Cloud Computing

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20181A0208

Assignment - 02

Q1) What is Amazon S3 service and explain the different components and its behaviour.

Ans) Amazon S3 ->

Amazon Simple storage service [Amazon S3] is storage for internet. It is designed to make web-scale computing easier.

It has a simple web-service interface that you can use to store and retrieve any amount of data at any time.

The service aims to maximize benefits of scale & to pass those benefits on to developers.

Components of AWS ->

1. Amazon cluster: Also known as Amazon account AWS has the main computer service EC2 & EU3 Administrators and system developers use the EC2 instances to maintain and run the cloud computing. For smaller human interventions & fault tolerance. AWS ELB distributes applications in all cases of EC2. ELB is free of charge in EC2 of data processing 2750 hrs of montly service for one year.

2. Storage - The S3 service from Amazon, EBS and cloud front are three Amazon storage options. storage in AWS is guaranteed by the pay-per-use model. It is an AWS storage offering which can store any amount of storage content required It is used for several reason such as storing content, backing, archieving & recovering an accident, as well as storing data.

3. Databases - Along with caching and data storage in the AWS petabyte area, the relational ladder and No SQL database are also included. The Relational Database service [RDS] and Amazon Red shift are two AWS databases. Amazon RDS is used to manage & expand my SQL, oracle, SQL server.

4. Manggement & Security - The AWS directory service directly connects AWS clouds to local locations. It controls the cloud resources for AWS

5. Networks - Amazon VPC provides versatile network performance in AWS which means it prove integrated security & a private cloud.

6. Analytics - AWS provides data analysis services in all areas such as Hadoop, archestration and data trasmission and real time storage.

7. Application Services - Amazon SQS is used to automate the workflow between services. There is a special queue used to store messages.

8. Implementation & Management - Elastic Beanstalk uses Java, .NET, PHP, Node.js, Python and Ruby to implement and measure web applications.

9. Mobile Services. Amazon Cognito & mobile analytics are two popular mobile AWS services. Cognito users synchronize the data on their mobile devices.

Q2. What is VMware Vcloud suite and explain the different components of vcloud suite.

Ans. VMware Vcloud suite is a integrated collection of VMware software products for building private cloud infrastructure.

VMware Vcloud suite features components for cloud services provising, cloud services monitoring & cloud services chargeback or showback. Vcloud suite, which feature a self service portal, IT service catalog & Policy engine, comes in standard, Advanced and enterprise versions.

V cloud Suite is composed of →

→ Vsphere. It provides a virtualization platform

→ V center site Recovery manager - It provides automated disaster recovery.

→ Vcloud Network and security. It includes firewall, VPN, DHCP, NAT and other network function for a Virtualized compute environment.

→ Vcloud Automation Center - It facilitates self-service cloud service provisioning

→ V center operations Management suite. It provides a visual representation of the infrastructure is health, security risk and efficiency.

→ Vcloud Director - It manages infrastructure as a service [IaaS] architectures by monitoring and controlling various cloud-computing components such as security, virtual machine (VM) provisioning billing & self service access

Q3. Explain the key differences between Amazon EC2 and VMware Vcloud Express.

Ans) 1. Target Audiences - EC2 is designed for single accounts and Vcloud Express is designed for enterprise, SMBs and single user accounts.

2. Concept Model - Vcloud APIs include a set of APIs to manage the inventory structures & users which you don't need in EC2. Vcloud APIs consists of two set of APIs user level API & an administration API.

3. VM group - EC2 can manage only one VM, Vcloud can manage a group of VMs called Vapp as a solution.

4. Flexibility - EC2 predefines seven types of configurations with memory, storage, IO capability combined, Vcloud relies on the OVF open standard and can have as many as a user wants.

5. Persistency - EC2 instances don't persist after powering off where as Vcloud Vapp persist despite the power state change.

6. openness - EC2 is a proprietary API while Vcloud has been submitted to DMTF with other industry leaders.

Q4) What is SQL Azure and how it is different than the Amazon S3 service.

Ans) Azure SQL :

It is a family of managed, secure and intelligent product that use the SQL server database engine in the Azure cloud.

- Azure SQL Database : support modern cloud apps on an intelligent, managed database service that includes serverless compute.
- SQL server on Azure VMs - Lift & shift your SQL sower workloads with ease & maintain 100% SQL Server compatibility & os level access.

The basis of Comparison	AWS	Azure.
1. Storage	AWS uses S3 which is longest running then Azure it provides lots of documentation & tutorials. It offers archieve storage by a glacier data archiver & S3 infrequent access.	Azure uses storage block which are comprised of blocks and uploads large blobs efficiently. It uses storage cool & storage archieving data.

→ Amazon S3 belongs to cloud storage category of the tech stack, while Microsoft Azure can be primarily classified under cloud hosting.

→ Amazon S3 is reliable, scalable & cheap whereas Azure SQL scales well & quite easy. can used net or open source tools and is startup friendly.

Qs. Write short Notes on →

(1) Factors for successful cloud deployment →

A ~~due~~ new due deligence process will be required. Explore your options look beyond marketing, explore their development roadmaps, contingency plans & get clients reference. Talk to cloud firms about how they source data centers & how they manage code & do release.

→ Expect to pay more attention to security as it is a primary concern for stake holders. Acknowledge concerns as the cloud is a new technology for many. Everyone should be comfortable that the cloud vendor can really mitigate risk.

→ Plan to spend more time helping the business adjust to the new technology.

(II) Azure AppFabric-

→ Azure appfabric provides a comprehensive cloud middle ware platform for developing, deploying & managing apps on windows Azure platform

→ It also enables bridging your existing applications to the cloud through secure connectivity across network and geographic boundaries & by providing a consistent development model to both windows Azure & Window Server.

Importan Services

- Service Bus
- Access Control
- Composite
- Caching
- Integration
- application

(III) Google App engine-

It is a service for developing & hosting webapps in google's data centers. belonging to Paas category of cloud computing.

→ Readily available servers with no config. requirement.

→ when usage is minimal Power scaling is free.

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201810208