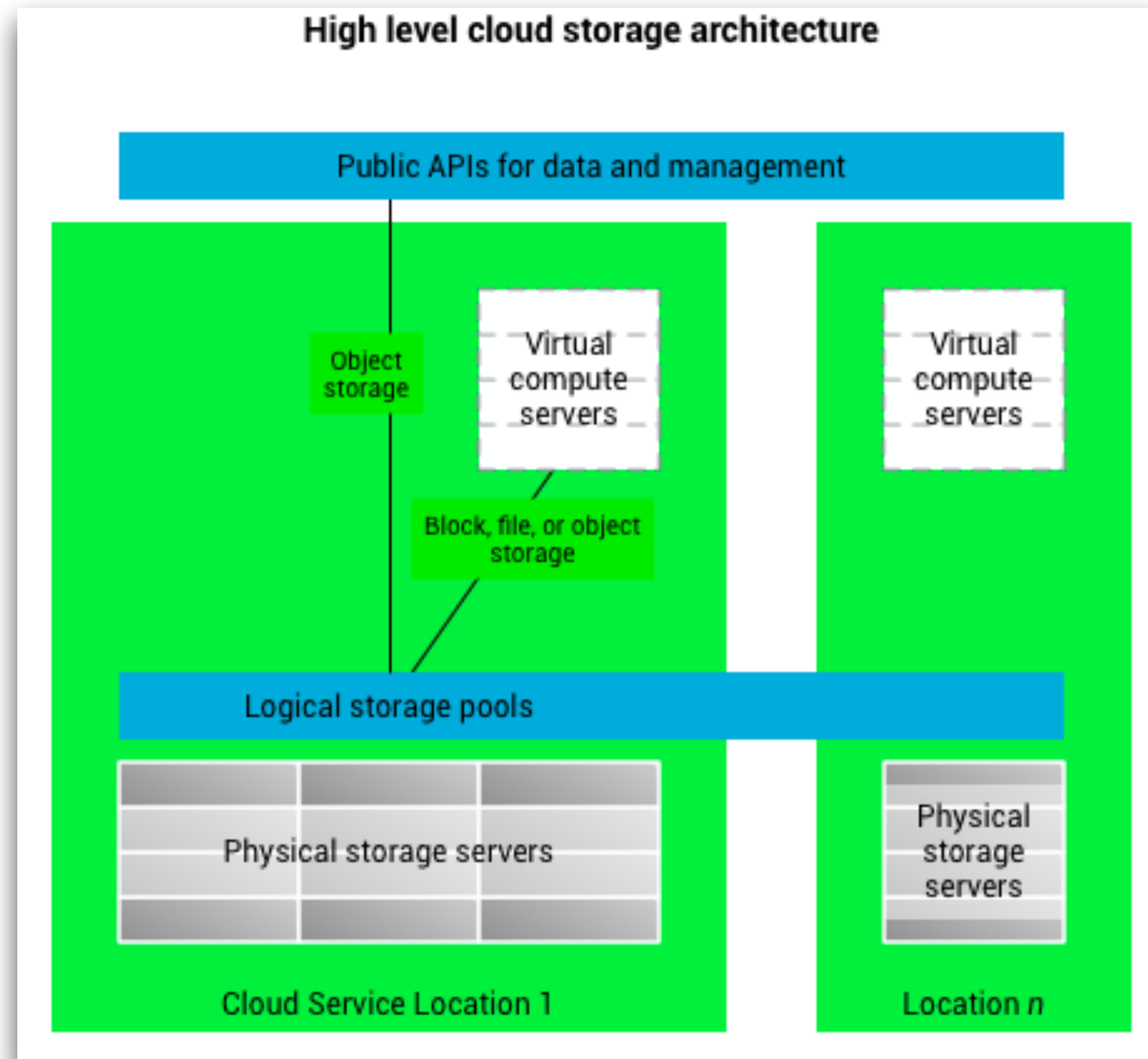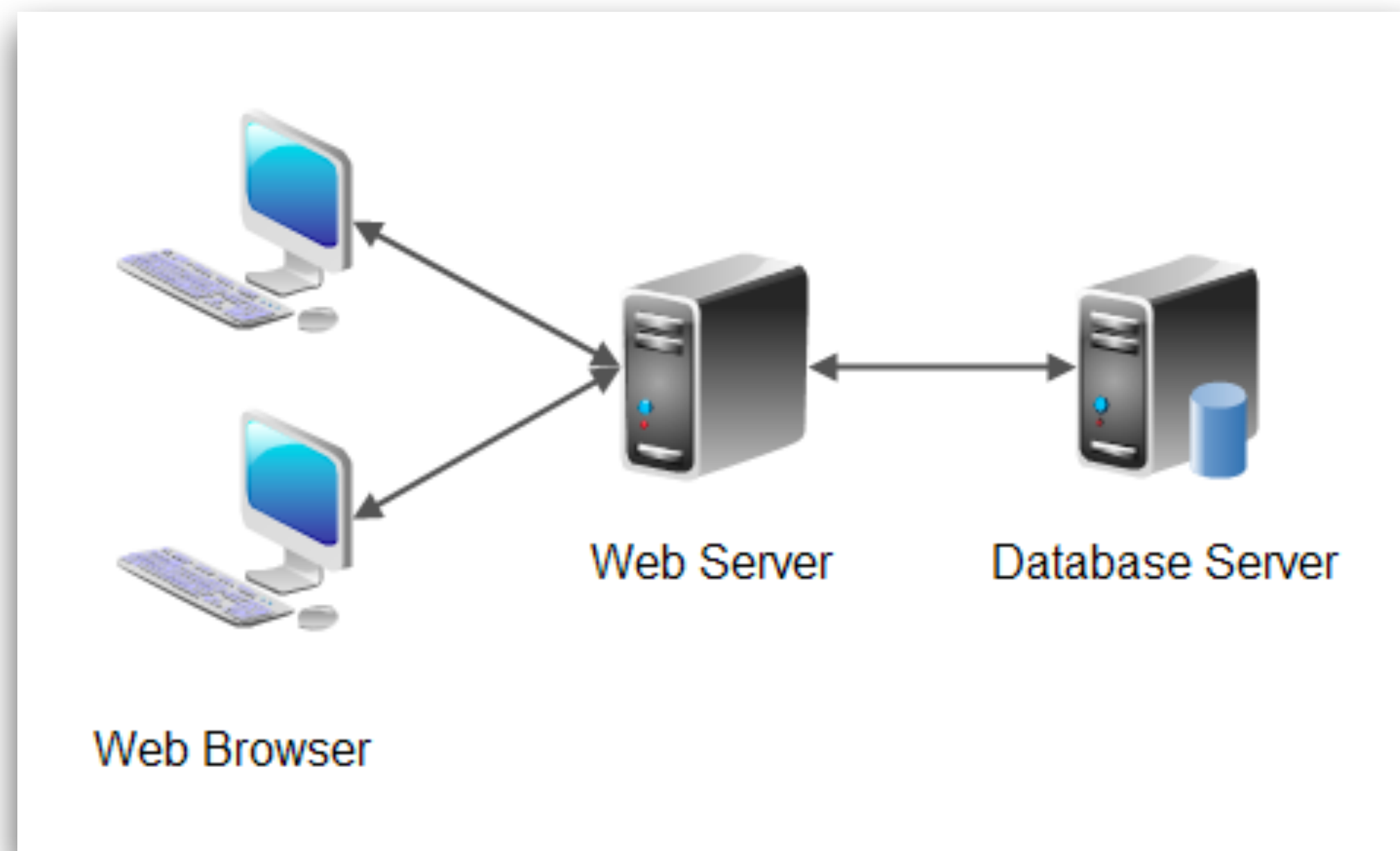# Cloud Storage

Cloud Storage

- Cloud storage is a service model of computer data storage in which the digital data is stored in logical pools, said to be on "the cloud".

- The physical storage spans multiple servers (sometimes in multiple locations), and the physical environment is typically owned and managed by a hosting company.

- These cloud storage providers are responsible for keeping the data available and accessible, and the physical environment secured, protected, and running.

- People and organizations buy or lease storage capacity from the providers to store user, organization, or application data.
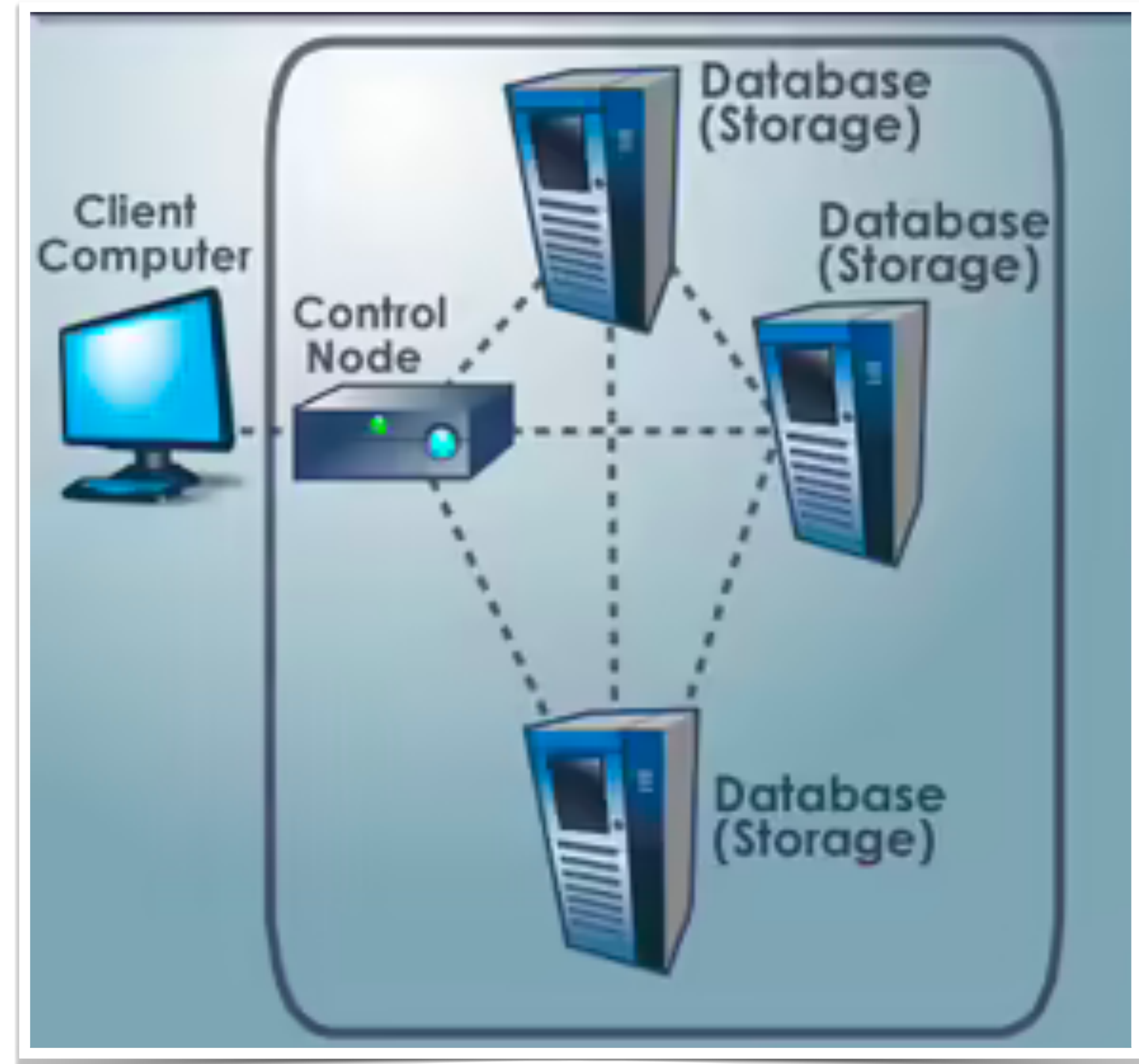
Cloud Storage

High level cloud storage architecture

How Does Cloud Storage Works...?

Conventional Datastore Application

Cloud based datastore

How Does Cloud Storage Works...?

- Cloud storage involves at least one data server that a user connects to via the internet. The user sends files manually or in an automated fashion over the Internet to the data server which forwards the information to multiple servers. The stored data is then accessible through a web-based interface.

- Cloud storage systems involve vast numbers of data servers to ensure their availability.

- The primary location tends to be nearer physically to the company's facility using it so the data can be processed faster and at lower costs

Types of Cloud Storage

- **Personal cloud storage**

  Network-attached device that allows users to store different types of personal data

- **Private cloud storage**

  Private clouds tend to be used by organizations that want the flexibility and scalability of cloud storage

- **Public cloud storage**

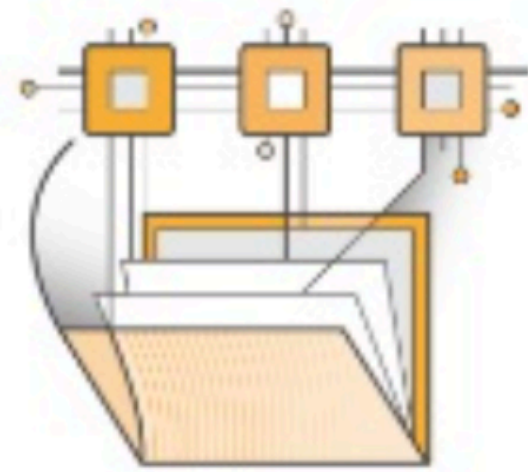 Available from a third-party as a service

- **Hybrid cloud storage**

  Combines resources that are owned and managed by the enterprise with public cloud storage services that are managed by a third party.
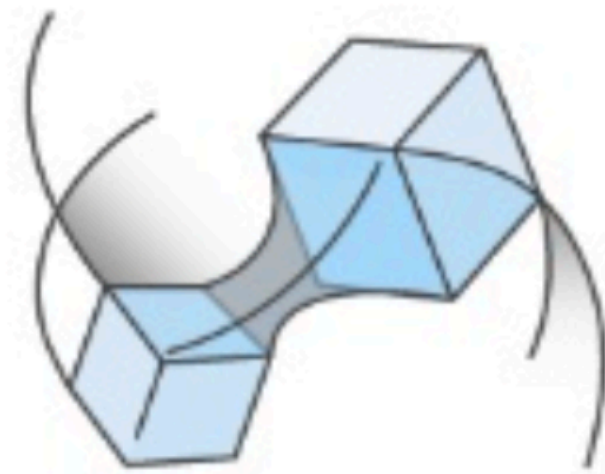
Advantages of Cloud Storage

- High performance, internet-scale

- Simple administration, Does not require capacity management

- Data encryption at rest

- Online and offline import services
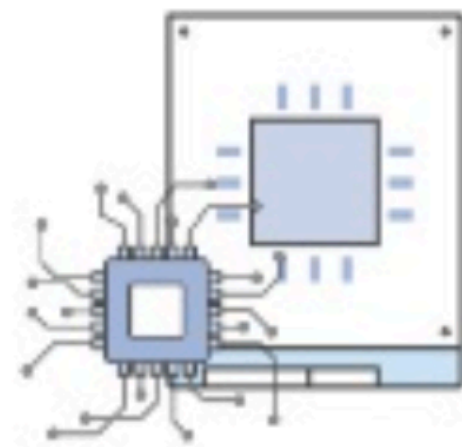
Public Cloud Storage - AWS

Public Cloud Storage - GCP
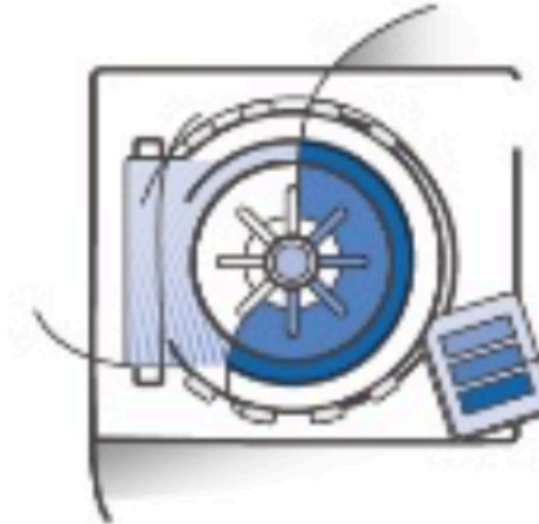
Public Cloud Storage - Azure