iCER SERVICE REPORT

798

Compute 87%

Support 37%

RESEARCHERS USED ICER SERVICES

75%
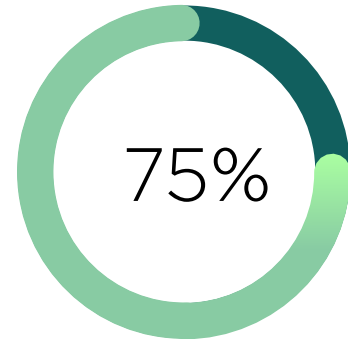
PERCENTAGE OF BUY-IN ON LACONIA

NUMBER OF USERS USING iCER SERVICES IN FEBRUARY

Number of users (y-axis: 0, 100, 200, 300, 400, 500, 600, 700, 800)

Categories: Total, Developer Nodes, Batch Queue, Tickets, Mapped Drives, Workshops, Office Hours
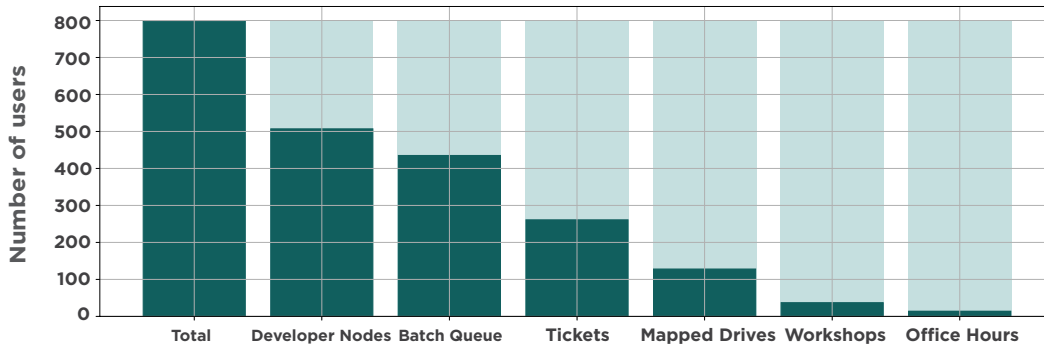
Batch Queue:
Users that run jobs on the main clusters

Developer Nodes:
Users that log into one of our developer nodes

Mapped Drives:
Users that map HPC drives to their local computer (using samba)

Tickets:
Users with active support tickets

Workshops:
Users that attended iCER supported workshops

Office Hours:
Users that attended iCER open office Hours (Mondays and Thursdays 1-2pm)

NUMBER OF USERS USING iCER SUPPORT SERVICES IN FEBRUARY

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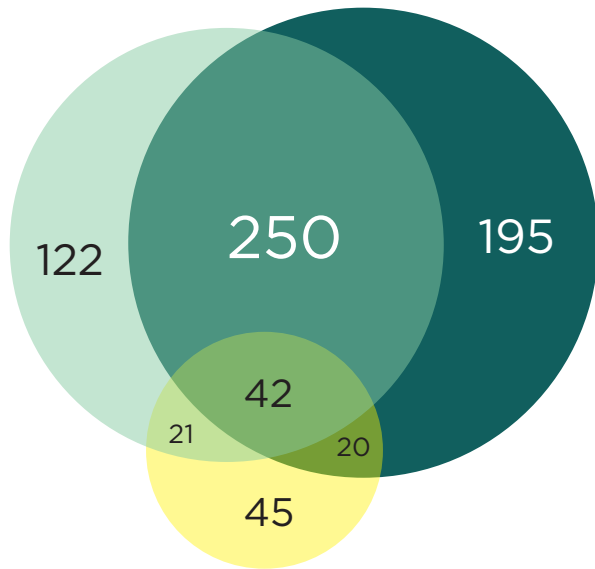
List of iCER workshops in February:

> Introduction to HPCC
> Introduction to Linux/Unix
> Parallel Computing with Shell Scripting
> R on HPCC

■ Tickets   ■ Workshop   ■ Office Hour

244   11   25

5   1   0

8
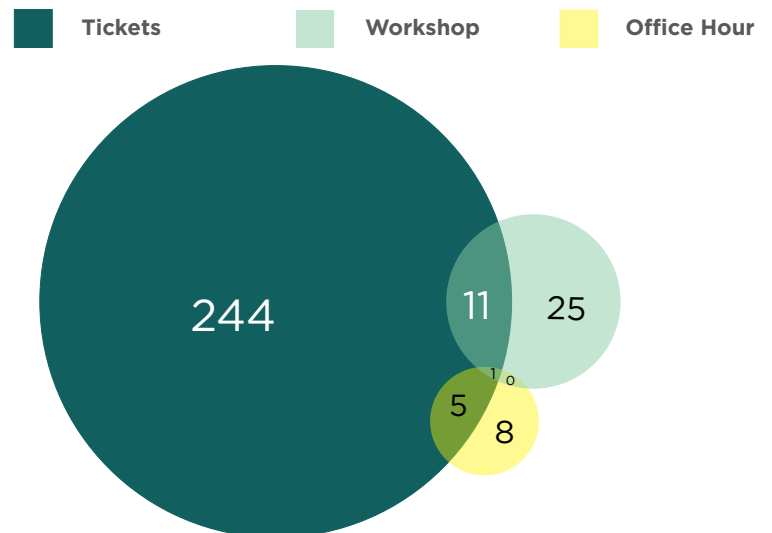
Developer/Login Nodes   **Batch Queue**   **Mapped Home Drive**

NUMBER OF USERS USING iCER COMPUTE SERVICES IN FEBRUARY

122   250   195

42

21   20

45

This figure shows a breakdown of users that use iCER compute services:

292 users (250+42) use the developer nodes to submit jobs to the queue.

215 interactive users (195+20) 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.

45 users only used the iCER file systems to store their files.

**260 researchers (195+20+45) used iCER hardware outside of the batch queue.**
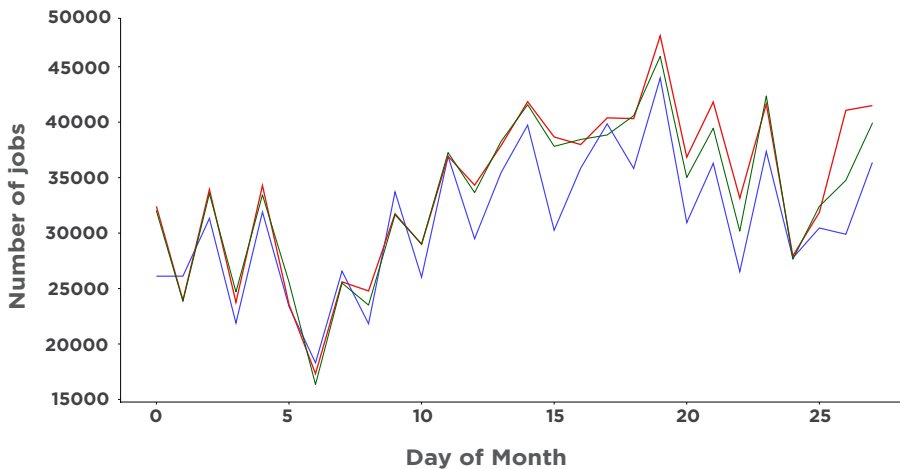
DAILY SCHEDULER ACTIVITY IN FEBRUARY

Queued   **Start**   **Finish**

This figure shows the activity of the batch scheduling system by day. On a typical day, the scheduler processes approximately 153,753 jobs. This includes jobs that are queued, jobs that start and jobs that end. Put in another way, the scheduler manages approximately 106 jobs per minute.

COMPARISON BETWEEN NUMBER OF USERS USING iCER SUPPORT AND COMPUTE SERVICE IN FEBRUARY

504   191   103

Compute

Support
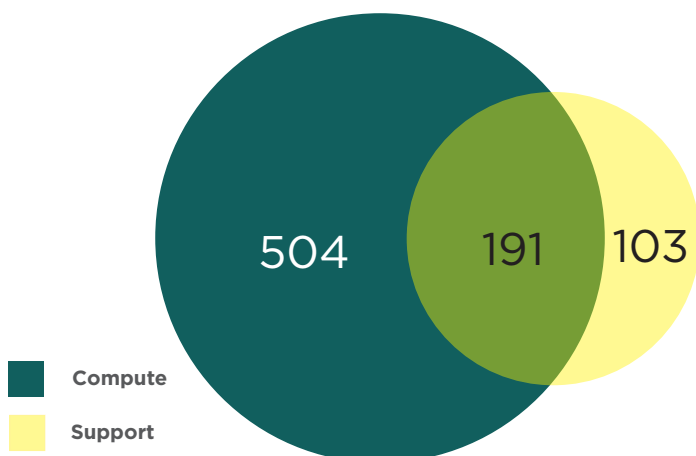
NUMBER OF MAPPED HOME DIRECTORIES PER SERVER IN FEBRUARY
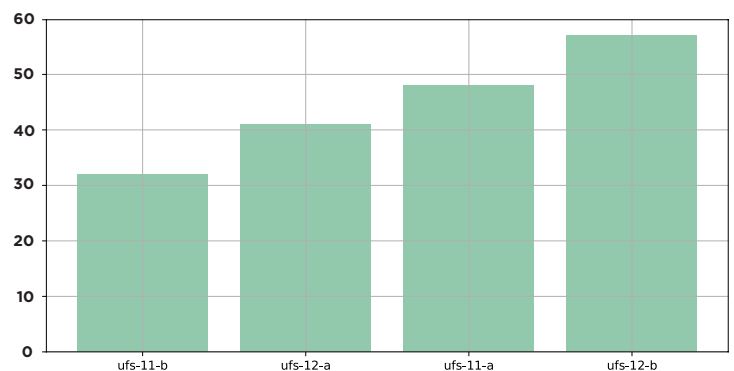
In an effort to better serve our users, we have been analyzing the software that is being used on the HPC by recording which software modules are being loaded using the "module load" command. Clearly this is not a complete view; many users install their own software in their home directories, some modules 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.

ALL MODULE LOAD COUNTS <10000000
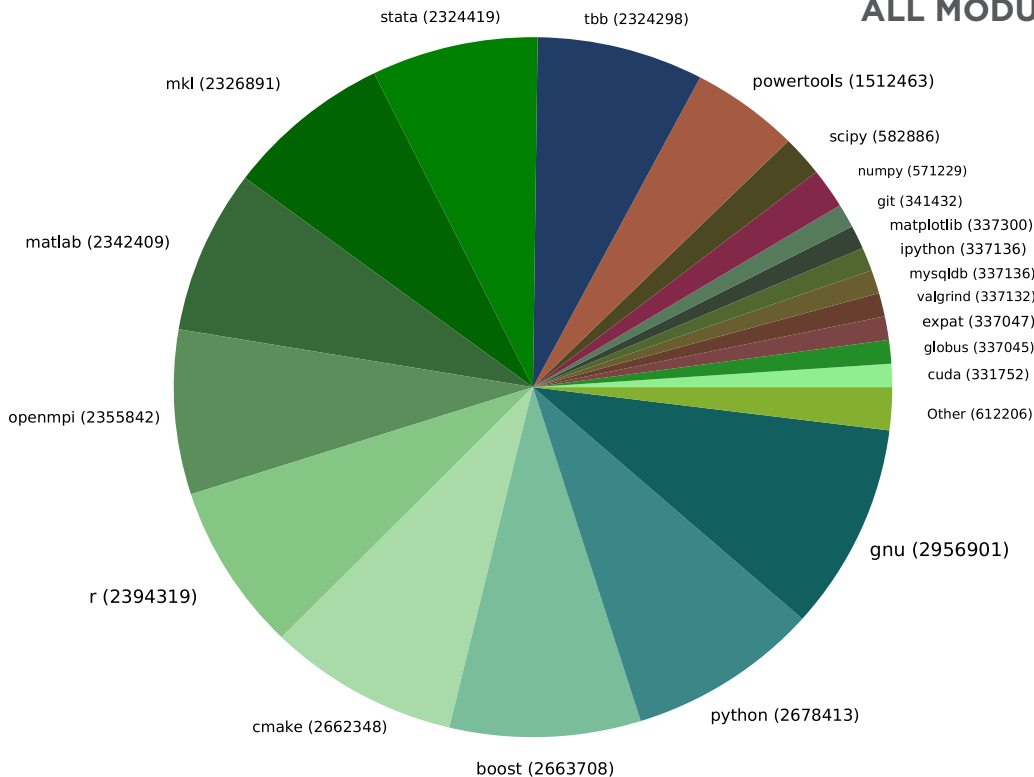
The pie chart shows the most commonly loaded modules. Note again that the biggest ones are the ones included in a user's default profile such as MATLAB, Python, and R. These modules get loaded every time they log in or run a job. As can be seen clearly, the default modules get loaded in an order of magnitude more than many of the other modules.

ALL MODULE LOAD COUNTS <100000

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 37493 gateway connections in February. From our service report we know that 507 unique individuals used a developer node in February. This means that on average each person is logging into gateway approximately 73 times in the month or about 3 times a day (on average).
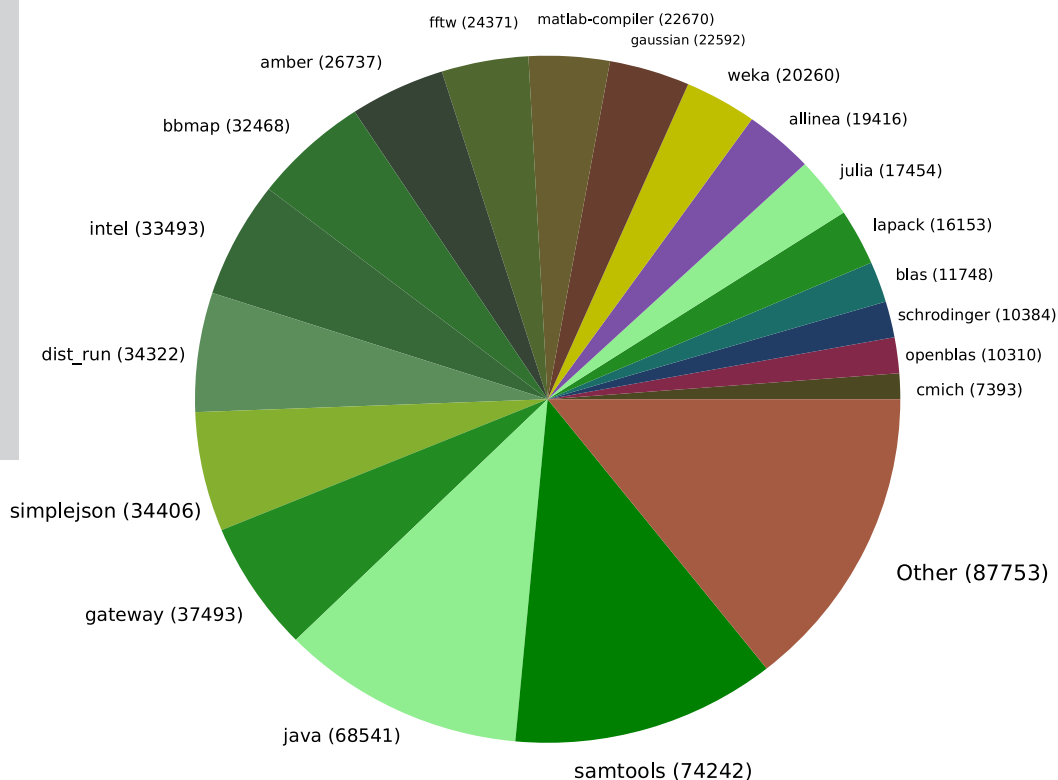
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