YAIM: The gLite configuration tool

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YAIM documentation

- Guide for Administrators

https://twiki.cern.ch/twiki/bin/view/LCG/YaimGuide400

- YAIM in EMI

https://twiki.cern.ch/twiki/bin/view/EMI/EMIYaim

- Dissemination level

http://en.wikipedia.org/wiki/Yaim

- Old, but nice

https://twiki.cern.ch/twiki/bin/view/EGEE/YAIM

Yaim: Yet Another Installation Manager

YAIM implements a configuration method for the gLite software.

The aim of YAIM is to provide a simple configuration method that can be used to set up a simple Grid Site but can be easily adapted and extended to meet the need of larger sites.

YAIM is not more than, just a set of bash scripts and functions.

YAIM is distributed in rpm form and it usually resides in /opt/glite/yaim.

Modular structure

Yaim is modular:

- glite-yaim-core

contains common functions and definitions

- glite-yaim-<module_name>

implement the functionality to configure specific node types

Each service metapackage installs the appropriate yaim module

YAIM Configuration Files (1)

- users.conf   (for pool accounts configuration)

- groups.conf (for pool accounts configuration)

- wn-list.conf

- site-info.def (main configuration file of YAIM)

- vo.d   (specific VO conf.)

- services/glite-<node_name> (specific service conf., overwrite defaults)

- services/nodes/<host_name.domain_name> (host specific)

- site-info.pre (contains defaults)

- site-info.post (contains defaults)

Documentation:
https://twiki.cern.ch/twiki/bin/view/LCG/Site-info_configuration_variables#site_info_def

YAIM Configuration Files (2)

- YAIM distributes an example of relevant configuration files under /opt/glite/yaim/examples/siteinfo/site-info.def. In case the system administrator is interested in using these files, it should move them to a safer location.

- site-info.def is the main configuration file of YAIM. It is in the format of key-value pairs.

- Since YAIM is mainly bash, all the configuration files have to follow the bash syntax.

- A good syntax test for the site-info.def is to source it

YAIM Configuration Files (3)

Configuration file sourcing flow:

1. /opt/glite/yaim/defaults/site-info.pre

2. /opt/glite/yaim/defaults/glite-node-type.pre

3. siteinfo_dir/site-info.def

4. siteinfo_dir/services/glite-node-type

5. siteinfo_dir/nodes/machine.domain

6. /opt/glite/yaim/defaults/site-info.post

7. /opt/glite/yaim/defaults/glite-node-type.post

8. siteinfo_dir/vo.d/vo_name

9. /opt/glite/yaim/node-info.d/glite-node-type Second level

Node Type Definition

The configuration steps for a specific node type are defined in

/opt/glite/yaim/node-info.d/glite-<nodename>

This file contains the ordered list of yaim scripts run to configure the specified node type.

YAIM usage

/opt/glite/yaim/bin/yaim <action> <parameters>

Actions:
    -c | --configure   : Configure already installed services. Compulsory parameters: -s, -n
    -r | --runfunction : Execute a configuration function.   Compulsory parameters: -s, -f
                                                               Optional parameters : -n
    -v | --verify   : checks that the required variables for a given nodetype are all defined.
                                                    Compulsory parameters: -s -n
    -d | --debug   : Define a loglevel, overwrites YAIM_LOGGING_LEVEL defined in site-info.def.
                         Values: 1-7
    -e | --explain   : Explains what the functions are doing by printing out the comments
                         found inside them.   Compulsory parameters: -s -n
    -a | --available   : Prints out the available configuration targets.
                                                               Compulsory parameter: -s
    -p | --package   : Creates an rpm package from the configuration directory structure,
                         that can be installed on other nodes. It installs under:
                         /opt/glite/yaim/examples/siteinfo/mysiteinfo-${SITE_INFO_VERSION}
                                                               Compulsory parameter: -s
    -h | --help   : Prints out this help.
Specify only one action at a time !

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

Examples

- Check what can you configure:

/opt/glite/yaim/bin/yaim -a -s /etc/yaim/site-info.def

- Configuration:

/opt/glite/yaim/bin/yaim -c -s /etc/yaim/site-info.def -n creamCE

- Running a function:

/opt/glite/yaim/bin/yaim -r -d 6 -s /etc/yaim/site-info.def -n creamCE -f config_cream_ce

- Verify your site-info.def:

/opt/glite/yaim/bin/yaim -v -s /etc/yaim/site-info.def -n creamCE

- Create an rpm package from site-info.def:

/opt/glite/yaim/bin/yaim -p -s /etc/yaim/site-info.def

HOW TO customize YAIM

- Yaim configuration scripts are installed in

  /opt/glite/yaim/functions

- Customization scripts must be created in

/opt/glite/yaim/functions/local

If you create in the suddirectory "local" a script with the same name of a script already existing one in "functions", the "local" script will overwrite the "functions" one.

This is usefull to apply fixes or customizations locally.

Be careful to verify a deployment after updates

Questions?