

# AI3603 服务器使用说明

## 一、 GPU 实例创建

1. 使用给定的账户密码登录 <https://studio.hpc.sjtu.edu.cn>

The screenshot shows the HPC Studio web interface. At the top, there's a navigation bar with links for HPC Studio, Apps, Files, Shell, Jobs, Interactive Apps, Customization Apps, My Interactive Sessions, Help, and Log Out. Below the navigation bar is the HPC Studio logo. A banner below the logo reads "HPC Studio provides an integrated, single access point for all of your HPC resources." The main area is titled "Pinned Apps" and "A featured subset of all available apps". It contains a grid of 16 application icons, each with its name and status (System Installed App). The applications listed are: Code Server, Desktop, GIMP, Grace, IGV, Jupyter, MATLAB, Octave, Panoply, ParaView, RStudio Server, Relion, SUMO, TensorBoard, VMD, and VisIt.

2. 选择编程所需的 APP，这里以 Desktop 为例。填写使用时间<12h，选择实例类型 Pi cluster 1gpu 或 Siyuan Cluster 1debuga100

The screenshot shows the "Interactive Apps" section of the HPC Studio interface, specifically the "Desktop" configuration page. The left sidebar lists various desktop environments: Desktops (selected), GUIs (GIMP, Grace, IGV, MATLAB, Octave, Panoply, ParaView, Relion, Sumo, VMD, VisIt, XCrySDen), and other options like Pi Cluster 1gpu and Siyuan Cluster 1debuga100. The main right panel is titled "Desktop" and contains the following fields:

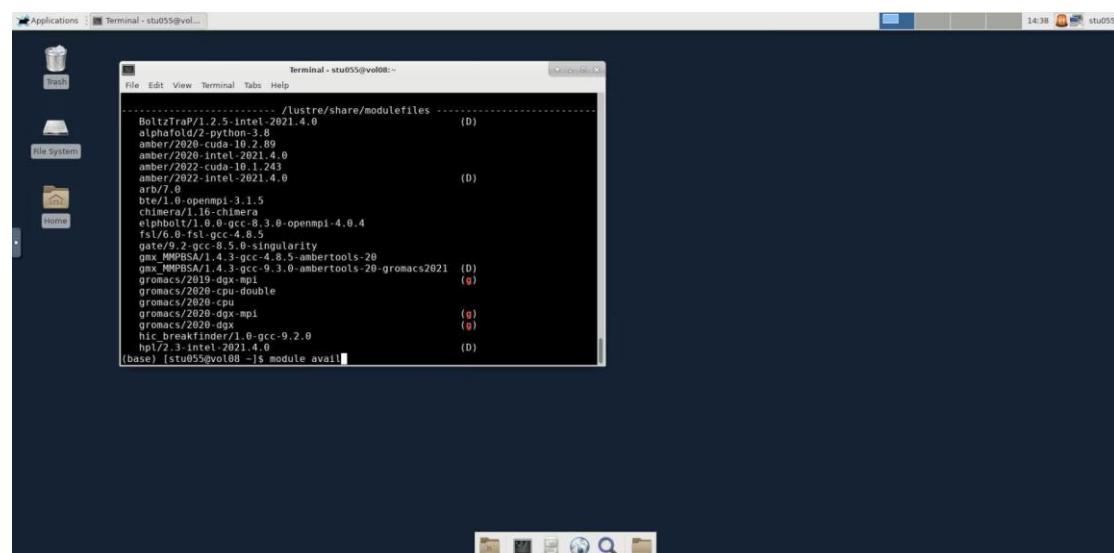
- Description: "This app will launch an interactive desktop on one or more compute nodes. You will have full access to the resources these nodes provide. This is analogous to an interactive batch job."
- Number of hours: A text input field containing "12".
- Mail: An empty text input field.
- Resolution: Two input fields for width (1536 px) and height (864 px).
- Reset Resolution: A button.
- A checkbox labeled "I would like to receive an email when the session starts".
- Desktop Instance Size: A dropdown menu set to "Pi Cluster 1gpu".
- A large blue "Launch" button.

3. 可能需要等待一定时间创建，创建好如下，点击 Launch desktop 启动

The screenshot shows the 'Interactive Apps' interface. On the left, there's a sidebar with 'Interactive Apps' and a list of desktop environments: Desktops, Desktop, GUIs, GIMP, Grace, IGV, MATLAB, Octave, Panoply, and ParaView. On the right, a detailed view of a session titled 'Desktop (28347585)'. It shows the host as 'vol08.pi.sjtu.edu.cn', created at '2023-10-10 14:30:33 CST', with a time remaining of '11 hours and 56 minutes'. The session ID is '6648efda-7ec1-46f8-9a3c-dd59a02e7614'. There are tabs for 'noVNC Connection' and 'Native Instructions'. Below these are sliders for 'Compression' and 'Image Quality', both set to 5. A large blue button labeled 'Launch Desktop' is prominent. At the bottom right is a link 'View Only (Share-able Link)'.

4. 进入桌面后打开终端，配置所需环境。仅能使用预设的库和包，

终端输入命令 `module avail` 查看可用



以安装 miniconda 为例，配置环境，运行 `module load miniconda3`

5. 其余过程与 miniconda 安装与使用相同，

初次安装 miniconda 运行 `conda init <shell name>`，shell name 可以为 bash 等

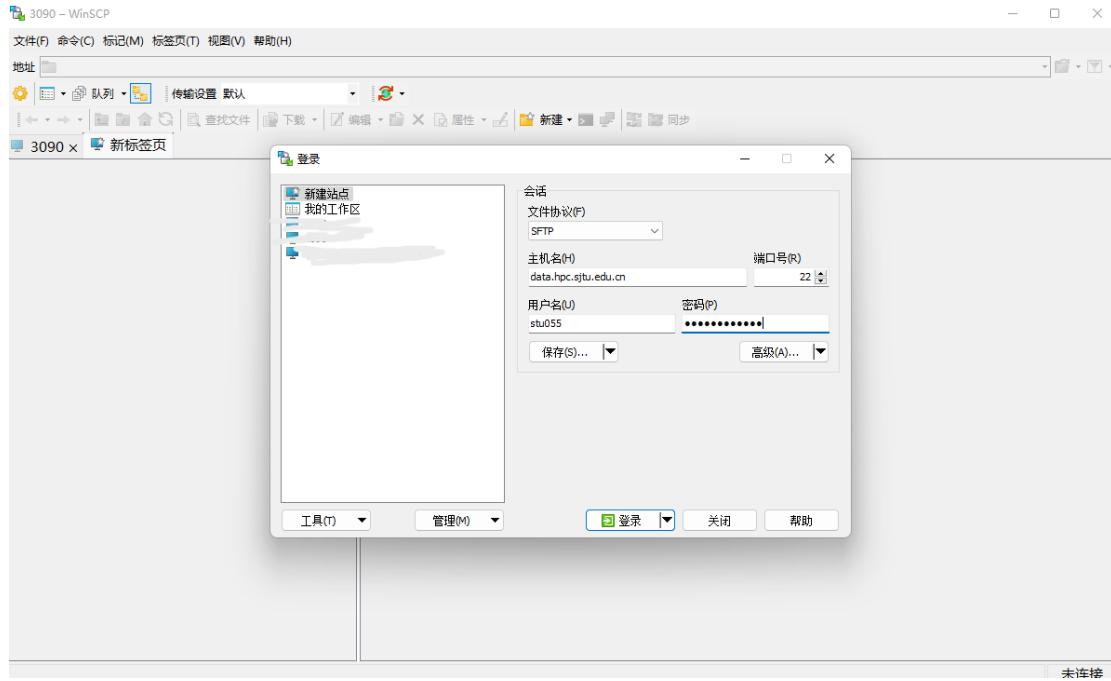
conda 安装指定包运行 `conda install <pkg name>`

conda 创建 python 虚拟环境 `conda create -n <env name> python=x.x`

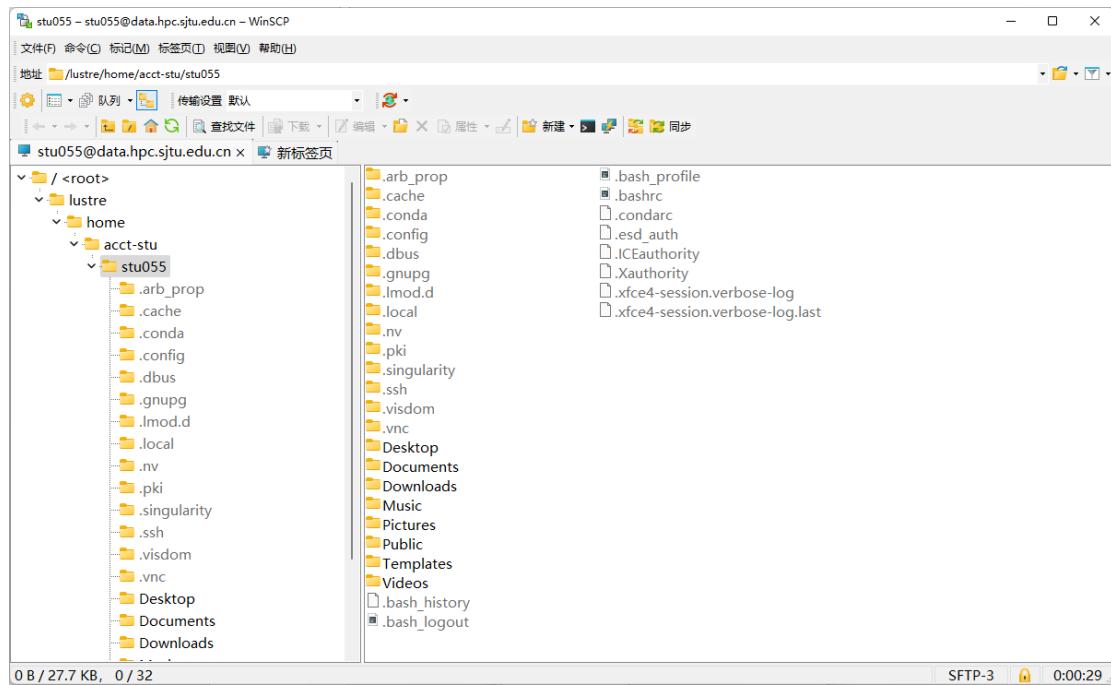
## 二、文件上传

方法一：

1. 可使用 SFTP 协议传输，以 SFTP 客户端 WinSCP 为例
2. 安装后新建站点，主机地址 data.hpc.sjtu.edu.cn，输入账户、密码后登陆



3. 登陆成功后可以看到服务器上的文件



## 方法二：

1. 打开本机终端
2. 若从本机传输文件至服务器，在终端中运行命令：

```
scp source_file_path username@data.hpc.sjtu.edu.cn:target_path
```

3. 若从本机传输文件夹至服务器，在终端中运行命令：

```
scp -r source_folder_path username@data.hpc.sjtu.edu.cn:target_path
```

4. 若从服务器下载文件/文件夹至本机，只需调换服务器上源文件路径和本机目标路径即可

### 三、 注意事项

- 1. 【务必注意】不要在登录节点运行作业，否则将会被封禁！**
2. 分配给大家的是教学账号，教学账号限制作业运行数量 1 个、GPU 卡数 1 卡、每个作业最长运行时间 12 小时，请大家注意好时间，
3. 学校超算 GPU 资源紧张，可能会出现排队现象，请妥善安排作业提交时间。
4. 建议使用本教程所述的方式(远程桌面)使用集群，使用 ssh 等方式也可以，但请务必遵守学校超算管理的规定，不要运行与课程无关的程序。
5. 如果遇到使用中的问题，请先阅读超算使用文档(链接如下)

### 四、 相关文档

集群官方文档: <https://docs.hpc.sjtu.edu.cn/quickstart/index.html>

集群状态查询: <https://mon.hpc.sjtu.edu.cn/>