

ENCS 691K – Fall 2014
Cloud Networking and Service Provisioning
(Quiz #1)

Note: Please answer each question to the best of your understanding. No additional information will be provided during the quiz.

Question #1

- a. Cloud computing is a distinct paradigm because of the combination of 5 characteristics. Give 3 examples of these characteristics
- b. What is a virtual private cloud? What is its main drawback?

Question #2

Let us assume a RESTful conference service that allows a conference manager to carry out the following actions:

- Create a conference
- Terminate a conference
- Create a floor
- Terminate a floor
- Add participants to a conference
- Remove participants from a conference
- Grant floor to participants
- Remove floor from participants

Note: A floor is a temporary permission to access / use a shared resource in a given conference. Voice and video are examples of floor.

- c. Figure out the data set
- d. Split the data set into resources
- e. Name the resources with URIs

Question #3

- a. What is the key reason for which some CPUs cannot be fully virtualized?
- b. What are the two most commonly used techniques to virtualize CPUs that cannot be fully virtualized? Give an example of difference between the two techniques.
- c. Give an example of difference between virtual private network and network virtualization
- d. Give an example of difference between overlays and network virtualization

Question #4

- a. What is the main difference between Google Apps Engine and Cloud Foundry when it comes to the IaaS they use?
- b. What is auto-scaling in a PaaS?

Question #5

- a. How many conceptual layers does an IaaS have? Define each layer in one sentence.
- b. Define IaaS scalability in 1 sentence
- c. Define IaaS elasticity in 1 sentence
- d. When are 2 IaaS interoperable? When do they enable portability?
- e. What is the main difference between pre-copy live migration and post copy live migration?