

❖ explain public private and hybrid with 5 real time examples for each type.

1. Public Cloud

A public cloud is a type of computing where resources like servers and storage are owned and operated by third-party providers and delivered over the internet. These resources are shared among multiple customers (multi-tenancy).

Real-Time Examples:

1. Microsoft Azure: A leading public cloud provider offering virtual machines, app services, and serverless computing on a pay-as-you-go model.
 2. Amazon Web Services (AWS): Provides cloud computing services like S3 (storage), EC2 (compute), and Lambda (serverless). Widely used by startups, enterprises, and individuals.
 3. Google Cloud Platform (GCP): Offers solutions like BigQuery, App Engine, and Kubernetes Engine for data analysis, development, and container management.
 4. Dropbox: Uses AWS as its backend infrastructure to provide file storage and sharing services to millions of users.
 5. Netflix: Relies on AWS for scalable content delivery, transcoding, and streaming, ensuring high availability globally.
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2. Private Cloud

A private cloud is a dedicated environment where resources are used exclusively by a single organization. It offers better control and security but requires significant investment.

Real-Time Examples:

1. Government Clouds: Many government agencies, like the U.S. Department of Defense, use private clouds for highly secure and controlled data storage and application hosting.
 2. Healthcare Organizations: Hospitals and healthcare providers maintain private clouds to store sensitive patient data securely, complying with regulations like HIPAA.
 3. Banks and Financial Institutions: Banks like JPMorgan Chase use private clouds to manage critical financial data and applications with enhanced security and compliance.
 4. Corporate Data Centers: Companies like BMW host their private cloud infrastructure to handle sensitive data, product designs, and internal applications securely.
 5. SAP HANA Enterprise Cloud: Offers private cloud hosting for businesses using SAP solutions, ensuring performance and data isolation.
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3. Hybrid Cloud

A hybrid cloud combines public and private cloud environments, allowing data and applications to be shared between them. It provides flexibility to move workloads and manage costs effectively.

Real-Time Examples:

1. Coca-Cola: Uses a hybrid cloud to manage their e-commerce websites via a public cloud while keeping sensitive data like recipes on a private cloud.
2. General Electric (GE): Utilizes AWS for scalable workloads and a private cloud for critical manufacturing data.
3. Retail Industry (Target): Uses hybrid cloud strategies to run their e-commerce platforms (public cloud) while managing customer data and payment systems on private infrastructure.
4. NASA: Combines private cloud for research-sensitive data and public cloud (AWS) for high-compute projects, like processing satellite images.
5. IBM Cloud with VMware: Offers hybrid cloud solutions, enabling companies to integrate their on-premises VMware workloads with IBM's public cloud.