MuleSoft Videos

TTB. What is an API? A set of protocols that allow different software applications to communicate and exchange data.

- Scripting
  - automation ~~one~~ repetitive task
  - orchestration

Monday 19

14.0 Virtualization
14.1 Data center & Storage Network
14.2 Cloude Concepts

Virtualization - Logical "virtual" version of something real "physical". Creates virtual versions of computer resources.

virtual machine (VM)
Host
Hypervisor -
  Type 1 hypervisor - bare metal
  Type 2 hypervisor - hosted

Virtual Servers
Virtual Networks
Virtual Switch
Virtual NIC
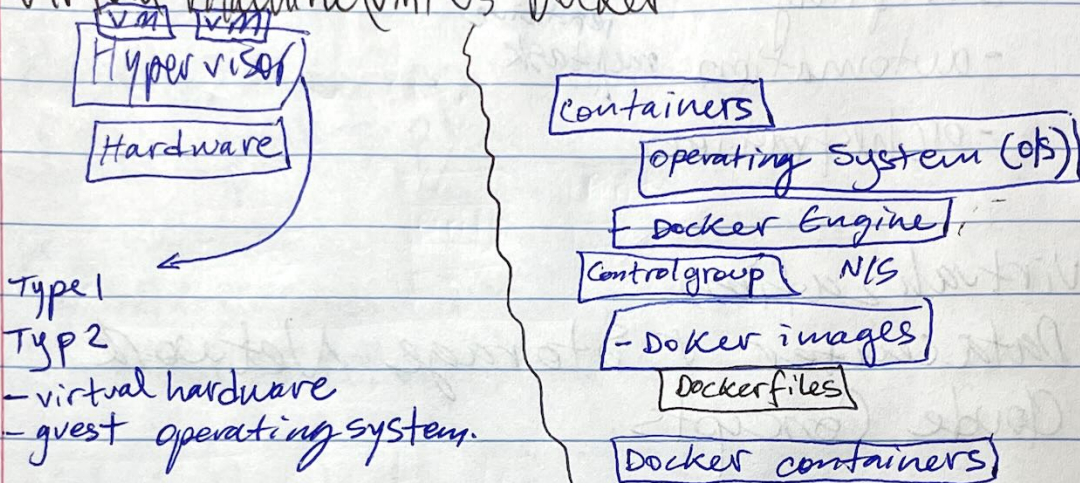
Container virtualization

PowerCert
Videos

YTB   Virtual Machines
       VM vs Containers
       Container / "Docker"

IBM YTB Virtual Machine (vm) vs Docker

| VM | VM |
| Hypervisor |
| Hardware |

Type 1
Typ 2
- virtual hardware
- guest operating system.

| containers |
| operating System (oS) |
| - Docker Engine |
| Control group   N/S |
| - Docker images |
| Dockerfiles |
| Docker containers |

Vses case:
1) Diverse Operating System
2) Isolation
3) Legacy

Vse cases:
1) micro services
2) rapidily Develop

14.1   Data Center Network Design.
       Traffic flow: North-south   • Zero Trust architecture
                     east - West

Spine & Leaf Topology; Predictable Latency, load Balancing & failovers,
Loop-free Design, Scability & Redundancy, High-speed Connectivity.
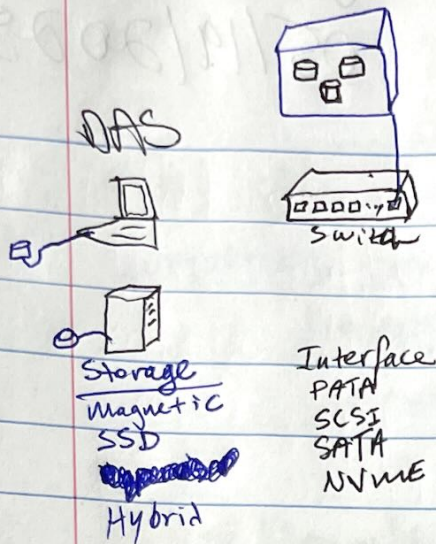
Sunny
classroom YTB.   Das, NAS & SAN

DAS- storage directly attached to host
NAS- storage Connected to production switch
SAN- separates storages resource from the local Network.

DAS

Switch

Storage   Interface
Magnetic   PATA
SSD   SCSI
~~Dynamic~~   SATA
               NVMe
Hybrid

SAN Technology
Fibre Channel (FC)
- initiator
- Target
- FC Switch

Fibre Channel (FC) vs Ethernet switch.
Fibre Channel over Ethernet FCoE.

Benefits of a SAN
- High Availability
- scalability
- minimized latency + maximized throughput

Use cases
- Database management
- Business continuity
- Cloud storage.

PowerCert videos
1TB
What is RAID 0, 1, 5 + 10?
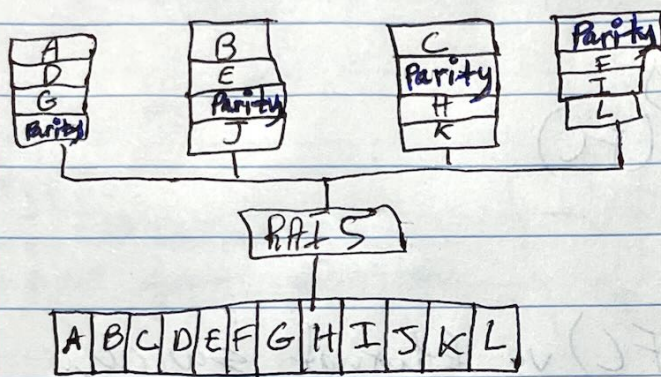Redundant Array of Independent Disk
RAID 0 - not fault tolerant.
Adv. is speed.

William Prado
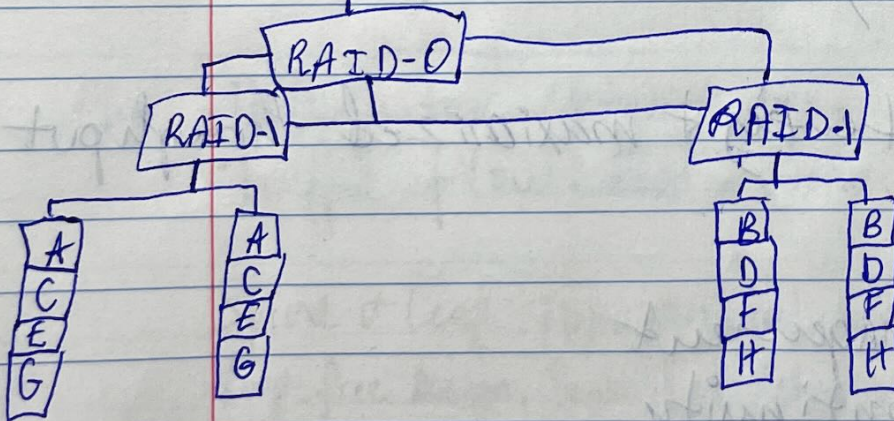05/19/2025

RAID 1 - Mirroring & Duplexing
is fault tolerant.

RAID 5 - Striping w/ parity.
Requires 3 or more disks.

RAID 10
Combines Raid 1 & RAID 0

75% exam
Labs/assessment 70%

14.2 Cloud Concepts
Cloud Basics Internet, Scalability; vertical scaling;
horizontal scaling.

William Prado
05/19/2025

Elasticity - ability to automatically adjust & allocate computing resources on demand.
- cost effectiveness (pay what you use)
- real time responsiveness.

~~Cloud Deploy~~ Cloud Deployment Models.
- Public (multi-tenant) cloud.
- Private cloud.
- Hosted private cloud.

- Community Cloud.
- Hybrid Cloud. combination of multiple clouds (public, private, community).

Software Architec YTB - Cloud Deployment Models - Public Cloud, Private & Community Cloud. cloud Hybrid Cloud