

# Getting started with FGI

## Getting started with Finnish Grid Infrastructure (FGI)

These instructions take you through what you need to do to submit your first grid job. You basically need follow three steps:

1. [Request a personal grid certificate](#)
2. [Virtual Organisation membership](#)
3. [The Nordugrid ARC Client](#)

These three steps need to be done only once.

### Request a Personal Grid certificate

When you use the grid, you don't use usernames and passwords to tell the resources who you are. Grids use X509 certificates instead. You can apply for a personal certificate. This will be used when you send grid jobs, and it tells the resources who you are.

You can get the detailed instructions about how to get a certificate from [here](#).

After this step you should have two files, `usercert.pem` and `userkey.pem`, in `.globus` folder that must be in your home directory

### Request Virtual Organisation membership

**Important note:** Before you request VO membership, please make sure that:

1. you have [requested a certificate](#) (Please refer to section above).
2. your certificate is installed in your web browser.
3. The CA certificate of the server is installed in your browser. Install it by clicking [here](#).

Virtual Organisations (VOs) are groups of people and resources that share a common goal. The permission to use a resource (e.g. a cluster) is given to a VO, and not single users. This is why you need to apply for a VO membership.

In FGI we currently use the `fji.csc.fi` VO. More VOs will be added in the future.

Go to [FGI Virtual Organization](#) web page. There you can request to become a member of the VO.

Fill the form with your personal information and read the Acceptable Use Policy and if you agree, accept it. You will receive an e-mail confirmation request in your mailbox. Please follow the instructions in that e-mail.

We will process your request as soon as possible, usually within a day.

### Install Nordugrid ARC Client

**New!** You can try out our new Virtual Appliance [here](#).

At this point you should have a grid certificate installed in your PC and a VO membership. Now you need to get the grid tools also called Nordugrid ARC Client, let's proceed.

You can get the tools for Linux, Windows and Mac from [Nordugrid ARC Client Download Page](#) (ARC Client Standalone Version).

For **most linux distributions**, we recommend to install the repository version of the clients. That allows you to use always the latest release of the client. Please, find [here](#) how to install Nordugrid repositories and after that you just need to install **nordugrid-arc-client-tools** meta-package, this way:

- for debian/Ubuntu: `sudo apt-get install nordugrid-arc-client nordugrid-arc-plugins-globus` (See here more info about [how to install ARC client in Ubuntu](#))
- for Red Hat/Fedora/CentOS: `yum install nordugrid-arc-client-tools`

Please note that we have only tested the Linux version. The Mac version have been tested by users and it seemed to work well. The Windows version was also tested, but it had a lot of problems, and we do not recommend that you use it.

For the Linux and Mac versions you will need to get a copy of this `client.conf` file. Place it in **\$HOME/.arc/client.conf**. Be sure that you name it as **client.conf**. For Windows users this should go to the `/etc` directory under the ARC client installation.

Now you should have installed and configured grid tools or Nordugrid ARC Client.

## Setup for every session (Standalone client)

### Important Notes:

- This step only applies if you installed the client's standalone version.
- If you installed from the repositories or the **Mac** version you can ignore this step.

For every session you will need to run the following commands,

if you are using **bash**:

```
cd nordugrid-arc-standalone-<Version Number>
source setup.sh
```

if you are using **csh**:

```
cd nordugrid-arc-standalone-<Version Number>
source setup.csh
```

## First test

To create a proxy - a proxy is like a ticket to access in the Grid - in your terminal type the following command and hit enter:

```
arcproxy
```

You will be asked for your certificate's password. Type it and hit enter again.  
If the proxy started successfully, you'll see an output similar to the following:

```
Enter pass phrase for load private key:
Your identity: /DC=org/DC=terena/DC=tcs/C=XY/O=XYZ Corp/CN=John Doe
john.doe@xyz.net
Proxy generation succeeded
Your proxy is valid until: 2012-07-04 20:37:11
```

This message means that you "logged in" into Grid and this proxy, by default, will be valid for the next 12 hours.  
Now you can test if you are fully set up, for that simply run in your terminal the following command:

```
arctest -J 1
```

Despite some "Conversion Failed" error messages that you can ignore, you should get a line similar to the following:

```
Test submitted with jobid:
gsiftp://powerfullmachine.fgi.csc.fi:2811/jobs/29531341390440989625521
```

If so, you're set!

## Next steps

After setting up your client and submitting your first job you might want to try our [FGI Hands on Tutorial](#). There you can learn some more ARC commands and start your first Grid scripts.

**Note:** If you have any doubt, please **contact** us.