GEONGrid Roll Experiences

Rocks-A-Palooza I

Track 2

Case Studies of Existing Rolls

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GEONGrid Roll Function

- ◆ Interoperability by deploying a consistent software stack across sites.
  - ⮞ Higher level development and deployment environments. (web/grid service libraries)
  - ⮞ Web servers, databases with GIS extensions.
  - ⮞ Monitoring software and
  - ⮞ End user environments (portal).
- ◆ Automatically install/configure environment on frontend.
  - ⮞ Create appropriate users and software ownership.
  - ⮞ Services to be deployed and started out of the box.

Issue

◆ One time configuration of software including

- ➲ Create appropriate users and software ownership.
- ➲ Configure database.
- ➲ Configure portal.
- ➲ Deploy services to web servers.

◆ One solution:

- ➲ Use <file> tags in the roll <post> section to define an executable file with all the configuration steps.
- ➲ Guarantee execution of this file just once.

Dealing with the One time Issue

◆ Trick:

- ➲ Use Roll's <file> tag to define a file.
- ➲ Put all the one time configuration setup in the <file> </file> tag.
- ➲ Install the file in the right location with right permissions.(needs to be executable)
  - • File location: /etc/rc.d/rocksconfig.d/
- ➲ File is executed during "First Boot"
- ➲ Delete the file just before closing the file. (i.e the file deletes itself)

How We Do It

rocks/src/roll/geongrid/nodes/geongrid.xml

◆ The file tag

```
<post>
  <file name="/etc/rc.d/rocksconfig.d/post-90-geongrid" perms="755">
   #!/bin/sh

   ...........................
   ...........................
   #"Run all your post configuration here"


   rm -f /etc/rc.d/rocksconfig.d/post-90-geongrid
  </file>


</post>
```

◆ Make the file executable

◆ Delete it before closing the file tag.

The Nodes File

```
<post>
<file name="/etc/rc.d/rocksconfig.d/post-90-geongrid" perms="755">
#!/bin/sh

/usr/sbin/useradd -c "Globus User" -d /export/home/globus globus &gt;&amp; /dev/null
mkdir /export/home/globus/.ssh
chmod 700 /export/home/globus/.ssh
touch /export/home/globus/.ssh/id_rsa.pub
chmod 400 /export/home/globus/.ssh/id_rsa.pub
chown -R globus.globus /export/home/globus

...................................................
...................................................

# setup gridsphere
chown -R globus.globus /opt/gridsphere
(su - globus -c "cd /opt/gridsphere &amp;&amp; ant install &amp;&amp; exit")
(su - globus -c "cd /opt/gridsphere/projects/gridportlets &amp;&amp; ant install &amp;&amp; exit")
(su - globus -c "cd /opt/gridsphere/projects/gama &amp;&amp; ant install &amp;&amp; exit")

rm -f /etc/rc.d/rocksconfig.d/post-90-geongrid
</file>
</post>
```

Other Rolls Which Use This Trick

- ◆ Many including GAMA Roll
  - ➲ Packages and Configures a complete GSI solution.