Cloud Management

The Cloud Management Challenge

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Introduction

To provide value, IT cost model has to be:

- Equitable
- Controllable
- Repeatable and predictable
- Simple
- Comprehensive

1. Service based model

Service-based model offers cost-transparency and cost-reductions options

2. Resiliency

- Resiliency is the capacity to rapidly adapt and respond to risks, as well as opportunities.
- This maintains continuous business operations that support growth and operate in potential adverse conditions.
- The reach and range step of the assessment process examines business driven, data-driven and event -driven risks.
- The resiliency blueprint includes different layers- facilities, technology, applications and data, processes
- The framework enables people to examine business, understand what areas of vulnerabilities that might exist and quickly pinpoint areas of concern and help them understand what actions they can take to reduce the risk associated with those areas.

2.1 Resiliency Capabilites

The framework combines multiple parts to mitigate risks and improve business resilience

- From a facilities perspective, you may need to implement power protection
- from security perspective- to protect applications and data
- From process perspective- you may implement identification and documentation of most critical business process
- From organizational perspective- geographical diversity, backup of workstation data
- From strategy and vision perspective, you would want to have a crisis management

3. Provisioning

Provisioning process is a service that uses group of compliant processes called " solution Realization"

- provisioned products are servers built with all the software and infrastructure required to support a business application.
- Standard solutions are defined so that standard workflows can be derived
- server hardware is assembled, cabled and connected to the network and SAN before work orders are released.

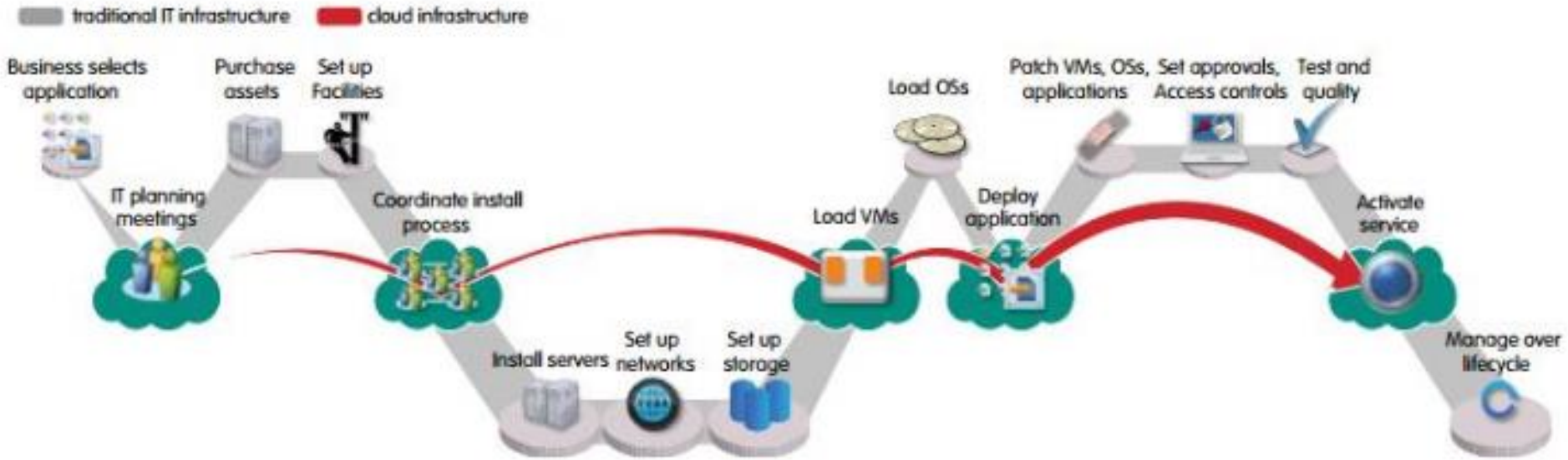


Figure 1: Using Cloud Infrastructure Can Speed and Simplify the Provisioning Process

Characteristics

Each process has the owner who is responsible for the successful implementation of the product

3.1 Approach

The approach involves the following activities

- Planning precedes execution
- Validating build specification precede building
- Packaged software installation on respective servers
- Having servers racked , stacked, cabled and connected to storage and networks precedes issuing work-orders

3.2 Benefits

Here are some benefits of provisioning

- ability to measure progress of all the work related to one RfS
- continuous improvement activities based on process measurements
- Isolation of the build, install, configure, and customise tasks from requirements design, and hardware setup activities
- Role players performing a finite set of repeatable activities

4. Asset Management

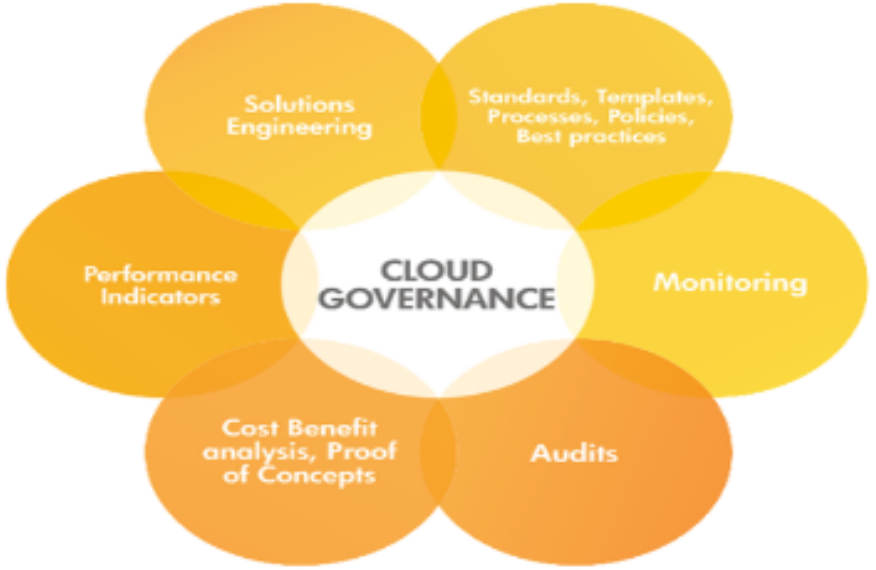
Asset management and change management interact regularly. The asset management strategy includes

- Software packaging
- Incident management
- Pool Management
- Release management
- configuration management
- Systems management
- Operational readiness Management
- Backup management

5. Cloud Governance

Cloud Governance is broken down into the following

- Regulation of new service creation
- Getting more use of services
- Enforcing standards and best practices
- Service change management and service version control



6. High availability and Disaster Recovery

High availability(HA) and disaster recovery (DR) are important factors for cloud deployments.

- Mean time between failures
- Mean time to recover
- High availability
- Continuous operations
- Continuous availability
- Availability management

Google Dashboard Gmail Outage case study

7. Charging models, Usage Reporting, Billing and Metering

Charging models are approaches taken to recover expenses.

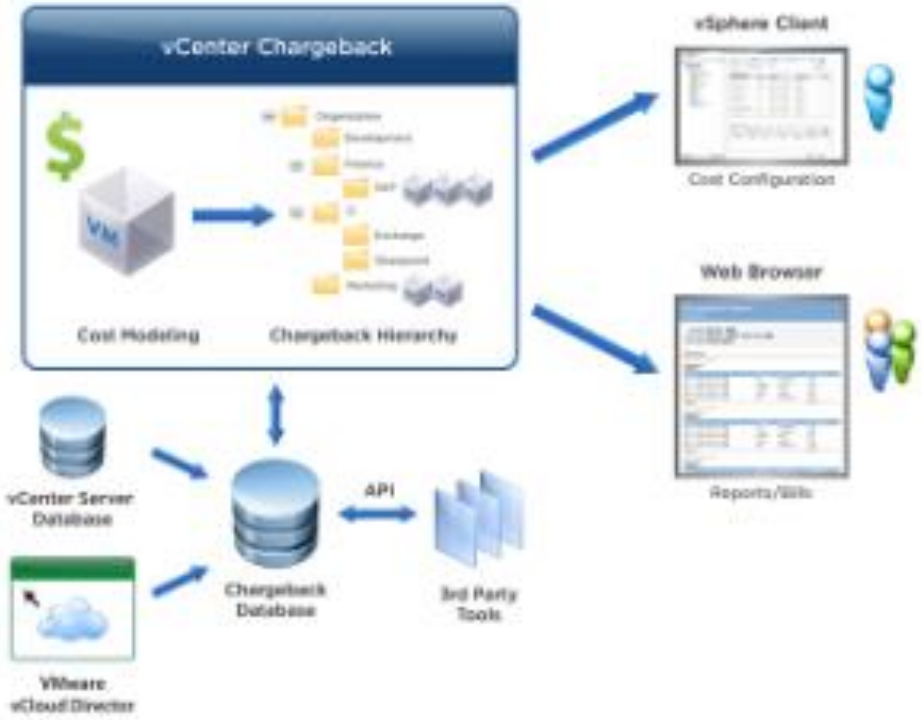
Instance Type	RAM (GB)	# of Virtual Cores	Local Disk (GB)	Price ($/hr)
Standard Extra Small	1	1	30	**$0.04**
Standard Small	2	2	60	**$0.08**
Standard Medium	4	2	120	**$0.16**
Standard Large	8	4	240	**$0.32**
Standard Extra Large	16	4	480	**$0.64**
Standard Double Extra Large	32	8	960	**$1.28**

7.1 Benefits

Charging models build transparency to enterprise cost and help companies to figure out increase resources and also weed out wastes.

7.2 Cloud Chargeback models

- Standard subscription-based model
- Pay-per use model
- Premium pricing model
- Hybrid model
- Allocation-based
- Flat Fee
- Usage-based
- Product or service based
- Activity-based
- Market based



7.3 IT Infrastructure Governance

Governance in a shared infrastructure becomes a paramount, as resources shared by all business units require some level of policies and control mechanisms that define boundaries and upload business unit requirements.

7.4 Basic Requirements

- Fairness
- Control
- Repeatability
- Simplicity