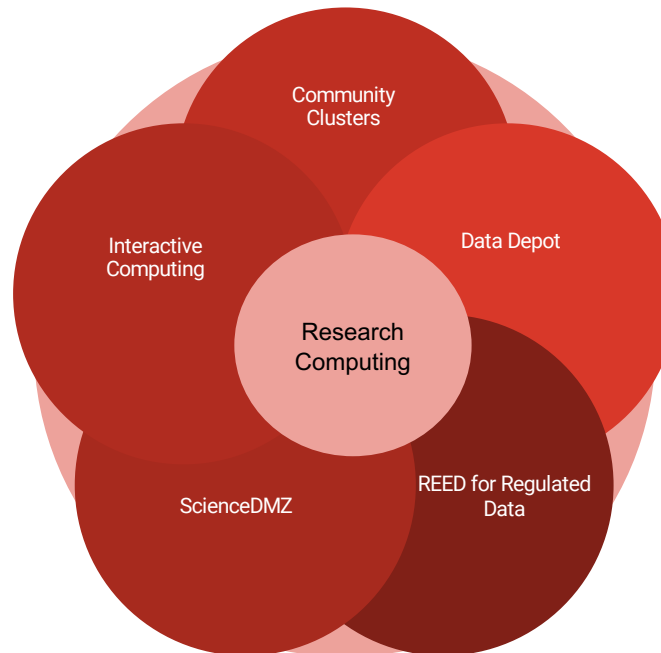


Interactive Supercomputing

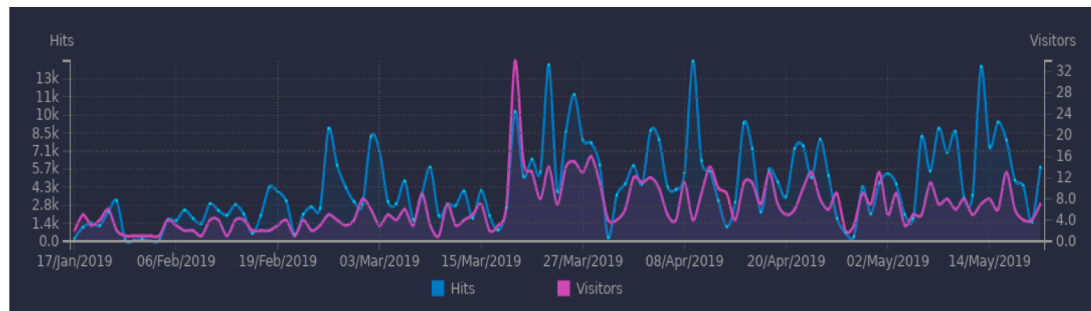
Stephen Lien Harrell* and Alex Younts
Purdue University

Research Infrastructure



Interactive Computing

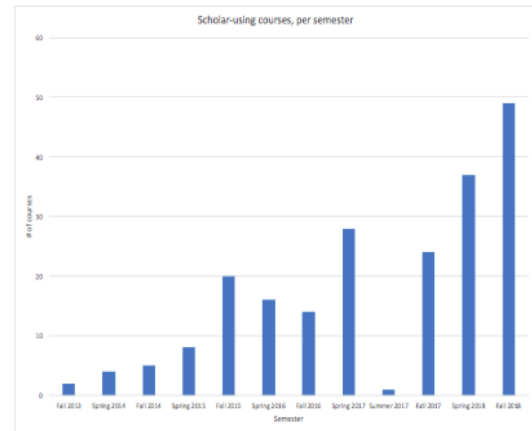
- Research Desktops since 2014 using Thinlinc
 - Web client very popular
 - Great native client
- Added JupyterHub/Rstudio Server in 2016
 - Piloted on our Teaching/Learning resource
 - Now in full production on all clusters
- OnDemand deployed for users since March



Usage is growing quickly

and many long tail users are moving off of desktops

College	2014	2018	Growth 2014-2018	Growth Rate 2014-18
Agriculture	48	202	154	4.2x
Engineering	161	387	226	2.4x
Science	199	308	109	1.55x
Education	1	12	11	12x
Liberal Arts	1	15	14	15x
Management	20	49	29	2.45x
Pharmacy	5	18	13	3.6x
Polytechnic	13	34	21	2.62x
Heath and Human Sciences	14	46	32	3.29x
Veterinary Medicine	0	15	15	undef



Big impact to workflow

- From recent survey of remote desktop users
 - 75% of respondents replied that the Thinlinc desktops are either Moderately or Extremely important to using HPC
 - 82% of respondents replied that they are satisfied or extremely satisfied with the service

“It’s taken something that was a real chore, and it’s now a trivial task, it’s made the science a lot faster.”

*Dr. Jason Ackerson
Assistant Professor of Agronomy*

- Is it cost effective to consolidate high performance workstations?
- What does the future of browser based high performance computing look like?
- Purdue is currently considering Open On-Demand vs Thinlinc?