Cloud Deployment Scenarios

Preface

- List the four major cloud deployment types
- Describe the features of private, public, hybrid, and community clouds
- List some additional cloud deployment types
- Select the most appropriate deployment model based on a set of business and technical requirements

Agenda

- Cloud deployment models - public, private, hybrid, community clouds
- Selection criteria for cloud deployment types

Cloud deployment models

- There are 4 cloud deployment model that will be covered during this chapter
  - Public Cloud
  - Private Cloud
  - Community Cloud
  - Hybrid Cloud

Gartner Definition of Public Cloud computing

- Gartner defines **public cloud computing** as a style of computing where scalable and elastic IT-enabled capabilities are provided as a service to external customers using Internet technologies—i.e., public cloud computing uses cloud computing technologies to support customers that are external to the provider's organization. Using public cloud services generates the types of economies of scale and sharing of resources that can reduce costs and increase choices of technologies.

Public Cloud

- A *public cloud* is a publicly accessible cloud environment owned by a third-party cloud provider. The IT resources on public clouds are usually provisioned via the previously described cloud delivery models and are generally offered to cloud consumers at a cost or are commercialized via other avenues (such as advertisement).

- The cloud provider is responsible for the creation and on-going maintenance of the public cloud and its IT resources. Many of the scenarios and architectures explored in upcoming chapters involve public clouds and the relationship between the providers and consumers of IT resources via public clouds.

Gartner definition of Private Cloud computing

Private cloud computing is a form of cloud computing that is used by only one organization, or that ensures that an organization is completely isolated from others.

Private Cloud Computing

- A private cloud is owned by a single organization. Private clouds enable an organization to use cloud computing technology as a means of centralizing access to IT resources by different parts, locations, or departments of the organization.

- The use of a private cloud can change how organizational and trust boundaries are defined and applied. The actual administration of a private cloud environment may be carried out by internal or outsourced staff.

Hybrid Cloud Computing

- A hybrid cloud is a cloud environment comprised of two or more different cloud deployment models. For example, a cloud consumer may choose to deploy cloud services processing sensitive data to a private cloud and other, less sensitive cloud services to a public cloud.

- --> I will provide more example of IBM Hybrid offering as reference.

Community Cloud

- A community cloud is similar to a public cloud except that its access is limited to a specific community of cloud consumers. The community cloud may be jointly owned by the community members or by a third-party cloud provider that provisions a public cloud with limited access. The member cloud consumers of the community typically share the responsibility for defining and evolving the community cloud

Migration paths for cloud adoption

- Use public clouds
  – Smaller organizations can use resources provided by larger cloud service providers

- Develop private clouds
  – Build or procure private clouds
  – Metering and chargeback

- Build or procure community clouds
  – For organizations that share common goals
  – Shared infrastructure or sandbox environment •

- Use hybrid clouds
  – Balance workloads between clouds

Case study and exercises

- Please read Hybrid Cloud for Dummies