



A powerful web-based interface to access Aristotle HPC cluster



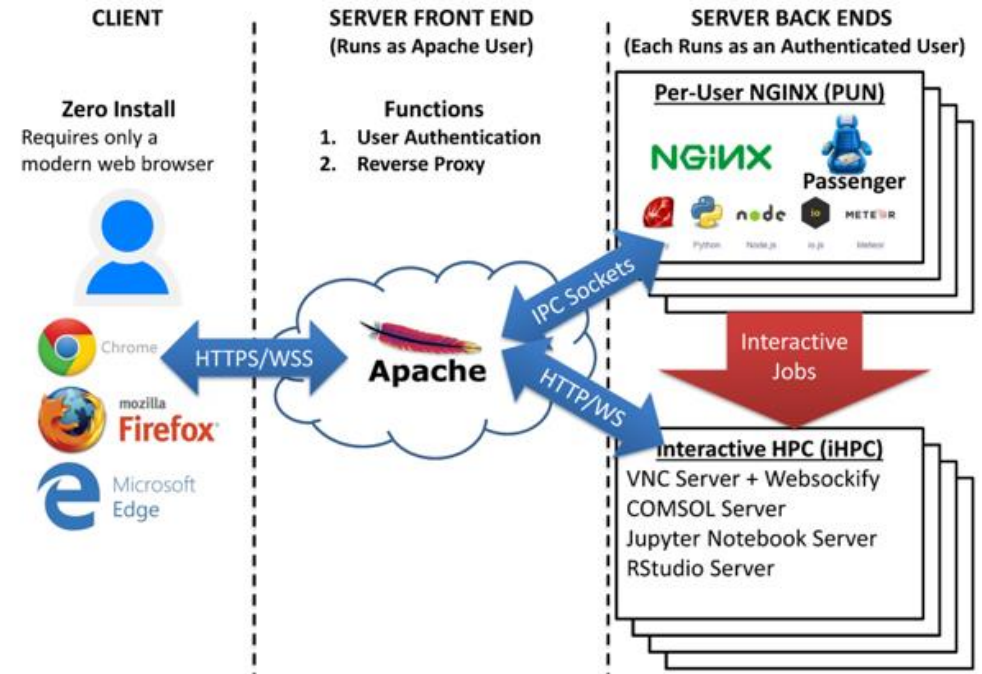


What is Open onDemand?

- A free and open-source platform for accessing and managing HPC resources through a **web-based interface**.
- Runs in a browser. **No client** installation.
- Access an organization's computing infrastructure from **anywhere**, on any device.
- A simple and intuitive way to **launch/manage batch jobs** and **transfer files**.
- Empowers users of all skill levels offering an **alternative to command-line interface**.
- Allows creation of **custom applications** to meet unique needs.
- An active and growing [community!](#)

Architecture Overview

- **Apache** is the server front end accepting all requests from users and serves four primary functions
 - Authenticates user
 - Starts Per-User NGINX processes (PUNs)
 - Reverse proxies each user to her PUN via Unix domain sockets
 - Reverse proxies to interactive apps running on compute nodes (RStudio, Jupyter, VNC desktop) via TCP sockets
- The Per-User **NGINX** serves web apps in Ruby and NodeJS and is how users submit jobs and start interactive apps



Open onDemand @ Aristotle HPC: Available Features

- Use a web-based **File Explorer** to manage files and directories on the cluster
- **Submit jobs** and **check job status** from your browser
- Access the login node using **shell** from your browser
- Use **Interactive Applications** with graphical user interface on the cluster

Open onDemand @ Aristotle HPC: Interactive Apps



- Start **Desktop Environment** on the cluster: <https://hpc.it.auth.gr/ondemand-desktop/>
- Run **Interactive Applications** with graphical user interface on the cluster:
 - Matlab
 - Ansys
 - Abaqus
 - Ansa/Meta
 - Cadence
 - Jupyter Notebooks
 - Mathematica
 - Rstudio
 - SPSS
 - Tensorboard
- **Develop** your own interactive applications

Open onDemand @ Aristotle HPC: Infrastructure for Apps



THE WORLD'S FIRST RAY
TRACING GPU
NVIDIA QUADRO RTX 6000



*Virtual***GL**
3D Without Boundaries

- Interactive apps run on a separate partition that consists of **12 nodes** with **12 CPUs** each.
- Each node has access to a virtual **GPU**: Nvidia Quadro RTX 6000 6GB GDDR6.
- Applications run on the GPU using **VirtualGL**.

Open onDemand resources



Website: <http://openondemand.org/>



Documentation: <https://osc.github.io/ood-documentation/latest/>



Main code repo: <https://github.com/OSC/ondemand>



Short Demo: <https://github.com/OSC/ondemand#demo>



Connect @ Aristotle Open onDemand web interface: <https://hpc.auth.gr>