GACRC AC Meeting April 2016

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Projects Underway

- Backup environment
- Expansion of IB fabric on Sapelo
- New cluster management stack on Sapelo
- XDMoD

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Backup environment

- Extensive demo of SEP sesam concluded
  - Enterprise backup/recovery environment
  - purchase of license + 1-year support
- Hardware in procurement
  - Initial purchase of 720TB (raw) - ~500TB (usable)
  - ZFS-based Penguin IceBreakers
- Investment of ~$180k
- Once deployed will backup
  - zcluster /home
  - Sapelo/ home
  - /project
  - Others, e.g. buy-in storage???

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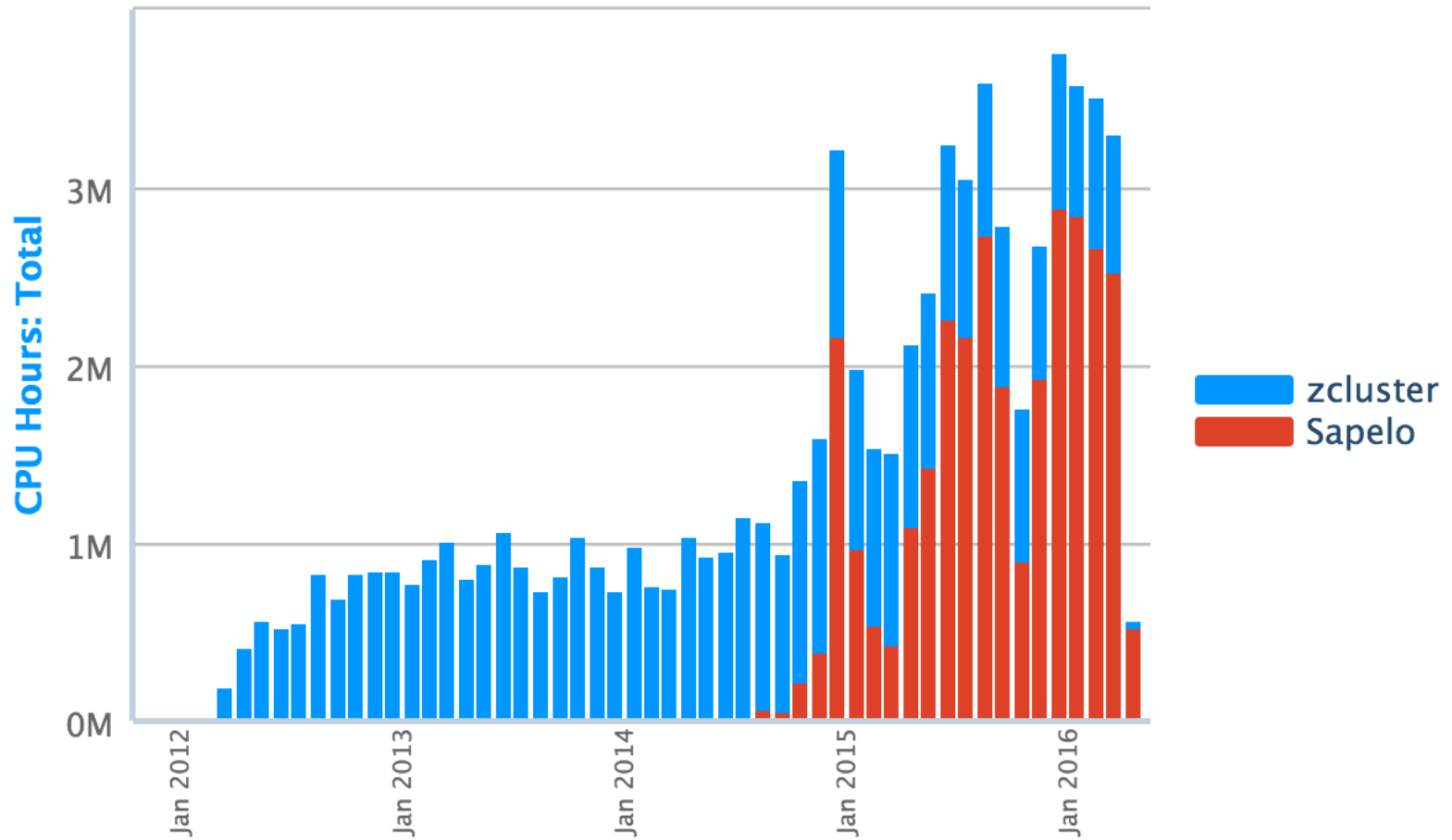TECHNOLOGY SERVICES

Expansion of IB fabric on Sapelo

- Current
  - Single director switch with 216 ports
  - Full bandwith at 40Gbps
- To be purchased
  - Second director switch
  - Edge switches
  - Fat-tree configuration with 2:1 over-subscription
  - Redundant fabric with 240 ports activated (initial)
  - Max port count of 864
- Investment of ~$200k

New cluster management stack on Sapelo

- Currently evaluating stack components
  - Cluster provisioning & node config management
  - Resource monitoring & node/cluster health check
  - Queuing & scheduling
- Minimize impact on users
  - retain Torque/Moab
  - recognition of user accounts
  - recognition of existing scientific packages, libraries and compilers
  - same file systems, mount points and transfer nodes
- Development Cluster
  - Components delivered and physically installed
  - Waiting for network and cabling
  - Next - O/S being installed and configured

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XDMoD

- usage reporting environment
- Presents historical data from
  - Zcluster (since March 2012)
  - Sapelo (since Dec 2014)

- http://128.192.75.20:8080/
  - Only available on campus or VPN
- Exploring reporting capabilities
  - How public do we want them?

Aggregated group usage since 03/2012

simulphy 9,223,746.1
rmclab 6,967,407.1
1001 4,450,538.9
pcslab 4,149,415.6
mamlab 4,137,404.9
xqwlab 3,587,123.0
rlslab 3,578,704.4
ddlab 3,428,948.7
mblab 3,371,170.9
xynlab 2,083,800.7
All 209 others 28,237,781.5

73,216,042 core.hours = 8,358 core.years