

# Grid Authorization

# Useful Guides

- Grid Certificates: [Grid Certificates](#)
- RHIC Guide: [Start Using the Grid: Overview](#)
- Likely others..

# CERN Root Certificates

- Different steps depending on browser used:
  - [Internet Explorer/Edge](#)
  - [Mozilla Firefox](#)
  - [Safari and Mac](#)
  - [Chrome \(Windows or Mac\)](#)
- By default certificates from CERN Root and Trusted Certification Authorities (CA) are not trusted on home/external PCs
  - You need to install CERN Root Certificates to trust the certificate authority
  - Steps are listed [here](#)

# Obtaining Grid Certificates

- Certification Authority: <https://ca.cern.ch/ca/>
  - Select: New Grid User certificate
  - Enter a new password for the certificate
  - Download the certificate on your machine

# Install Grid Certificate

- Copy the certificate (named: myCertificate.p12) to lxplus
  - Ex: `scp myCertificate.p12 <username>@lxplus.cern.ch: .`
- Convert the key using:
  - `openssl pkcs12 -in myCertificate.p12 -clcerts -nokeys -out usercert.pem`
  - `openssl pkcs12 -in myCertificate.p12 -nocerts -out userkey.pem`
  - `chmod 400 userkey.pem`
  - `chmod 444 usercert.pem`
- When executing openssl you should enter a PEM pass phrase for the key
- Move the two new files to the .globus directory
  - If this doesn't exist then use `mkdir ~/.globus` first

# Joining ATLAS VO

- Perform after obtaining a Grid Certificate and installing it in your browser
- VOMS site: [VOMS server](#)
- Complete the necessary registration steps and submit
- After your membership is confirmed (could take some time)
  - Make sure you are a member of the /atlas Group
  - Register for the respective country group (/atlas/ca for Canadians)
- Do note:
  - Use the same browser that you installed your certificates in
  - It may take some time to be able to access the VOMS site after installing your certificate

# Check Installation

- Use the following commands to check that things are setup
- `setupATLAS`
- `lsetup rucio`
- `voms-proxy-init -voms atlas`
- `voms-proxy-info all`
  - Your grid password should be the PEM password you set
- You should now see information related to your VOMS account

# Check that everything works

- Once everything is configured and your VO memberships have been approved run:
  - setupATLAS
  - diagnostics
  - gridCert
- All tests should pass, if rucio or AIM fail you may need to wait for a day