Unit 4 QB: -

1. Give the definition of provisioning. Explain the benefits, long-term and short-time goals of provisioning in cloud management.

Provisioning

- Is a service that uses a group of compliant services called **solution realization.**
- Is a broad base service that begins with a Request For Service to build environment for hosting an app, DB, etc.
- It can be invoked to modify an existing environment
- Provisioned environment include development, test, disaster recovery.
- Output from provisioning is
  - Configured and tested environment
  - With appropriate h/w platform, storage, n/w, OS, middleware, backup capability, monitoring capability and with the app installed per requirements.

Benefits

- Supports the ability to deliver to service levels
- Enables eliminating delays to continuously provision
- Isolation of build, install, configure and customize tasks from h/w setup activities
- Facilitates automation of piece parts of the process in an incremental approach to self service

Long-Term Goals

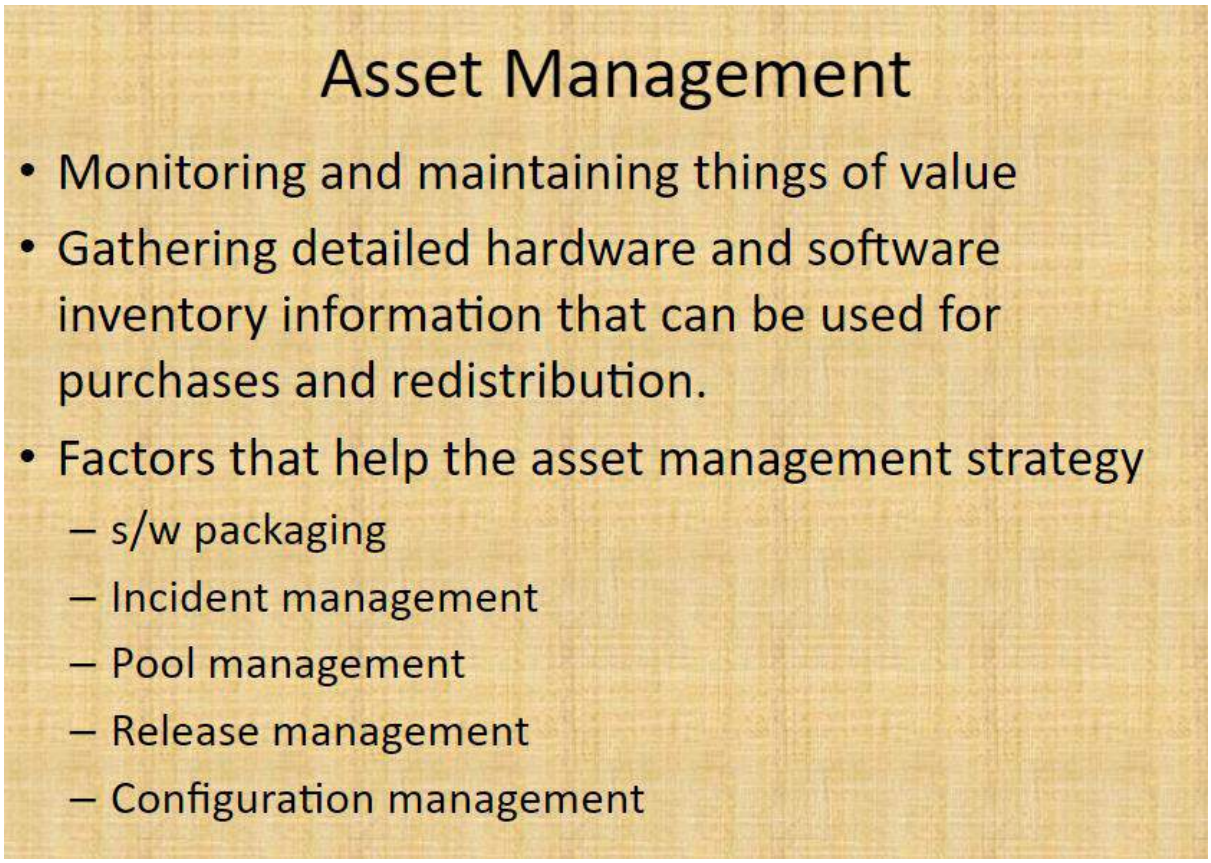
1. Achieve operational efficiencies by using a common set of processes and procedures to deliver provisioning services to the enterprise.
2. Achieve target environmental defect rate.
3. Establish and achieve service-level objectives for delivery of provisioned environments.
4. Reduce time to set up development and test environments.
5. Reduce hardware/software spending through optimization of all environments and reuse of assets.
6. Enforce enterprise provisioning standards.

Short-Term Goals

1. Reduce the defect rate for the setup of the development and test environments.
2. Improve and provide consistency in the provisioning of environments for all platforms.
3. Transfer skills and knowledge of new standard processes and procedures to the provisioning teams.

4. Gain stakeholder agreement before deployment of a provisioned product that all requirements have been met.
5. Reduce rework.
6. Improve quality of work experience for process participants.

2. List & explain the different factors that help to develop asset management strategy.



3. Define Resiliency and its capabilities.

Resiliency

- Capacity to rapidly adapt and respond to risks.
- It maintains business continuity in potential adverse conditions.
- The focus is to understand the risks in business process.
- Resilient framework is used to understand risks and to avoid and mitigate it.
- Risks can be transferred to cloud vendors.
- Frame work includes facilities, technology, Apps, data, processes, strategy and vision.

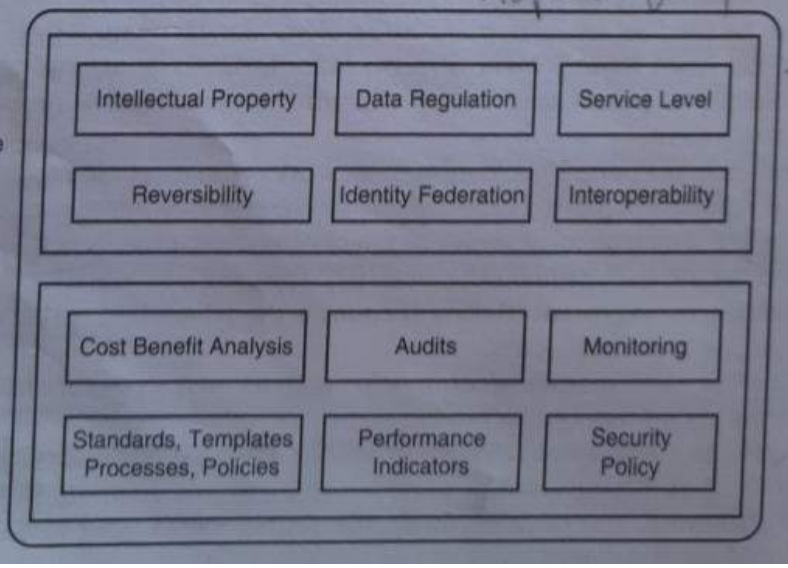
- Resiliency capabilities
  - Strategy helps mitigate risks and improve business resilience.
  - One may implement power protection.
  - Protect apps and data or implement biometric solutions.
  - Can implement remote backup, identity management, email filtering or archiving.
  - May implement requirements conforming to Govt regulations and standards.

4. Explain cloud governance model with a block diagram.

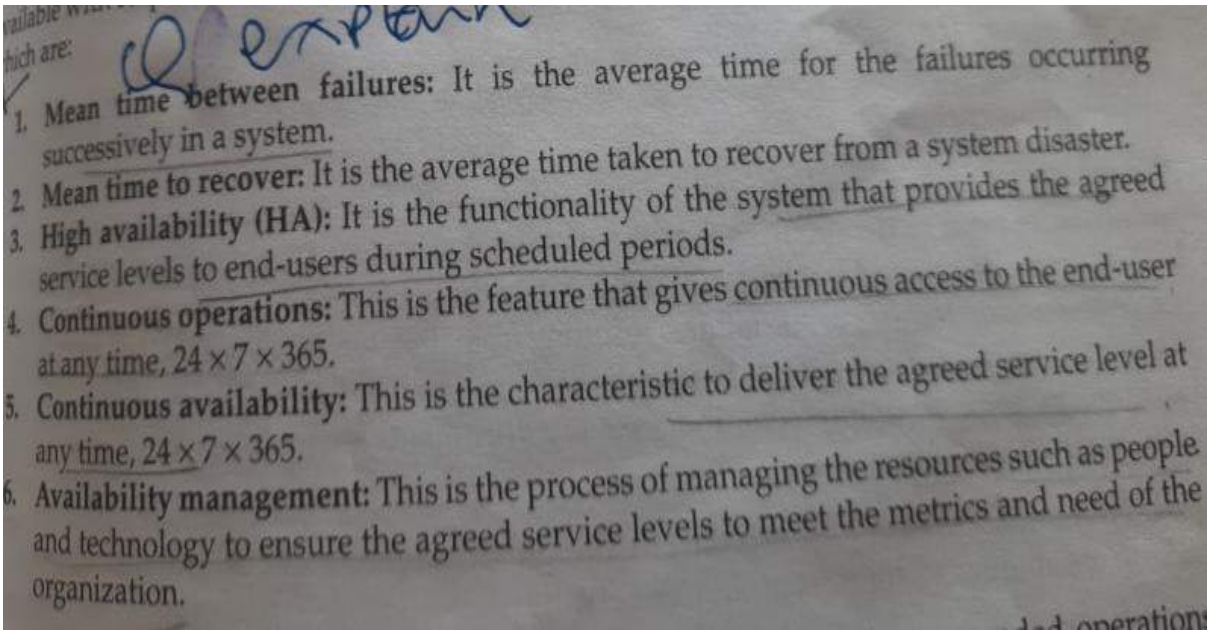
One of the major components of any governance model is the proper definition of roles and responsibilities within an appropriate organizational structure. The domain owners within the organization own and are accountable for the business functionality within their proper business domain. These domain owners report to the head, but they also have direct reporting responsibilities within their business domain. These technical roles, along with the domain owners, strive to achieve a confluence between business and IT. One of the major aspects of cloud governance is to ensure that the lifecycle of services maximizes the value of service-oriented architecture (SOA) to the business. In order for governance to be effective, all aspects of the service lifecycle need to be properly handled.

The process transcends all phases of the service lifecycle: model, assemble, deploy and manage. Each task is numbered based on the phase it falls under. The cloud governance scenario should be broken down into realizations (see Fig. 6.1). They can be:

1. Regulation of new service creation.
2. Getting more reuse of services.
3. Enforcing standards and best practices.
4. Service management and version control.



5. Explain the following i) Mean Time Between Failure ii) Mean Time to Recover iii) High Availability iv) Continuous Operations v) Continuous Availability



which are:

1. **Mean time between failures:** It is the average time for the failures occurring successively in a system.
2. **Mean time to recover:** It is the average time taken to recover from a system disaster.
3. **High availability (HA):** It is the functionality of the system that provides the agreed service levels to end-users during scheduled periods.
4. **Continuous operations:** This is the feature that gives continuous access to the end-user at any time, $24 \times 7 \times 365$.
5. **Continuous availability:** This is the characteristic to deliver the agreed service level at any time, $24 \times 7 \times 365$.
6. **Availability management:** This is the process of managing the resources such as people and technology to ensure the agreed service levels to meet the metrics and need of the organization.

6. With a neat diagram explain any 3 Chargeback Model.

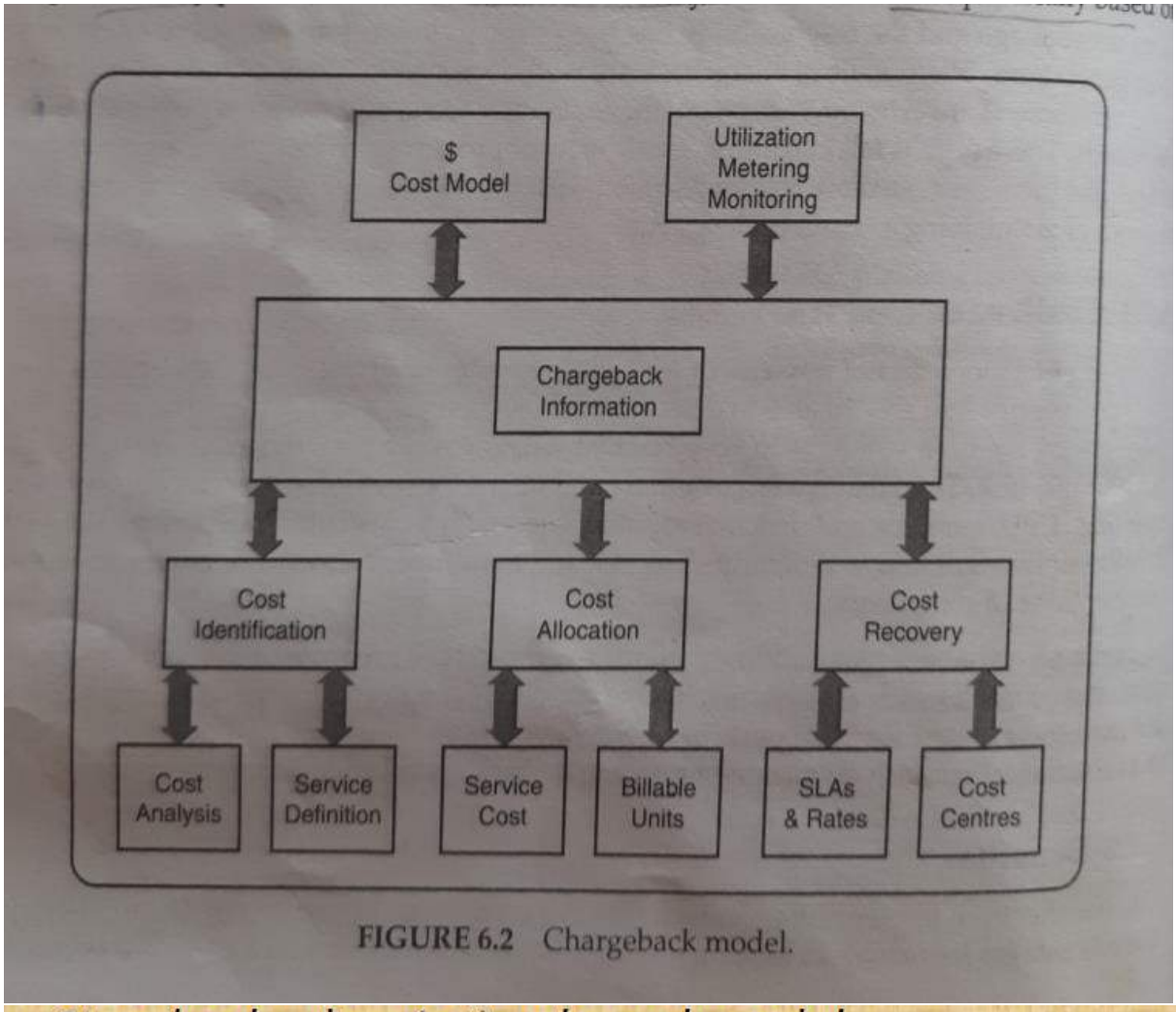


FIGURE 6.2 Chargeback model.

- *Standard subscription based model*
  - Simplest
  - Divides the total operational costs by total no. of apps hosted by the environment
  - Widely used
  - Flawed and unequal allocation of resources
  - Poorly performing apps are subsidized by other apps
  - Less emphasis on resource consumption and app-footprint

Line of business (LOB):apps that are critical to enterprise functioning

- ***Pay per use model***
  - Charged based on apps consumption of resources and choice of SLAs
  - Suitable for environments that have various LOBs
  - A poorly written app may pay more because of footprint
  - Apps requiring dedicated services or higher degree of preference may have to pay more
  - This model ensures fair cost recovery
  - But arriving to agreeable cost metrics based on resource consumption is challenging

- Premium pricing model
  - Focus on class of service and guaranteed availability of resources for apps
  - LOBs will incur premium for preferential treatment and priority in resource allocation
  - May include dedicated h/w
  - Cost depends on degree of isolation from shared resources
  - Preferred by mission critical systems
  - Used in combination with other models

- Hybrid model – you know the answer bois