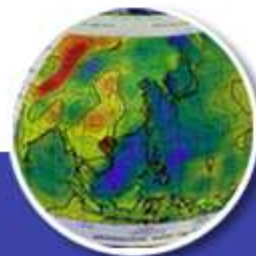




User Interface Installation

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Agenda

- **User Interface (UI) Introduction**
- **Basic Virtual Machine Overview**
- **UI Installation**
- **UI Configuration**
- **UI Testing**

Introduction



- The UI is a suite of clients and API that users and applications can use to access the gLite services
- The gLite UI includes the following components:
 - VOMS command-line tools
 - Workload Management System clients and APIs
 - Logging and Bookkeeping clients and APIs
 - Data Transfer command-line clients and APIs
 - Data Catalog command-line clients and APIs
 - gLite I/O client and APIs
 - R-GMA client and APIs

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Login Basic Virtual Machine



- **Execute putty.exe**
 - In "Host Name (or IP address)", fill in the ip of UI. IP Address: **117.103.102.99**. Click "**Open**"
 - Input **username** and **password** specified in your tutorial worksheet.
- **ssh to your VM**
 - *ssh root@gridXX.euag.org*
- **Check hostname and make sure no one login to your VM**
 - *hostname*
 - *who*

Check Network Configuration



- **Check the network configuration**

```
cat /etc/sysconfig/network
```

```
cat /etc/sysconfig/network-scripts/ifcfg-eth0
```

```
cat /etc/resolv.conf
```

- **Check DNS forward and reverse mapping**

```
host gridXX.euag.org
```

```
host 117.103.102.XXX
```

Check Firewall



- **We have disabled iptables to simplify tutorial**

chkconfig --list|grep iptables

iptables 0:off 1:off 2:off 3:off 4:off 5:off 6:off

- **Normally you will configure your firewall to meet middleware service requirements here:**
 - <https://twiki.cern.ch/twiki/bin/view/LCG/LCGPortTable>

Check System Time



- Time synchronization is required by GSI security
- Use NTP protocol to synchronize system time
 - Add NTP servers to /etc/ntp.conf

```
restrict <ntp server ip> nomodify notrap noquery
server <ntp server hostname>
```
 - Start NTP daemon

```
service ntpd start
chkconfig ntpd on
```
 - Reference
 - http://wiki.twgrid.org/apwiki/NTP_Configuration_Guide

Check System Time



- There is a problem synchronizing time on VMWare
- Instead add a crontab entry to update time every minute

crontab -l

```
* * * * * /usr/sbin/ntpdate 117.103.105.129
```

Check Java JDK 1.5.0



- **Java JDK 1.5.0 rpm is required to satisfy installation dependencies for gLite 3.1**

rpm -qa|grep java-1.5

java-1.5.0-sun-1.5.0.15-1jpp

java-1.5.0-sun-devel-1.5.0.15-1jpp

Check Yum Repositories



- **Check YUM repositories to meet middleware dependencies (JPackage, Lcg-CA, DAG)**

```
cd /etc/yum.repos.d/
```

```
ls -la
```

```
-rw-r--r-- 1 root root 363 May 22 2007 dag.repo  
-rw-r--r-- 1 root root 1022 Jul 2 05:57 jpackage.repo  
-rw-r--r-- 1 root root 296 Mar 31 13:04 lcg-CA.repo
```

Check lcg-CA RPMS



- **Grid service needs to install trusted Certificate Authorities public certificates**

```
rpm -qa|grep lcg-CA
```

```
lcg-CA-1.30-1
```

- **Certificates are installed in /etc/grid-security/certificates/**

- ASGCCA files

9cd75e87.0

CA root certificate

9cd75e87.crl_url

URL where revocation list is found

9cd75e87.r0

CRL that was obtained

- **Install GILDA CA RPM to trust certificates issued by GILDA**

```
rpm -qa|grep -i gilda
```

```
gilda-vomscert-1.0-2
```

```
ca_GILDA_2009-1.0-14
```

```
ca_GILDA-1.0-22
```

- **Install host certificate for your VM**

```
cd /etc/grid-security/
```

```
ls -la
```

```
-rw-r--r-- 1 root root 1062 Jul 7 10:09 hostcert.pem
```

```
-r----- 1 root root 887 Jul 7 10:09 hostkey.pem
```

- **Make sure correct file permissions are set correctly**

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User Interface Installation



- **Add UI YUM repository**

```
cd /etc/yum.repos.d/
```

```
wget http://bdii.euag.org/repos/glite-UI.repo
```

- **Install glite-UI RPMs and YAIM configuration tool**

```
yum install glite-UI
```

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Configure User Interface



- **Copy your configuration files to your server**

```
cd /opt/glite/yaim/etc/
```

```
wget http://bdii.euag.org/yaim/gridXX-site-info.def
```

- **Protect your configuration file**

```
chmod 600 gridXX-site-info.def
```

- **Defines which Grid services are used by UI**

BDII_HOST=bdii.\$MY_DOMAIN

– *Top level BDII Information System for service discovery*

WMS_HOST=wms.\$MY_DOMAIN

Job management services

PX_HOST=px.\$MY_DOMAIN

– *My proxy server for extended proxies*

MON_HOST=gridXX.\$MY_DOMAIN

– *RGMA service*

site-info.def Parameters



- **Define Virtual Organization parameters:**

VOS="euasia gilda ops dteam"

- *Specify which VO to configure: operations and tutorial VO*

VO_<VO NAME>_VOMSES

VO_EUASIA_VOMSES="euasia voms.grid.sinica.edu.tw 15015
/C=TW/O=AS/OU=GRID/CN=voms.grid.sinica.edu.tw euasia"

- *Defines vomses files that holds VOMS server contact information*

VO_<VO NAME>_VOMS_CA_DN

VO_EUASIA_VOMS_CA_DN=""/C=TW/O=AS/CN=Academia
Sinica Grid Computing Certification Authority Mercury"

- *Certificate subject of trusted CA which issued VOMS servers host certificate*

Use YAIM to Configure UI



- **Check syntax of the site-info.def**

```
cd /opt/glite/yaim/etc/  
source gridXX-site-info.def
```

- **Run YAIM**

```
/opt/glite/yaim/bin/yaim -v -s gridXX-site-info.def -n glite-UI
```

– Verify that all required yaim parameters are present in your site-info.def

```
/opt/glite/yaim/bin/yaim -c -s gridXX-site-info.def -n glite-UI
```

– Configure UI

Pause for Practical



- **We will now Install and Configure the User Interface**
- **Go to wiki page for instructions:**
 - http://lists.grid.sinica.edu.tw/apwiki/Project/UPM_Tutorial_Jul_2009_Instructions/UI_Installation

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Configured Correctly?



- **BDII_HOST:**
 - Sets environment variable
echo \$LCG_GFAL_INFOSYS
- **WMS, LB, PX_HOST:**
 - Set default services
cat /opt/glite/etc/gilda/glite_wms.conf

Add a User Account



- **Add an account and password**

adduser gildauser

passwd <some pass>

- **Log into the account**

su - gildauser

Install User Certificates



- **Make .globus directory**

```
cd ~  
mkdir .globus  
cd .globus
```

- **Download certificates**

```
wget http://bdii.euag.org/cert/UPM<XX>/usercert.pem  
wget http://bdii.euag.org/cert/UPM<XX>/userkey.pem
```

- **Correct permissions**

```
chmod 644 usercert.pem  
chmod 400 userkey.pem
```

- **Check DN and valid date**

```
openssl x509 -in usercert.pem -noout -subject -dates
```

Run Test Commands



- **Test information system**

lcg-infosites -vo gilda ce

- **Test job submission to ce**

globus-job-run ce.euag.org /bin/hostname

- **Test data management**

*lcg-cr -v -d dpm.euag.org -l lfn:/grid/gilda/gridXX_test_20090713
file:///etc/group*

Stop Virtual Machine



- **Stop this virtual machine before you install the next node**
 - Since you will reuse your IP and hostname
shutdown -h now

References



- **Generic Installation and Configuration Guide gLite 3.1**
 - <https://twiki.cern.ch/twiki/bin/view/LCG/GenericInstallGuide310>
- **YAIM 4 Guide**
 - <https://twiki.cern.ch/twiki/bin/view/LCG/YaimGuide400>
- **Site-info.def Parameters**
 - https://twiki.cern.ch/twiki/bin/view/LCG/UI_configuration_variables
 - https://twiki.cern.ch/twiki/bin/view/LCG/Site-info_configuration_variables
- **gLite User Guide**
 - <https://edms.cern.ch/file/722398/1.2/gLite-3-UserGuide.html>