**ASSIGNMENT # 2**

**VIRTUALIZATION & CLOUD COMPUTING**

## What are compute Services in other cloud providers?

**GOOGLE CLOUD PLATFORM:**

Google Cloud Platform is essentially a public cloud-based machine whose services are delivered to customers on an as-you-go basis, by way of service components.

* A public cloud lets you leverage its resources to empower the applications you build, as well as to reach a broader base of customers.
* Although Google does offer a virtual machine hosting service similar to, and competitive with, [Amazon Web Services](https://www.zdnet.com/article/amazon-aws-everything-you-should-know-about-the-largest-cloud-provider/), its primary service model is based around the development and deployment of more modern, containerized applications.
* GCP's strategy for competing on price is to offer discounts for sustained use, for customized use, and for committed use.
* The targeted core user for GCP at present appears to be the business -- small, medium, or large -- that is well into its journey to modern application models, and needs a more cost-effective and efficient means of deploying them.
* Even [Apple uses Google Cloud Platform](https://www.cnbc.com/2018/02/26/apple-confirms-it-uses-google-cloud-for-icloud.html) for data storage for its iCloud services. And most recently, [GitLab](https://venturebeat.com/2018/04/06/why-and-how-gitlab-abandoned-microsoft-azure-for-google-cloud/" \t "_blank) and [Twitter](https://cloud.google.com/twitter/) moved to Google Cloud.

**SERVICES OF GOOGLE CLOUD PLATFORM:**

Cloud services are difficult to understand in the abstract. So to help you comprehend Google Cloud Platform more explicitly, here are the major services that GCP operates:

1. [Google Compute Engine (GCE)](https://cloud.google.com/compute/) competes directly against the service that put Amazon Web Services on the map: hosting virtual machines (VMs, servers that exist entirely as software).
2. [Google Kubernetes Engine](https://cloud.google.com/kubernetes-engine/) (GKE, formerly Google Container Engine) is a platform for a more modern form of containerized application (housed in what are often still called "Docker containers"), which is engineered for deployment on cloud platforms.
3. [Google App Engine](https://cloud.google.com/appengine/) provides software developers with tools and languages such as Python, PHP, and now even Microsoft's .NET languages, for building and deploying a web application directly on Google's cloud. This is different from building the application locally and deploying it remotely on the cloud; this is "cloud-native" development: building, deploying, and evolving the application all remotely.
4. [Google Cloud Storage](https://cloud.google.com/storage/) is GCP's object data store, meaning it accepts any quantity of data and represents that data to its user in whatever manner is most useful -- for example, as files, a database, a data stream, an unordered list of data, or as multimedia.

**VMware:**

VMware is a universal leader in virtualization and Cloud Infrastructure.

* VMware’s cloud computing is exclusive and helps in reducing the IT intricacy, lower the expenses, provides flexible agile services.
* VMware vCloud Air is a safe and protected public cloud platform that offers networking, storage, disaster recovery, and computing.
* VMware’s Cloud solutions facilitate to maximize your organization’s profits of cloud computing by combining the services, technologies, guidance needed to operate and manage the staff.

### **Oracle Cloud:**

* Oracle Cloud is available as SaaS, PaaS, and IaaS. Oracle Cloud helps the companies in transforming their business quickness and reducing the IT Complexity.
* Oracle Cloud SaaS provides a complete data-driven and secure cloud environment.
* Oracle Cloud PaaS helps IT Enterprises and Independent developers to develop, connect, secure and share data across the applications.
* Oracle Cloud IaaS is a broad set of subscription-based and integrated services that help to run any kind of workload of an Enterprise.

### **SAP:**

### SAP Cloud Platform is an enterprise service with wide-ranging services required for application development.

* SAP is considered as the best cloud provider as it has powerful business networks, cloud collaboration, and advanced IT security.
* SAP has a universal foundation named SAP HANA for all its cloud services.
* SAP Cloud Platform is modernizing the working style of enterprises on the iPhone and iPad.

### **DROPBOX**:

* Dropbox is a refined cloud storage service used by small businesses and customers to store files or documents virtually on remote cloud servers.
* Generally, Dropbox serves as an online or cloud personal hard drive.
* Dropbox allows its users to access any saved data or content from any device through an internet connection.
* Dropbox is available as a desktop app, where users can download it and save the files directly in the Dropbox folder located on your desktop.

### **EGNYTE:**

* Egnyte provides a hybrid cloud way out that combines the cloud storage along with local storage of the accessible infrastructure.
* Using Egnyte one can upload the file of any size and any type.
* One can customize their unique Egnyte domain to replicate their brand by implementing their personal logo on the interface and note headers of Egnyte.
* Egnyte’s Cloud service provides an automatic syncing feature that guarantees that one can access the inaccessible data from any internet connection.

#### **IBM:**

IBM, Salesforce, Oracle, and Google are battling it out for the third position as the best enterprise cloud. IBM Cloud is a suite of cloud computing services from IBM that offers both [platform as a service (PaaS)](https://searchcloudcomputing.techtarget.com/definition/Platform-as-a-Service-PaaS) and [infrastructure as a service (IaaS)](https://searchcloudcomputing.techtarget.com/definition/Infrastructure-as-a-Service-IaaS).

With IBM Cloud IaaS, organizations can deploy and access virtualized IT resources -- such as compute power, storage and networking -- over the internet. For compute, organizations can choose between bare-metal or virtual servers.

With IBM Cloud PaaS -- which is based on the open source cloud platform [Cloud Foundry](https://searchcloudcomputing.techtarget.com/definition/Cloud-Foundry) -- developers can use IBM services to create, manage, run and deploy various types of applications for the public cloud, as well as for local or on-premises environments. IBM Cloud supports various programming languages, such as Java, Node.js, PHP and Python and  extends to support other languages.

The IBM Cloud Catalog lists over 170 services across categories, including:

* Compute -- Offers various compute resources, including bare-metal servers, virtual servers, serverless computing and containers, on which enterprises can host their workloads;
* Network -- Provides cloud networking services, such as a load balancer, a content delivery network ([CDN](https://searchnetworking.techtarget.com/definition/CDN-content-delivery-network)), virtual private network (VPN) tunnels and firewalls;
* Storage -- Offers object, block and file storage for cloud data;
* Management -- Provides tools to manage and monitor cloud deployments, such as those for log analysis, automation and Infrastructure as Code ([IaC](https://searchitoperations.techtarget.com/definition/Infrastructure-as-Code-IAC));
* Security -- Includes services for activity tracking, identity and access management and authentication;
* Data management -- Provides SQL and NoSQL databases, as well as data querying and migration tools;
* Analytics -- Offers data science tools such as [Apache Spark](https://searchdatamanagement.techtarget.com/definition/Apache-Spark), Apache Hadoop and IBM Watson Machine Learning, as well as analytics services for streaming data;
* Artificial Intelligence (AI) -- Uses IBM Watson to deliver services such as machine learning, natural language processing and visual recognition;
* [Internet of things (IoT)](https://internetofthingsagenda.techtarget.com/definition/Internet-of-Things-IoT) -- Includes the IBM IoT Platform, which provides services that connect and manage IoT devices, and analyzes the data they produce;
* Mobile -- Enables a development team to build and monitor mobile applications and their back-end components;
* Developer tools -- Includes a command-line interface (CLI), as well as a set of tools for continuous delivery, continuous release and application pipelines;
* [Blockchain](https://searchcio.techtarget.com/definition/blockchain) -- Provides IBM's Blockchain Platform, a software-as-a-service offering to develop apps, enforce governance and monitor a Blockchain network;
* Integration -- Offers services to integrate cloud and on-premises systems, or various applications, such as API Connect, App Connect and IBM Secure Gateway;
* Migration -- Provides tools to migrate apps to the cloud, such as IBM Lift CLI and Cloud Mass Data Migration;
* [VMware](https://searchvmware.techtarget.com/definition/VMware) -- Enables the migration of VMware workloads into the cloud.

### **ADOBE:**

### Adobe offers many products that provide cloud services. Few among them are Adobe Creative Cloud, Adobe Experience Cloud, and Adobe Document Cloud.

* Adobe Creative Cloud service is a SaaS, that offers its users to access the tools offered by Adobe like editing the videos, photography, graphic designing.
* Adobe Experience Cloud offers its users to access a broad set of solutions for advertising, building campaigns and gaining intelligence on business.
* Adobe Document Cloud is a complete solution for digital documentation.

## What about the other services?

While Creative Cloud is Adobe’s most prominent line of business, it’s only part of the company’s offering. The acquisition of Marketo in September of 2018 allowed Adobe to beef up its marketing and commerce verticals. As part of its Experience cloud, it offers a number of services that run on Azure since March 2017 and signed a strategic partnership with Microsoft to make it its preferred cloud platform.

**RACKSPACE:**

Rackspace Cloud offers a set of cloud computing services like hosting web applications, Cloud Files, Cloud Block Storage, Cloud Backup, Databases and Cloud Servers.

* Rackspace Cloud Block Storage uses a combination of solid-state drives and hard drives to deliver high performance.
* Rackspace Cloud Backup uses compression and encryption techniques and provides file-level backups with low cost.
* Customers using Rackspace Cloud services are charged based on their usage.