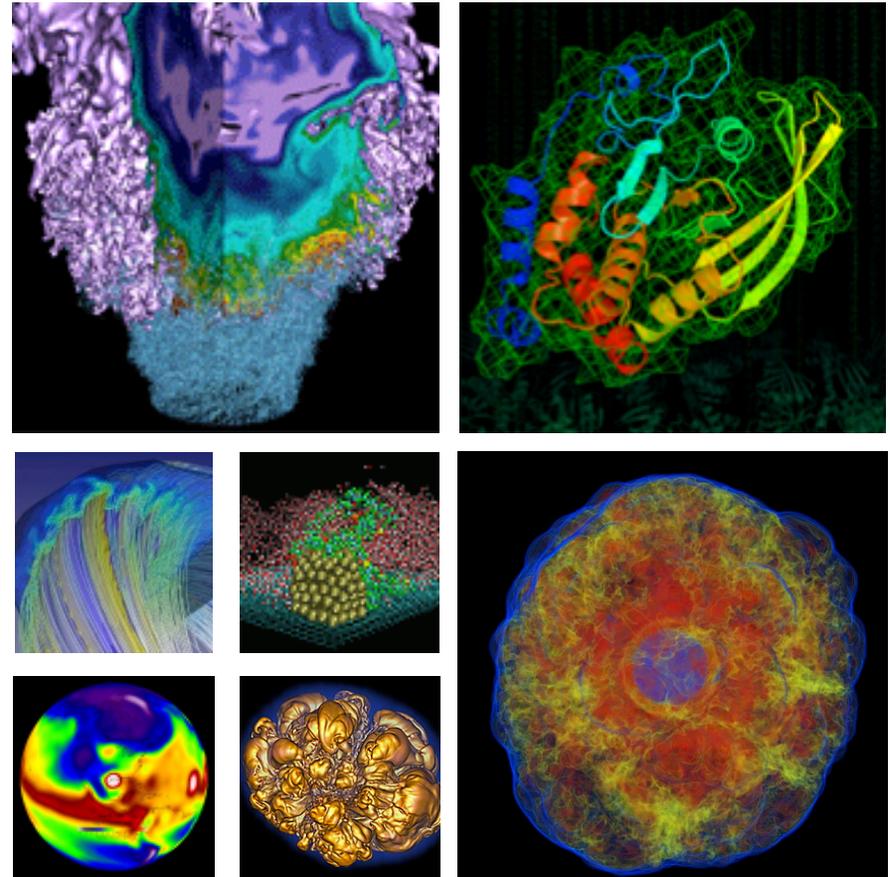


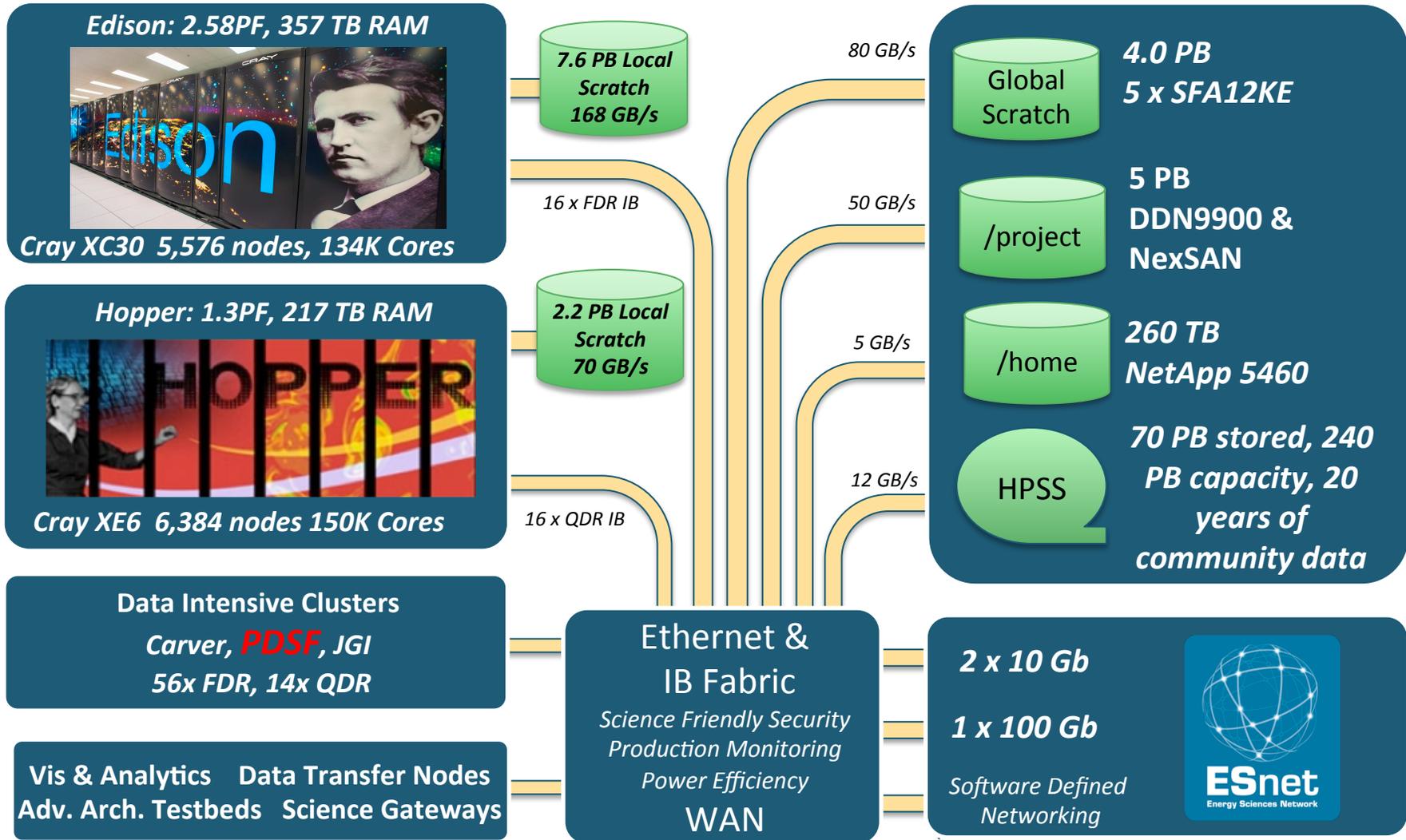
PDSF Transition Plan



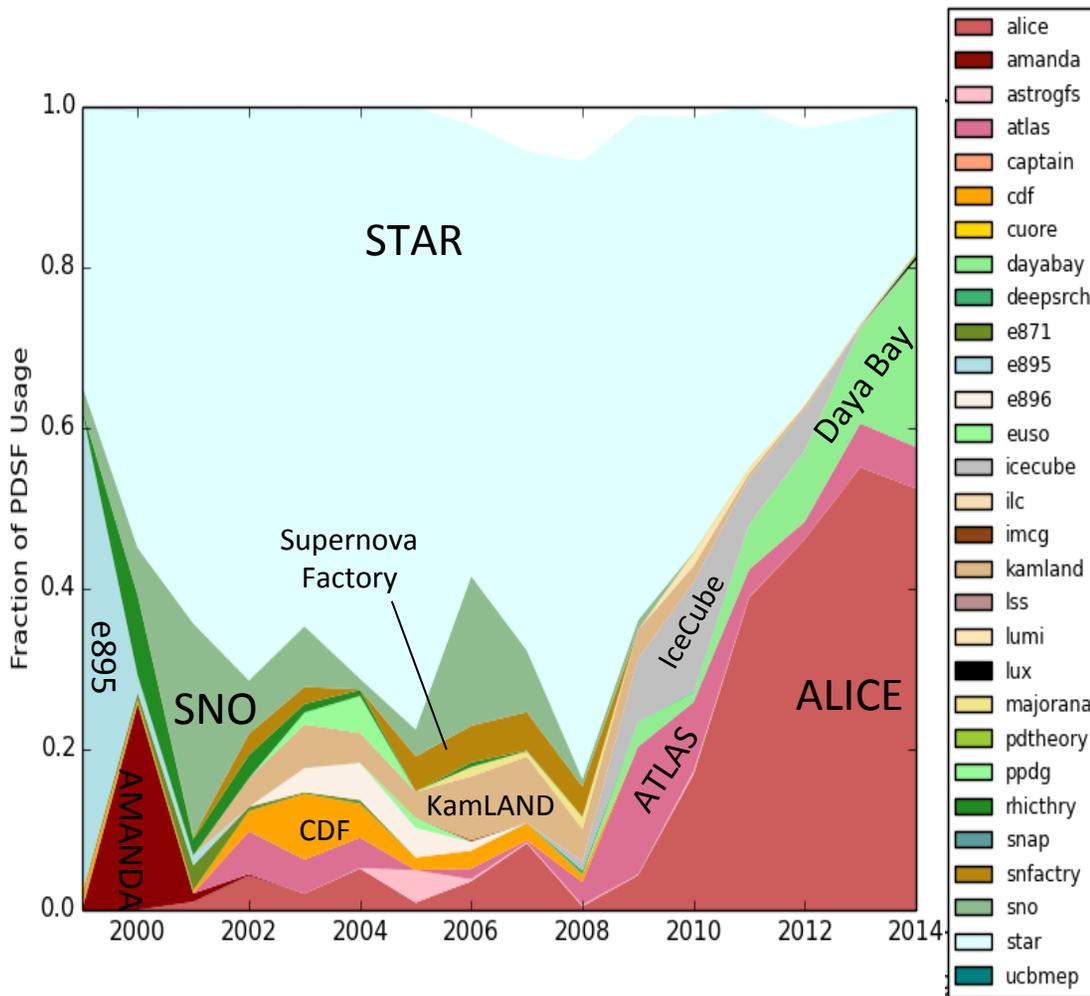
Iwona Sakrejda
Lisa Gerhardt

February 11, 2015

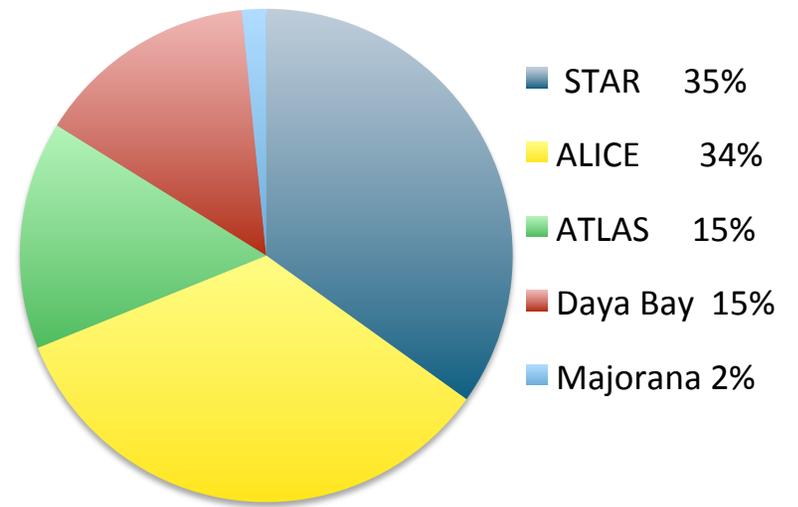
NERSC Systems Today



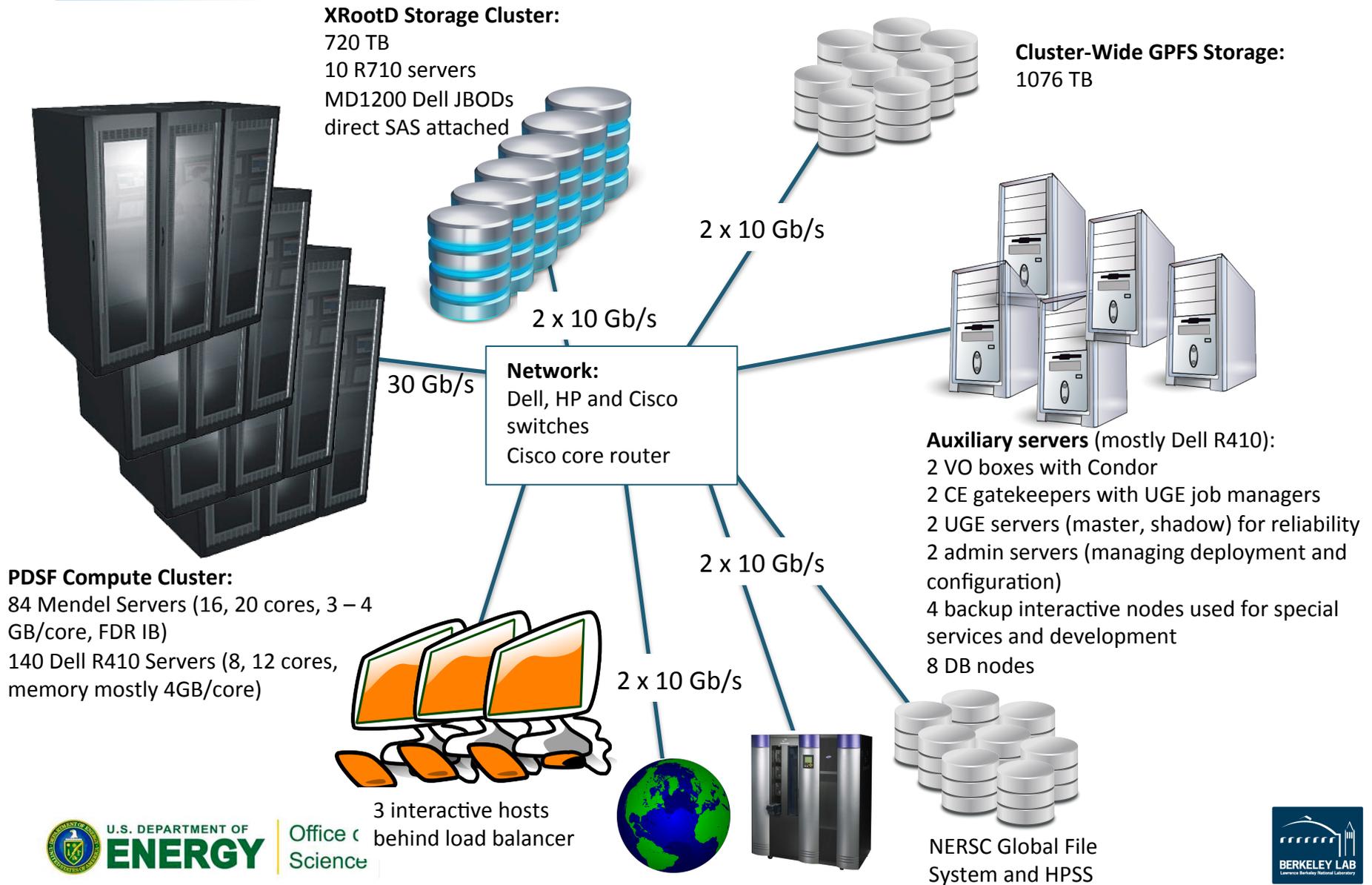
PDSF Users



PDSF Shares 2015



PDSF Cluster Layout



Office of Science



NERSC is moving this year



Computational Research and Theory (CRT) facility

140,000 GSF

Energy efficient LEED Gold design

Move Schedule



- **Occupancy of building is expected in April**
- **Older hardware will stay behind at OSF**
 - Keep the cluster running during move
 - 400 GiB connection between CRT and OSF
- **New computes delivered to CRT: May**
- **New ALICE storage delivered to CRT: June**
 - Migrate data to new storage
- **Move newer computes (3 weeks): June**
- **Switch to shadow servers: July**
- **Retire primary servers: July**
- **Turn off old computes: July?**

Cray: Haswell processors, each with 24 TB drives, 32 cores, 128 GB of RAM

Under the Covers



Thing	Before Move	After Move
Gatekeeper	Single node pdsfgrid (pdsfgrid2)	Shared node VM / docker
VO box	Single node palicevo1 (palicevo2)	Shared node VM / docker
Batch System Server	Single node pdsf-master	Shared node VM / docker
Admin Server	Single node pdsf-admin	Shared node Mendel Admin
SE	One redirector, 10 servers	??
Computes	2700 cores 238 nodes 48k HS06 Mix of old and new nodes	2477 cores 116 nodes ~40k HS06 New Mendel nodes

} Same node



National Energy Research Scientific Computing Center

Changes in Shares after Move



Group	Shares	Effective Cores			HS06		
		Current	True Retire	After Move	Current	True Retire	After Move
ALICE	373	414	325	207	7211	5992	4349
STAR	307	340	268	170	5935	4932	3579
ATLAS	374	415	326	208	7231	6009	4361
Daya Bay	364	404	317	202	7037	5848	4244
Majorana	40	44	35	22	773	643	466
RNC	1043	1156	909	579	20165	16756	12161
Total	2501	2773	2181	1389	48353	40180	29160