

YAIM Overview

MiMOS Grid tutorial

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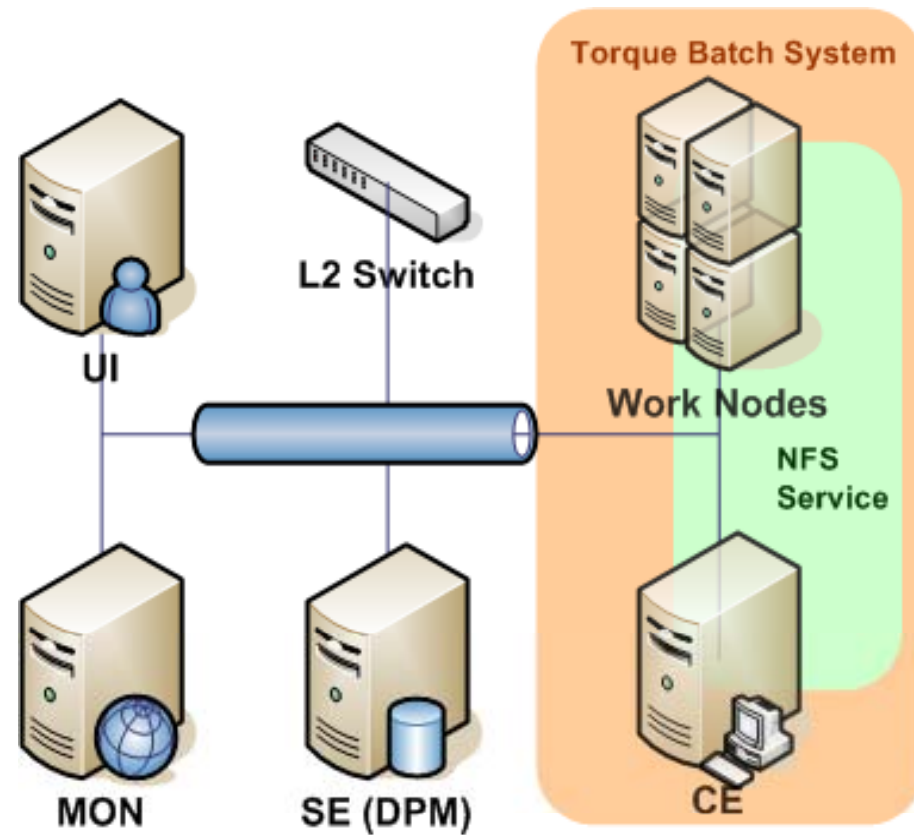
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- **YAIM Introduction**
- **How to begin**
- **Install a node**
- **Configure a node**
- **YAIM's log file**

- The components for basic grid site.

- UI
- CE
- WN
- SE
- MON



■ What is the YAIM?

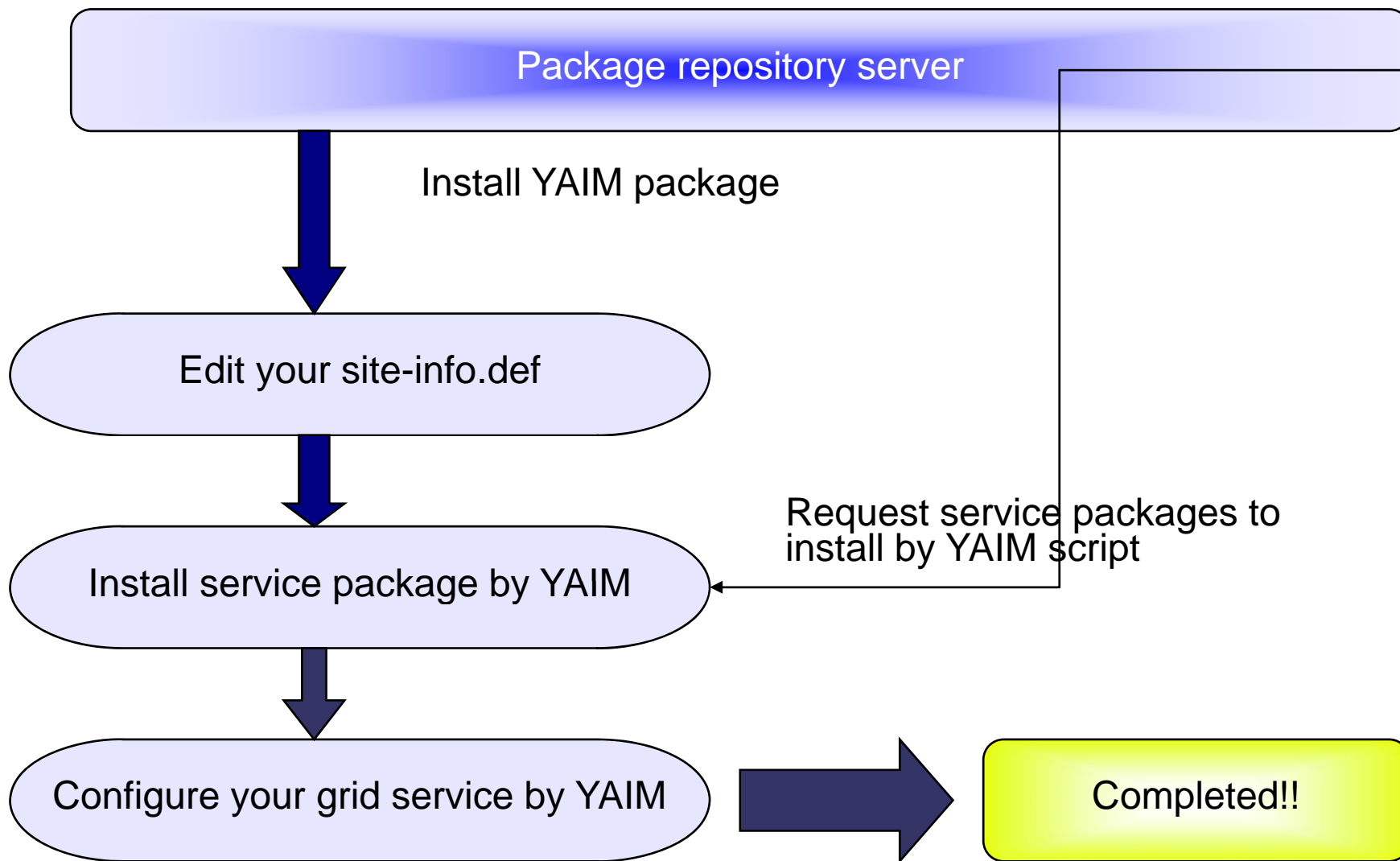
- The full name is Yet Another Installation Manager
- A tool to install and configure Grid middleware.

■ When to use the YAIM?

- You want to set up a simple Grid site.
- You want to deploy a larger sites.

■ Why use YAIM?

- Install and configure grid service easily.



- **Of course, you need a linux OS first, here the YAIM and grid middleware just support SL(C)3 and SL(C)4.**
- **Set up the NTP network time.**
- **Configure local time to UTC.**
- **Configure the DNS query.**
- **Request CA certificate.**
- **The detail procedure, please refer to following links:**
 - http://lists.grid.sinica.edu.tw/apwiki/New_Site_Deployment_Procedures
 - http://lists.grid.sinica.edu.tw/apwiki/New_Site_Deployment_Procedures_II%3A_Site_Pre-installation

■ Activate NTP update.

- Adjust system time manually, using following command:
 - `#ntpupdate <your time server>`
- Adjust system automatically, please using following command to active ntp service:
 - `#service ntpd start`
- To set up automatic start the ntp service at system booting, please use following command:
 - `#chkconfig ntpd on`

■ Set the local system time to UTC

- Edit /etc/sysconfig/clock, modify to following value:

ZONE="UTC"

UTC=true

ARC=false

- Replace local time format:
 - `#cp /usr/share/zoneinfo/UTC /etc/localtime`
- Sync system time to the BIOS time and set it to UTC too:
 - `#hwclock --systohc --utc`

■ Set up the DNS query

- Edit /etc/resolv.conf to define your name server as following format:

```
nameserver <your name server ip>
```

■ Test the DNS resolution

- #nslookup <any exist hostname>
- Must get the following information:
 - Server: <your dns server>
 - Address: <your dns server>
 - Name: <the host name which you queried>
 - Address: <the ip address of host>

- For install successfully, you must need a package manager such as apt or yum.
- Please make sure your RPM repository can be work correctly.
- Should be have following repositories for your package manager.
 - The middleware repositories
 - The CA repository
 - The jpackage repository
 - The DAG repository
 - The SLC OS repository

■ Configure repositories for apt.

- Get source list from cern
- For slc3:
 - #rpm -ivh
<http://linuxsoft.cern.ch/cern/slc30X/i386/SL/RPMS/apt-sourceslist-30X-10.cern.i386.rpm>
- For slc4:
 - #rpm -ivh
<http://linuxsoft.cern.ch/cern/slc4X/updates/i386/RPMS/apt-sourceslist-4X-3.cern.i386.rpm>

- **For grid package**

- # cat > /etc/apt/sources.list.d/lcg.list << EOF

- rpm ftp://slc.grid.sinica.edu.tw/pub/apt/R3.0/ rhel30 externals
Release3.0 updates
EOF

- # cat > /etc/apt/sources.list.d/lcg-ca.list << EOF

- rpm ftp://slc.grid.sinica.edu.tw/pub apt/LCG_CA/en/i386 lcg
EOF

- After install the source list, please remember run following command to get new package tree.
 - #apt-get update

- Configure repositories for yum
 - Put the repository configuration files into /etc/yum.repo.d/
 - You can find them in following link:
 - <http://grid-deployment.web.cern.ch/grid-deployment/yaim/repos/>

- Before you use yaim tool, you must install this rpm.
 - glite-yaim
 - core package which include common function and definitions.
 - To install the glite-yaim, please use apt-get or yum
 - For apt:
 - # apt-get install glite-yaim
 - For yum:
 - # yum install glite-yaim

YAIM's Configuration files

- **After installed yaim core package, all the sample files were put into /opt/glite/yaim/example directory.**
 - site-info.def:
 - This is the main configuration file of the site.
 - user.conf:
 - Defines local pool accounts to be created
 - Mainly for CE and WN..etc
 - groups.conf:
 - Defines groups associated with pool accounts.
 - wn-list.conf:
 - The work node lists.

- **Be careful the variable format, that is: <variable>=<your parameter>. Please don't give any space at the line.**
 - e.g. CE_HOST=myce.mydomain
that is correct.
 - e.g. CE_HOST = myce.mydomain
that is wrong format.
- **Must be careful the JAVA_LOCATION variable, that should be match to your Java JDK version.**

■ **Make sure following variables is match to your own configuration files path:**

- WN_LIST
- USERS_CONF
- GROUPS_CONF

- **More detail about the site-info.def, please refer to following link:**
 - https://twiki.cern.ch/twiki/bin/view/LCG/YaimGuide311#site_info_def

Relocate configuration files

- **Edit your site-info.def and put it into a protected directory.**
- **Edit groups.conf and users.conf for your grid site . (remember to modify the USERS_CONF and GROUPS_CONF variables in site-info.def).**

- Located in `/opt/glite/yaim/bin/yaim`
- Performs different configuration steps

- Usage: `./yaim <action> <parameters>`
- The action list:
 - i | `--install` : Install one or several meta package.
Required parameters: -s, -m
 - c | `--configure` : Configure already installed services.
Required parameters: -s, -n
 - r | `--runfunction` : Execute a configuration function.
Required parameters: -s, -f
Optional parameters : -n

-v | --verify : Checks that the required variables for a given configuration target are all defined in site-info.def.

Required parameters: -s -n

-h | --help : Prints out the help.

■ Notice: Please specify only one action at a time !

■ Parameters:

- s | --siteinfo: : Location of the site-info.def file
- m | --metapackage : Name of the metapackage(s) to install
- n | --nodetype : Name of the node type(s) to configure
- f | --function : Name of the functions(s) to execute

■ **Command:**

```
./yaim -i -s <site-info.def file location> -m <meta-package name>
```

■ **For example:**

```
– ./yaim -i -s site-info.def -m lcg-RB
```


- **After install successfully, you should run the configuration next.**

- **Command:**

 - `./yaim -c -s <site-info.def file location> -n <node type name>`**

- **For example:**

 - `– ./yaim -c -s site-info.def -n RB`**

■ **The YAIM log file is stored in:**

- `/opt/glite/yaim/log/yaimlog`
- If you get any error in the installation or configuration process, please check this log file.

Thank you very much.