**Group Project**

**Total Points: 60**

Cloud computing offers a way of delivering computing resources instantly, on-demand and with less cost. Cloud computing attracts companies of different sizes. Citrix Cloud is a platform that hosts and administers Citrix Services. Using Citrix, we can create, manage, and deploy workspaces with apps and data for the end-users from a single console. Resource locations contain resources required to deliver services for the end-users. Resource locations use cloud connectors to interact with Citrix Cloud. XenApp and XenDesktop are two of the available products that are provided by the Citrix Cloud system. To setup the two products, you need to configure a network.

**Part-A: Overview Diagram and Use Case Diagram (10 points)**

For the Citrix cloud architecture described above: **(5+5) =10**

1. Design a landscape map that will include all the products and functions provided the cloud platform. The diagram should also include the application components that are needed to design the products and functions provided by the cloud platform
2. Design a use case diagram that will have at least 7-use cases

**Part-B: Designing the Technology Layer (25 points)**

Here, we want to create a technology layer for the cloud system. The technology layer must show the followings:

i) **Service Layer:** It will include the services provided by each of the devices in the network. *In figure-1, you can see Claim files Service is realized by the mainframe computer*. So, your design must show the services like this

ii) For each device, mention at least one function as shown in figure-1. *In the figure, you can see **Data Storage** is a function provided by the zSeries mainframe.*

iii) Your design also needs to include passive objects as shown in figure-1. In the figure, *Database tables* is a passive object

*[N.B., I have included this figure just to show you an example, this figure is not related to the project]*

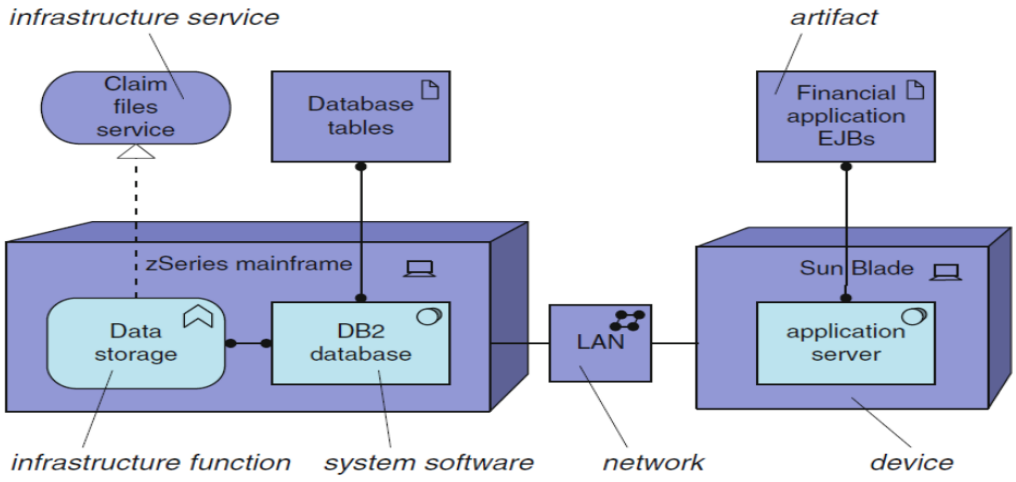


**Figure-1**

**You need to configure a computer network similar to figure-2.**

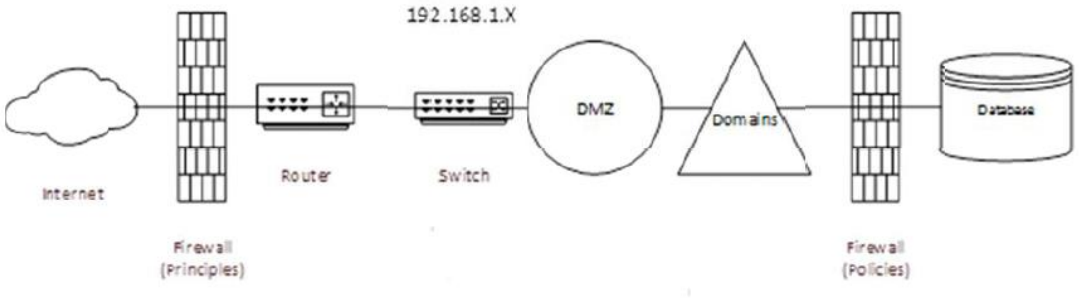


**Figure-2**

Here are the devices you need to include in the network. You need to include:

a) major components such as the Internet, Firewall(s), DMZ, Domain Name Server and the back-end server block like figure-2
b) at least 5 servers within the DMZ
c) at least 5 back end databases or servers

The behavioral component must include the followings:

d) For each of the devices, identify at least one function (similar to figure-1) that will be done by the device.
e) The service bus of the technology layer must show at least **5** services that will be provided by the technology layer to the application layer

Use **ArchiMate** to design the technology layer based on the explanation above and the diagram should have:

**B1:** Service layer **(5 Points)**

**B2:** Passive Objects **(5 Points)**

**B3:** Active components/devices. Each device must include at least one function. Placement of the devices should follow figure-2. **5 + 5 + 5 = 15 points**

**B4:** To design the diagram, make sure you are using all the symbols and notations properly **(5 Points)**

## Part-C: Designing the Application Layer (10 Points)

Include a SaaS building block that is connected to the Application Development Server Node in the Technology layer. SaaS provides service for office applications, messaging software, CRM, MIS. Your design should show the active, behavioral and passive components as done in ArchiMate application layer.

## Part-D: Designing BPMN Diagram (15 Points)

1. Use your own idea to design a BPMN for the Citrix system for the following task: **7 points**

"A user uses the Citrix cloud service to use the software 'Enterprise Architect'" Over here you need to include the steps like invoking the portal, entering user's credentials, login (successful/unsuccessful) etc. Make sure you are using the gateways properly.

2. Design a BPMN diagram, for a cloud service purchase done by a customer. The process must start from searching the service, once a service is selected the user needs to create an account (if the user is a new user) on the service provider's website. Then the user uses a valid payment method (only visa/ Mastercard is accepted) to purchase the service/subscription. After a successful payment the user is able to use the service and if the user is a new user, a free subscription to another service is given by the provider. **8 points**

**Submission:**

***One group member from each group should upload the project files to D2L.***

**Please submit the following files:**

i) **Include a word/text file to list all the group members name and ID (mandatory)**
ii) **For Part-A: 2 pdf/jpg files**
iii) **For Part-B: 1/2 pdf/jpg file**
iv) **For Part-C: 1 pdf/jpg file**
v) **For Part-D: 2 pdf/jpg files**

**Failure to follow the submission instruction will get a deduction of 5-marks.**

Late submission will not be accepted.

Best of luck

Debashish