Cloud Computing – Lecture 1

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Course Overview

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Introduction to Cloud Computing

Course Overview

Grading based on

- **Course work** 40%
  - Midterm 20%
  - Assignments / presentation / quizzes 20%

- **Final Exam** 60%

Introduction to Cloud Computing

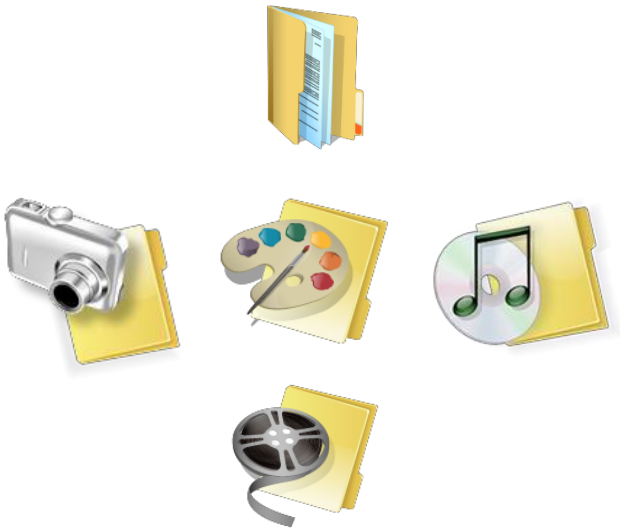
Definition

Cloud computing is the delivery of computing as a service rather than a product, whereby shared resources, software, and information are provided to computers and other devices as a metered service over a network (typically the Internet).

Wikipedia

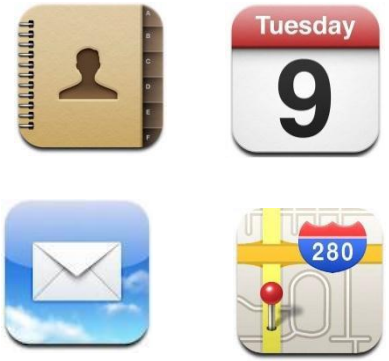
Introduction to Cloud Computing

Our Data Now…



Documents and Media

Personal Data



Emails, Calendars, Contacts, Location Information, etc…

Introduction to Cloud Computing

Using Diverse Interfaces & Devices

…and even appliances

Consumer

We also want to access, share and process our data from all of our devices, anytime, anywhere!

Introduction to Cloud Computing

How will you…

…work on documents?

…get your news & info?

and share media?

…navigate?

…communicate with friends and family?

…live in an intelligent home?

Topic 3: Introduction to Cloud Computing

How Will We Manage Our Data?

Manage it ourselves?	• Personal, but time consuming.
How would you get access to your data wherever you are?	• Would you keep it on your devices? • or would you keep it online?
What if it's managed by someone else?	• and you can get this "service" for free or with a subscription?

Introduction to Cloud Computing

A Cloud is …

- A data center hardware and software that the vendors use to offer the computing resources and services

Topic 3: Introduction to Cloud Computing

Cloud Computing

Cloud Computing is the delivery of computing as a service rather than a product,

whereby shared resources, software, and information are provided to computers and other devices,

as a metered service over a network.

Topic 3: Introduction to Cloud Computing

The promise of the Cloud

- Transformation of IT from a product to a service
- Revolutionizing for health care, financial systems, scientific research, and society

Introduction to Cloud Computing

Why Cloud Computing?

Pay-as-You-Go economic model

- Reduce capital expenditure
- No upfront cost
- Reduced Time to Market

Simplified IT management

- All you need is access to the internet.
- It's the providers responsibility to manage the details.

Scale quickly and effortlessly

- Resources can be rented and released as required
- Software Controlled
- Instant scalablility

Flexible options

- Configure software packages, instance types operating systems.
- Any software platform
- Access from any machine connected to the Internet

Resource Utilization is **improved**

- Reduce Idle resources by sharing and conolidation
- Better utilization of CPU / Storage and Bandwidth.

Carbon Footprint decreased

- Sharing of resources means less servers, less power and less emissions.