Help us organize this BOF!

- We are going to start by asking the following questions. Are you…
  - First time hearing about OnDemand?
  - HPC Center staff considering OnDemand for your users?
  - HPC Center user wanting to leverage OnDemand?
  - Experienced/Advanced with OnDemand?
  - Something else???

Learn more about OnDemand!

- Visit our table here at PEARC
- Documentation and code repository available at: http://openondemand.org/
- Send email to ood-users-request@lists.osc.edu with the subject "subscribe" to join the mailing list
- Webinars and conference publications available on the website

Open OnDemand website QR code

Based upon work supported by the National Science Foundation under grant number 1534949.

OPEN OnDemand

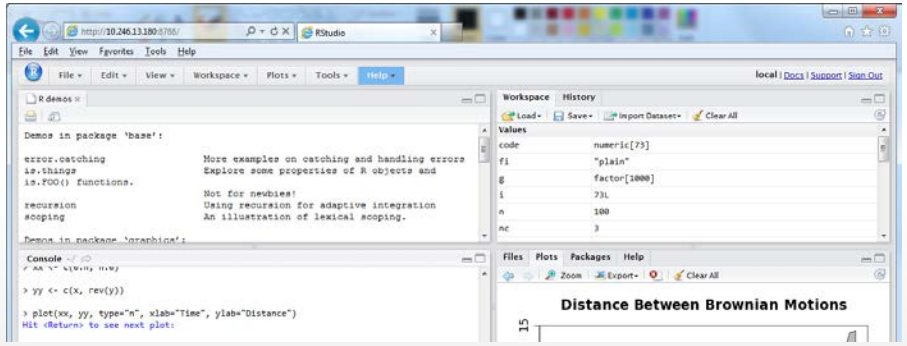
- Single point of entry for HPC Access
- User needs: URL, ID, Password
- Single sign-on
- Completely browser-based
- Firewall friendly (all traffic over https)
- Installable on a range of cluster types
- Per-user architecture for security
- Easy onboarding of users new to HPC
- Connects user to apps on compute node
- App developer interface

Ohio Supercomputer Center

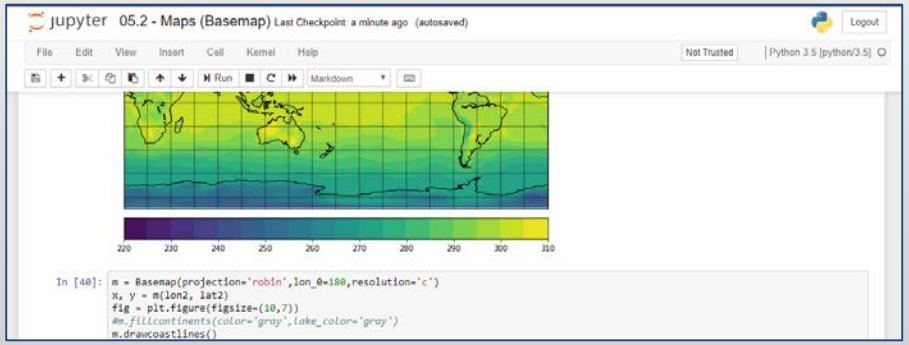
An OH·TECH Consortium Member

Interactive Apps & Cluster Access

RStudio Server – R IDE

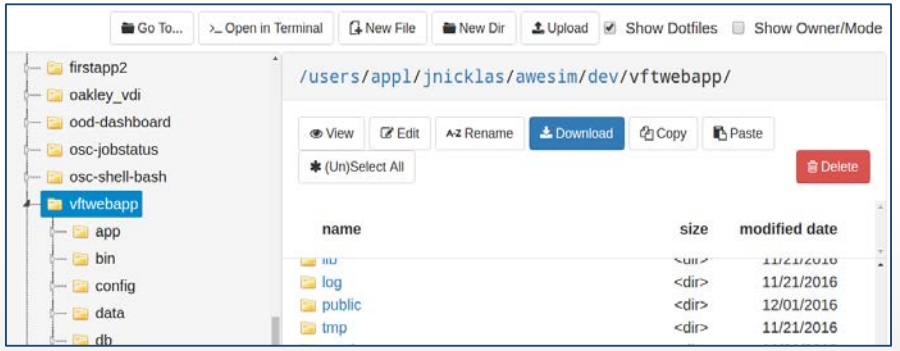


Jupyter Notebook – Python IDE

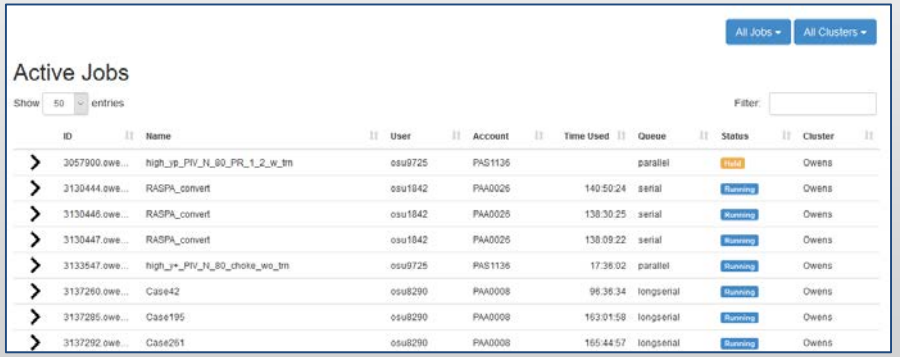


And many more, such as ANSYS Workbench, Abaqus/CAE, MATLAB, Paraview, COMSOL Multiphysics

File Access (browse, edit, etc)



Manage Jobs (view, submit, etc)

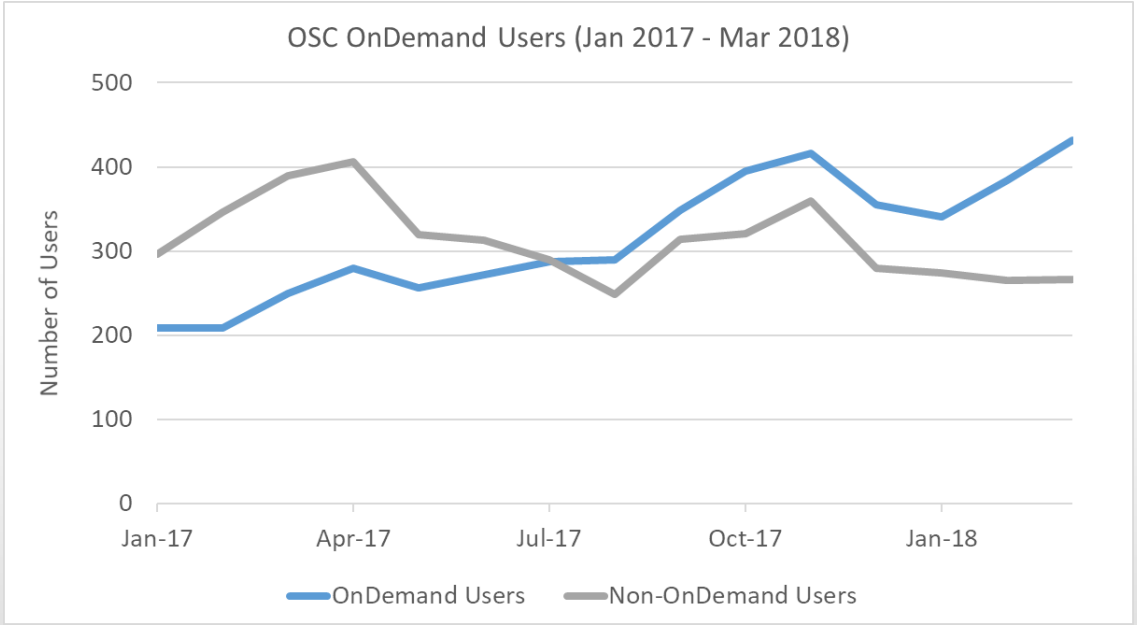


And many more, such as in-browser SSH terminal, job constructors, VNC desktops

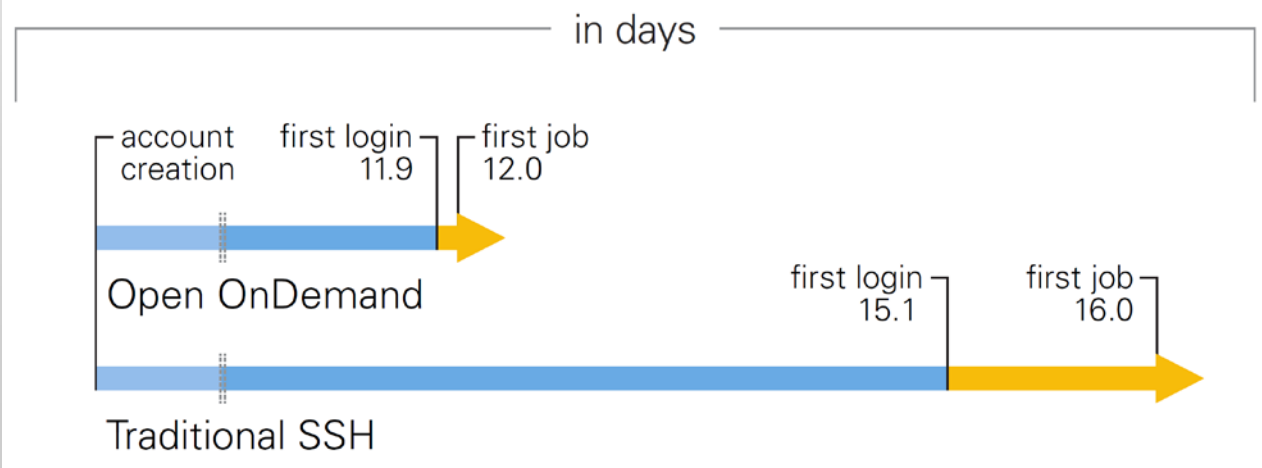
Example Current Engagements and Deployments

OSC OnDemand Details

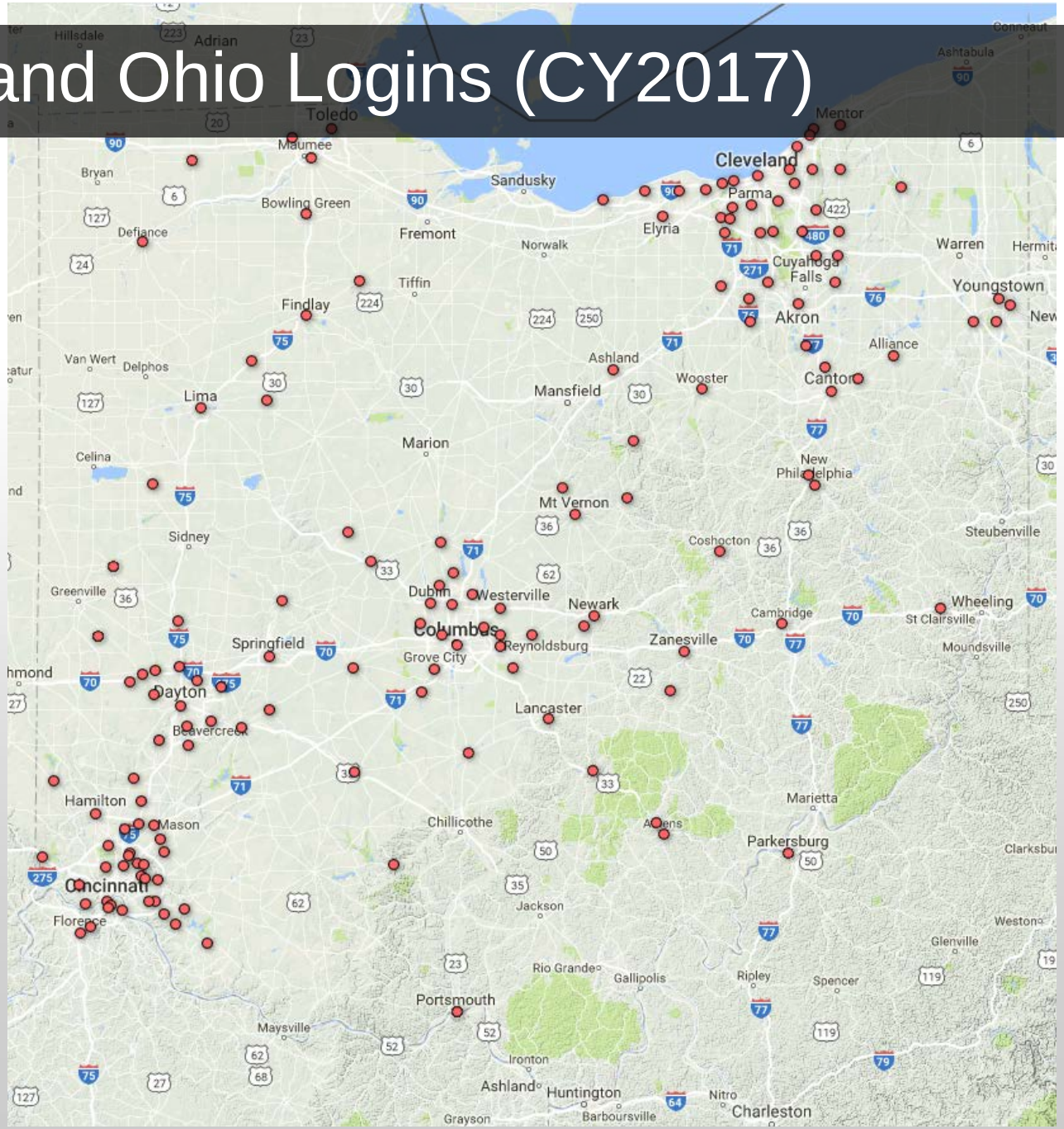
Launched Sep. 2016, serving OSC clients globally, % of users has steadily increased since launch



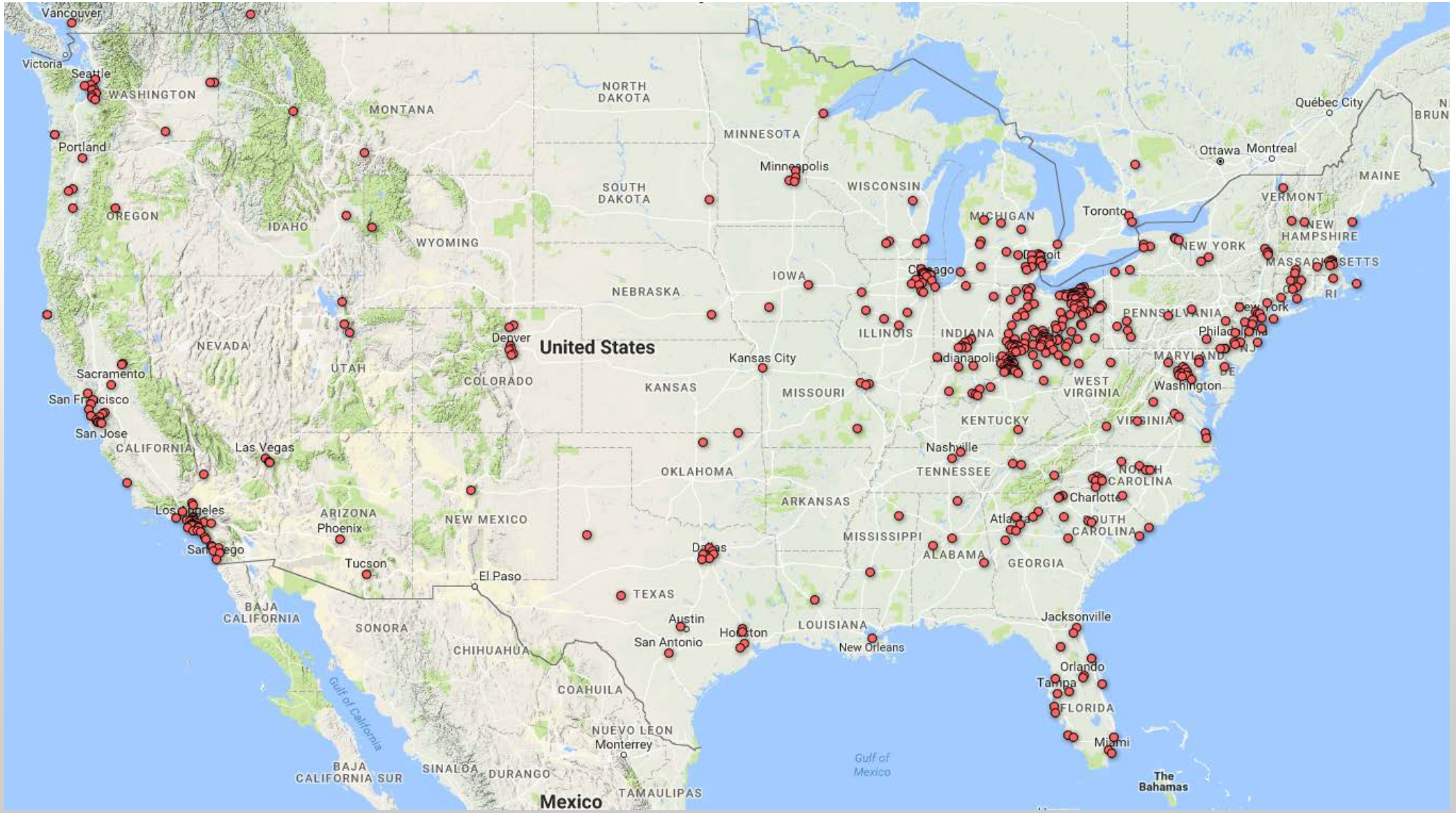
OnDemand users start work faster than traditional users, both in terms of first login and job submission



OSC OnDemand Ohio Logins (CY2017)



OSC OnDemand US Logins (CY2017)



OSC OnDemand Global Logins (CY2017)

Key Software Releases since PEARC17

- Ver 1.0 (Aug 2017): released versioning scheme, expanded resource manager support, support for interactive HPC apps
- Ver 1.1 (Sept 2017): developer interface for custom apps, support for interactive Jupyter, authentication via Keycloak.
- Ver 1.2 (Nov 2017): large number of bug fixes, eased the admin workload, support app development, extended the Files app.
- Ver 1.3 (May 2018): Red Hat Package Manager (RPM) based installation, XFCE for the desktop, more bug fixes.
- Also: Support for popular web-based apps including Jupyter and RStudio.

Community Engagement since PEARC17

- Published the software in the Journal of Open Source Software (JOSS)
- Engaged with the Science Gateways Community Institute and working to become an affiliate
- Held 2 webinars, 1st had 17 attendees / 13 institutions, 2nd had 41 attendees / 19 institutions.
- Demoed "Developing Apps to Extend Open OnDemand" at the Gateways17 conference.
- Project overview at the Coalition of Academic Scientific Computation (CASC) meeting
- Project update at the NSF SI2 principal investigator meeting
- Featured in an HPCWire article. "Democratizing HPC: OSC Releases Version 1.3 of OnDemand"

Short Term Roadmap (this year)

- Improve support for large data transfer via the files app
- Add support for the Sun Grid Engine (SGE) job scheduler
- Add general performance improvements for HPC Centers that have 20K+ jobs at a time
- Add support for additional interactive apps including MATLAB, Abaqus, and ANSYS
- Continue to support the deployment at other sites and provide outreach and training webinars

Long Term Roadmap (next few years)

- More close integration with XDMoD
- Improve the customization of the desktop for specific domain scientists
- Increase the scalability via server load balancing and API updates
- Expand community outreach engagements and platforms
- Establish long term sustainability via community adoption and development pathways