6-rpms
# subscription-manager repos --enable rhel-6-server-optional-rpms
```

For CentOS 6

```
# yum install epel-release
# yum install centos-release-scl-rh
```

### Additional repo setup for OpenVZ kernel installation

```
# yum install -y wget
# wget -O /etc/yum.repos.d/openvz.repo http://download.openvz.org/open
vz.repo
# rpm --import http://download.openvz.org/RPM-GPG-Key-OpenVZ
```