

Q1 How can you make a system fault tolerant?

Ans Fault-tolerance is the property that enables a system to continue operating properly in the event of the failure of some of its components.

In many applications, where computers are used, outages or ~~malfunctions~~ malfunctions can be expensive or even disastrous. In that case the system must handle the failures but such systems are hardly ever perfect.

There are countless ways in which a system can fail. To make it fault tolerant, we need to identify potential failures, which a system might encounter, and design counteractions. Each failure's frequency & impact on the system need to be ~~be~~ estimated to decide which

Q2 How can you develop your own IT department using the three Service Models?

Ans. Once you use cloud service models SaaS, IaaS, PaaS, you can leverage its wider possibilities to bring the flexibility & efficiency that pushes your business growth.

An application development in cloud computing provides an extensive, flexibility & affordable way to implement cloud service models.

* SaaS.

SaaS or software as a service is a model that gives quick access to cloud based web applications. The vendor controls the entire computing stack which you can access using a web browser. The applications run on the cloud, you can use them paid licensed or for free with limited access.

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one system should tolerate.

- * Program experiences an unrecoverable error & crash (unhandled exceptions, expired certificates, memory leaks).
- * Component become unavailable (power outage, loss of connectivity).
- * Data corruption or loss (hardware failure, malicious attack).
- * Security (a component is compromised).
- * Performance (an increased latency, traffic, demand).

Q3 Give some examples of platform as a service (PaaS).

Ans

EXAMPLES OF PaaS.

The examples of PaaS includes.

- AWS Elastic Beanstalk.
- Windows Azure.
- Heroku.
- Force.com
- Google App Engine.
- OpenShift:

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IaaS.

IaaS or infrastructure as a service is basically a virtual Provision of computing resources over the cloud. An IaaS cloud provider can give you the entire range of computing infrastructure such as storage, servers, networking hardware alongside maintenance & support.

PaaS.

Platform as a service or PaaS is essentially a cloud base where you can develop, test & organize the different application for your business. Implementing PaaS simplifies the process of enterprise software development. The virtual run time environment provided by PaaS gives favorable space for developing and testing app.

LOOSE COUPLING:

Service minimize dependencies on each other.

Create specific types of relationship with in outside of service boundaries.

ABSTRACTION:

Service hide the logic they encapsulate from the outside world.

Avoid the proliferation of unnecessary services information, meta-data.

AUTONOMY:

Service should have control over the logic they encapsulate.

Represents the ability of service to carry out its independently of outside influences.

Q₃ What are the characteristics of Utility computing SOA + SLA.

SOA CHARACTERISTICS:

- Standardized service contracts.
- Loose coupling
- Abstraction
- Autonomy.
- Composability.

STANDARDIZED SERVICE CONTRACT:

Services adhere a service-description
Services use service contract to
Express their purpose.
Express their capability.
Use formal, standardized service contracts.

ENHANCED CUSTOMER SATISFACTION LEVEL:

A clearly & concisely defined SLA increases the customer satisfaction level as it helps providers to focus on the customers requirement & ensures that the effort is put on the right direction.

IMPROVED SERVICE QUALITY:

Each item in an SLA corresponds to a key performance indicator that specifies the customer service within internal organisation.

IMPROVE RELATIONSHIP b/w TWO PARTIES:

A clearly SLA indicates the reward & penalty policies of a services provision. The ~~customer~~ consumer can monitor services according to service level-objective specified in SLA.

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COMPOSABILITY:

Services break big problems into little problems.

Related to reusability principle service execution should be efficient in that individual processing should be highly tuned.

SLA CHARACTERISTICS:

SLA are used to identify parties who engage in the electronic business, computation & outside processes & to specify the minimum expectations & obligations that exist between parties. The most concise SLA includes both general & technical specifications including business parties, pricing & property of resources required to process the service.