Installation

What is HUBzero?

HUBzero is a platform used to create dynamic web sites for scientific research and educational activities. With HUBzero, you can easily publish your research software and related educational materials on the web. Powerful middleware serves up interactive simulation and modeling tools via your web browser. These tools can connect you with rendering farms and powerful Grid computing resources.

Minimum System Requirements

HUBzero installations require one or more dedicated physical hosts running Debian GNU/Linux 5.0.

> Other distributions might theoretically work with some modification, although they would be totally unsupported.

A typical starter HUBzero installation might consist of a single physical server with dual 64-bit quad-core CPUs, 16 Gigabytes of RAM and a terabyte of disk

It is possible to run HUBzero inside of a virtual machine such as ones created by VMware and VirtualBox. While fully functional there will would significant performance and resource limitations in such an environment.

Target Audience

This document and the installation of a HUBzero system has a target audience of experienced Linux administrators (preferably experienced with Debian GNU/Linux).

What's Included

HUBzero is composed of the following packages (subject to change):

Package Name	*Purpose*
hubzero-addrepo	Creates project areas for tool development
hubzero-apache2	Apache 2.2 Site Configuration Files for HUBzero
hubzero-app	HUBzero App Installer
hubzero-app-invoke	HUBzero application (tool) invocation scripts
hubzero-app-workspace	HUBzero App providing a lightweigth Linux desktop, for app/tool development

hubzero-cms	The HUBzero Content Management System (based on Joomla! framework)
hubzero-cms-joomla	Joomla! framework used by HUBzero
hubzero-cms-setup	Customizes the HUBzero CMS database
hubzero-config	Configures a HUBzero server and provides an automated installation script
hubzero-expire-sessions	Expires unused app/tool sessions
hubzero-filexfer	Transfer files between App Sessions and user's desktop
hubzero-filexfer-xlate	Support daemon for the filexfer program
hubzero-firewall	HUBzero firewall that protects app/tool sessions
hubzero-icewm	Linux ICE window manager configuration, used in workspaces
hubzero-icewm-captive	Linux ICE window manager specially crafted to support tools in a sessions
hubzero-icewm-themes	The HUBzero Linux ICE window manager theme, used in workspaces
hubzero-mw-client	HUBzero middleware - client
hubzero-mw-service	HUBzero middleware - execution host session manager
hubzero-mw-session	HUBzero middleware - per session tools
hubzero-mysql	MySQL configuration package for HUBzero
hubzero-openldap	OpenLDAP configuration package for HUBzero
hubzero-python	HUBzero python API module
hubzero-rappture	The Rapid APPlication infrastrucTURE toolkit for building scientific tools
hubzero-rappture-session	Session support packages for Rappture
hubzero-ratpoison-captive	Linux window manager, used in app/tool sessions
hubzero-submit-client	The session based part of the job submission server
hubzero-submit-distributor	Part of the job submission server
hubzero-submit-server	Part of the job submission server
hubzero-telequotad	Disk quota monitor
hubzero-texvc	Helper utility to generate math fomulas for wiki markup
hubzero-trac-mysqlauthz	Plug-in for MySQL user auth in project development areas
hubzero-twm-captive	Linux TWM window manager, used in app/tool sessions
hubzero-use	Command for configuring the environment within a workspace
hubzero-usermap	File permission mapping FUSE filesystem used by WebDAV
hubzero-vncproxy	Routes vnc between web server and app/tool session

icewm	Modified Linux ICE window manager, used in workspaces
tightvnc-java	Modified VNC Client that receives app/tool sessions within a web browser
vnc4server	Modified VNC Server that sends app/tool sessions to the web browser

Source Code

You'll find most of the source code within the web root of a working hub. But you can get source code for the middleware and all other parts by installing source code via the package mechanism. Please refer to Section 1.2.7 for instructions.