

Installation and Configuration : SESSION C

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- OS version of gLite Middleware version 3.1 is Scientific Linux 4 (SL4):
 - <http://www.scientificlinux.org>
- The sources and the images (iso) to create CDs for SLC4 can be found in this site:
 - <ftp://ftp.scientificlinux.org/linux/scientific/4x>

Node synchronization, NTP installation and configuration

- A general requirement for the gLite nodes is that they are synchronized
- Use the NTP protocol with a time server
 - *yum install ntp*
 - *edit the file /etc/ntp/step-tickers*
 - *pool.ntp.org*
- Activate the ntpd service with the following commands:
 - *ntpdate pool.ntp.org*
 - *service ntpd start*
 - *chkconfig ntpd on*
- Check ntpd's status by running the following command:
 - *ntpq -p*

- All nodes except UI, WN and BDII require the host certificate/key files to be installed
- Obtain a certificate from national Certification Authority (CA)
- Place the certificate under **/etc/grid-security**
(hostcert.pem containing the machine public key)
(hostkey.pem containing the machine private key)
 - `cp /root/<service>/hoscert.pem /etc/grid-security/`
 - `cp /root/<service>/hostkey.pem /etc/grid-security/`
- Make sure that the permission of the certificate are:
 - `-r--r--r-- 1 root root 4249 Jun 30 2009 hostcert.pem`
 - `-r----- 1 root root 887 Jun 30 2009 hostkey.pem`

Installing the Middleware

- Java is required before proceeding to middleware installation:
 - *cd /root/java*
 - *rpm -ivh java-1.5.0-sun-1.5.0.14-1jpp.i586.rpm*
 - *rpm -ivh java-1.5.0-sun-devel-1.5.0.14-1jpp.i586.rpm*
- Repositories
 - *the middleware repositories*
 - *the CA repository*
 - *the jpackage repository*
 - *DAG*
- The middleware repositories
 - *wget the yum repository for the node type and place it under*
 - *[/etc/yum.repos.d](#)*
- Download repositories from:
 - *<http://grid-deployment.web.cern.ch/grid-deployment/glite/repos/3.1>*

- DAG is a maintained repository which provides a number of packages not available through Scientific Linux
- In a limited number of cases, DAG provides rpms already represent in the OS
- In this case, DAG rpms are of a higher version
- Install the relevant rpm by hand before installing the meta-package
 - `wget 'http://linuxsoft.cern.ch/dag/redhat/el4/en/i386/RPMS.dag/perl-SOAP-Lite-0.69-1.el4.rf.noarch.rpm'`
 - `yum localinstall perl-SOAP-Lite-0.69-1.el4.rf.noarch.rpm`

- `yum install lcg-CA`
- `yum install glite-UI glite-MON`
- `yum install lcg-CE`
- `yum install glite-WMS glite-LB`
- `yum install glite-WN TORQUE_client`

Configuring the Middleware

- Using the YAIM configuration tool
- Configuring multiple node types on the same physical host
 - lcg CE + BDII_site : not recommended when the lcg CE is subjected to a heavy load. In that case the site BDII may stop working and the whole site will stop being published properly.
 - WMS+LB
 - WN + batch system client or MPI
 - lcg CE or cream CE + batch system server + batch system utils
- Installing and Configuring a batch system
 - The Torque/PBS batch system
 - *cd /etc/yum.repos.d/*
 - *wget http://grid-deployment.web.cern.ch/grid-deployment/glite/repos/3.1/glite-TORQUE_server.repo*
 - *wget http://grid-deployment.web.cern.ch/grid-deployment/glite/repos/3.1/glite-TORQUE_client.repo*
 - *wget http://grid-deployment.web.cern.ch/grid-deployment/glite/repos/3.1/glite-TORQUE_utils.repo*
 - *yum update*
 - *yum install the_necessary_metapackage_*

Configuring the Middleware

- Place the configuration files:
 - users.conf
 - groups.conf
 - site-info.def
- `(cp /root/ce201/etc/ /opt/glite/yaim)`
- `cd /opt/glite/yaim/bin/`
- `yaim -c -s site-info.def -n lcg-CE -n TORQUE_server -n TORQUE_utils`
- `yaim -c -s /opt/glite/yaim/etc/site-info.def -n glite-WMS -n glite-LB`
- `yaim -c -s /opt/glite/yaim/etc/site-info.def -n glite-MON glite-UI`
- `yaim -c -s /opt/glite/yaim/etc/site-info.def -n glite-WN TORQUE_clent`