Tutorial: Python for Programmers

(new to Python)

on **ACES**

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High Performance
Research Computing
DIVISION OF RESEARCH

Outline

- Overview of Python
- Getting Started
- Control
- Data Structures

Overview of Python

About Python

What is Python like?

Python is a High-level language, which means:

- Syntax is similar to human language syntax
- Supports abstract concepts
- Takes care of mundane hardware tasks for you

Python is designed to simplify the development process so you can focus on what matters.

(High)

SQL

Python

C

Assembly

Machine

(Low)

Is Python right for me?

No programming language is perfect for every task.

Python is best for research and rapid development.

Pros

- Easy to use
- Modules are readily available
- Portable

Cons

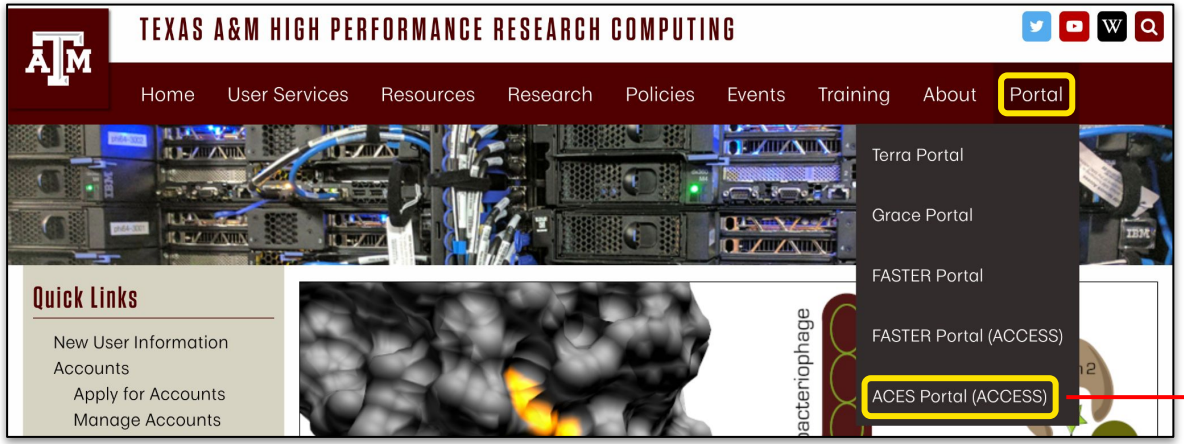
- Not the fastest
- Source code style is mandatory

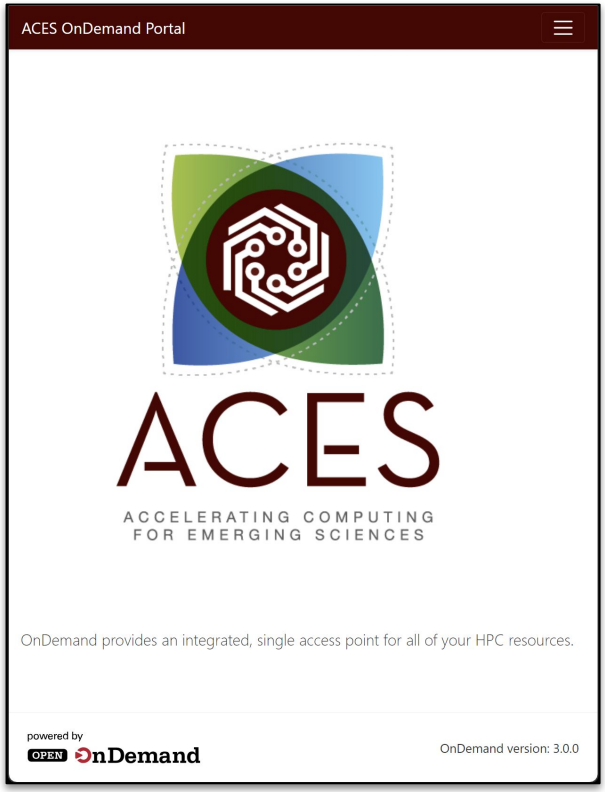
Learning Resources

- Slides on the course web page
  https://hprc.tamu.edu/training/aces_python4programmers.html
- HPRC's Knowledge Base
  https://hprc.tamu.edu/kb/Software/Python/
- HPRC on YouTube
  https://www.youtube.com/c/TexasAMHPRC
- ACCESS Links
  https://support.access-ci.org/ci-links

Getting Started

ACES Portal

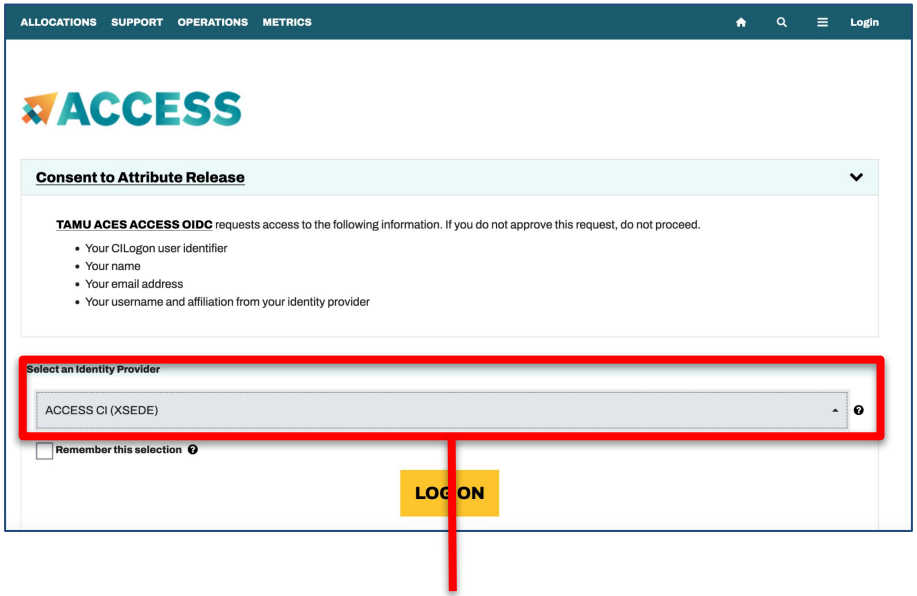




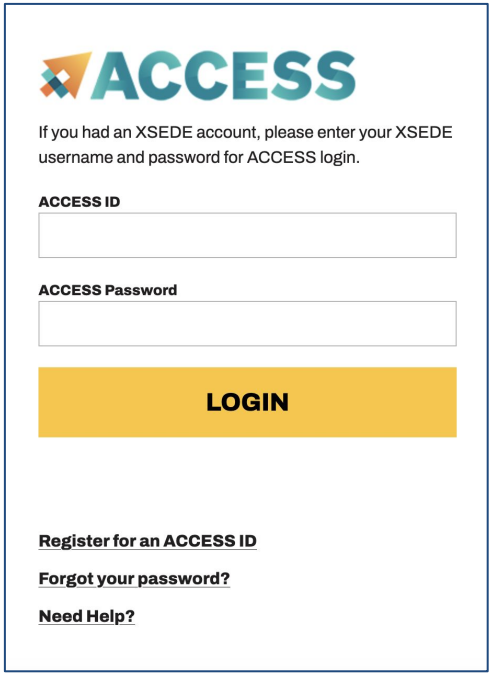
ACES Portal portal-aces.hprc.tamu.edu
is the web-based user interface for the ACES cluster

Open OnDemand (OOD) is an advanced web-based graphical interface framework for HPC users

Accessing ACES via the Portal (ACCESS)

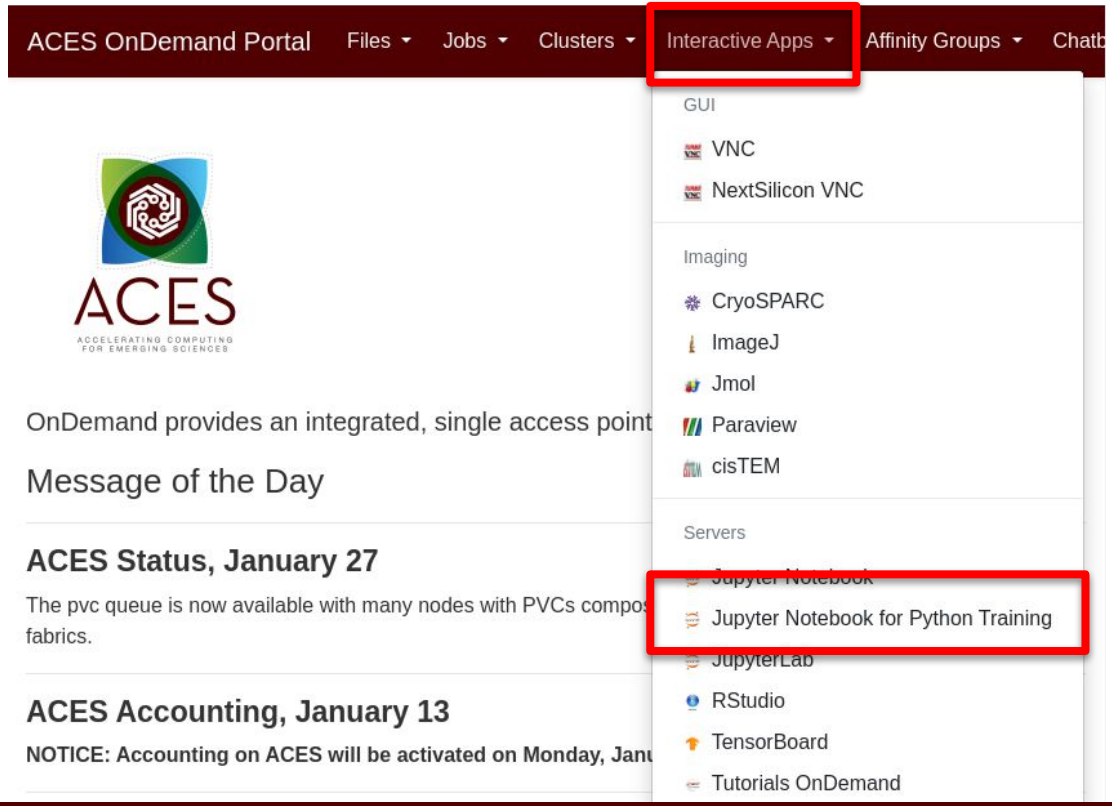


Select the Identity Provider appropriate for your account.

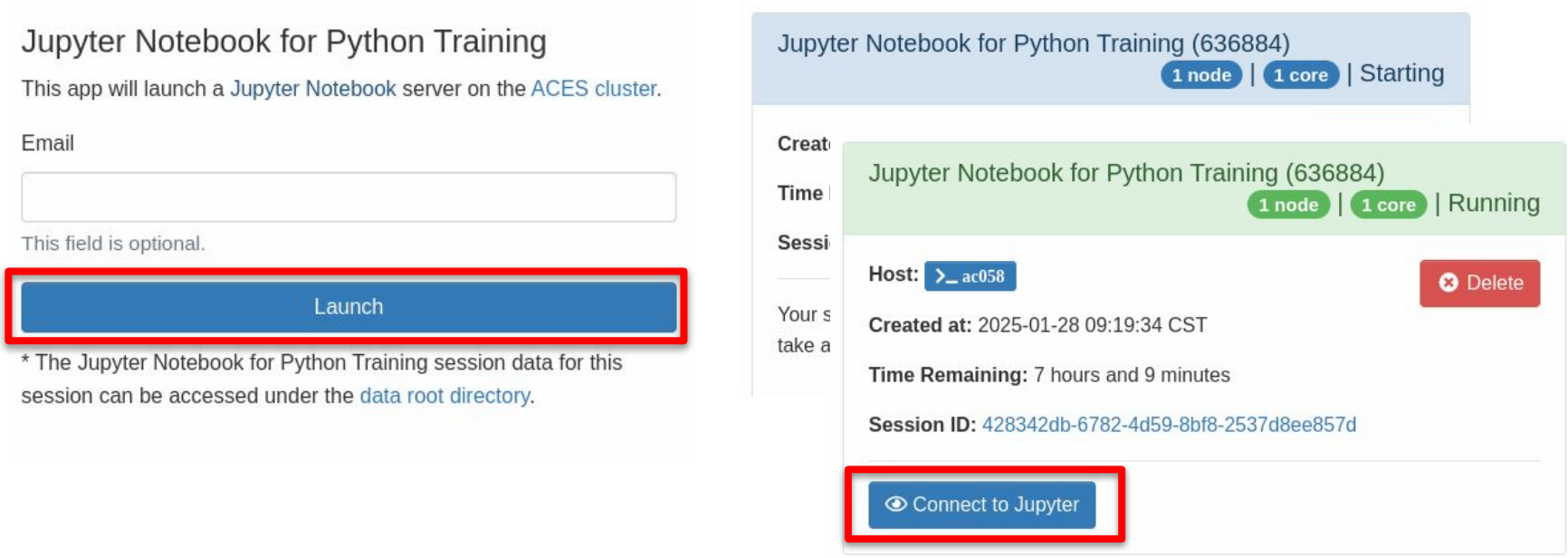


Log-in using your ACCESS or institutional credentials.

Jupyter Notebook for Python Training



Jupyter Notebook for Python Training



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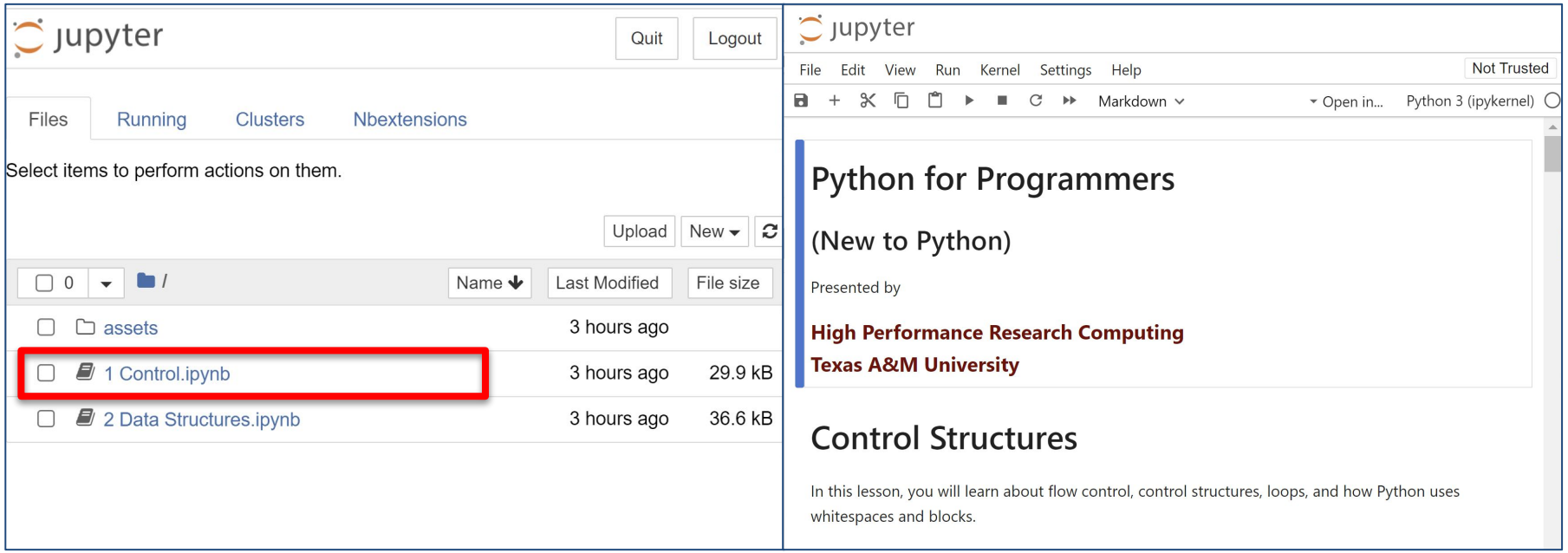

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https://hprc.tamu.edu

HPRC Helpdesk:

help@hprc.tamu.edu
Phone: 979-845-0219

Take our short course survey!

HPRC Survey

https://u.tamu.edu/hprc_shortcourse_survey

Help us help you. Please include details in your request for support, such as, Cluster (ACES, FASTER, Grace, Launch), NetID (UserID), Job information (JobID(s), Location of your jobfile, input/output files, Application, Module(s) loaded, Error messages, etc), and Steps you have taken, so we can reproduce the problem.