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REVIEW OF CLOUD SERVICE MODELS & CASE STUDY

Recall Cloud Computing Definition

- Formally, NIST defines cloud computing *as a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.*

Recall Characteristics (NIST)

- On-demand self-service
- Broad network access
- Resource pooling
- **Rapid elasticity**
- **Pay-per-use** measured service

Recall Cloud Service Models

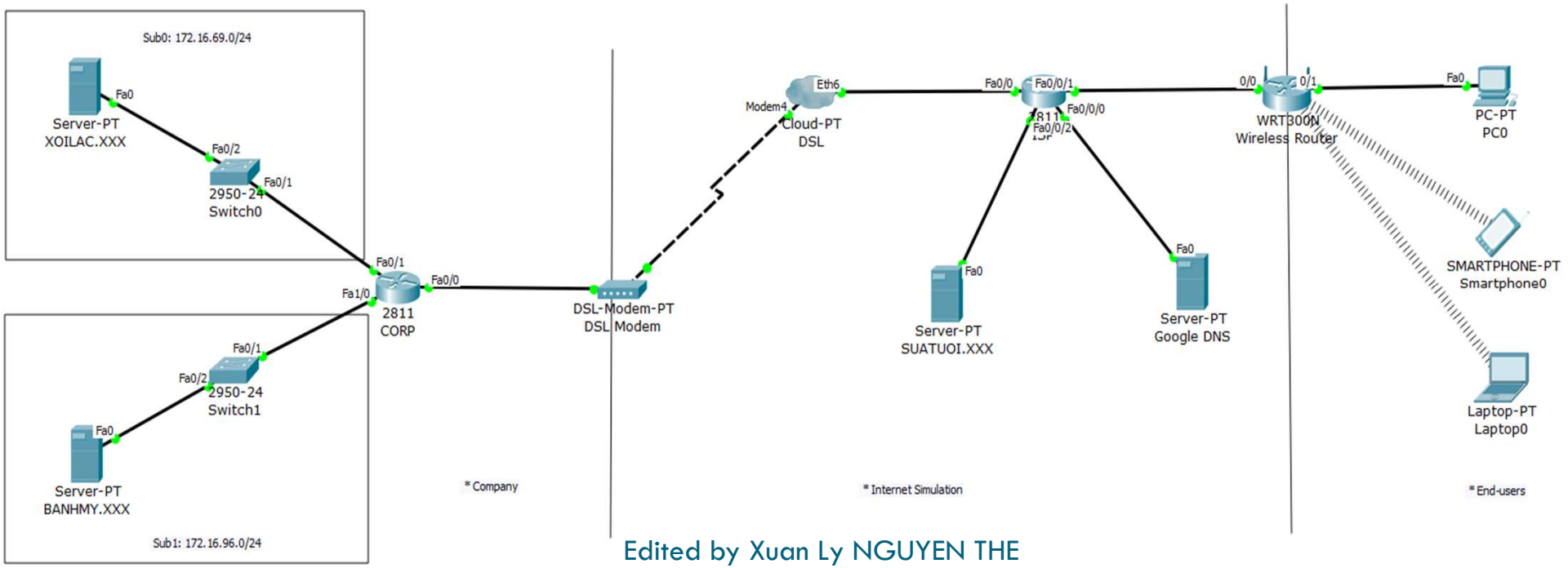
- IaaS:
  - IaaS vendors provide physical/virtual hardware (storage, processor(s), virtualization and network connectivity). E.g. : GoGrid, Amazon EC2 & Rackspace Cloud.
  - IaaS customers run, control and maintain operating systems (OS) and software applications of their choice.
- PaaS: IaaS plus specific OS/ server applications. E.g. : Google App Engine, Force.com, AWS Elastic Beanstalk and Microsoft Azure.
- SaaS: IaaS plus specific software suite. E.g. : Google Docs and Microsoft Office 365.

Case study
AWS IaaS vs. Normal Deployment

- Scenario:
  - The Banana company would like to deploy 2 web servers: xoilac.xxx & banhmy.xxx (already registered and DNS) located in 2 different subnets 172.16.69.0/24 & 172.16.96.0/24.
  - Both of them could access Internet freely but Internet users just only access web services provided by them via router internet gateway.
- Proposal Methods: Normal Deployment or AWS IaaS

Case study
AWS IaaS vs. Normal Deployment (cont.)

- How to normal Deployment and demonstration?
  - Buying, cabling and configuring devices.
- Pros and Cons: control everything but high cost, quite high failure rate (≥10%) due to Internet connection and power cut.



Case study
AWS IaaS vs. Normal Deployment (cont.)

- Deployment using AWS IaaS
- Pros and Cons:
  - registration and get free for12 months, especially, exploitation of rapid elasticity and pay-per-use.
  - Ultra low failure rate in terms of Internet connection & power cut (availability five nine, i.e. 99.999%)
  - Creating/ configuring virtual devices, subnets, OS and access keys via web console (friendly interfaces)
  - Just control selected services

Case study
AWS IaaS vs. Normal Deployment (cont.)

- How to AWS IaaS & demonstration
- Creating/ configuring network infrastructure:
  - Access AWS Console (Web Interface) using your account
  - Creating/ configuration Virtual Private Cloud (VPC). Simply put, virtual router corresponding to the geographical location.
  - Creating/ assigning IP for subnets in VPC
  - Creating/ attaching Internet Gateways to VPC
- Selecting/ configuring EC2 free instance (CPU, Storage, subnetwork & security)
- Connecting/ configuring instances using your SSH keys (on Linux/ Windows)

END

- Thanks for listening
- Questions & Answers