GEOSERVER INSTALL

Installation and Configuration of GeoServer

01 January 2009

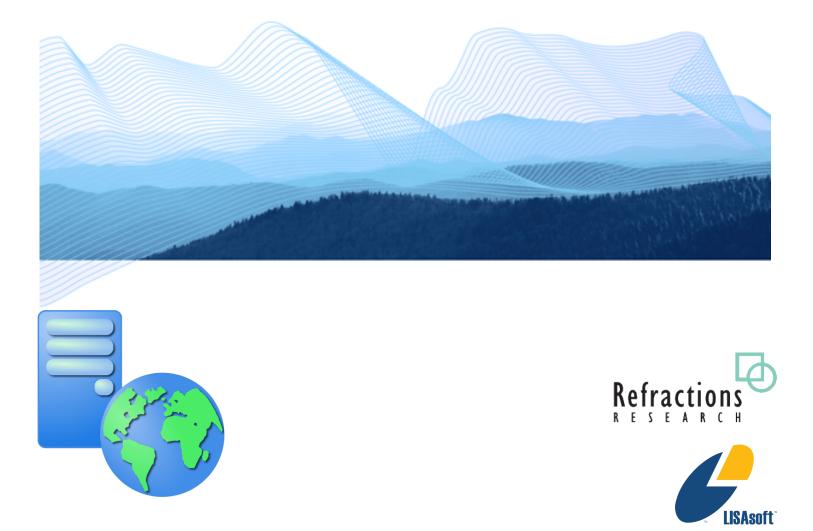


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1 GOALS

After completing this workbook, you will have:

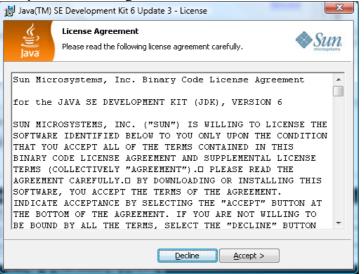
- Installed a Java Development Kit onto your computer
- Installed GeoServer using the Windows installer
- Started up and Customize GeoServer
- Started the Open Layers WFS-T Demonstrate

2 JAVA DEVELOPMENT KIT INSTALL:

1. Download the latest Java SE Development Kit from sun: http://java.sun.com/javase/downloads/

Required: rou must accept the license agreement to download the product. Operation It Review License Agreement Operation License Agreement		
Download the full version as a single file .		
Windows Offline Installation, Multi-language	jdk-6u3-windows-i586-p.exe	65.64 MB
✓ Windows Online Installation, Multi-language	jdk-6u3-windows-i586-p-iftw.exe	373.39 KB

2. Double-click the installer (jdk-6u3-windows-i586-p.exe is used in this example) and accept the license agreement.



3. Note: You don't have to install either the Demos or Public Runtime Environment.

闄 Java(TM) S	늻 Java(TM) SE Development Kit 6 Update 3 - Custom Setup		
() Java	Custom Setup Select the program features you want installed.		
Select optional features to install from the list below. You can change your choice of features after installation by using the Add/Remove Programs utility in the Control Panel			
<u> </u>	Peature Description Java DB is Sun's supported distribution of the open source Apache Derby 100% Java technology database. This will require 25 MB on your hard drive.		
	 This feature will be installed on local hard drive. This feature, and all subfeatures, will be installed on local hard drive. 		
Install to 🗊	Install to 😰 🛛 Don't install this feature now.		
× This feature will not be available.			
	< Back	Next > Cancel	

4. This will create the following directory:

server in artes a serve	still in our drifter others it				
😋 🔵 🗢 🚺 Di\Program	Files\Java\jdk1.6.0_0	13 👻 🛃	Search		م
🌗 Organize 👻 🏢 Views	👻 😍 Burn				0
Name	Date modified	Туре	Size	Tags	
bin db include jre lib COPYRIGHT LICENSE LICENSE.rtf PATCH.ERR README.html README.ja.html README.zh_CN.html THIRDPARTYLICENSEREA	DME.txt				
13 items					

3 SET JAVA_HOME

- 1. Right click on the **My Computer** icon on your desktop and select **Properties** from the drop down menu. Under the **Advanced** tab click the **Environment Variables...** button.
- 2. <u>Press the New button under System Variables to create the following:</u>

New System Variable	
Variable <u>n</u> ame:	JAVA_HOME
Variable <u>v</u> alue:	C:\Program Files\Java\jdk1.6.0_03
	OK Cancel

3. The lis of environmental variables now points JAVA_HOME to your installation directory.

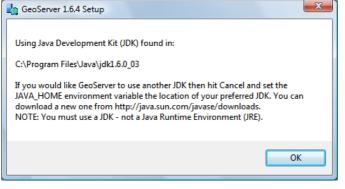
Variable	Value
APR_ICONV_PATH	C:\Program Files\Subversion\iconv
TEMP	%USERPROFILE%\AppData\Local\Temp
TMP	%USERPROFILE%\AppData\Local\Temp
	<u>N</u> ew <u>E</u> dit <u>D</u> elete
ystem variables Variable	New Edit Delete
Variable	
ystem variables Variable JAVA_HOME M2_HOME	Value
Variable JAVA_HOME	Value C:\Program Files\Java\jdk1.6.0_03
Variable JAVA_HOME M2_HOME	Value C:\Program Files\Java\jdk1.6.0_03 C:\java\maven-2.0.5

4 GEOSERVER INSTALL

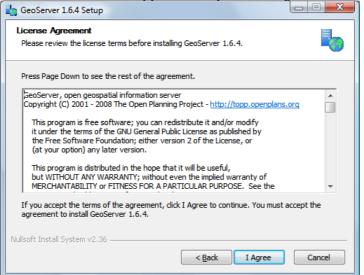
- 1. Downloaded the latest GeoServer release: http://docs.codehaus.org/display/GEOS/Download
- 2. Double-click the geoserver-1.6.4.exe installer.

👆 GeoServer 1.6.4 Setup	
	Welcome to the GeoServer 1.6.4 Setup Wizard This wizard will guide you through the installation of GeoServer 1.6.4. Please report any suggestions or issues to geoserver-devel@lits.sourceforge.net. Click Next to continue.
	Next > Cancel

3. Press Next, ensure GeoServer discovers the JDK installed previously.



4. GeoServer is a GPL application, press "I Agree" to continue.



5. GeoServer will install into the Programmers Files directory, press Next to continue.

GeoServer 1.6.4 Setup
Choose Install Location Choose the folder in which to install GeoServer 1.6.4.
Setup will install GeoServer 1.6.4 in the following folder. To install in a different folder, dick Browse and select another folder. Click Next to continue.
Destination Folder C:\Program Files\GeoServer 1.6.4 Browse
Space required: 82.2MB Space available: 7.3GB
Nullsoft Install System v2.36

6. GeoServer will store your configuration in a "data directory", the default location will work fine. Press **Next** to continue.

🎝 GeoServer 1.6.4 Setup			
GeoServer Data Directory Choose the location of your data directory.	-		
Enter the path to your GeoServer data directory. If you are installing GeoServer for the first time, hit 'Next'. If you are upgrading GeoServer, select your current GeoServer data directory. Find out more information below. If you do not have an existing data directory, leave the field the way it is and hit Next.			
* How to create a new Data Drectory for upgrade from a previous version			
ל:∖Program Files\GeoServer 1.6.4\data dir			
Nullsoft Install System v2.36	Cancel		

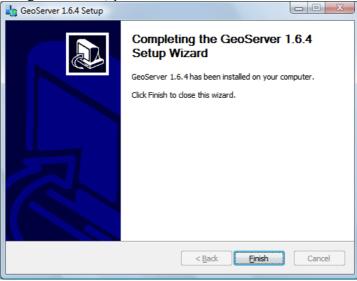
7. Press **Next** to create the default start menu folder

GeoServer 1.6.4 Setup		
Choose Start Menu Folder		
Choose a Start Menu folder for the G	eoServer 1.6.4 shortcuts.	
Select the Start Menu folder in which can also enter a name to create a new		's shortcuts. You
can also enter a name to create a ner	violuei.	
GeoServer 1.6.4		
7-Zip		•
Accessories		
activePDF		=
Administrative Tools		
AVG Free 8.0		
BitPim		
Catalyst Install Manager		
Digsby		
Extras and Upgrades		
Games		
GeoServer 1.4.1		*
Do not create shortcuts		
Jullsoft Install System v2,36		
rements and sensely a setting the lower		

8. Please wait while the application installs.

geoServer 1.6.4 Setup	
Installing Please wait while GeoServer 1.6.4 is being installed.	-
Extract: validation-1.6.4.jar	
Show details	
Nullsoft Install System v2:36	
< <u>B</u> ack <u>N</u> ext >	Cancel

9. Congratulations, press Finish to exit the installer.



5 STARTING UP GEOSERVER

In this section you will learn how to start GeoServer, and explore its editing abilities.

- 1. Click Start->Programs >GeoServer 1.6.4 >Start GeoServer GeoServer 1.7.0-RC3 If you have a web GeoServer Administration server already GeoServer Documentation running on port 🃩 Start GeoServer 🌆 Stop GeoServer 8080 you can 🗊 Uninstall change the 2. GeoServer will open up a console running the Jetty Application Server; please wait until jetty.xml file by Jetty indicates it is listening on port 8080 as shown below. hand. tart GeoServer

 Øi Jan 13:19:59 INFO [geoserver.wms] - Processed layer group 'tiger-ny'

 Øi Jan 13:19:59 INFO [geoserver.wms] - Processed layer group 'tasmania'

 Øi Jan 13:19:59 INFO [geoserver.wms] - Processed layer group 'tasmania'

 Øi Jan 13:19:59 INFO [geoserver.wms] - Processed layer group 'spearfish'

 Øi Jan 13:19:59 INFO [geoserver.confg] - Loading service 'wms'

 Øi Jan 13:20:01 INFO [util.GeoServerConfiguration] - No context parameter, syste

 m or Java environment variables found for GEOSERVER_WMS_URL

 Øi Jan 13:20:01 INFO [util.GeoServerConfiguration] - Reverting to http://localho

 st:8000/geoserver/wms?request=GetCapabilities

 Øi Jan 13:20:01 INFO [util.GetCapabilitiesConfiguration] - Constructing from url

 http://localhost:8000/geoserver/wms?request=GetCapabilities

 Øi Jan 13:20:01 INFO [util.GetCapabilitiesConfiguration] - Constructing from url

 http://localhost:8000/geoserver/wms?request=GetCapabilities

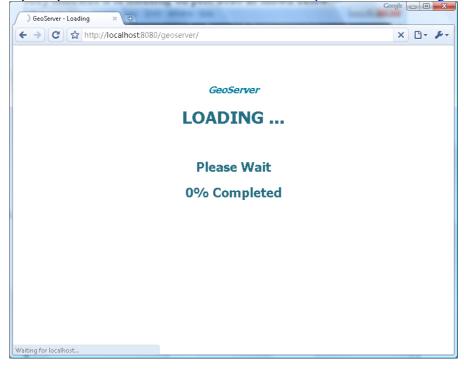
 Øi Jan 13:20:01 INFO [util.GetCapabilitiesConfiguration] - Constructing from url

 http://localhost:8000/geoserver/wms?request=GetCapabilities

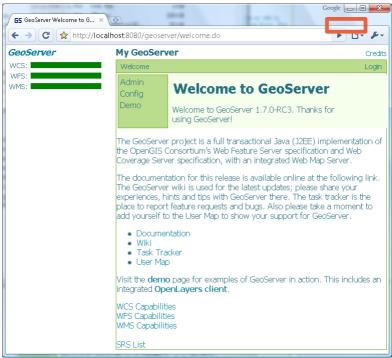
 Øi Jan 13:20:01 INFO [layer.TileLayerDispatcher] - TileLayerFactor constructed

 Øi Jan 13:20:01 INFO [geowebcache.GeoWebCacheDispatcher] - set TileLayerDispatch

 * 01 Jan 13:20:01 INFO [geowebcache.GeoWebCacheDispatcher] - Invoked setServletPre fix(gwc) 01 Jan 13:20:01 INFO [wms.WMSService] - Got passed 1 configuration objects for g 01 Jan 13:20:01 INFO LWMS.WMSServiceJ - Got passed I configuration of etCapabilities. etCapabilities. 01 Jan 13:20:01 INFO LWMS.WMSService] - Will proxy requests to backend that are not getmap or getcapabilities. 22884 [main] INFO /geoserver - Initializing WebApplicationContext for Struts Act ionServlet 'action', module '' 22943 [main] INFO org.mortbay.log - Opened C:\Program Files\GeoServer 1.7.0-RC3\ logs\2009_01_01.request.log 23009 [main] INFO org.mortbay.log - Started SelectChannelConnector@0.0.0:8080
 - 3. Open up a web browser and enter the URL: http://localhost:8080/geoserver



4. We need to login before we can use the configuration screen. Click on the "Login" link in the upper right corner.



5. Login using "admin" and "geoserver" as the credentials. My GeoServer Credits

Welcome Log	in	Login
	Login Login to Geoserver.	
by editing GE(user=admin and password=ge DSERVER_DATA_DIR/security/ ntroduction for details.	
Usern	ame: <mark>admin</mark>	
Passv	vord:	
	🔲 Remember my login d	on this computer
	Submit Reset	

6. Press Submit to return to the welcome screen. You can now press "Config" to begin customizing GeoServer.



Coverage Server specification, with an integrated Web Map Server.

7. Continue deeper into the configuration system by pressing "**WMS**" and then "**Description**". As you navigate you can see where you are along the top of the screen. Please take a moment to change the title of your WMS Service.

	1.8.1.8.1.	Google	
🖉 🕞 GeoServer Web Map Serv 🗙 🕅	\$		
← → C ☆ http://localh	ost:8080/geoserver/	config/wms/description.do	🕒 • 🔑 •
GeoServer	My GeoServer		Credits
WMS:	Welcome Config	WMS Description	Logout
GeoServer Sep 20, 5:19 AM Configuration Sep 20, 5:19 AM XML Sep 20, 5:19 AM Update Sequence: 0 Apply Save		Veb Map Server Description	
Apply Save Load	Name:	OGC:WMS	
		My GeoServer WMS	
	Constraints:	NONE	
	Fees:		
	Maintainer:	http://jira.codehaus.org/secure/BrowseProject.jspa?id=10311	
		WFS WHS GEOSERVER	
	Keywords:		
			.11
		This is a description of your Web Map Server.	
	Abstract:		
		Submit Reset	
		Submit Reset	

8. Press the "Apply" button in the top left corner.

GeoServer ©	My GeoServer	Credits
WMS: GeoServer Aug 14, 12:03 AM Configuration Aug 14, 12:03 AM XML Aug 14, 12:03 AM Apply Save Load	Welcome Config WMS Description Web Map Server Desc Configuration of Web Map Server informat metadata	-
<i>(.</i> 1 · 11	Name: My GeoServer WMS Title: Local Web Map Server	

(this allows you to try out the settings without saving)

9. You can see that you have unsaved changes as the date has changed next to "GeoServer*". This section of the screen shows how healthy your server is. The fact that we have a green bar shows that everything is working.

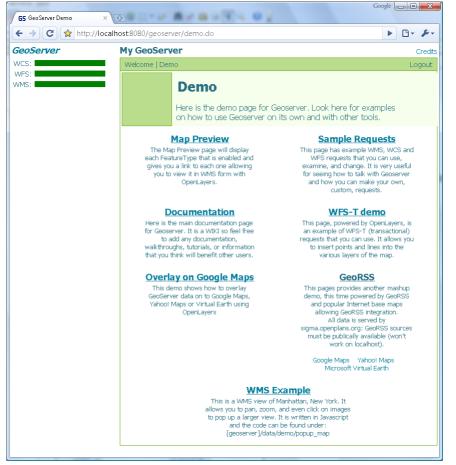
GeoServer ©	My GeoServer	Credi
Data: GeoServer * Sep 9, 8:41 PM Configuration Aug 14, 12:03 AM XML Aug 14, 12:03 AM Aug 14, 12:03 AM Apply Save Load	Welcome Config	Logout
	Server WCS WFS WMS Data	1
	Data loaded without incident	

10. Pressing the "Save" button will save your changes into the data directory specified during the installation.

6 WFS-T DEMO

One of the things that makes GeoServer a capable Web Feature Server is the ability to edit (The "T" is for transactional in WFS-T).

1. Return to the "Welcome" screen and select "Demo"

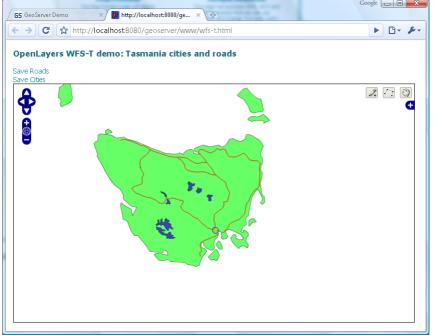


2. Click on the "WFS-T demo" to open a new tab. As this Open Layers application is started up you can watch the GeoServer console respond to queries.



3. This will bring up a web application put together with "Open Layers".

This is the same map used as a reference point for the uDig "Walkthrough 2" tutorial.



4. You can use the point and line tools to draw additional roads and cities onto the map. The links at the top of the page can be used to submit your work to GeoServer.



7 THINGS TO EXPLORE

If you finish early here are some challenges.

- Try out some of the others demos
- The "Sample Requests" demo lets you try out requests one at a time by selecting them from a List and hitting Send. Try out a GetMap request by hand.
- Config > Server You can fill in your contact details here, and turn down the amount of logging to let GeoServer run faster
- Config > WMS > Rendering Turn off anti aliasing for a speed boost.
- Config > Data > DataStores Register new shape files and data bases. You can use the same PostGIS database from uDig walkthrough 1.
- Config > Data > FeatureTypes Publish select FeatureTypes from your DataStores
- Config > Data > Style Control the rendering of specific FeatureTypes

How can you use GeoServer in your organization?

Remember you can hit "Apply" to try out your settings. If you do not like them you can hit "Load" to reset the configuration to the last time saved.