• What is a distributed system?

“A collection of independent computers that appears to its users as a single coherent system”

-A. Tanenbaum
Distributed Systems: Clusters, Grids, Clouds, and Supercomputers

An Overview of Distributed Systems

[GE08] “Cloud Computing and Grid Computing 360-Degree Compared”
A large-scale distributed computing paradigm driven by:
1. economies of scale
2. virtualization
3. dynamically-scalable resources
4. delivered on demand over the Internet

Clouds ~ hosting
What is exciting about this specialization?

Google Trends

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Distributed and Cloud Computing Specialization
Coursework

- CS 546 Parallel and Distributed Processing
- CS 550 Advanced Operating Systems
- CS 552 Distributed Real-Time Systems
- CS 553 Cloud Computing
- CS 570 Advanced Computer Architecture
- CS 595 Data-Intensive Distributed Computing
Faculty

- Xian-He Sun
- Zhiling Lan
- Shangping Ren
- Ioan Raicu
Employment Opportunities

- Google
- Yahoo
- Microsoft
- Amazon
- IBM
- Apple
- VMWare
- Netflix
- Cray
- Intel

- NVIDIA
- Facebook
- LinkedIn
- Salesforce.com
- Rackspace
- Red Hat
- Cleversafe
- UnivaUD
- Greenplum
- AsterData

- Proprietary Trading Companies
- Department of Energy Laboratories
- NASA
- Academic supercomputer centers
- Many more…
More Information

• More information:
  – http://www.cs.iit.edu/~iraicu/

• Contact:
  – iraicu@cs.iit.edu

• Questions?