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gLite 3.1 / 3.2 WN tarball distribution

Introduction

We provide the gLite Worker Node as a tarball distribution. This distribution consists of two tarballs, one containing the gLite software, the other containing external dependencies which are usually not installed on the host. The latter contains a string "external". The tarballs are versioned by the WN version (the version of the corresponding meta rpm).

Availability

A tarball distribution of the gLite 3.2 Worker Node is available on the following platforms

- SL5_x86_64
http://grid-deployment.web.cern.ch/grid-deployment/download/relocatable/glite32_x86_64.tar.gz

A tarball distribution of the gLite 3.1 Worker Node is available on the following platforms

- SL4_i686
http://grid-deployment.web.cern.ch/grid-deployment/download/relocatable/glite31_i686.tar.gz
- SL4_x86_64
http://grid-deployment.web.cern.ch/grid-deployment/download/relocatable/glite31_x86_64.tar.gz

The x86_64 tarball also contains 32bit binaries, i.e. the x86_64 SL4 host has to be set up in compatibility mode.

Releases intended for PPS are prefixed with PPS_ and contain also the creation date.

Installation

Download the two tarballs from the repository. Create an `INSTALL_ROOT` directory for the distribution, e.g. `/gLite`. Then `cd` into `INSTALL_ROOT` and `untar` the two tarballs. E.g for production:

```
mkdir /gLite
cd /gLite
tar zxvf glite-WN-3.1.2-0.tar.gz
tar zxvf glite-WN-3.1.2-0-external.tar.gz
```

Configuration

Make sure that your `site-info.def` file contains at least the following variables, plus the variables needed to configure a WN, which can be found here: WN configuration variables:

```
INSTALL_ROOT=base_install_dir
GLITE_EXTERNAL_ROOT=${INSTALL_ROOT}/external
GRID_ENV_LOCATION=${GLITE_EXTERNAL_ROOT}/etc/profile.d
```

WN_Tarball < LCG < TWiki

```
FUNCTIONS_DIR=${INSTALL_ROOT}/glite/yaim/functions
```

INSTALL_ROOT is the directory in which the glite middleware is installed. GLITE_EXTERNAL_ROOT is the directory in which the external dependencies are installed. You must set GLITE_EXTERNAL_ROOT=\${INSTALL_ROOT}/external. Note that other configurations have not been tested.

To configure the TAR WN run the following command in INSTALL_ROOT (In this example site-info.def is also there):

```
cd ${INSTALL_ROOT}/glite/yaim/bin
./yaim -c -s site-info.def -n WN_TAR
```

The pool accounts on the WN_TAR have to source the files in GLITE_EXTERNAL_ROOT/etc/profile.d/ (*sh for bash, *csh for tcsh). As of glite-WN-3.1.3-0, GLITE_EXTERNAL_ROOT/etc/profile.d/ also contains al_grid_env.sh which has to be sourced by every job before other scripts are sourced. It is recommended to copy these files to /etc/profile.d or to create symlinks.

Structure and content of the tarball

The file INSTALL_ROOT/glite/etc/relocatable-release.txt contains a list of all rpms installed on the machine where the tarball was created. A subset of them is in the tarball.

The file GLITE_EXTERNAL_ROOT/content.txt contains a list of rpms that were used to create the externals tarball. The externals tarball contains files of an rpm based WN installation that are not in /opt/d-cache, /opt/edg, /opt/glite, /opt/globus, /opt/gpt or /opt/lcg. These files are usually not found on an scientific linux installation. Currently we have no reference SL installation that guarantees to WN tarball to work but we plan to do so. It might be possible that the tarball WN does not work on your machine because of some missing files. If this is the case you can either install the relevant rpms or add the files under GLITE_EXTERNAL_ROOT. Don't forget to update the files GLITE_EXTERNAL_ROOT/etc/profile.d/grid-env.(c)sh accordingly.

Additional installation tasks

The following sections assume that you untarred the tarballs into /gLite.

```
INSTALL_ROOT=/gLite
GRID_ENV_LOCATION=/gLite/external/etc/profile.d
GLITE_EXTERNAL_ROOT=/gLite/external
```

Adapt the examples if you installed into a different directory.

Torque client installation

The tarball does not include any batch system clients. Installing such clients on a WN usually requires root privileges. We provide here instructions on how to install the Torque batch system clients:

Download the `glite-TORQUE_client.repo` for 3.1 [or](#) `glite-TORQUE_client.repo` for 3.2 [file](#) and run:

```
yum install glite-TORQUE_client
cd ${INSTALL_ROOT}/glite/yaim/bin
./yaim -c -s site-info.def -n glite-TORQUE_client
```

Creation of pool accounts

The function `config_users` can be used to create pool accounts on a TAR WN. Note that this function also creates a cron job `cleanup-grid-accounts`.

```
cd ${INSTALL_ROOT}/glite/yaim/bin
./yaim -r -s site-info.def -n glite-WN_TAR -f config_users
```

Installation of certificates

If you want YAIM to take care of the installation of the CA files, YAIM provides the following relevant functions `config_certs_userland` and `config_crl`:

`config_certs_userland` will install the CA files in the directory pointed by `X509_CERT_DIR` (providing that YAIM determines that valid CRL files are not already present in the directory). Be aware that the directory pointed by `X509_CERT_DIR` must exist and the user must have write permissions or otherwise YAIM will fail. The default value for `X509_CERT_DIR` is `/etc/grid-security/certificates`. If you want to use another location, redefine this variable in `site-info.def` **and also define it in your shell's environment before starting yaim**

Remember that in case you don't use the standard location, you have to make sure you define `X509_CERT_DIR` and `X509_VOMS_DIR` in the pool accounts environment, since YAIM does not do this. In that case, edit the `${GLITE_EXTERNAL_ROOT}/etc/profile.d/grid-env.sh` file and manually add:

```
gridenv_set "X509_CERT_DIR" "your_non_standard_cert_path"
gridenv_set "X509_VOMS_DIR" "your_non_standard_voms_path"
```

You can also edit the `grid-clean-env.sh` file to unset the same variables.

`config_crl` will create a cron job to maintain the `crl` files up to date.

The variable `CA_REPOSITORY` may be used to change the repository from which the CA files are fetched. The variable is defined by default in YAIM. Check the `site-info.pre` section for more information. In general this variable can be defined by the user if another repository is used.

Having set `CA_REPOSITORY` run the `config_certs_userland` and `config_crl` functions

```
cd ${INSTALL_ROOT}/glite/yaim/bin
./yaim -r -s site-info.def -n glite-WN_TAR -f config_certs_userland -f config_crl
```

The `externals` tarball contains VOMS server certificates in `${GLITE_EXTERNAL_ROOT}/etc/grid-security/vomsdir`. However, the function `config_vomsdir` is going to be introduced to create the `.lsc` files substituting the VOMS server certificates when bug 42943 [is fixed](#).

Set up of the pool account environment

In `${GLITE_EXTERNAL_ROOT}/etc/profile.d` you find scripts that should be sourced by every pool account. Either copy them to `/etc/profile.d` or create symlinks.

Note on glite-wn-info.conf configuration

If you want to configure only once a TAR WN for a certain group of WNs, they should all belong to the same subcluster. Otherwise, `/etc/glite-wn-info.conf` will be overwritten. So in case you have more than one subcluster, you would need different TAR WNs to be installed in different places and to be configured independently.

Known issues

Note: for configuration issues in the WN tarball, check the yaim clients known issues section in the YAIM guide.

- In glite 3.1 the following issue exists, reported in [Bug #56446](#) and [GGUS #52114](#). Symlinks to non existing directories. The recommendation from the developers is to use the corresponding python version. The integration team is working on another solution at the moment.
- During the configuration of the WN_TAR the following error message can be seen (it can be ignored):

```
./glite/yaim/bin/./libexec/configure_node: line 93: [: -lt: unary operator expected
./glite/yaim/bin/./libexec/configure_node: line 93: [: -eq: unary operator expected
```

Using WN_TAR on different sites

Using WN_TAR on different sites: [WnTarOnSiteUsage](#)

Contact

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-- AndreasUnterkircher - 07 Jan 2008

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