This figure shows a breakdown of users that use iCER support services. These support services include support tickets, iCER workshops, and office hours.

**List of iCER workshops in September:**
- Introduction to Linux/Unix
- Introduction to HPCC
- Matplotlib for Data Visualization

---

**NUMBER OF USERS USING iCER COMPUTE SERVICES IN SEPTEMBER**

- 240 users (219+21) use the developer nodes to submit jobs to the queue.
- 164 interactive users (148+16) only use iCER developer nodes to do their work. This includes users:
  - Only need access to software (ex. Matlab, mathematica)
  - Still in software development process and have not submitted a job
  - Find development nodes are sufficient for their research.
- 51 users only used the iCER file systems to store their files.
- 215 researchers (148+16+51) used iCER hardware outside of the batch queue.

---

**NUMBER OF USERS USING iCER SUPPORT SERVICES IN SEPTEMBER**

This figure shows a breakdown of users that use iCER support services. These support services include support tickets, iCER workshops, and office hours.

**List of iCER workshops in September:**
- Introduction to Linux/Unix
- Introduction to HPCC
- Matplotlib for Data Visualization

---

**PERCENTAGE OF BUY-IN ON LACONIA**

- 773 researchers used iCER services, with 71% using compute services and 35% using support services.

---

**RESEARCHERS USED iCER SERVICES**

- 773 researchers used iCER services, with 87% using compute services and 35% using support services.
COMPARISON BETWEEN NUMBER OF USERS USING ICER SUPPORT AND COMPUTE SERVICE IN SEPTEMBER

This figure shows the activity of the batch scheduling system by day. There was a scheduled maintenance outage on September 19th but usage quickly scaled up.

On a typical day, the scheduler processes approximately 3729343 jobs. This includes jobs that are queued, jobs that start and jobs that end. Put in another way, the scheduler manages approximately 84 jobs per minute.
TICKET ACTIVITY SUMMARY IN SEPTEMBER

- Tickets Created: 239
- Tickets Updated: 370
- Tickets Resolved: 253
- Open Tickets: 20

SEPTEMBER TICKET HIGHLIGHTS

NANYE LONG
Research Consultant
USING HTOP TO MONITOR JOBS

109 New User Accounts are created in SEPTEMBER
In an effort to better serve our users, we have been analyzing the software that is being used on the HPC by recording which software modules are being loaded using the “module load” command. Clearly this is not a complete view; many users install their own software in their home directories, some modules are automatically loaded as part of a user profile and there will be a bias toward pleasantly parallel codes which will load their required modules every time a job runs (as compared to bigger jobs which would only load the modules once). However, we find this data interesting and wanted to share it with you.

The pie chart shows the most commonly loaded modules. Note again that the biggest ones are the ones included in a user’s default profile such as MATLAB, Python, and R. These modules get loaded every time they log in or run a job. As can be seen clearly, the default modules get loaded in an order of magnitude more than many of the other modules.

After taking out the default modules, the pie chart on the right shows more modules that users are choosing to include in their .bashrc files and being submitted on a lot of jobs. This group also includes the gateway module which gets loaded every time someone logs onto gateway. This by itself is interesting and shows that we had 18922 gateway connections in September. From our service report we know that 404 unique individuals used a developer node in September. This means that on average each person is logging into gateway approximately 47 times in the month or about 2 times a day (on average).

Report Contributors:
Camille Archer
Chun-Min Chang
Kelly Osborn
Michael Rometty
Michelle Szidik
Nanye Long
Xiaoxing (Adele) Han