Step 0: Linux machine with Java 1.5

Add **JAVA_HOME** to your environment

```
export JAVA_HOME=<Path to your JDK>
export PATH=$JAVA_HOME:$PATH
```

Step 1: Install Ant 1.6.5 in /opt

Download from http://ant.apache.org/bindownload.cgi

Unzip and move to /opt

Add **ANT_HOME** to your environment

```
export ANT_HOME=/opt/apache-ant-1.6.5
export PATH=$ANT_HOME:$PATH
```

Step 2: Install Globus WS Core 4.0.2 in /opt

Download from http://www-unix.globus.org/toolkit/survey/index.php?download=ws-core-4.0.2-bin.zip

Unzip and move to /opt

Add **GLOBUS_LOCATION** to your environment

```
export GLOBUS_LOCATION=/opt/ws-core-4.0.2
export PATH=$GLOBUS_LOCATION:$PATH
```

Let us check the globus installation

```
cd $GLOBUS_LOCATION
chmod 744 bin/*
bin/globus-start-container -nosec
```

You should get an output like:

```
[1]: http://140.254.80.128:8080/wsrf/services/SampleAuthzService
[2]: http://140.254.80.128:8080/wsrf/services/Version
...
[24]: http://140.254.80.128:8080/wsrf/services/TestServiceRequest
```

Stop the container with Ctrl+C

Step 3: Add the following variables to your environment (optional)

```
export JAVA_OPTS=-Xmx1000m
export GLOBUS_OPTIONS=-Xmx1000M
```

Step 4: Install caGrid 1.0 beta in /opt

Download as follows

```
Set an environment variable:
CVS_RSH = ssh

cd /opt
cvs -d:ext:anonymous@cbiocvs2.nci.nih.gov:/share/content/gforge/cagrid-1-0 checkout -r caGrid-
1_0_beta cagrid-1-0/caGrid
The password is anonymous
```

Add **CAGRID_LOCATION** to your environment

```
export CAGRID_LOCATION=/opt/cagrid-1-0/caGrid
```

Let us build caGrid

```
cd $CAGRID_LOCATION
ant clean all
```

Step 5: Checkout of the In Vivo Imaging Middleware and the gridIMAGE Application

Checkout as follows to say the /opt directory

In Vivo Imaging Middleware:

```
cvs -d :ext:USERNAME@cbiocvs2.nci.nih.gov:/share/content/gforge/middleware co middleware
```

NOTE: To get a User Name for the repository, please go to http://gforge.nci.nih.gov/projects/middleware/ Click on **Request To Join,**

Alternatively you can download the released middleware.tar.gz file

Step 6: **Setup the Environment Variables**

set the variable IVI_LOCATION to the In Vivo Imaging Middleware project subdirectory called 'middleware/projects' (the one which contains build.xml)

Step 7: **Build everything**

```
NOTE: The Globus container from Step 2 should not be running at this stage
$ cd $IVI_LOCATION; ant
$ vi DICOMDataService/server-config.wsdd
      (set lines like
          <parameter name="GridFTPServerListenPort" value="2811" />
          <parameter name="GridFTPServerListenHost" value="your.public.ip.or.hostname" /> )
$ ant deployGlobus
```

Step 8: **Start Globus Containers**

```
cd $GLOBUS_LOCATION
bin/globus-start-container -nosec
```

Step 9: **Setup and Start gridFTP**

Download globus installer from
http://www.globus.org/toolkit/downloads/4.0.2/

Install gridFTP only from the binary/source installer under a separate GLOBUS_LOCATION distinct from your ws core GLOBUS_LOCATION.

some source installation instructions are as follows after you unpack the sources and cd into the resulting directory:

```
  export GLOBUS_LOCATION=/some/unique/directory
  ./configure --prefix=$GLOBUS_LOCATION --with-buildopts="--static"
  make gpt globus_gridftp_server
```

Start gridftp

```
$GLOBUS_LOCATION/sbin/globus-gridftp-server -d ALL -aa -p 2811
```