# CLOUD BUILDING BLOCK TECHNOLOGIES

## VIRTUALIZATION

Creates virtual instances of computing resources like servers, storage, and networks

Allows multiple virtual machines (VMs) on a single physical server (the whole point of virtualization)

Provides scalability and flexibility by enabling rapid provisioning and resource allocation





## <u>STORAGE</u>

Massive scalability and resilient storage solutions for your data in the cloud

Object, block, and file storage to cater to different workload requirements and cloud deployment models

Data durability, availability, and accessibility through redundancy and data replication

## **NETWORKING**

Broad network connectivity between cloud resources, users, and external networks

Secure communication and data transfer across distributed environments

Networking services like load balancing, DNS



management, and VPNs for efficient traffic routing and management



Stores structured data

Supports various database models including relational, NoSQL, and NewSQL

Data integrity, consistency, and durability through robust data management features and backup mechanisms

## **ORCHESTRATION**

Automates the deployment, configuration, and management of cloud resources and services

Workload scaling, optimization, and fault tolerance through dynamic resource allocation

Operational efficiency and agility by streamlining complex workflows and enforcing consistent infrastructure configurations



Study Notes and Theory A CCSP Study Guide