1

Welcome to the Cloud

Homework Part 1

Last Name:

First Name:

Due Date: Friday September 4, 2015.

# Directions

For Test-Your-Understanding Questions

**You must do all in boldface**

~~You do not have to do those that are crossed out~~

You need to know others for the exam but need not do them as homework

You must do all End-of-Chapter Questions

Omitting any will result in a severe reduction in your homework grade

To answer a question part, place your cursor at the end of the question part and hit Enter

This will put you in the Answer style

# Netflix Dives Into the Amazon

Test Your Understanding

1. What is the significance of the Internet being depicted as a cloud?

2. a) What is the term we use in networking for any device that communicates over a network?

**b) Is your smartphone a host when you use it to surf the ‘Web?**

**c) Are you as a person a host when you use a network?**

3. a) How do application programs on different hosts communicate?

b) If I call you on your cellular phone, do I have to know your name? (Think about this a second.)

c) What do I have to know?

d) **What kind of addresses do hosts have on the Internet**?

e) **What kind of address is 128.171.17.13**?

4. a) What do we call the format 128.171.17.13?

**b) Convert the following binary IP address into dotted decimal notation (spaces are added for easier reading): 10000000 10101011 00010001 00001101. (Check Figure: 10000000 = 128**.)

**c) Convert 5.6.7.138 into a 32-bit IP address. (Check Figure: 5 = 00000101) Show a space between each 8-bit segment**.

d) What type of IP addresses is 32 bits long?

**e) What other type of IP address exists, and how long are its addresses**?

5. **a) Is the Internet a single network? Explain**.

b) What is the role of ISPs?

c) When do you capitalize *internet*?

d) Who owns the Internet?

e) Who controls the Internet?

f) Who funds the Internet?

6. a) List Netflix’s content delivery requirements.

**b) How does Netflix use AWS**?

**c) How does the Open Connect CDN reduce streaming delays to customers**?

**d) Who owns the Open Connect appliances? (The answer is not explicitly in the text**.)

7. **a) Distinguish between physical servers and virtual machines**.

b) What can be done with virtual machines that would be difficult to do with physical servers?

**c) What are the two advantages of self-service applications that allow Netflix and other customers to add new instances of VMs, spin down VMs when they are not needed, and do many other server management tasks**?

8. a) What is a CSP? (Do not just spell out the acronym).

**b) Distinguish between IaaS CSPs and SaaS CSPs**.

**c) Is AWS an IaaS or a SaaS for Netflix**?

d**) Is Google an IaaS or a SaaS for Netflix**?

**e) Who owns and manages the servers in IaaSs and SaaSs**?

f**) Who owns and manages the applications in IaaSs and SaaSs**?

**g) In AWS, what does Netflix manage and not manage**?

9. a) List the benefits of using a cloud service provider for personal office services.

b) How do cloud-based office software services go beyond serving individuals?

10. **What concerns do customers have about cloud security**?

11. **Describe the stresses that cloud computing puts on networking**.