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 November:**
- R on HPCC

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

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

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

- 324 users (290+34) use the developer nodes to submit jobs to the queue.
- 174 interactive users (161+13) 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.
- 66 users only used the iCER file systems to store their files.
- 240 researchers (161+13+66) used iCER hardware outside of the batch queue.

**RESEARCHERS USED iCER SERVICES**

- 189 researchers used iCER services in November:
  - Support: 27%
  - Compute: 93%
COMPARISON BETWEEN NUMBER OF USERS USING ICER SUPPORT AND COMPUTE SERVICE IN NOVEMBER

NUMBER OF MAPPED HOME DIRECTORIES PER SERVER IN NOVEMBER

DAILY SCHEDULER ACTIVITY IN NOVEMBER

On a typical day, the scheduler processes approximately 4,563,063 jobs. This includes jobs that are queued, jobs that start and jobs that end. Put in another way, the scheduler manages approximately 113 jobs per minute.
**TICKET ACTIVITY SUMMARY IN NOVEMBER**

- **216** Tickets Created
- **322** Tickets Updated
- **223** Tickets Resolved
- **19** Open Tickets

**TICKET MESSAGE SUMMARY IN NOVEMBER**

- **459** Total Users’ Messages
- **652** Total iCER’s Messages

**TICKET RESOLUTION STATISTIC IN NOVEMBER**

- **486** Messages answered in November
  - 55% Messages answered within 5 hours
  - 17% Messages answered within 12 hours
  - 8% Messages answered within 5-12 hours
  - 5% Messages answered within 24 hours - 2 day
  - 15% Messages answered in more than 2 days

**NOVEMBER TICKET HIGHLIGHTS**

**PAT BILLS**
Research Consultant

**USING INTERACTIVE JOBS TO INCREASE PRODUCTIVITY**

**45** New User Accounts created in NOVEMBER
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.

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