

Upgrading Geoserver on Tomcat 6 and Ubuntu

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1. Prerequisites

You need Tomcat 6 running on an Ubuntu server. For instructions on how to install Tomcat 6 see *Tomcat6 – Ubuntu 8.04.doc*. You should probably read that first anyway.

This tutorial assumes that you can access your home directory on the target machine, i.e. `\\services\your_user_name` - this requires that Samba is up and running on the target machine. This is so that you can transfer files to the target machine.

You will need a SSH client such as Putty or access to a VMWare console.

This tutorial assumes that the target machine is called *Services* and tomcat is installed at `/var/lib/tomcat6`.

2. Download Files

Get the latest stable version of Geoserver from <http://geoserver.org/display/GEOS/Stable>. Download the *Web Archive* version. Then you also want to get any extensions that we use so from the same page download *Oracle* and *Image Pyramid*.

3. Copy to Server

By now you should have downloaded 4 zip files. Inside windows explorer, navigate to `\\services\your_user_name`. This is your home directory on the services machine, which is accessible via a terminal prompt at `/home/your_user_name`.

Create a directory called `geoserver`, and extract the `geoserver-x.x.x-war.zip` file that you downloaded into it.

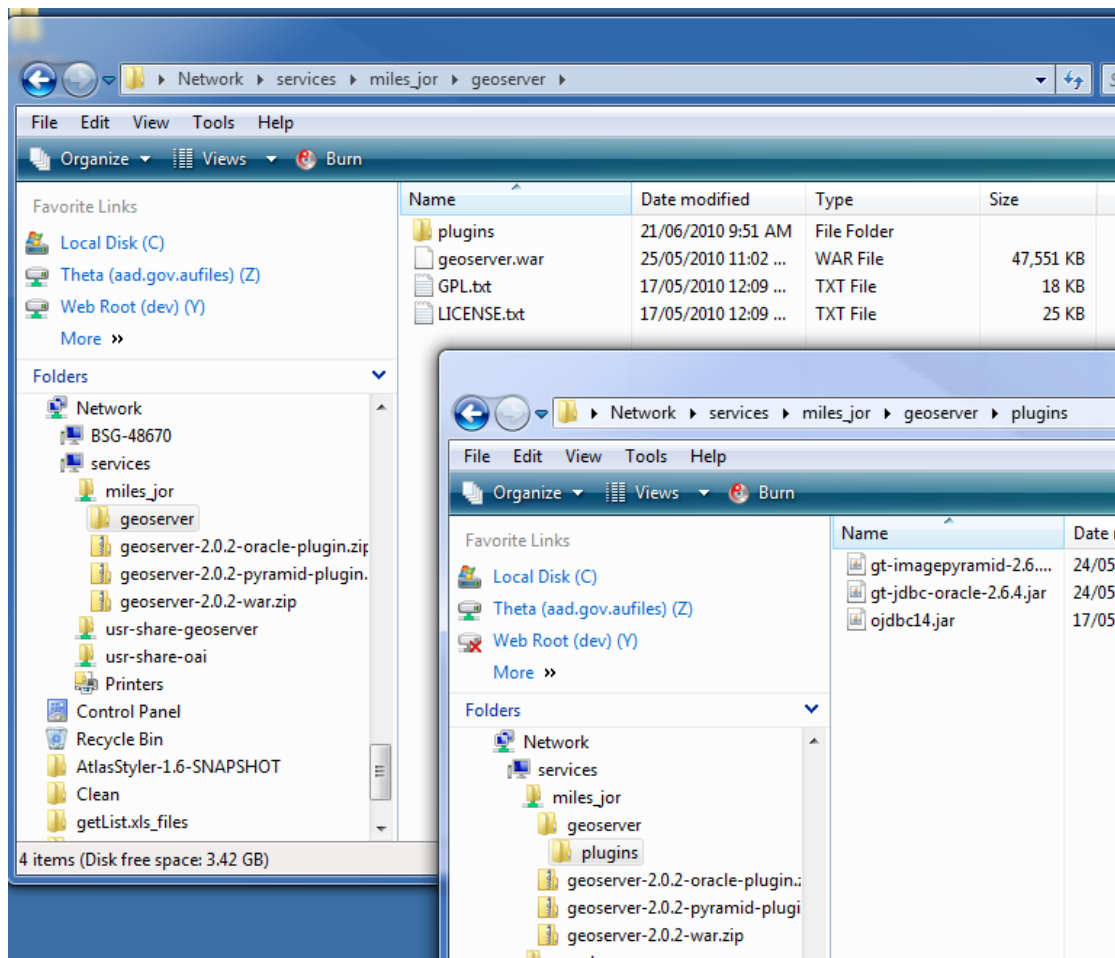
Inside of that directory, create a folder called `plugins`, and extract all of the other files that you downloaded into it.

Delete all of the `.zip` files that should now be extracted.

Rename `geoserver.war` to have the version of Geoserver in the name of the file, such as `geoserver-2.0.2.war`. This is *very* important as it is the same name that Tomcat will use to name the webapp that is deployed.



Now your geoserver directory should look something like this:



4. Deploy on Tomcat

Log into the machine using a SSH client (Putty or equivalent) and become root:

```
$ sudo -i
```

Copy the Geoserver war file from your home directory into the auto-deploy folder of Tomcat. This is usually `/var/lib/tomcat6/webapps`

```
# cd /var/lib/tomcat6/webapps
# cp /home/your_user_name/geoserver/geoserver-2.0.2.war ./
```

The webapp should now auto deploy into a new folder using the same name as the Geoserver war file, without the `.war` extension. Wait a minute for it to finish deploying, and then stop tomcat.

```
# /etc/init.d/tomcat6 stop
```

Make sure tomcat is stopped, otherwise try stopping it again or kill the process off after 5 minutes of trying. **TOMCAT MUST BE STOPPED NOW.**

```
# ps -ef | grep tomcat
```



Once Tomcat is stopped, delete the geoserver war file and move the newly deployed Geoserver directory to `/var/lib/tomcat6/webapps-available`.

```
# rm geoserver-2.0.2.war
# mv geoserver-2.0.2 ../webapps-available/
```

You may now start Tomcat again, but note that the new instance of Geoserver will not yet start up, and we don't want it to because we need to do some more configuring first.

```
# /etc/init.d/tomcat6 start
```

5. Install plugins

Now we need to copy over any plugins into the new webapp's `WEB-INF/lib` directory.

```
# cd ../webapps-available/geoserver-2.0.2/WEB-INF/lib
# cp /home/your_user_name/geoserver/plugins/*.jar ./
```

6. Geoserver Configuration

Before we start the new instance of geoserver, we have to perform some final configuration.

Move back a directory and edit the `WEB-INF/web.xml` file using a text editor such as nano.

```
# cd ..
# nano web.xml
```

Most of the defaults are fine; we just need to point Geoserver to the existing *Data Directory* that is already set up on the machine. NOTE: If you are installing Geoserver for the first time, please consult the Geoserver online documentation for information about how to create a custom *Data Directory*.

Find the following section:

```
<!--
<context-param>
  <param-name>GEOSERVER_DATA_DIR</param-name>
  <param-value>C:\eclipse\workspace\geo... </param-value>
</context-param>
-->
```

Remove the comments, and replace the path to the *Geoserver Data Directory* to be `/usr/share/geoserver/aadc`.

```
<context-param>
  <param-name>GEOSERVER_DATA_DIR</param-name>
  <param-value>/usr/share/geoserver/aadc</param-value>
</context-param>
```

Save and exit nano by pressing `<CTRL-X>` followed by `<Y>` and `<ENTER>`.



7. Deploy

The new instance of Geoserver will not be running yet. In Tomcat's `webapps` directory, there is a *symbolic link* (*shortcut* in Windows terms) called *geoserver* that points to the version of Geoserver that we want Tomcat to run, in the `webapps-available` directory.

Put simply, we can store multiple versions of Geoserver in the `webapps-available` directory but only things that are in the `webapps` directory will be run by Tomcat.

Using this approach, we can always go back to older versions of Geoserver by simply removing the symbolic link in the `webapps` directory and creating it again, pointing it to the version of Geoserver that we want to deploy.

So that's exactly what we will do now. Remove the `tomcat6/webapps/geoserver` symbolic link and create a new *symbolic link* called *geoserver*, that points to the version of Geoserver that we want to deploy:

```
# cd /var/lib/tomcat6/webapps
# rm geoserver
# ln -s ../webapps-available/geoserver-2.0.2 geoserver
```

You can use the `ls -l` command to verify that the Geoserver symbolic link is pointing to the right version of Geoserver.

Wait a minute for Tomcat to automatically deploy the app, and you should see the new version of Geoserver deployed at <http://services.aad.gov.au/geoserver>

8. Troubleshooting

1. Try restarting. Use `stop/start` instead of `restart` so that you can be sure that tomcat stops before it's restarted:

```
# /etc/init.d/tomcat6 stop
# ps -ef | grep tomcat
# /etc/init.d/tomcat6 start
```

2. Check the Tomcat log files for errors. They are located in `/var/log/tomcat6`
3. Make sure you installed the plugins that you need. Geoserver is being configured to use an existing data directory that already has configurations in it which use plugins. At the time of writing we only used the Oracle and Image Pyramid plugins. PostGIS is native so no need to install a plugin for that.
4. If you don't get what you expect at <http://services.aad.gov.au/geoserver> it may be that apache isn't configured to forward to Tomcat properly. Firstly, try restarting it by issuing the following command:

```
# /etc/init.d/apache2 restart
```



If that doesn't work, see if you can access Geoserver directly on tomcat on port 8080 via <http://services.aad.gov.au:8080/geoserver> - if you can then it would seem that Apache is the problem.

