# Virtualizing TDL Systems


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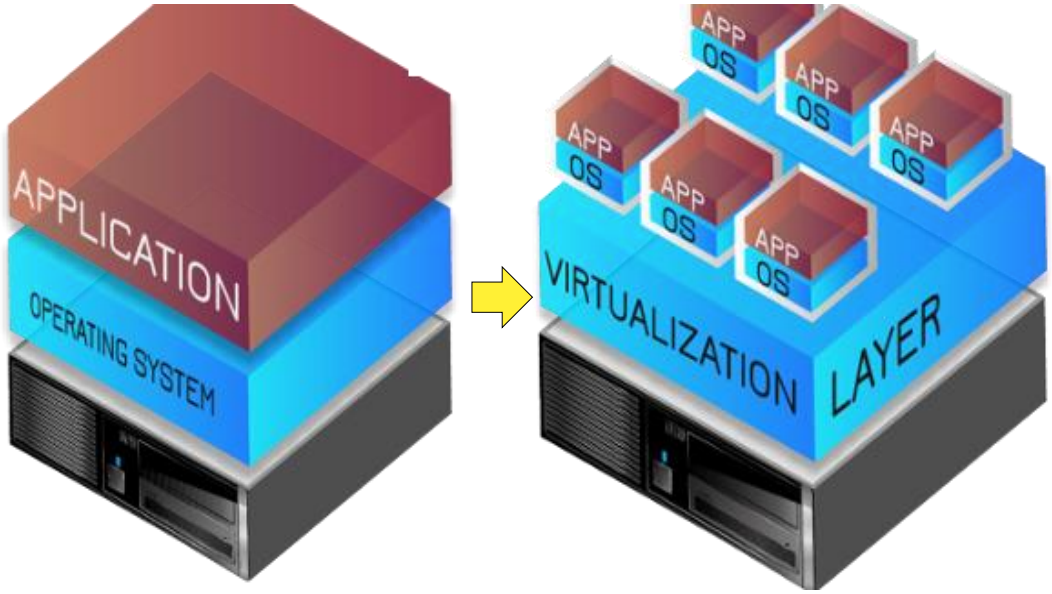
# Introduction

## Overview of Virtual Machines




Virtual Machines

- Computer(s) within a computer
- Typically called Images
- Sandboxed from the host machine and other VMs

Configurations

- Servers
- Local VM Software
- Hybrid

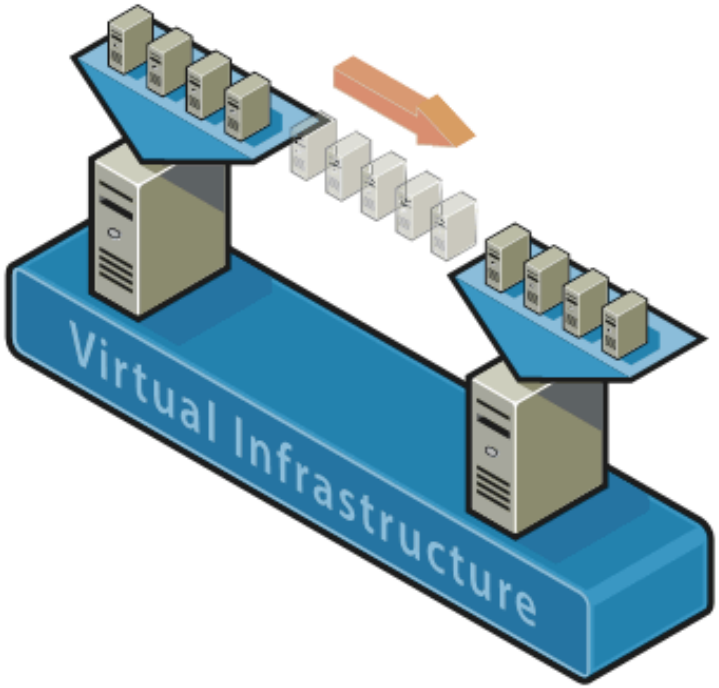
Communication

- Ethernet Replication
- USB
- External Peripherals

# Virtualizing TDL Systems

## Key benefits

- Hardware agnostic
  - Upgrade host machines and servers on your own schedule.
  - Host additional systems on the same hardware
- Experimentation/Testing
  - Isolated environment with without risking host computer stability
  - Snapshots prior to patching
- Replication and remote distribution
  - Generate, configure, and test VMs prior to distribution
  - Distribute VMs from a central site



# Virtualizing TDL Systems

## Information Assurance

- STIGS/OS Lockdown
  - STIGing machines are time and labor intensive
  - Generate a base secure Image
    - Exact policy/Configuration settings
  - Replicate Secure Images
  - Testing/Experimentation
    - Prevent “Bricking” systems

# Virtualizing TDL Systems

## TDL Capabilities

- **ETHERNET DATA LINK CORE Capabilities**
  - Link 16 JREAP 3011C
  - Link 16 MTC
  - Link 16 MTDS
  - Link 16 SIMPLE
  - Link 11 SIMPLE
  - MIDS on IP (LVT-1D, LVT-2J, LVT-11 or STT)
  - Intel data links including: FDL, OTH-T, CMF and USMTF
  - Secondary data links including VMF
  - MTCD

# Virtualizing TDL Systems

## Legacy Serial interfaces

### SERIAL DATA LINK OFFERING WITH ULTRA'S SYNCNET8 APPLIANCE

SyncNet8 appliance is Ultra's interface conversion device that transports serial communications over an Ethernet Local Area Network (LAN).The network device converts a full duplex synchronous, asynchronous or HDLC serial data stream to a UDP/ IP packet stream.

- JREAP A
- JREAP B (synchronous and asynchronous)
- S-TADIL J
- MTC
- MTDS Serial J
- Link 16 SIMPLE
- Link 11 SIMPLE
- Link 11 Indianhead
- Link 11B
- NATO Link-1
- ATDL-1

# Virtualizing TDL Systems

## Link 11

### DATA LINK OFFERING WITH THE SABTECH POWERNET ATDS OR NTDS BRIDGE SYSTEM

Designed with redundant capability, the PowerNet ATDS or NTDS Bridge system has dual ports so that if one network path is not available then the other port is used and operation is not interrupted. Another caveat of using the PowerNet device and its network architecture is that it solves the problem of cable length limitations.

- Link 11 NTDS (MIL-STD-1397C) and ATDS (MIL-STD-188-203-1A, Appendix D2)

# Points of Contact

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