

Welcome and How to Login

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U.S. DEPARTMENT OF
ENERGY

Syllabus

Draft Agenda June 17

Time (all times EDT)	Topic	Presenter
1:00 PM	Welcome	Suzanne Parete-Koon, HPC Engineer
1:02 PM	What is HPC	Trey White, Computational Scientist
1:22 PM	Login	Suzanne Parete-Koon, HPC Engineer
1:30 PM	Intro to Unix	Michael Sandoval, HPC Engineer
2:00 PM	Intro to Vim	Fernando Posada Correa, HPC Engineer
2:30 PM	Extra Help with login	Suzanne Parete-Koon, HPC Engineer

Syllabus

Draft Agenda Day 2 June 24

Time (all times EDT)	Topic	Presenter
1:00 PM	Welcome back	Suzanne Parete-Koon, HPC Engineer
1:02 PM	What is HPC	Trey White, Computational Scientist
1:10 PM	Intro to Python	Michael Sandoval, HPC Engineer
2:30 PM	Close	

Draft Agenda Day 3 July 1

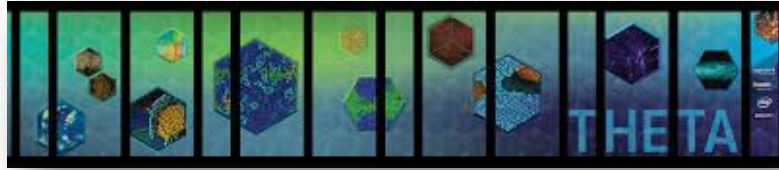
Time (all times EDT)	Topic	Presenter
1:00 PM	Welcome Back	Suzanne Parete-Koon, HPC Engineer
1:02 PM	What is HPC?	Trey White, Computational Scientist
1:10 PM	Intro to C	Subil Abraham, HPC Engineer
2:30 PM	Close	

Syllabus

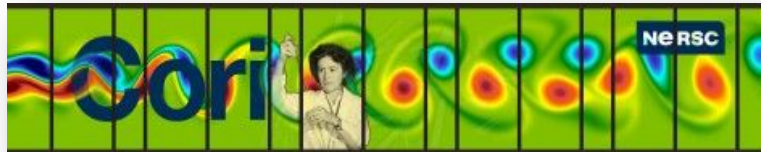
Draft Agenda Day 4 July 8

Time (all times EDT)	Topic	Presenter
1:00 PM	Welcome Back	Suzanne Parete-Koon, HPC Engineer
1:02 PM	What is HPC	Trey White, Computational Scientist
1:15 PM	Odo Overview	Subil Abraham, HPC Engineer
1:30 PM	Hands-on Session 1 Workflow and Job Launcher	
2:00 PM	Parallel Programming Models and Certificate requirements	Suzanne Parete-Koon, HPC Engineer
2:55 PM	Hands-on Session 2 Parallel Programming models	
3:00	Intro to Machine Learning	Michael Sandoval, HPC Engineer
3:15	Hands-on Session 3 Python and Machine Learning exercises	
4:00	Final Check-in and Questions	All

We are one of the DOE's Office of Science computation user facilities



- DOE is leader in open high-performance computing
- Provide the world's most powerful computational tools for open science
- Access is free to researchers who publish
- Boost US competitiveness
- Attract the best and brightest researchers



Getting Started

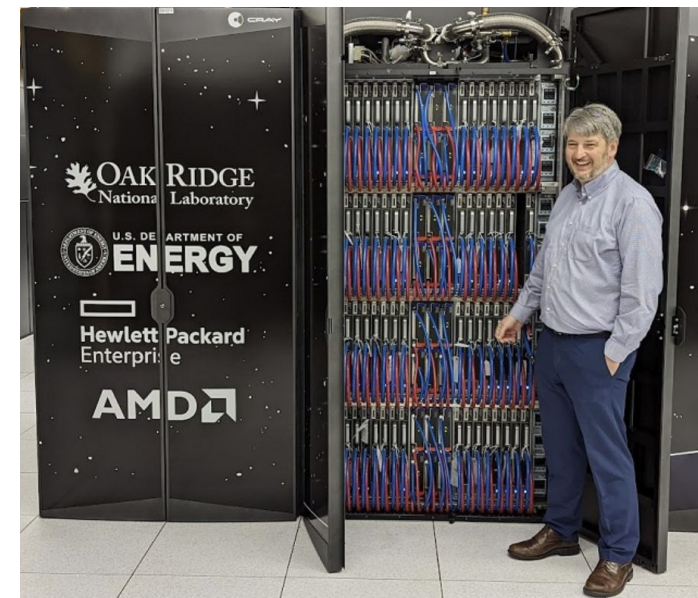
Computer Access

- You will have access to Odo and the OpenDTN from now until August 12.



OpenDTN

- Has six login nodes
- Usually used for data transfer



Odo

- Has two login nodes, and 30 compute nodes
- It is just like one 1/2 cabinet of the Frontier Supercomputer

Getting Started

Slack

Slack is the best place to get help.

- Please join the slack workspace:

https://join.slack.com/t/2024summerhpc-ezd4176/shared_invite/zt-2ij8s3ytv-~57ZdaLh0lQWqWioGDGg3g

- **Slack Tips**

- This is the primary place to ask questions
- Start your questions in the general chat or Login-Help Channels
- Check early and often

Getting Started



Certificates

- On our last day of lectures (July 10), we will introduce you to a set of HPC challenge exercises. To earn the Course Completion Certificate you must complete seven of them by August 12.

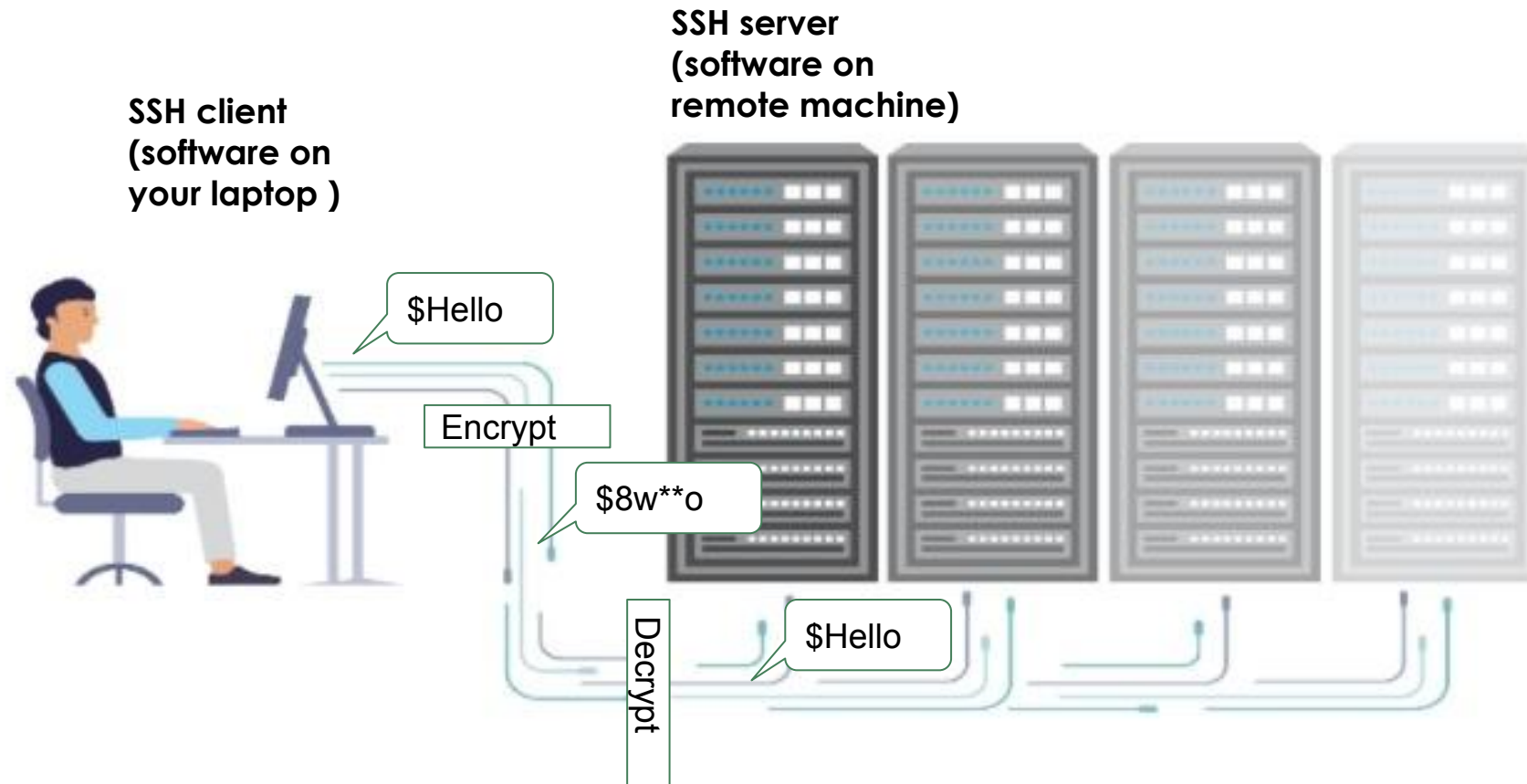
Other Resources

- [OLCF Training Archive](#) - Our user training with slides and recordings and often exercises
- [OLCF Tutorials](#) - git repositories with HPC-related exercises.
- [System User's guides](#)

Login

Remotely access clusters

- Connect to a cluster through secure shell SSH



Login

- OLCF Username and Password.

If you joined the project for this course, TRN025,

Your username will be in an email with subject line:

“OLCF Accounts: You Have Been Added to Project TRN025”

- If you set and then forgot your password you can reset it here:

<https://user.ornl.gov/Account/ForgottenPassword?reqid=>

SSH interfaces

Mac and Linux

- From Terminal
 - Terminal is a command line interface
 - Comes with ssh software, invoked by “ssh” command.

Windows

- Moba Xterm

<https://mobaxterm.mobatek.net/download-home-edition.htm>

Browser-based (ssh terminal)

- <https://jupyter-open.olcf.ornl.gov/>

SSH interfaces

If your first name begins with A-M use Login1

If your first name begins with N-Z use Login2

Jupyter or Mac terminal

MAC Terminal or mobaXterm

- Applications > Utilities > Terminal

```
ssh <username>@login1.odo.olcf.ornl.gov
```

- Enter your password when prompted.

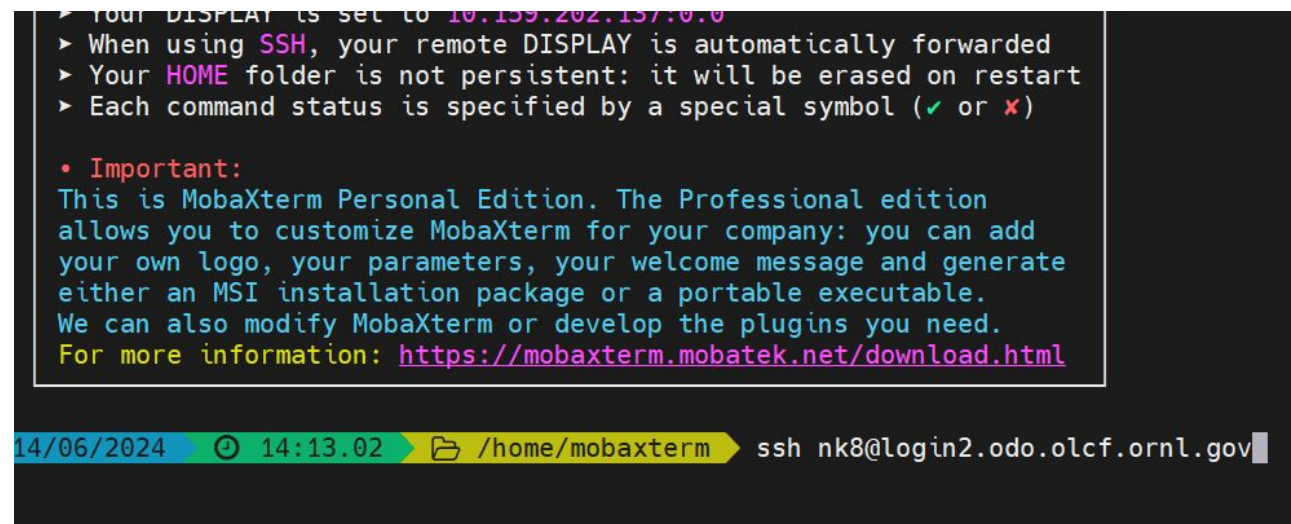
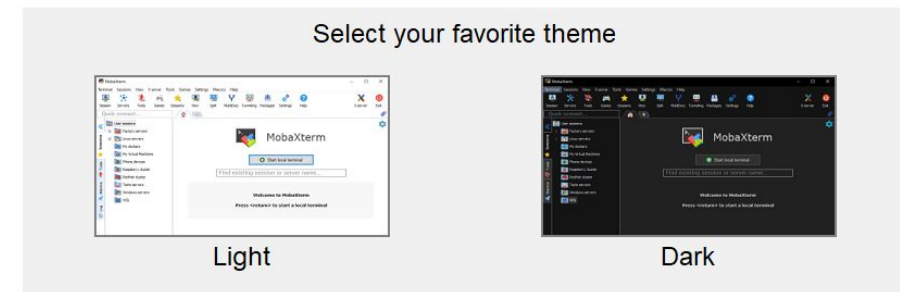
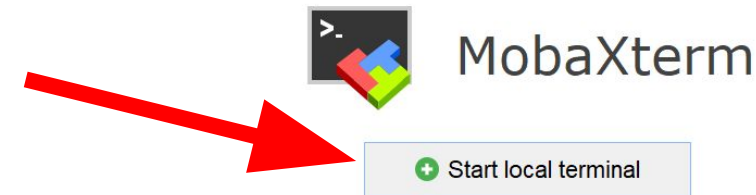
Jupyter

- Open browser
- Go to <https://jupyter-open.olcf.ornl.gov/>
- Login with your XCAMS Username and password.
- Choose “Crash Course training lab”
- Click Open Terminal
 - Then type

```
ssh <username>@login1.odo.olcf.ornl.gov
```

- Enter your password when prompted.

Windows MobaXterm



Get the Repo

More about git:

<https://dev.to/basementdevs/everything-that-you-need-to-know-about-git-2440>

Open your Browser to:

https://github.com/olcf/foundational_hpc_skills.git

From the opendtn terminal:

```
git clone https://github.com/olcf/foundational_hpc_skills.git
```

Get the Repo

Open your Browser to:

<https://github.com/olcf/hands-on-with-frontier.git>

From the opendtn terminal:

git clone <https://github.com/olcf/hands-on-with-frontier.git>

Extra Slides, Specific to the NGP Summer School

Jupyter or Mac terminal

MAC

- Applications > Utilities > Terminal

```
ssh username@opendtn.ccs.ornl.gov
```

- Enter your password when prompted.

Jupyter Terminal

- Open browser
- Go to <https://jupyter-open.olcf.ornl.gov/>
- Login with your XCAMS Username and password.
- Choose Crash Course training lab
- Click Open Terminal

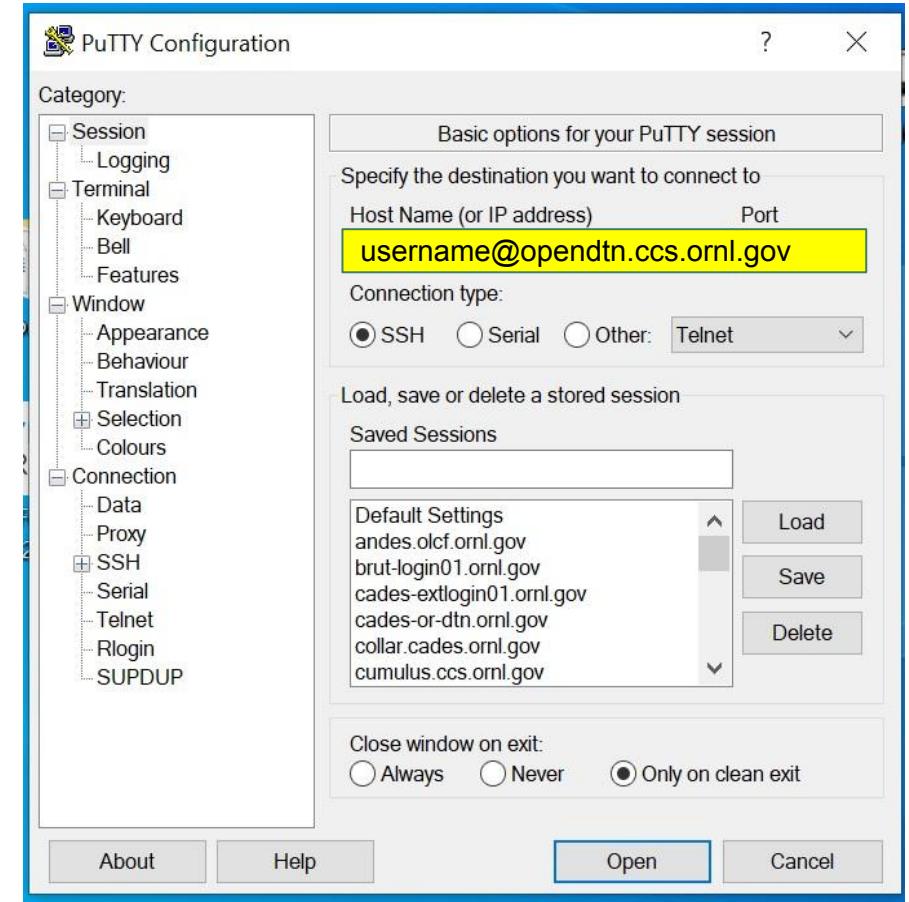
Then type

```
ssh username@opendtn.ccs.ornl.gov
```

- Enter your password when prompted.

Windows Putty

- Click Open Putty
- Enter username@opendtn.ccs.ornl.gov
- Click Open



- Enter your password when prompted.