Hybrid multi cloud

1. Hybrid cloud
    a. Is a computing environment that connects an organization's on-premise private cloud and third-party public cloud into a single infrastructure for running the organization's applications

Microservice

1. Microservice architecture is an approach in which a single application is composed of many loosely coupled and independently deployable, smaller components or services
2. Typically have their own stack running on their own containers
3. Communicate with one another over a combination of API, event streaming or message brokers

Serverless Computing

1. Is an approach to computing that offloads responsibility for common infrastructure management tasks such as scaling, scheduling, patching and provisioning application stacks
2. Key
    a. No provisioning of servers and runtimes
    b. Runs code on demand, scaling as needed
    c. Pay when used
3. Use Case
    a. Data enrichment
    b. Transformation
    c. Validation and cleansing
    d. PDF processing
    e. Thumbnail generation
    f. Video transcoding
    g. Data search and processing
    h. IoT sensor data
    i. Log data
    j. Financial market data

Cloud Native Application

1. Development Principle
   a. Follow microservices architecture
   b. Rely on Containers
   c. Adopt agile methods

DevOps on the cloud

1. A collaborative approach that allows multiple stakeholders to collaborate:
   a. Business owners
   b. Development
   c. Operations
   d. Quality assurance
2. The DevOps Approach
   a. Apply agile and lean thinking principles to all stakeholders in an organization who develop, operate or benefit from the business software system
   b. Continuous Delivery
   c. Continuous Integration
   d. Continuous Deployment
   e. Continuous Monitoring
   f. Delivery Pipeline
3. Challenges
   a. Automated provisioning and installation
   b. Continuous integration and deployment pipelines
   c. Define how people work together and collaborate
   d. Test in low-cost, production-like environments
   e. Recover from disasters by rebuilding system quickly

Application Modernization