Basic Concepts

– **Public clouds** are owned by third-party providers.

– Users pay for using public cloud services such as storage, servers over the internet.

– In public cloud, user do not own the hardware or software, but they are allowed to use them which they have paid for.

– Examples:

• Microsoft Azure, Amazon AWS, Google Cloud

• Gmail, Yahoo

• Bank Of America Online Banking

– **A private cloud** is operated and used exclusively by individual business or organization.

– Private cloud can be physically located on the organizations datacenter.

– Companies also can pay third-party provides to host their private cloud.

– Private clouds are mainly accessed through internal network.

– Examples:

• WashU Supercomputing Center (CHPC)

– **Hybrid cloud** is a combination of private cloud & public cloud.

– Hybrid cloud is generally more flexible than private clouds since it allows users to move data and applications to move between private and public cloud.

Cloud Services are generally divided into:

– IaaS (Infrastructure as a service) - AWS EC2, Microsoft Azure, Google Computing Engine. (Rent IT infrastructures)

– PaaS (Platform as a service)-Google App Engine, AWS Elastic Beanstalk

– SaaS (Software as a service) -Google Maps, Microsoft Office

Advantages of Cloud Services : Cost, Global Scale, Speed, Productivity, Reliability.