Workshop: High-performance computing for economists

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Discussion of HPC

XSEDE presentation by Phil Blood, PSC (2012)

ECCO

http://www.vrdc.cornell.edu/ecco/

Clusters

What are clusters?

- http://www.rocksclusters.org/
- Torque Job Submission
- STAR Cluster
- Oracle (Sun) Grid Engine

Where are clusters?

- ► CAC Private Clusters [Rocks]
- ► XSEDE

Where can I get computers?

- ▶ Buy them (Dell, etc.)
- ▶ Buy a subscription: CAC RedCloud [Eucalyptus]
- ▶ Rent them: Amazon EC2 (STAR cluster)
- ▶ Steal them: Botnet with 450,000 computers
- ▶ Use free ones: CPU scavenging
  (HTCondorG, SETI@Home)

Getting access

...legally

- ► Apply for an account on ECCO
- ► Accounts on CAC general cluster no longer available
- ► Buy resources at Amazon
    - ► 750 hrs/month free for the first year if using Micro instances
    - ► 0.615GB , Very Low network performance
- ► Apply for an XSEDE account

Data management

Basics

Wrap-up