How to login in TeideHPC?

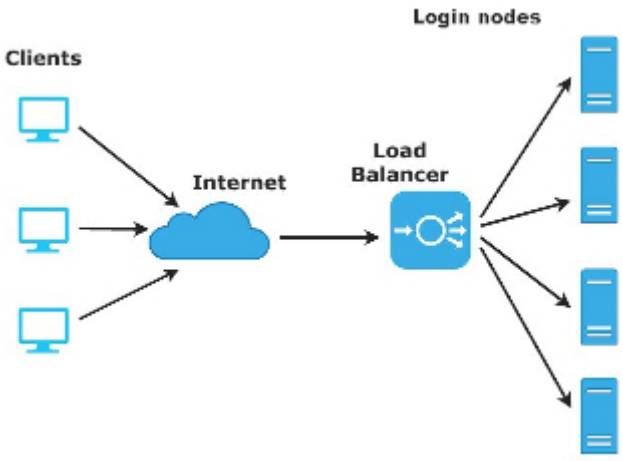
With the arrival of the new infrastructure at TeideHPC, several login nodes have been arranged that allow for the redundancy and high availability necessary to keep the cluster operational 100% of the time.

For access to the infrastructure, TeideHPC has the following *2 access points*, one for each cluster.

TeideHPC	AnagaGPU
10.5.22.100	10.5.22.101

Remember that you must be connected to the VPN to access

To ensure that the number of users is not concentrated in a single login node, which eventually ends up saturating due to access preferences and unintentional executions of the users, **a load balancer has been arranged for each cluster which is is responsible for distributing users equally to each of the 2 login nodes that each cluster has.**



All login nodes share their entire $HOME

That is, **regardless of which access IP you connect to and which node is assigned to you, your data will be accessible**

Once you log in, it is possible to go from one node to another without any type of restriction

```
ssh login-cpu01
ssh login-cpu02
ssh login-gpu01
ssh login-gpu02
```

The software available in each cluster is NOT the same

Not all nodes are the same, each cluster has a type of nodes according to their architecture, so the software is mostly compiled based on the architecture of the nodes.

On the main page of this documentation you can see what architectures exist in TeideHPC.

Access for Linux and macOS users

Through a terminal:

```
ssh miusuario@IPservidor o
ssh miusuario@login.hpc.iter.es (*)
```

Use DNS instead of IPs

Remember that you can access using our DNS as long as you have added them to your configuration.

SSH Alias

To make it easier to work and not remember the server's IP, we can use an alias to save the connection. To do this, we edit the `~/.ssh/config` file and add the following (if it does not exist, we create it):

~/.ssh/config

```
Host teidelogin
   Hostname 10.5.22.100
   User miusuario

Host anagalogin
```

```
    Hostname 10.5.22.101
    User miusuario
```

To connect via ssh to the login nodes we can do it as follows:

```
ssh teidelogin
ssh anagalogin
```

Access with SSH public key

We can access the login nodes without a password using an SSH public key. If we don't have any, we can do it as follows:

```
ssh-keygen -b 4096
```

Once the command is executed, it will ask us for two things:

- A location to save the key and a name for the file.
- A password to encrypt the key and that we will have to use every time we use the public key.

We can leave both fields empty. In the case of localization, by default, the key pair will be saved in the `~/.ssh` directory:

- For the private key: `~/.ssh/id_rsa`
- For the public key: `~/.ssh/id_rsa.pub`

> **Warning**
>
> You must keep the private key and not share it with anyone. It is the one that will be used to authenticate with the server. If you lose it, you will not be able to connect using the ssh public key.

As for the password, that is everyone's decision.

To copy the SSH public key to the login node, you must do the following:

```
ssh-copy-id -i ~/.ssh/id_rsa.pub mi-usuario@ip-nodo-login
```

It will ask us for our user's password to proceed and we will be able to connect to the login nodes without needing a password, as long as we do so from the computer where the private key is.

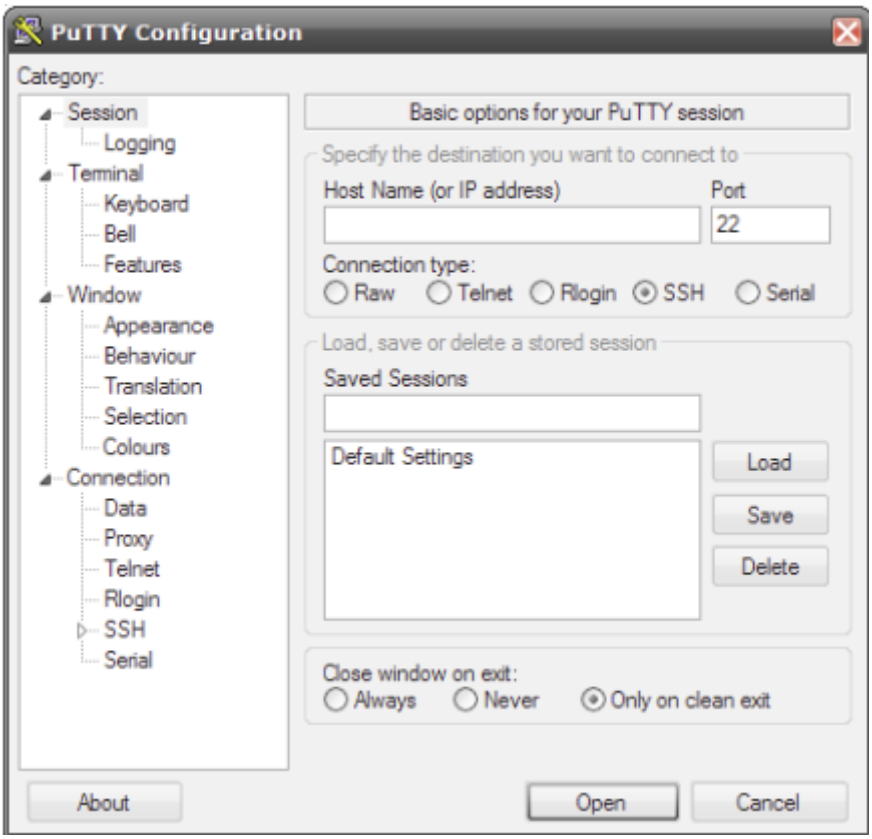
Access for Windows users

Windows users have several alternatives to connect via SSH to the login nodes. Among them are ***PuTTY*** and ***MobaXterm***:

SSH Remote Access with PuTTy

PuTTy is a network client that supports the SSH, Telnet and Rlogin protocols and is mainly used to start a remote session with another machine or server. It is free license and despite its simplicity it is very functional and configurable.

Once the software has been downloaded and installed, you will have to follow the following steps to establish the connection with the TeideHPC login nodes



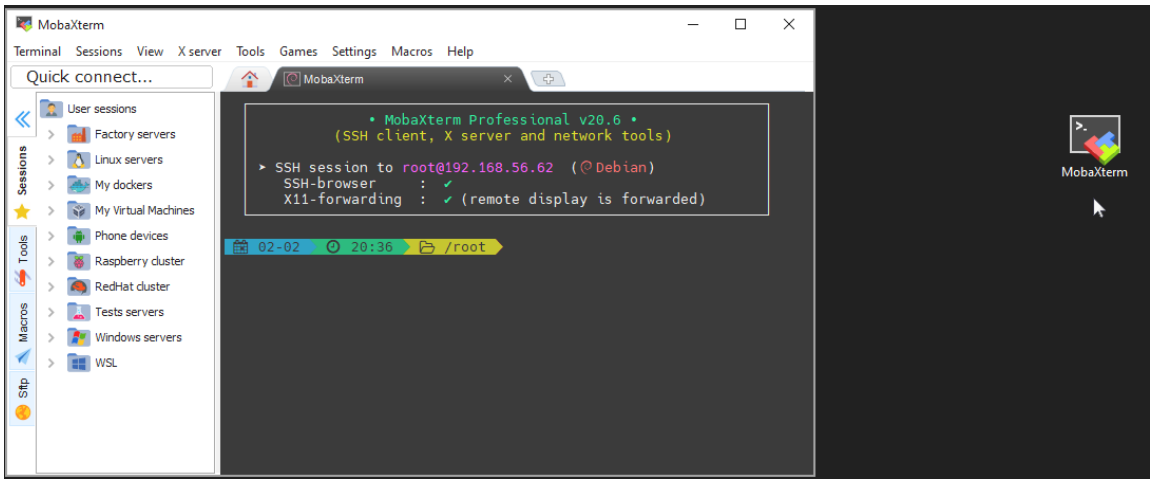
1. In the configuration menu select the Session category.
2. Enter your domain name or IP in the Host Name field and select the SSH protocol.
3. Enter a name for this connection in the Saved Sessions field.
4. Go back to the settings menu and select the SSH category.
5. Make sure option 2 is checked in Preferred SSH protocol version.
6. Select the Session category again.
7. To save the configuration press Save and Open to connect.

Tips:

- For slow connections you can enable compression. You can find a checkbox in the Connection > SSH menu.
- SSH version 2 must be set as the preferred protocol version in Connection > SSH menu.

MobaXterm

MobaXterm is a toolbox for working remotely. In a single application it provides a lot of features (SSH, a simpler way.



The free version has certain limitations such as the number of simultaneous sessions, but can be used freely without commercial purposes.

To configure an SSH client in MobaXterm, follow these steps:

1. Start MobaXterm: Open MobaXterm on your computer.
2. New Session: Click the "Session" button at the top left of the MobaXterm home screen.
3. Select SSH: In the "Session settings" window, select the "SSH" option in the list of session types.
4. Configure SSH Parameters:
    - Remote host: Enter the IP address or host name of the server you want to connect to.
    - Specify username: You can specify a username if you do not want to enter the username every time you connect to the server.
    - Port: Change the port if necessary (the default port for SSH is 22).

- Advanced SSH settings: If you need advanced settings such as using a specific SSH key, click on "Advanced SSH settings" and make the necessary settings.

1. Save the session (optional): You can save the session settings for future connections. Give the session a name and save the settings.
2. Connect: Click "OK" or "Open" to start the SSH connection. If this is your first time connecting to this server, you may be asked to verify the host key and enter your password.
3. Authentication: Enter your password when prompted. If you have set up an SSH key and the key password, enter it.
4. Session Started: Once authentication is complete, you should be connected to your server via SSH in the MobaXterm terminal.

In this link you can find a guide More detailed: