

How to install Globus 2.0 on Fermi Linux 7

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Warning: The previous note about Globus installation dealt with Globus 2.0 beta release. In the meantime Globus team has released the Globus 2.0 version (without beta). This one is about Globus 2.0 (the final one). It is meant to replace the previous Globus installation instructions.

Before you begin: download the following files from <http://www.globus.org/gt2/install/download.html>

```
gpt-1.0.tar.gz
globus_all_bundle-client-linux-i686-gcc32.tar.gz
globus_all_bundle-server-linux-i686-gcc32.tar.gz
```

Install Globus binaries

set the GLOBUS_LOCATION variable to point to the directory where you want globus to be installed. (On hepfm007 this would be /home/products/globus/globus-2.0). You will need to install the globus packaging software (it comes in the gpt-1.0.tar.gz file). Create a directory where you would like to keep your Globus products. (On hepfm007 it is /home/products/globus). Put the gpt* file there, unzip and untar it. It will create directory gpt-1.0 where the packaging software sits. Create environment variable GPT_LOCATION which will point to where the packaging code is located. (On hepfm007 this is /home/products/globus/gpt-1.0). Then execute

```
cd $GPT_LOCATION
./build_gpt
```

This will install the packaging code. Now you have to install the globus binaries. Execute (as root):

```
$GPT_LOCATION/sbin/globus-install globus_all_bundle-server-
linux-i686-gcc32.tar.gz
$GPT_LOCATION/sbin/gpt-postinstall
$GPT_LOCATION/sbin/globus-install globus_all_bundle-client-
linux-i686-gcc32.tar.gz
$GPT_LOCATION/sbin/gpt-postinstall
```

This will install globus. Now initialize the security infrastructure:

```
$GLOBUS_LOCATION/setup/globus/setup-gsi
```

Initialize Globus environment (Each time you work with Globus)

```
. $GLOBUS_LOCATION/etc/globus-user-env.sh
```

That's all. Now you have to ask for your personal globus certificate, install globus gatekeeper, grid ftp and MDS. Let us do it one at a time.

Obtain personal Globus certificate.

Execute (from your personal account):

```
grid-cert-request -gatekeeper FQDN \  
    -key /etc/grid-security/hostkey.pem \  
    -cert /etc/grid-security/hostcert.pem \  
    -req /etc/grid-security/host.req
```

All in one line, replace FQDN with your domain name. Then mail the file `~/.globus/usercert_request.pem` to ca@globus.org. Once they reply, save their reply in file `~/.globus/usercert.pem`.

Install Globus gatekeeper.

First you have to ask for host gatekeeper. As a root execute

```
grid-cert-request -gatekeeper FQDN -key /etc/grid-  
security/hostkey.pem -cert /etc/grid-security/hostcert.pe,  
-req /etc/grid-security/host.req
```

(all in one line). Replace FQDN with the domain name of your Globus server (on hepfm farm this is `hepfm007.uta.edu`). This command will produce a file `/etc/grid-security/host.req`. mail this file to ca@globus.org. Within two days they will mail you back the certificate. Store their e-mail response (as root) in file `/etc/grid-security/hostcert.pem`. Give this file attribute 600 (as root).

Now you have to start the globus gatekeeper. Edit the file `/etc/services` (as root) and add a line:

```
gsigatekeeper 2119/tcp # Globus gatekeeper
```

at the bottom of this file.

On Linux 7 we use xinetd instead of inetd for managing system daemons. Goto /etc/xinetd.d directory and create file globus-gatekeeper with the following content:

```
service gsigatekeeper
{
    socket_type      = stream
    protocol         = tcp
    wait             = no
    user             = root
    server           = GLOBUS_LOCATION/sbin/globus-gatekeeper
    server_args     = -conf GLOBUS_LOCATION/etc/globusgatekeeper.conf
    disable         = no
}
```

(Replace GLOBUS_LOCATION with the actual globus location!).

As root execute

```
killall -USR1 xinetd
```

This will restart Linux daemons.

Install Grid-ftp.

As root edit /etc/services and add:

```
gsiftp 2811/tcp
```

Then goto /etc/xinetd.d directory and create file gsi-wuftp, with the following content:

```
service gsiftp
{
    instances          = 1000
    socket_type        = stream
    wait               = no
    user               = root
    server              = GLOBUS_LOCATION/sbin/in.ftpd
    server_args        = -l -a -G GLOBUS_LOCATION
    log_on_success     += DURATION USERID
    log_on_failure     += USERID
    nice                = 10
    disable            = no
}
```

Replace GLOBUS_LOCATION by the actual Globus location.

As root go to directory /etc/rc.d/init.d and execute:

```
xinetd restart
```

To use grid ftp do

```
globus-url-copy gsiftp://hepfm007.uta.edu/home/mcfarm/temp.source_file
file://heppc6.uta.edu/home/mcfarm/temp.target_file
```

Install MDS.

First of all, you have to ask for MDS server certificate. As root execute

```
grid-cert-request -cn "ldap/<FQDN>" \  
  -cert $GLOBUS_LOCATION/etc/server.cert \  
  -key $GLOBUS_LOCATION/etc/server.key \  
  -req $GLOBUS_LOCATION/etc/server.request -nopw \  
  -dir $GLOBUS_LOCATION/etc
```

(all in one line). Replace FQDN with your server name (hepfm007.uta.edu). Replace GLOBUS_LOCATION with your Globus location. Mail the file GLOBUS_LOCATION/etc/server.request to ca@globus.org. Within 2 days they will mail you back the certificate. Save their response (as root) in file GLOBUS_LOCATION/etc/server.cert, give this file permissions 600.

Now you have to start MDS. Execute (as root):

```
$GLOBUS_LOCATION/sbin/SXXgris start
```

It should start. To verify that it works you should (as regular user) initialize your grid proxy and do

```
$GLOBUS_LOCATION/bin/grid-info-search -anonymous -L
```

if everything is OK it should dump you the MDS contents.