Part I

1. What are cloud-deployment models (Cloud Types) provided by each Cloud provider?

Amazon Web Services: Public Cloud.

Rackspace: Private and Public Cloud services are offered.

Windows Cloud: Public Cloud.

Google Cloud: Public Cloud.

Salesforces Cloud: Community Cloud connecting customers, partners, and employees.

2. What are cloud-delivery models offered by each Cloud provider?

Amazon Web Services: IaaS, PaaS.

Rackspace: Paas, IaaS, IaaS.

Windows Cloud: Saas (SharePoint Server, Exchange Server and Lync Server), Paas (Windows Azure, Sql Azure, NAPA), IaaS (Windows Azure VMs and Networks, Storage).

Google Cloud: SaaS (Prediction API, Translate API) , PaaS (App Engine), IaaS (Compute Engine)

Salesforces Cloud: SaaS.

3. What do you have to consider to virtualise your data centre? List services that support this process from Cloud providers above.

The first element to be considered is based on the architecture itself, depending on the application taken into account. It must be questioned if the applications can be deployed in a manner that it can be virtualized. In case of the applications being compatible with virtualization items as cost (cloud-based solutions eliminates cost with energy, employees, air-conditioning), risk of losing data (random accidents, human failure or hardware failure), and scalability (processing, storage) are advantages that should take into account. In the other hand, there are factors as privacy of data that cannot be guaranteed anymore.

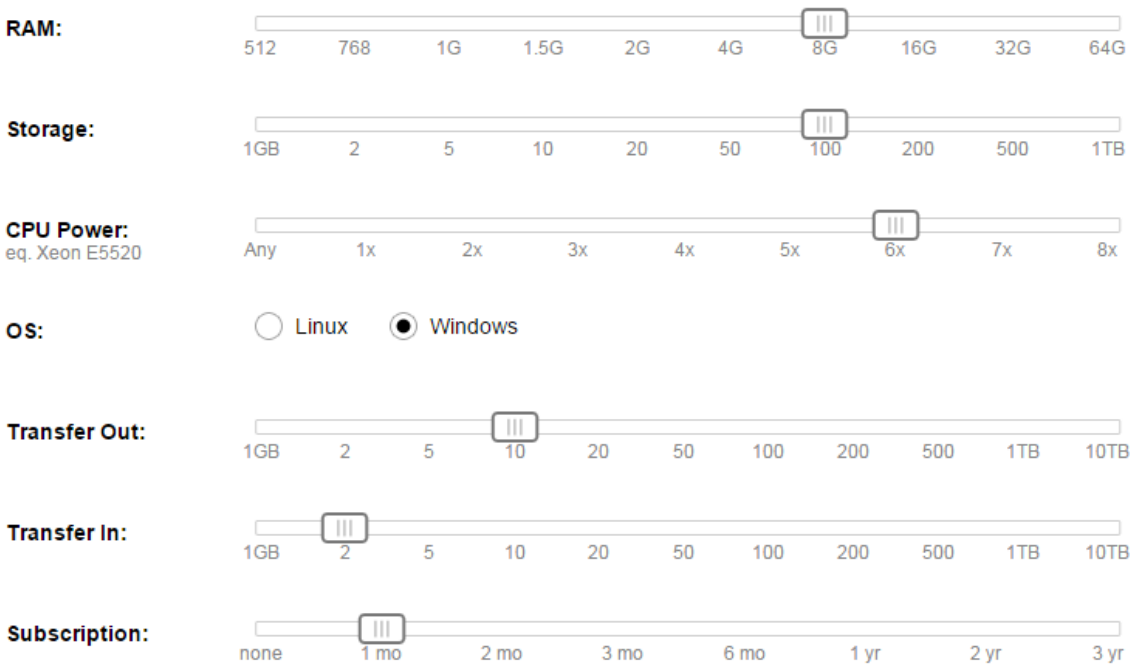
A simple list of services of major cloud provides are:

Storage Services: Azure SQL Server Database, Amazon Relational Database Service (Amazon RDS).

Processing Services: Google Compute Engine, AWS High Performance Computing.

Application Services: Google Analytics, Amazon Digital Media, Salesforce Sales Cloud.

4. Compare the cost of using different cloud services from Amazon Web Services, Google Cloud and Windows Cloud.



Extracted from: https://www.cloudorado.com/cloud_server_comparison.jsp

5. If you want to develop an application on the Cloud, which Cloud providers you choose? Why?

I would choose Google Cloud. The main reasons is the cost, Google offers a free quota and one of the better prices for apps that require additional storage and support. If you pass the free quota, you can control the maximum cost per day for each application associated with your account. Developing, once an app is built, it can simply be upload and Google will

manage the serving and scaling. Storage, Google provides data storage through the Google App Engine Datastore, Google Cloud SQL and Google Cloud Storage, which allows you to only pay for the resources that are used.

PART II

1. What is OpenStack? What is Xen Project?

OpenStack is a free and open-source cloud computing software platform. Users primarily deploy it as an infrastructure as a service (IaaS) solution. The technology consists of a series of interrelated projects that control pools of processing, storage, and networking resources throughout a data center—which users manage through a web-based dashboard,command-line tools, or a REST ful API. OpenStack.org released it under the terms of the Apache License. (Wikipedia)

Xen Project software is an open source virtualization platform with a similar governance structure to the Linux kernel. Designed from the start for cloud computing, the Project has more than a decade of development and is being used by more than 10 million users. A Collaborative Project at The Linux Foundation, the Xen Project community is focused on advancing virtualization in a number of different commercial and open source applications including server virtualization, Infrastructure as a Services (IaaS), desktop virtualization, security applications, embedded and hardware appliances. (xenproject.org)