

# Using the SCC

Fall 2025

Brian Gregor (bgregor@bu.edu)

Research Computing Services

<https://rcs.bu.edu>

Information Services & Technology



# BU Shared Computing Cluster (SCC)

- Located at the [MGHPCC](#) in [Holyoke, Massachusetts](#).
  - Alongside clusters from Harvard, MIT, NU, Umass, URI, and Yale
- 1070 compute nodes (servers)
  - 29,234 CPU cores
  - 516 GPUs
  - 16.6 PB of storage
- BU's [Research Computing Services](#) group maintains the BU SCC.



# SCC Access

- SCC OnDemand is the easiest way to access the SCC:

<https://scc-ondemand.bu.edu>

- Google Chrome is the recommended browser
  - This browser properly handles copy & paste in OnDemand Desktops.
- Beyond interactive use:
  - You can create and submit non-interactive “batch” jobs to the cluster job queue.

- Do not use the “BU Guest” WiFi network to access OnDemand.
  - The interface will break, and it will be unusable.
- Use the [eduroam](#) WiFi network or a wired Ethernet connection.
  - Wired Ethernet gives the best performance if you have an office or BU dorm room.
  - Modern laptops usually require an external USB adaptor (~\$20 plus a \$5 cable).



# Links to RCS Documentation

- [File transfers](#) to/from your own computer.
- [OnDemand](#) documentation
- [Batch](#) (non-interactive) Jobs
- [Linux guide](#) for SCC users.
- Linux usage [quick reference](#).
- Quick reference for [SCC commands](#).
- Home directory quota (just 10GB) is full? [Start here](#).
- If your professor and/or TA has asked you to submit a help ticket to us, fill out the [form here](#).
  - Choose “Research Computing” in each box, then describe your problem in as much detail as you can.

# OnDemand Jupyter

- Load the **miniconda** and **academic-ml/fall-2025** modules
- Pre-launch command:
  - **conda activate fall-2025-pyt**
  - This is a PyTorch-based conda environment.
- Choose 4-8 cores and 1 GPU when using a GPU
  - 4 is usually plenty
  - Request just 1 GPU
- For CPU-only, choose 4 or 8 cores.

## Jupyter Notebook

This app will launch a Jupyter Notebook server on a compute node.

List of modules to load (space separated)

miniconda academic-ml/fall-2025

Select Modules

Pre-Launch Command (optional)

conda activate fall-2025-pyt

Interface

lab

Working Directory

/projectnb/ds542

Select Directory

The directory to start Jupyter in. (Defaults to home directory.)

Extra Jupyter Arguments (optional)

Number of hours

12

Number of cores

4

Number of gpus

1

GPU compute capability

6.0 (P100 or V100 or A100 or A40 or L40S)

Project

ds542

Extra qsub options

☐ I would like to receive an email when the session starts

Launch

# OnDemand VS Code Server

- Code Server is open source, based on Microsoft VS Code, it runs in your browser.
- Same setup options as Jupyter
- **Important:** the Code Server extension marketplace is **NOT** the Microsoft one you see with VS Code on your laptop.
  - Practically speaking, this means that Github Copilot is not available.

## VS Code Server

This app will launch a VS Code server using Code Server on a compute node.

Codeserver Version

4.96.4

Additional modules to load (space separated, optional)

miniconda academic-ml/fall-2025

Select Modules

Pre-Launch Command (optional)

conda activate fall-2025-pyt

Working Directory

Select Directory

The directory to start in. (Defaults to home directory.)

Number of hours

6

Number of cores

1

Number of gpus

0

Project

ds542

Extra qsub options

☐ I would like to receive an email when the session starts

Launch

# OnDemand – start a Desktop Session

- Same setup for the number of hours, cores, and GPUs as the other two.
- To activate the PyTorch environment execute this in a terminal:

```
conda activate fall-2025-pyt
```

- To run genuine Microsoft VS Code:
  - `module load vscode/1.99.2`
  - `code`

- To run Jupyter:
  - `jupyter notebook`
  - OR
  - `jupyter lab`



## Desktop

This app will launch an interactive desktop on a compute node.

List of modules to load (space separated)

miniconda academic-ml/fall-2025

Select Modules

Working Directory

Select Directory

The directory to start in. (Defaults to home directory.)

Initial command to run

xfce4-terminal

Number of hours

4

Number of cores

1

Number of gpus

0

Project

ds542

Extra qsub options

☐ I would like to receive an email when the session starts

Launch