CLOUD COMPUTING CONCEPTS

with Indranil Gupta (Indy)

INTRODUCTION TO CLOUDS

Lecture B

WHAT IS A CLOUD?

What is a Cloud?

- It's a cluster!
- It's a supercomputer!
- It's a datastore!
- It's Superman!

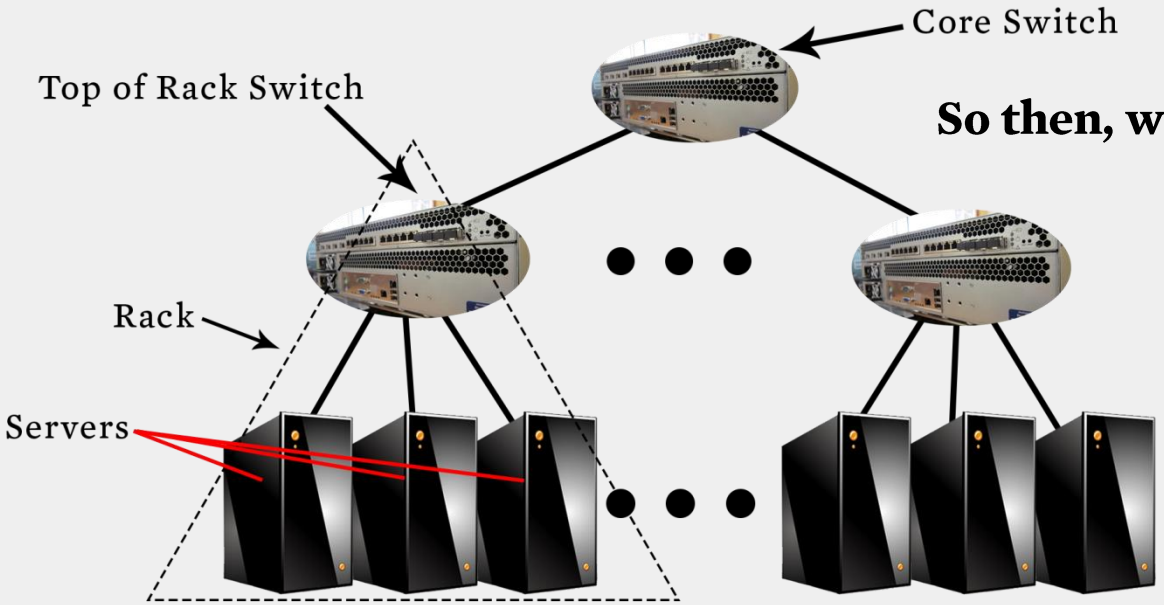
- None of the above
- All of the above

- Cloud = Lots of storage + compute cycles nearby

What is a Cloud?

- A single-site cloud (aka “datacenter”) consists of
  - Compute nodes (grouped into racks)
  - Switches, connecting the racks
  - A network topology, e.g., hierarchical
  - Storage (backend) nodes connected to the network
  - Front-end for submitting jobs and receiving client requests
  - Software services
- A geographically distributed cloud consists of
  - Multiple such sites
  - Each site perhaps with a different structure and services

A Sample Cloud Topology



So then, what is a cluster?