

OPEN
OnDemand

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HPC User Services
LSU HPC LONI
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Louisiana State University
Baton Rouge
March 3, 2021

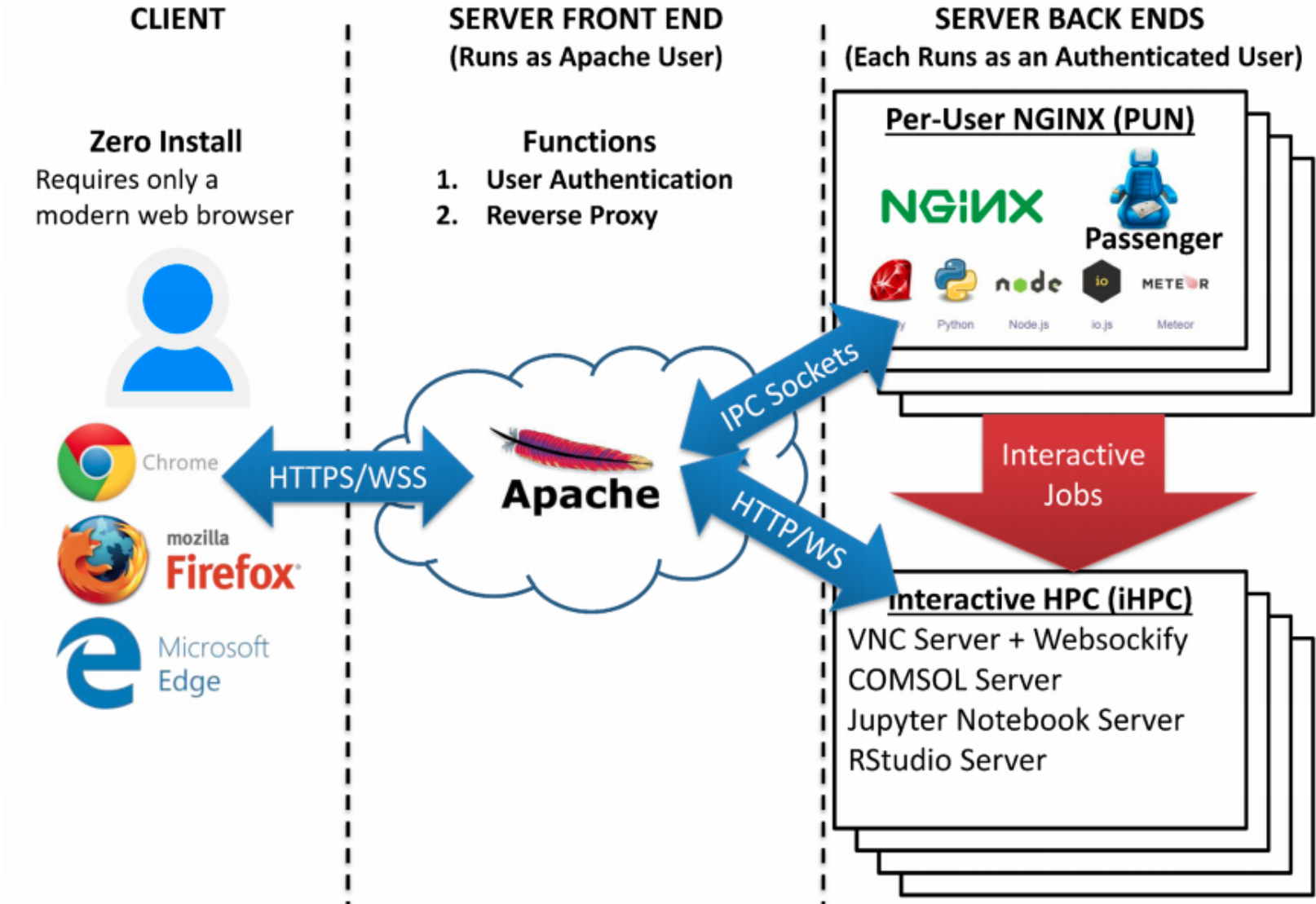
➤ **Open, Interactive HPC via the Web**

- Easy to use, plugin-free, web-based access to supercomputers
- File Management
- Command-line shell access
- Job management and monitoring
- Applications (currently Jupyter and Rstudio)

➤ **NSF-funded project**

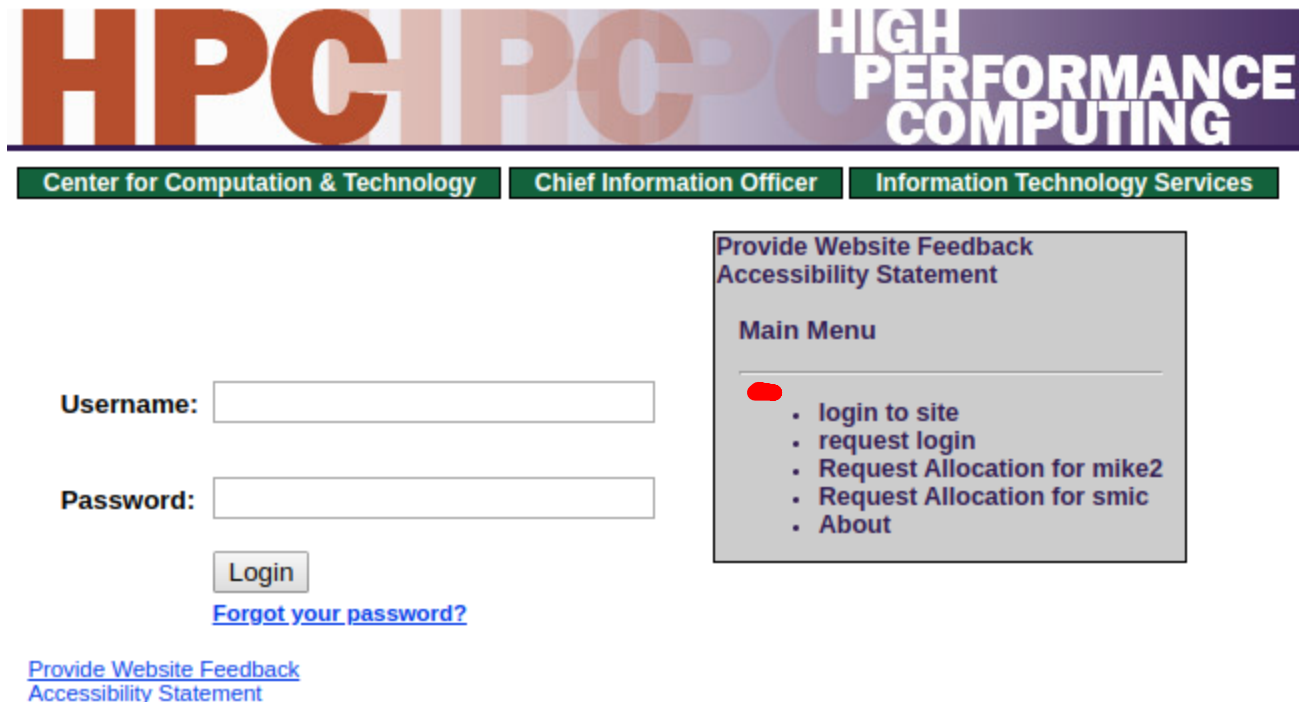
- SI2-SSE-1534949 and CSSI-Software-Frameworks-1835725
- Ohio Supercomputing Center
- Deployed at dozens of sites (universities, supercomputing centers)

- **Currently only available for SuperMike-II cluster**
- **Accessible on campus (wired and eduroam) and via LSU's VPN**
 - Installing GlobalProtect: `grok.lsu.edu` -> search "vpn"
 - Instructions for Mac, Windows, Linux
- **Launched late 2019**
- **Opened to all LSU HPC users February 2020**
- **Functionality currently available:**
 - File Browser, Allocation balances & Disk quotas
 - Submit and Monitor Jobs
 - Shell Access
 - Interactive Apps: Jupyter Notebooks & RStudio



➤ **What do I need?**

- **LSU HPC account (and active allocation)**
- **New users: accounts.hpc.lsu.edu → “request login”**



The screenshot shows the HPC login page. At the top, there is a banner with the text "HPC HIGH PERFORMANCE COMPUTING". Below the banner, there are three navigation tabs: "Center for Computation & Technology", "Chief Information Officer", and "Information Technology Services". The main content area contains a login form with fields for "Username:" and "Password:", a "Login" button, and a link for "Forgot your password?". To the right of the login form, there is a sidebar with a "Main Menu" containing a list of links: "login to site", "request login", "Request Allocation for mike2", "Request Allocation for smic", and "About". At the bottom left, there are links for "Provide Website Feedback" and "Accessibility Statement".

ondemand.mike.hpc.lsu.edu

➤ Logging in for the first time

- Sign in with your LSU HPC credentials
- If you have never logged into an LSU HPC cluster before, follow the instructions to create a home directory
- Follow the link to launch a shell, which will create your home directory
- Click the link to reload the web browser

Home directory not found

Don't panic, this is normal if you're using Open OnDemand for the first time. Your home directory appears to be missing. If this is the first time you have logged in with this account, you may need to access our systems using SSH in order to trigger the creation of your home directory.





1. Create Home Directory

- Click on this link: [Open Shell to create home directory](#) and a new tab should open. This tab contains the shell.
- In the shell, you will see a line that says: **Are you sure you want to continue connecting (yes/no)?** Type "yes" and press enter. (If you wait too long, you'll get an error like this: **Your connection to the remote server has been terminated.** Close the tab and click on the link above again.)
- Next the shell will ask you to enter your password (**mtiger@mike.hpc.lsu.edu's password:**). Enter the password that you made when creating your LSU HPC account. As you type the password, you won't see anything appear in the shell. This is normal. Press enter when you're done. If you're successful, you should see many lines come up. You can now close the tab, even if it warns you that "Changes may not be saved."

2. Restart the WebServer

- Next, click on this link: [Restart Web Server](#)
- If it brings you back to the same page, wait 10 seconds and try again.

LSU HPC OnDemand Files Jobs Clusters Interactive Apps ?

-  Home Directory
-  /work/mtiger
- Utilities
-  Allocation balances
-  Disk quotas

Announcement: ... will be held Wednesday, March 4 at 9:00am. For more details please see ...



OnDemand provides an integrated, single access point for all of your HPC resources.

Message of the Day

Welcome to the LSU HPC OnDemand portal!

With the OnDemand web portal, you can:

- - Manage, download and upload files to the HPC systems (click links in the "Files" on the top of this page)
- - [Check allocation balances](#)

Opening the File Explorer

LSU HPC OnDemand

Files ▾ Jobs ▾ Clusters ▾ Interactive Apps ▾

- Home Directory
- /work/mtiger
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- [Check disk usage and quotas](#)

Allocation balances

🕒 Active Jobs

Announcement: Open Job Composer ... held Wednesday, March 4 at 9:00am. For more details please see [HPC@LSU Training](#)



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Active Jobs

> **_SuperMike-II Shell Access**

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Opening a Shell (will open in new tab)

LSU HPC OnDemand Files Jobs Clusters Interactive Apps

Servers

Announcement: Open OnDemand training will be held on [Monday, April 19th](#) at 9:00am. For more details please see [HPC@LSU Training](#)

- Jupyter Notebook
- RStudio Server

HPCC HIGH PERFORMANCE COMPUTING

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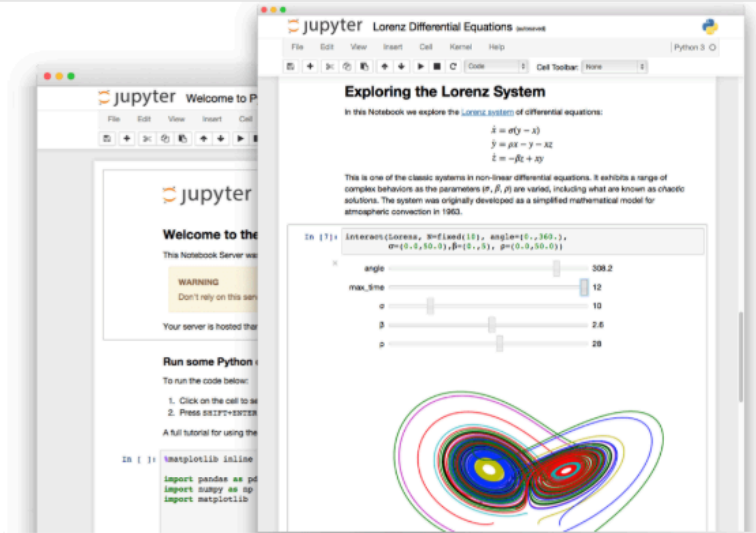
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Choose either Jupyter Notebook or RStudio Server



[Install](#)
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The Jupyter Notebook

The Jupyter Notebook is an open-source web application that allows you to create and share documents that contain live code, equations, visualizations and narrative text. Uses include: data cleaning and transformation, numerical simulation, statistical modeling, data visualization, machine learning, and much more.

Try it in your browser

Install the Notebook



Language of choice

Jupyter supports over 40 programming languages, including Python, R, Julia, and Scala.



Share notebooks

Notebooks can be shared with others using email, Dropbox, GitHub and the [Jupyter Notebook Viewer](#).



Interactive output

Your code can produce rich, interactive output: HTML, images, videos, LaTeX, and custom MIME types.



Big data integration

Leverage big data tools, such as Apache Spark, from Python, R and Scala. Explore that same data with pandas, scikit-learn, ggplot2, Tableau.

jupyter.org



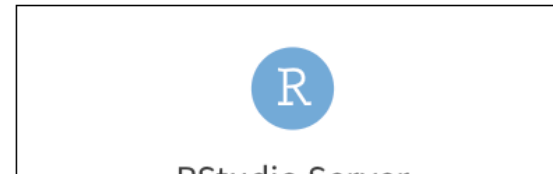
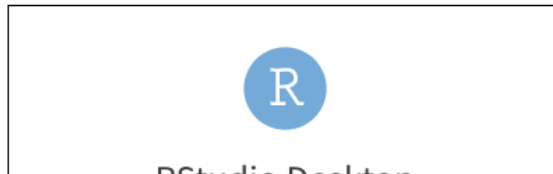
RStudio

Take control of your R code

RStudio is an integrated development environment (IDE) for R. It includes a console, syntax-highlighting editor that supports direct code execution, as well as tools for plotting, history, debugging and workspace management. [Click here to see more RStudio features.](#)

RStudio is available in **open source** and **commercial** editions and runs on the desktop (Windows, Mac, and Linux) or in a browser connected to RStudio Server or RStudio Server Pro (Debian/Ubuntu, Red Hat/CentOS, and SUSE Linux).

There are two versions of RStudio:



RStudio

Thanks!

For more information, email
sys-help@loni.org

Upcoming Training:
March 10, 2021: Intro to RStudio
March 17, 2021: Intro to Python