

# GLOBUS BASICS TUTORIAL

## Version 0.2.1

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1. Obtain your user certificate from the UK e-Science Certification Authority (<http://ca.grid-support.ac.uk/>) and convert it to Globus compatible PEM format files: `usercert.pem` and `userkey.pem`. For more information on the subject download the user documentation from <http://www.grid-support.ac.uk/ca/documentation.htm>. Related documentation is under 'New Certificate Documentation'.
  - a. Certificate application process overview
  - b. Uncertified certificate application process with Netscape 4.7x, 4.8x
  - c. Uncertified certificate application process with Internet Explorer
2. Login to utp-10
3. Create a hidden directory called `.globus` under your home directory

```
% mkdir .globus
```
4. Create a subdirectory called `certificates` under your `.globus` directory

```
% mkdir .globus/certificates
```
5. Put `usercert.pem` and `userkey.pem` files in `~/globus`

```
% mv usercert.pem .globus
% mv userkey.pem .globus
```
6. Download the following files: `01621954.0` and `01621954.signing_policy`  
Put them in `.globus/certificates` directory.

```
http://www.grid-support.ac.uk/ca/user-documentation/01621954.0
http://www.grid-support.ac.uk/ca/user-documentation/01621954.signing_policy
```

7. utp-10 is configured to setup all environment variables when you login, therefore there is no need for you to do anything

8. Query your certificate subject line

```
% grid-cert-info -subject
/C=UK/O=eScience/OU=Southampton/L=SeSC/CN=<Your Name Here>
```

Note: This long string is your certificate subject line. If you need to access any Grid resource you need to send your certificate subject line to the system administrator, and ask him to add you to the `grid-mapfile`.

9. Generate your proxy certificate

```
% grid-proxy-init
Your identity: /C=UK/O=eScience/OU=Southampton/L=SeSC/CN=<Your Name Here>
Enter GRID pass phrase for this identity: {Type in your passphrase here}
Creating proxy ..... Done
Your proxy is valid until: Wed Nov 19 23:43:55 2003
```

Related commands: `grid-proxy-destroy`, `grid-proxy-info`

10. Test the authentication

```
% globusrun -a -r utp-10
GRAM Authentication test successful
```

11. Do a Globus job run

```
% globus-job-run utp-10 /bin/echo "Hello World"
```

12. Do a Globus run

```
% globusrun -s -r utp-10 '&(executable=/bin/date)'
```

13. Do a Globus job submission and check its status

```
% globusrun -b -r utp-10 '&(executable=/bin/date)(stdout=test.out)'\
globus_gram_client_callback_allow successful
https://utp-10.mech.soton.ac.uk:40001/18930/1069246912/
```

Note: This is your unique job handle

```
% globusrun -status https://utp-10.mech.soton.ac.uk:40001/18930/1069246912/  
DONE
```

14. Transfer a file with Grid FTP

```
% globus-url-copy gsiftp://utp-10/<Your home directory here>/test.out \  
? file:///tmp/test.out
```

15. Perform a third-party file transfer with Grid FTP

```
% globus-url-copy gsiftp://<host1>/<directory1>/<file1> \  
? gsiftp://<host2>/<directory2>/<file2>
```

16. All of the Globus commands have detailed manual pages that can be accessed by using '-help' switch of the command, e.g. 'globusrun -help' types help information of the globusrun command.

17. Related Web sites:

- a. A very good introduction to Globus tools by ISS  
<http://www.iss.soton.ac.uk/research/e-science/start/>
- b. Globus Project  
<http://www.globus.org/>
- c. RSL information  
[http://www-fp.globus.org/gram/rsl\\_spec1.html](http://www-fp.globus.org/gram/rsl_spec1.html)
- d. CoG Kits  
<http://www-unix.globus.org/cog/>
- e. UK Grid Support Centre  
<http://www.grid-support.ac.uk/>
- f. UK E-Science Certification Authority  
<http://www.grid-support.ac.uk/ca/ca.htm>