



# Jenkins

Installing Jenkins

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# Preparation

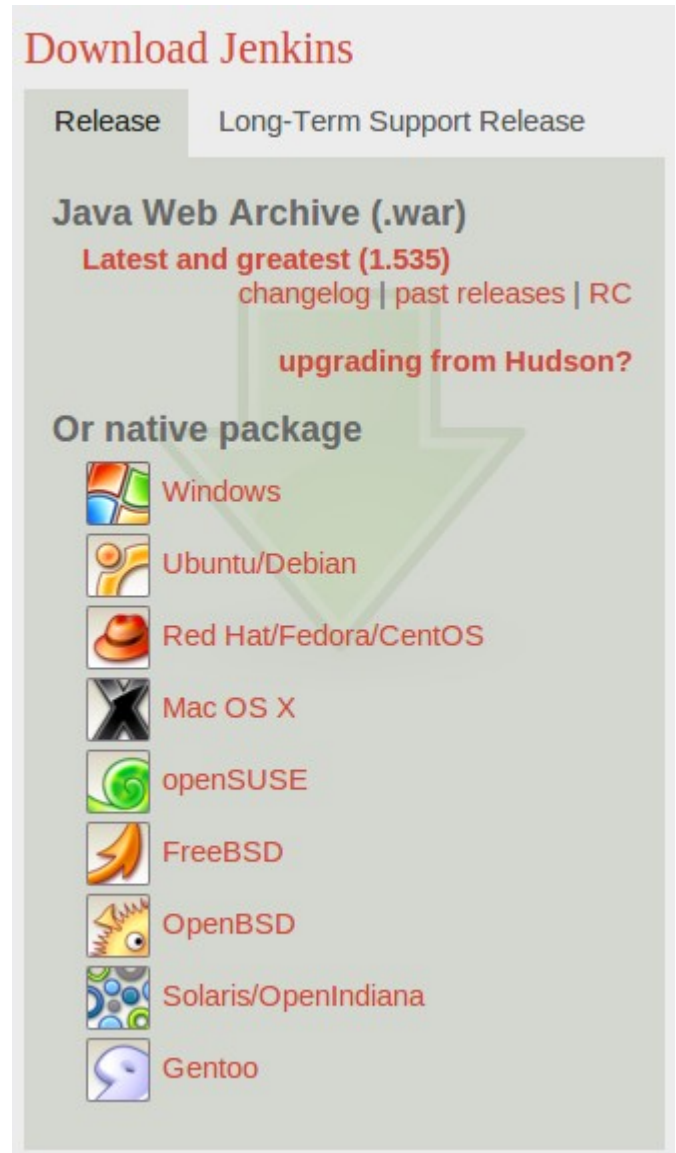
- Jenkins :
  - is a Java based web application, therefore requires a JRE
  - is memory, hard disk, and processor intensive
  - should be housed in a good machine
  - needs a dedicated machine or builds will be slow
  - can be setup onto multiple machines as "slaves"

# Checking the JRE

- Java JRE 5.0 or higher is recommended.
- Due to constant security announcements, having run the latest JRE is a plus.

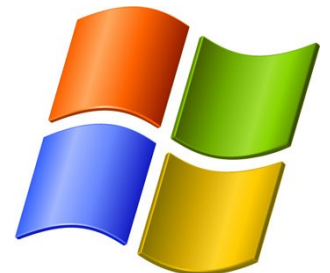
# Downloading Jenkins

- Visit <http://jenkins-ci.org>
- On the right, select whichever version is right for your situation
- The .war file is for Java based web containers
- Windows offers an .msi based installation script



# Downloading Jenkins for Windows

- The .msi script offers a simple, graphical way to do an install.
- The installer is a ZIP file containing
  - an MSI package for Jenkins
  - a setup.exe file that can be used to install the .NET libraries if they have not already been installed
- Mostly all you need to do is to unzip the zip file and run the jenkins-x.x.msi file inside



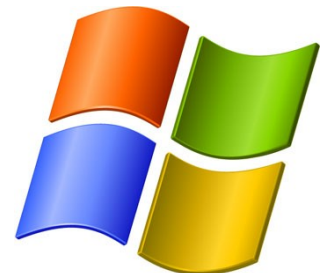
# Installing Jenkins as a Windows Service

- Running as a service will automatically reboot when your machine is rebooted
- To install:
  - Visit the Manage Jenkins
  - Click on the Install as a Windows Service
  - Select a JENKINS\_HOME directory. (Default will be JENKINS\_HOME environment variable)



# Windows Warnings

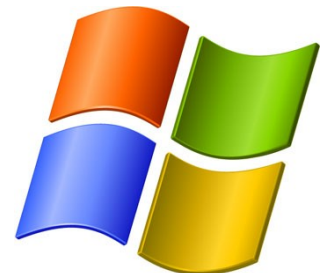
- Placing Jenkins in a directory that contains any spaces will give you a hard time.
- Anywhere in 'Documents and Settings' will be a poor location
- Long directory and file names can lead to build errors
- Keep it simple
- Examples:
  - `C:\Jenkins`
  - `C:\Users\gwasington\.jenkins`





# Uninstalling Windows Install

- To uninstall from any windows service, run either at the command prompt:
  - `C:\jenkins> jenkins.exe uninstall`
  - `C:\> sc delete jenkins`



# Using the Jenkins Home Directory

- All details will be located in the `JENKINS_HOME` directory.
- They are stored as XML files
- Most of the configuration is stored in `config.xml`
- At times may need to edit with an editor to get out of a jam
- This directory needs to be backed up frequently

# Using the Jenkins Home Directory

Directory	Description
.jenkins	The default Jenkins home directory (may be .hudson in older installations).
fingerprints	This directory is used by Jenkins to keep track of artifact fingerprints.
jobs	This directory contains configuration details about the build jobs that Jenkins manages, as well as the artifacts and data resulting from these builds.
plugins	This directory contains any plugins that you have installed. Plugins allow you to extend Jenkins by adding extra feature.
updates	This is an internal directory used by Jenkins to store information about available plugin updates.
userContent	You can use this directory to place your own custom content onto your Jenkins server. You can access files in this directory at <a href="http://myserver/hudson/userContent">http://myserver/hudson/userContent</a> (if you are running Jenkins on an application server) or <a href="http://myserver/userContent">http://myserver/userContent</a> (if you are running in stand-alone mode).
users	If you are using the native Jenkins user database, user accounts will be stored in this directory.
war	This directory contains the expanded web application. When you start Jenkins as a stand-alone application, it will extract the web application into this directory.

# Upgrading Jenkins

- One option is to replace the `jenkins.war` file with the latest
- Do not restart or shutdown Jenkins when a build is in progress
- Since the `JENKINS_HOME` directory is separate from the installation, upgrading is safe

# Upgrading From 'Manage Jenkins'

- In a running Jenkins instance an upgrade can be done by clicking on the upgrade link in the 'Manage Jenkins' section






The screenshot shows the Jenkins web interface. At the top is a blue header with the 'Jenkins' logo, a search bar, and user information 'dhinojosa | log out'. Below the header is a sidebar with navigation links: 'New Job', 'People', 'Build History', 'Project Relationship', 'Check File Fingerprint', 'Manage Jenkins' (highlighted), and 'My Views'. The main content area is titled 'Manage Jenkins' and features a yellow warning icon with the text: 'New version of Jenkins (1.534) is available for [download](#) ([changelog](#)).'. Below this are several configuration options, each with an icon and a description: 'Configure System' (wrench icon), 'Configure Global Security' (lock icon), 'Reload Configuration from Disk' (refresh icon), 'Manage Plugins' (puzzle piece icon), and 'System Information' (monitor icon). The 'Manage Plugins' option includes the text '(updates available)'. On the left side of the main content area, there are two sections: 'Build Queue' showing 'No builds in the queue.' and 'Build Executor Status' which contains a table with two rows, both showing 'Idle' status.

**Jenkins** search dhinojosa | log out

Jenkins > [ENABLE AUTO REFRESH](#)

**Manage Jenkins**

⚠ New version of Jenkins (1.534) is available for [download](#) ([changelog](#)).

-  [Configure System](#)  
Configure global settings and paths.
-  [Configure Global Security](#)  
Secure Jenkins; define who is allowed to access/use the system.
-  [Reload Configuration from Disk](#)  
Discard all the loaded data in memory and reload everything from file system. Useful when you modified config files directly on disk.
-  [Manage Plugins](#)  
Add, remove, disable or enable plugins that can extend the functionality of Jenkins. **(updates available)**
-  [System Information](#)  
Displays various environmental information to assist trouble-shooting.

**Build Queue**  
No builds in the queue.

**Build Executor Status**

#	Status
1	Idle
2	Idle

# Upgrading In a Web Container

- Web Containers will often cache the compiled JSP or other files.
- This means that after an upgrade cleaning out any cache directories like Tomcat's work directory is in order.

# Lab

- Download Jenkins Windows install from <http://jenkins-ci.org>
- Establish a JENKINS\_HOME environment variable in a path with no spaces or long names
- Install Jenkins as a Windows Service