Assignment, Course: -Cloud Computing

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Q1)Explain in detail Service Oriented Architecture (SOA) in cloud computing.

- Ans) Service Oriented Architecture is a software design in which by application components , services are present to the further unit. Over a communion protocol through a network . The principles of SOA are self-reliant of high tech and vendors . Different networking and message protocols are written proving SOA's client and factor and are used to interact with one another.

- Following are the Principles of SOA

- 1)Standardized Service Contract : In standardized service contract a service have lots of description which explain the service . It makes the service easier for client application to get the point .

- 2)Loose Coupling: Limited dependency on one another it is an essential distinctive of web service which describe as limited dependency as achievable

- within the client request and service web , so if the function of the service change at each point in extent , it will not finish off the client application .

- 3)Service Abstraction : This type of service keep secret the logic which they cover away from the world . The execution of the function of service will not be disclose.

- 4)Service Autonomy: Service will have complete control about the logic which they cover . The service should have acknowledge about functionality it provide and have full control about the code which they contains.

- 5)Service Reusability : Logic is apart into service for resolved of maximize reuse. In development company the reuse of code is a huge topic because no one want to consume time and money for creating same code again and again for applications . Hence formerly when the code is written for the web service it will have the ability to work for various application.

Q2)Explain in detail prominent security threats to the cloud computing.

- Following are the prominent security threats to the Cloud Computing

- 1)Malicious Attacks &Abuse

- Official user or hackers are possibly abuse and attack cloud storage for forbidden activities . This is include sweep of copyright materials , malware, pirated software and viruses. This type of threats accur when somebody straightly attack beyond the cloud service's resources .

- Cloud resources are also attacked by malware junction which is a big threat now a days . In this type of threats the hackers gain the hidden venomous code.

- 2)Insider Threats

- The company employees misuses or attack the data may look low-risk instead of insider threats which is actual real. This type of threats affect meaningful data such as financial information or customer.

- 3)Data loss
- Unaware of the data storage, the loss of data forever is a big problem , the loss of data effect operationally , financially and also to loss the data legally effect to gain compliance policies.
- Malicious Attacks threats; technical failure natural disaster and accidental erasure of the data are all induce cloud-based service in the similarly way of an internal infrastructure.
- Cloud provider is not responsible for avoiding over data loss . If your organization lost relevant key the data is useless
- 4)Data Breaches
- Threats of data breaches have no interest in data storage either it is store on cloud or internally . Cloud services which is more important to hijacking and the potential attacks of data because of newly process of attacks like Man-in-the-cloud .For security system we should execute cloud provider to over come the risk factor of data breaches we must remember that we are eventually liable of organization's data for security and a breaches may have a huge impact on rightful and financial results.

Q3)Explain in detail Cloud Infrastructure Mechanisms.

• The following are some of the cloud infrastructure . Virtual servers , the cloud storage device , logical network perimeter ready made environment ,

• The resource replications and the cloud usage monitor.

• 1)Consistent Network Perimeter: These are whereby there is the isolation of the network environment from the other communication networks. The logical interface will be able to establish the boundary that is virtually and also can be able to transform the group of the IT Resource such are physically distributed.

• 2)Virtual Server: The specific are the skills of the virtualization it limit the actual physical server that are in the large firm of the virtualization , the particular are usually used by the physical server providers of the cloud and then share the server (that is physical) to the consumers that use the cloud services .

- 3)Cloud Storage Devices: These are designed are used in cloud computing for the provision of storage services,

- This storage device can also be virtualized just like a physical server.

- 4)Resource Replication: Explained as the design of multiple example of the alike IT resource , replication is normally carry out when on IT resource availability and performance need to be enhanced customized by a cloud consumer.

- The particular environments are utilized by cloud consumers to remotely come about and use their own services and applications inside a cloud , typical ready-made environments include pre-installed IT resource , such as database , middleware development tools , and government tools.

- A ready made environment is usually provided with a absolute software development kit (SDK) that give cloud consumers with programmetic entry to the development technologies

- 5)Cloud Usage Monitor: Cloud usage monitor is a mechanism is a lightweight and is free software program is in charge for collecting and processing IT resource usage data .

- Clouds usage monitor can be exist in different formats.