

IT Partners



BUSINESS & TECHNOLOGY COMING TOGETHER

Use of Virtualization for Business Continuity

Platinum Business Partner



Advanced Infrastructure Solutions
Networking Infrastructure Solutions
Data Management Solutions



About IT Partners



IT Partners is a **Data Center Solution Provider** specializing in **server, storage and network offerings**.

We leverage strategic hardware and software partnerships to deliver **consolidation, virtualization and automation solutions**.

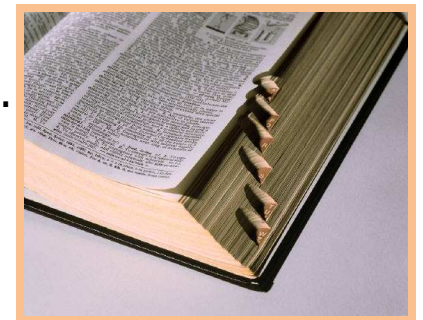
IT Partners provides these offerings through a consultative view of the customer's needs and objectives:

1. **VDC Workshop** – 3 hour executive working session
2. **VDC Assessment** – 1 week on site consulting engagement
3. **VDC Solution** – custom product & services offering:
 - Server Virtualization
 - Storage Virtualization
 - Network Virtualization
 - Desktop Virtualization



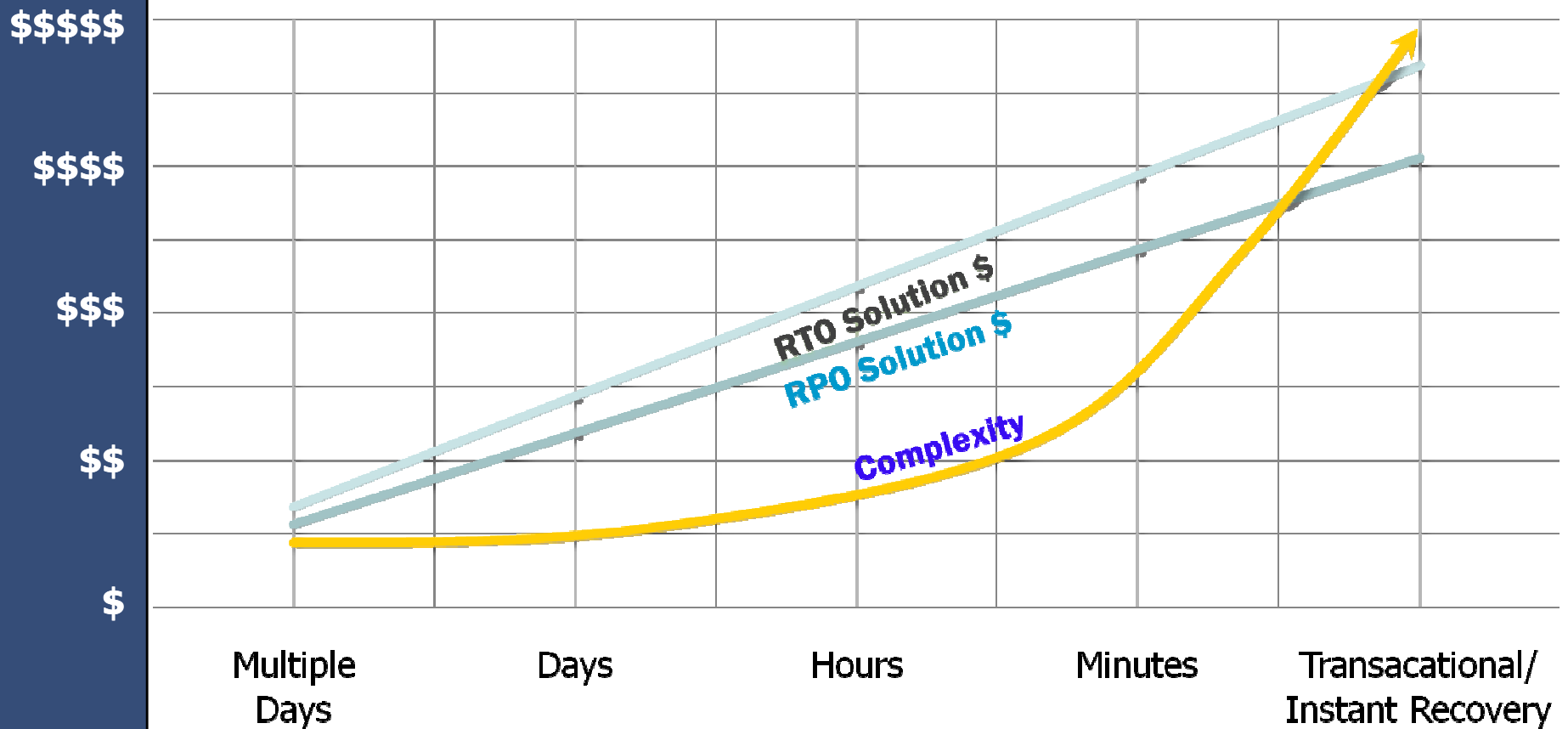
Some BC/DR Terminology

- **Business Continuity**
 - Procedures to ensure an organization's ability to continue operating outside of "normal" operating conditions.
- **Disaster Tolerance (aka. High Availability)**
 - The ability to provide access to business critical applications and/or services if a disaster occurs.
- **Disaster Recovery**
 - The ability to recover business critical data, applications and/or services in the event of a disaster.
- **Disaster Tolerance and Recovery Strategies Document**
 - Uses findings from the BIA and Risk and Threat Analysis to identify possible technical options that will allow the organization to continue to perform or recover critical processes in the event of a disruption.
- **Business Continuity Plan**
 - A detailed tactical document that identifies who, what, when and how to continue performing critical business processes in the event of a disruption.
- **Disaster Recovery Plan(s)**
 - A detailed tactical document that identifies who, what, when and how to recover applications and services.





Potential Solution Costs

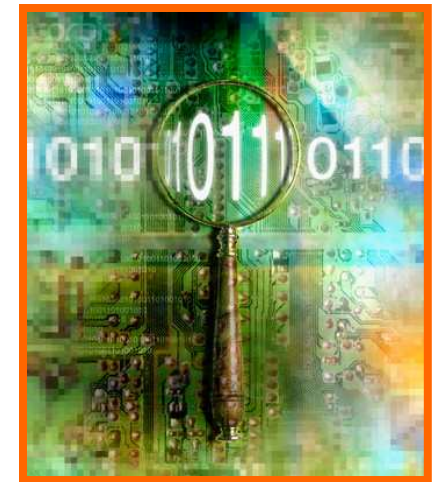


- DR/DT costs are directly related to the RTOs and RPOs.
- Virtualization can help keep costs down



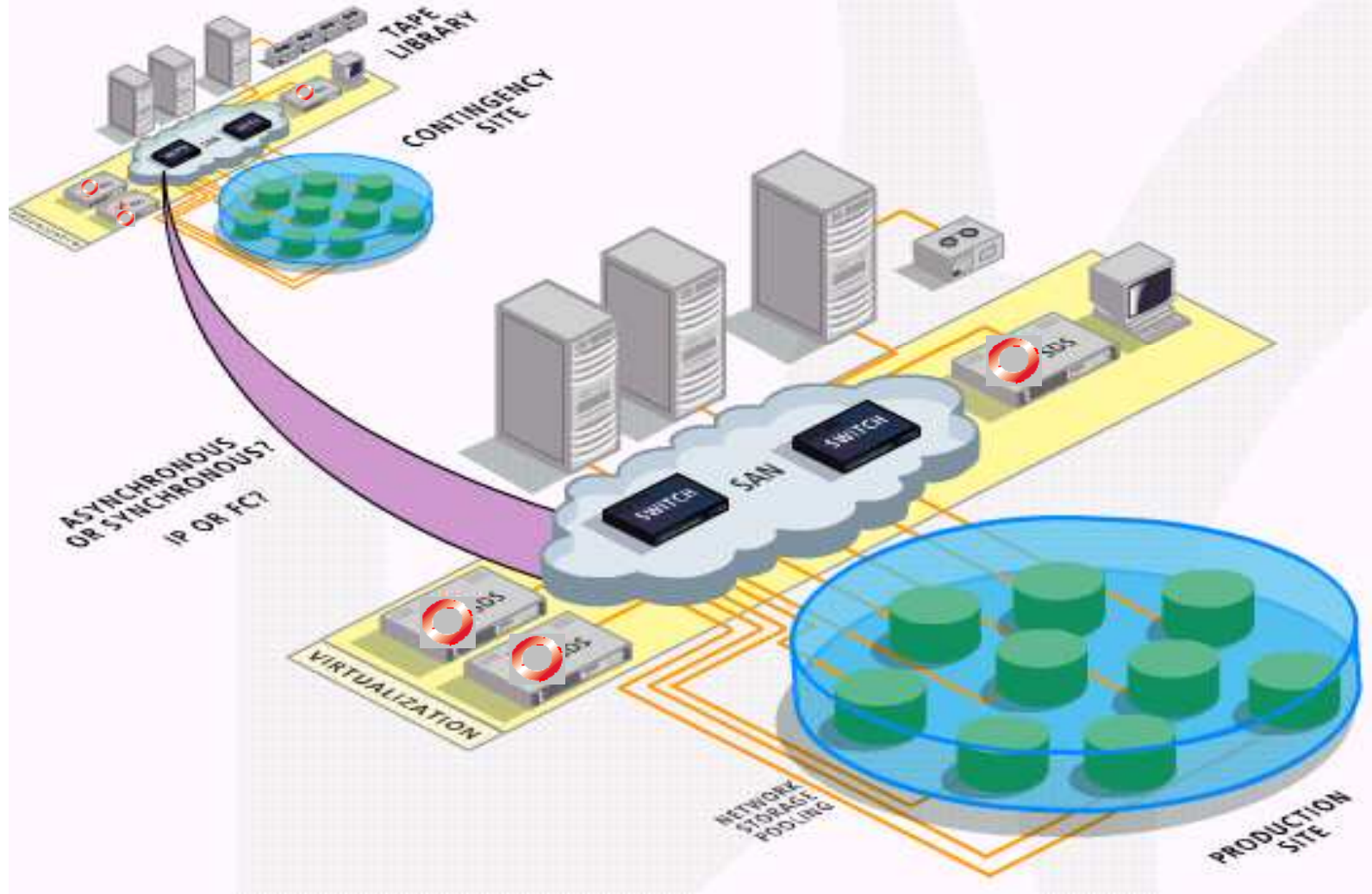
Focus Today on x86/x64

- **Network Virtualization**
- **SAN Virtualization**
- **Intel Server Virtualization**
 - 32 bit
 - 64 bit
- **Unix Virtualization**
 - HP-UX – nPar and vPar
 - AIX – LPar
 - Solaris – Domains and Zones
 - Linux - Xen



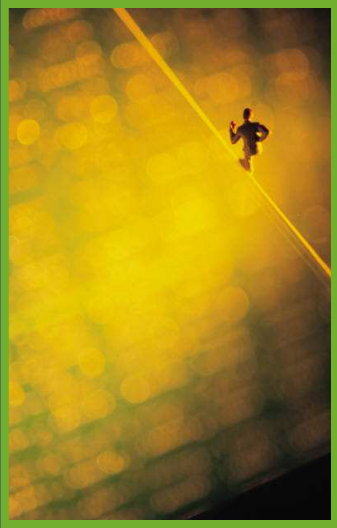


Multiple Data Centers





Traditional DR Challenges



- **Maintain 2 Data Centers**
- **Maintain 2 servers for each application**
 - Primary site
 - Secondary site
 - Hardware Consistency
- **Management of data replication**
 - Host based, many points of management
 - SAN based, many LUNs to manage
- **Complicated Disaster Recovery process**
- **Testing is a cumbersome process**



Traditional HA & BC

- **Redundant Hardware**

- CPU
- Memory
- Hard Drives
- Network Connections

- **Redundant Operating Systems**

- Shared Storage
- Replicated File Systems
- Clustered Operating Systems





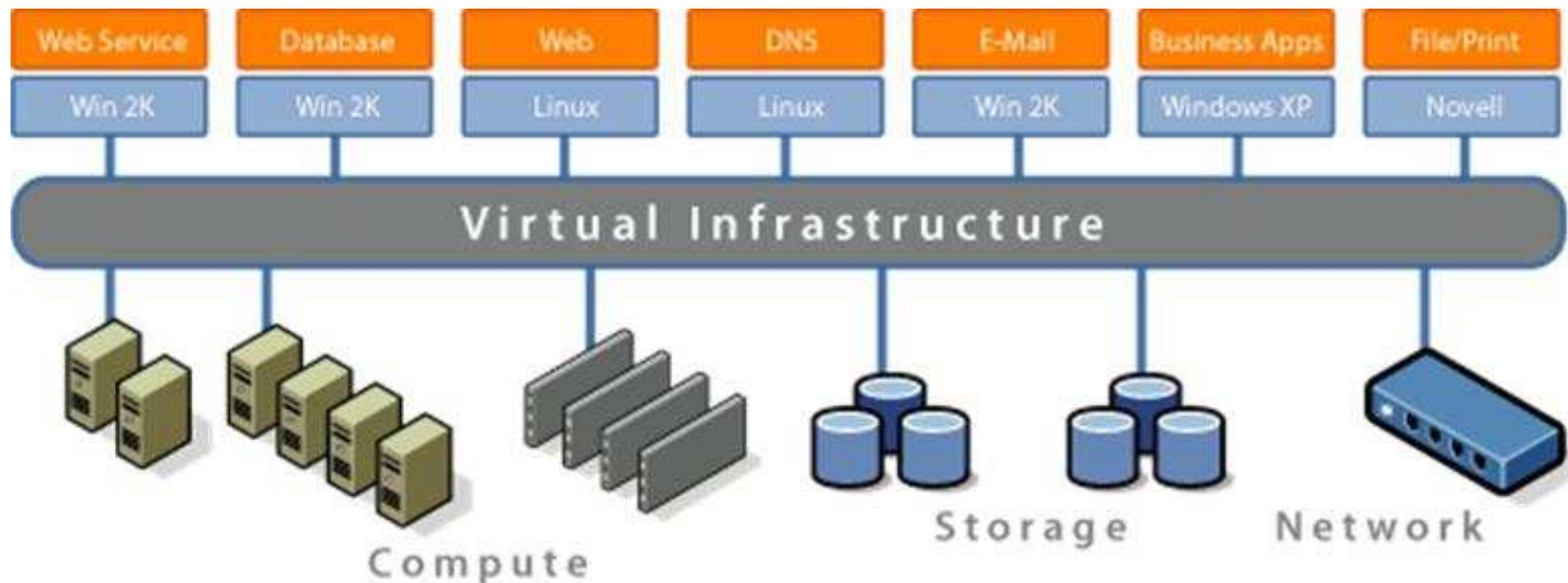
Virtualization DR Benefits

- **Still need to maintain 2 Data Centers**
- **Applications have no direct relationship with physical equipment**
- **Dissimilar hardware works**
- **Management of data replication is easier**
 - Fewer SAN LUNs to manage
 - Can still combine host based replication
- **Automated failover Workflow Management is available today**
 - VMware Site Recovery Manager
 - PlateSpin Forge



Virtualization BC Benefits

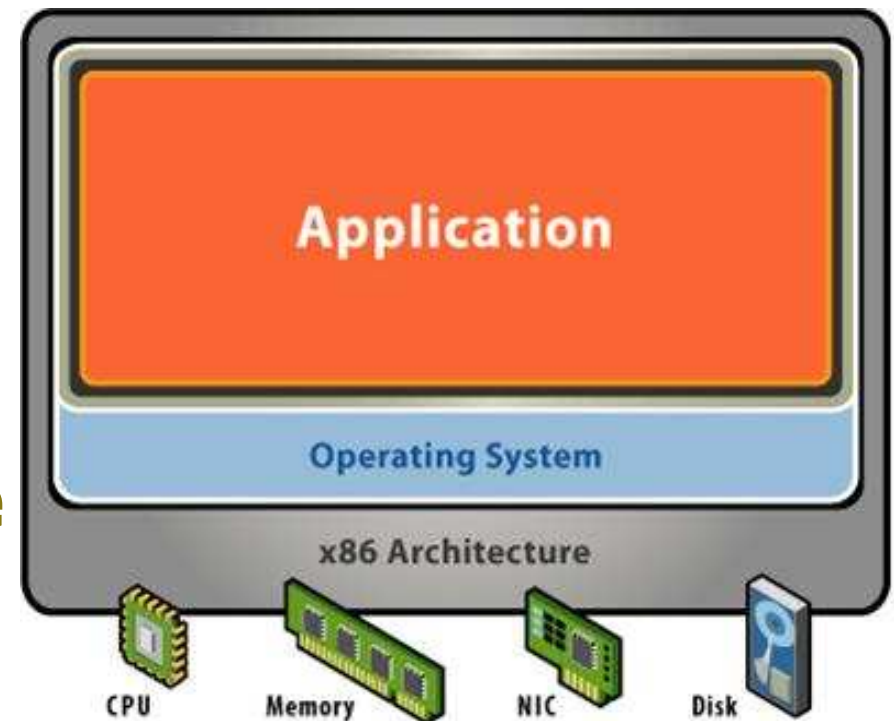
- **High availability for physical server failures**
- **Automated workload management**
- **Easy server and/or operating system recovery**





Physical Server Challenges

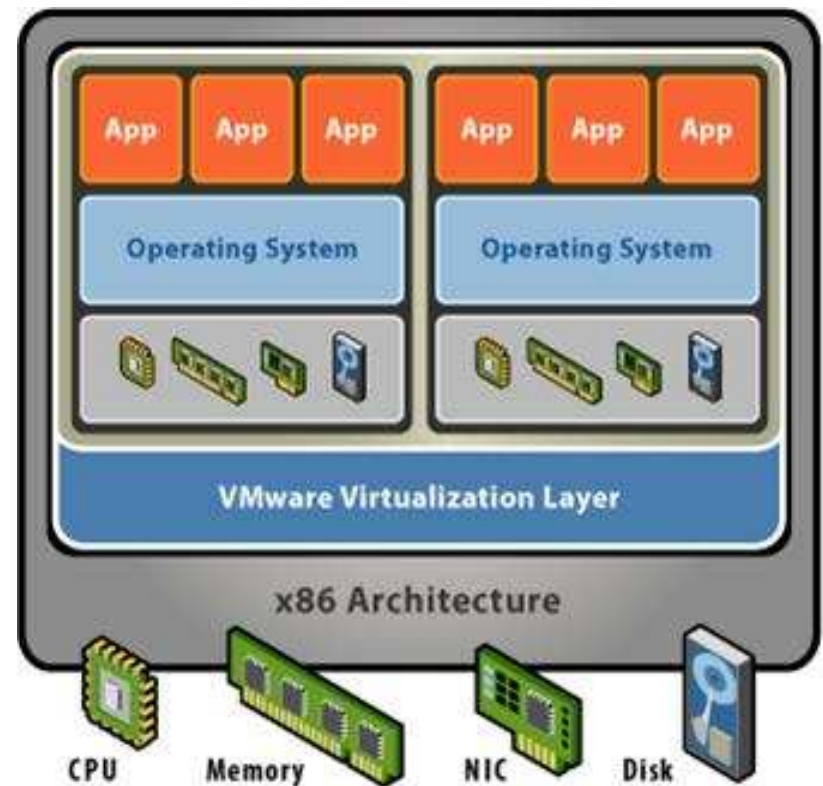
- **Hardware and Operating System must be tightly integrated**
- **One server for one Operating System**
- **Under-utilized hardware**
- **Hardware is a variable in our Data Centers**





Virtualization Benefits

- **Hardware and Operating System are tightly integrated**
- **Virtual Hardware is consistent**
- **32-bit & 64-bit Operating Systems on 64-bit hardware**





Virtualization = Savings

PHYSICAL

100 Servers - \$500,000
200 FC-HBA - \$160,000
300 Network - \$150,000

- **Power**
- **Cooling**
- **5-10 Racks/Tiles**
- **Cable Management (700+ Cables)**



VIRTUAL

5 Servers - \$200,000
10 FC-HBA - \$8,000
45 Network - \$22,500
Virtualization - \$70,000
Software

- **Reduce Infrastructure Physical Requirements by 90%**



Virtualization = *Results*

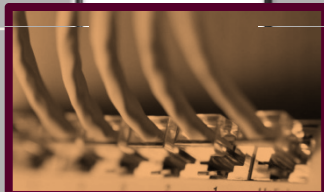
PHYSICAL

100 Servers - \$250,000

0 FC-HBA - \$0

200 Network - \$100,000

- **Power**
- **Cooling**
- **3-7 Racks/Tiles**
- **Cable Management (400+ Cables)**



VIRTUAL

5 Servers - \$200,000

10 FC-HBA - \$8,000

45 Network - \$22,500

Virtualization - \$70,000

Software

- **Reduce Infrastructure Physical Requirements By 80%**



Calls-to-Action

- Business Impact Assessment (formal or informal)
 - Business process focused
 - Business unit involvement to determine RTO/RPO
- DR/DT Fast-Path Approach
 - Focuses on the identification of technical roadmap for the business critical applications
 - Assumes that most of the BIA tasks are complete
- Consolidation Assessment
 - Determines consolidation ratios and ROI
 - Some application specific considerations
- Infrastructure Analysis
- Technology Plan
- Operational Plan



Thank you !



IT Partners

"Business & Technology Coming Together"

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