



## Data Center 3.0 Infrastructure Transformation



**“Le Datacenter au centre de la  
strategy de l’entreprise”**

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***Middle East & Africa, Business Development Mgr***

## La continuité des affaires ...

### Qu'auriez vous fait si :

- Le siège social et le data center étaient détruits ?
- Le réseau qui supportait plus de 5000 desktops et serveurs était hors d'usage ?
- Tous les employés du siège social étaient déplacés ?
- Toutes les communications des PBX étaient coupés?
- 45 agences distantes n'avaient plus accès aux applications informatiques de la compagnie ?

## Le résultat d'une constante réflexion de son Systeme d'Information ..

### Lehman Bros. Reopened for Business the Next Day

- **Recovering Applications and Data**

Synchronized data centers across a metro network ensured fast recovery of data and applications

- **Continuous Communications**

IP telephony network enabled continuous voice communications

Voice traffic rerouted over IP to alternate PSTN gateways in Europe, enabled communications with customers

- **Ensuring Continuous Access**

Data and communications secured over public networks using VPN technology provided continued access

Instant offices in hotel rooms, using wireless and VPN technologies allowed key personnel to get back to work

# Les coûts versus les Services : Quel Equilibre?



## Bay Bridge:

- Original cost in 1936: \$1.1 billion (adjusted for today's \$)
- Estimated cost to expand: \$6.2 billion... and climbing

**A Poorly Planned Architecture**



## Golden Gate Bridge:

- Original cost to in 1937: \$446 million (adjusted for today's \$)

**A Well Planned Architecture**

# Deux types de réflexion pour les dirigeants

Those that view the value that information technology can bring to their business as strategic

**OR**

Those that see IT as a cost center



## Le besoin Business : Flexibilité & Optimisation

- Economics: Globalization demands flexibility

Business processes: **The only constant is change**

- > New products & services
- > New customer expectations
- > New sales channels
- > ....

- Information: Greater availability

- Compliance issues increase

Sarbanes-Oxley, PATRIOT Act, Basel II, HIPAA

- Reusable assets can cut costs

**Service Oriented  
Application Oriented**

# Services Oriented Architecture is #1 on CIO's List

**64%** of CIO respondents plan to **implement** service-oriented architectures in the coming year.

Talking about how **Services from the Network** contribute to their SOA plans **makes IT leaders relevant** to the CIO



**And no need to be intimidated!!**

***“.... interest persists even though many Executives have been unclear about the precise meaning of the term ‘SOA’”***

Etendre le rôle du réseau dans le business de l'entreprise



Où est CISCO dans ce model SOA ?



# Data Centers under Increasing Pressure

## New Business Pressures



Collab



Shared U



SLA



Cost



Reg. Compliance

## Operational Li



Power & Cooling



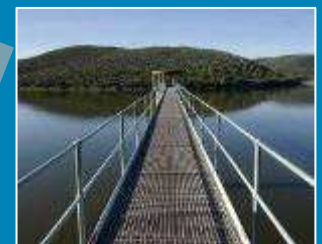
Asset Utilization



Provisioning



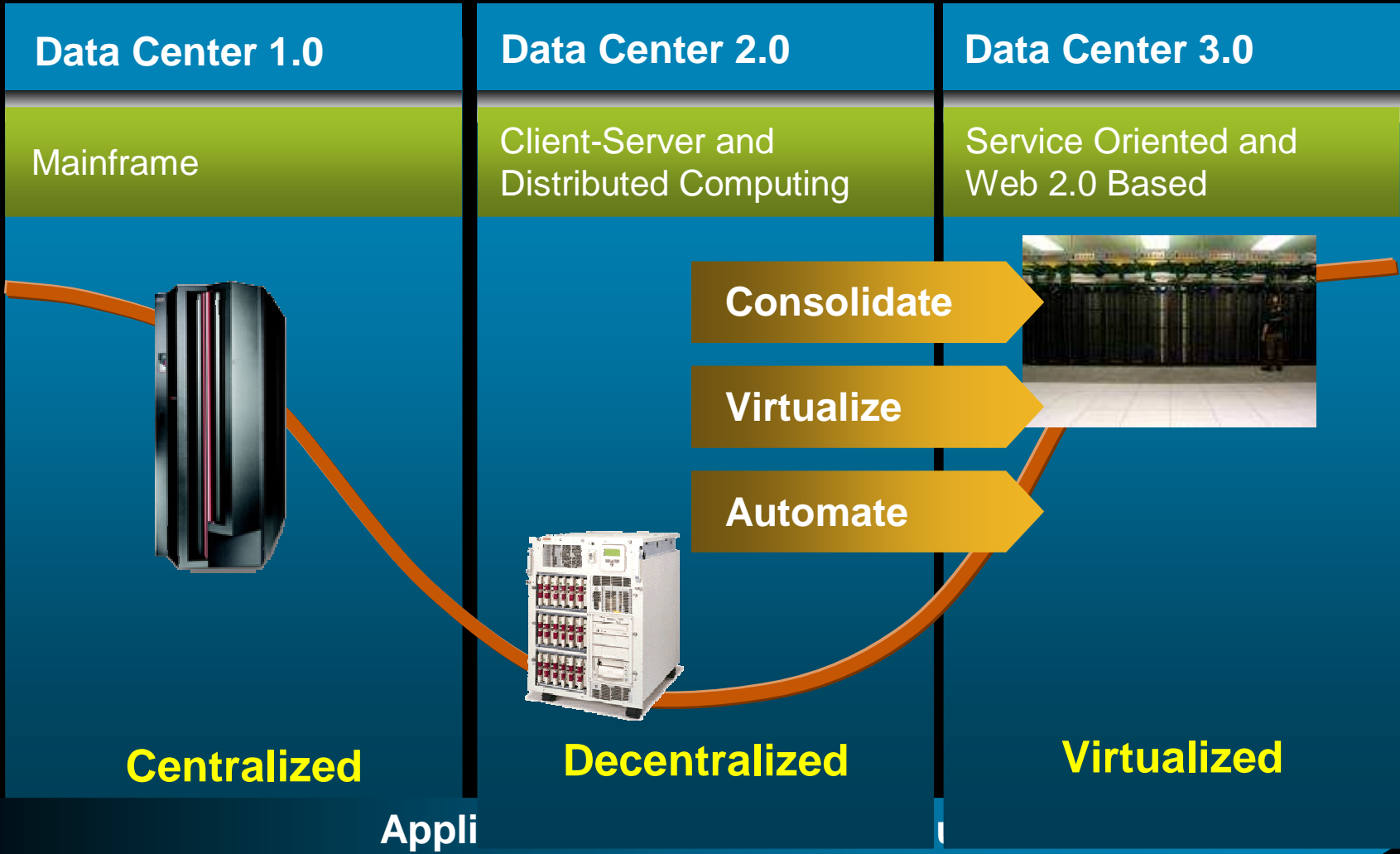
Threat Prevention



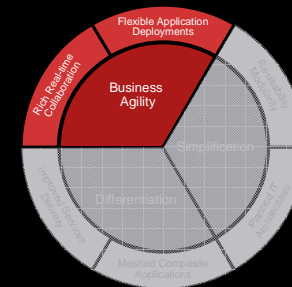
Bus. Continuance

# Data Center Evolution

IT Relevance and Control



# The Applications Landscape Is Evolving (Need Agility)



## Centralized

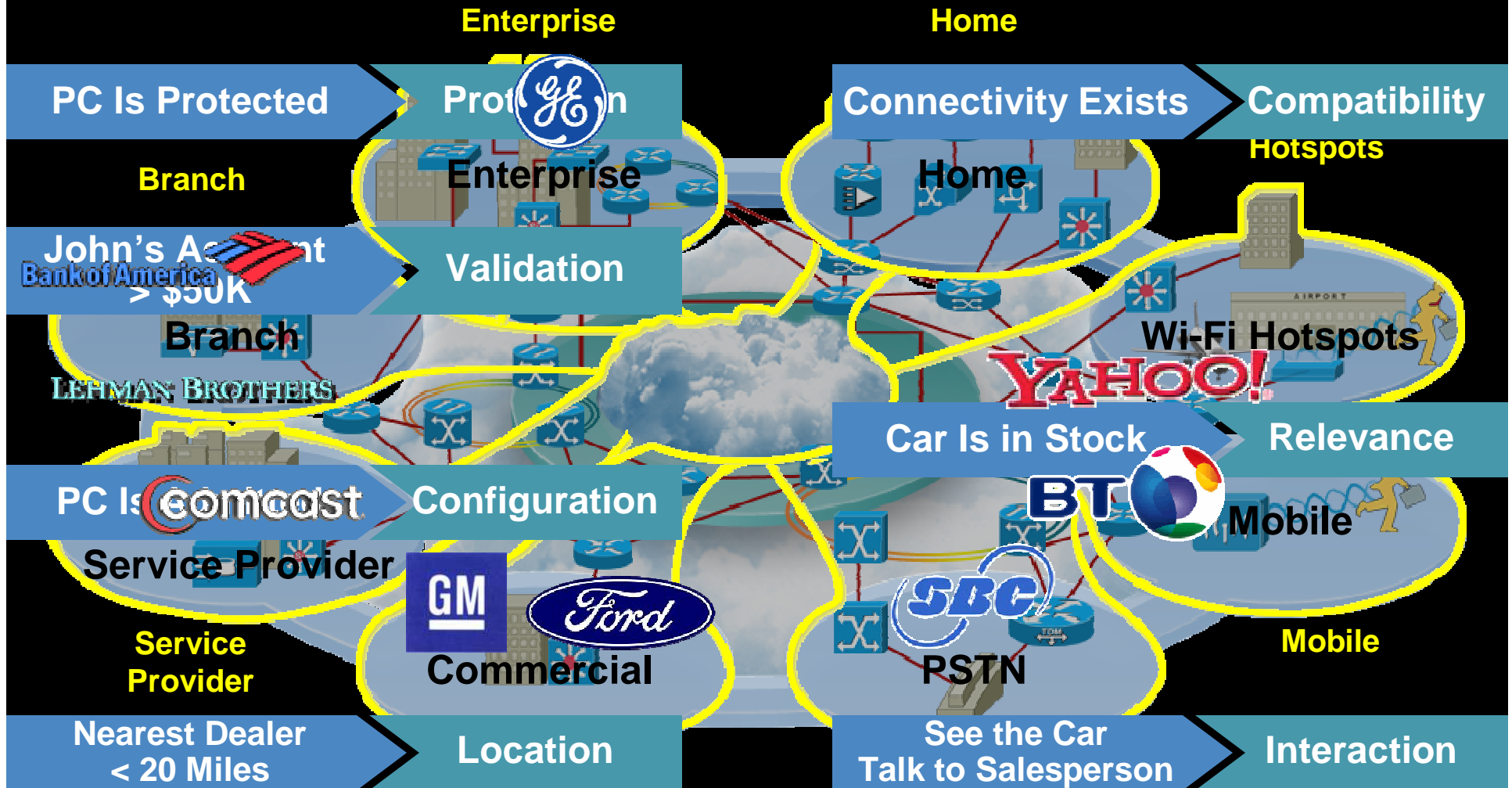
- Client-to-Server
- Data only
- Delays are OK
- Server-Centric
  
- Static documents
- Static repository
- Wired devices

## Collaborative

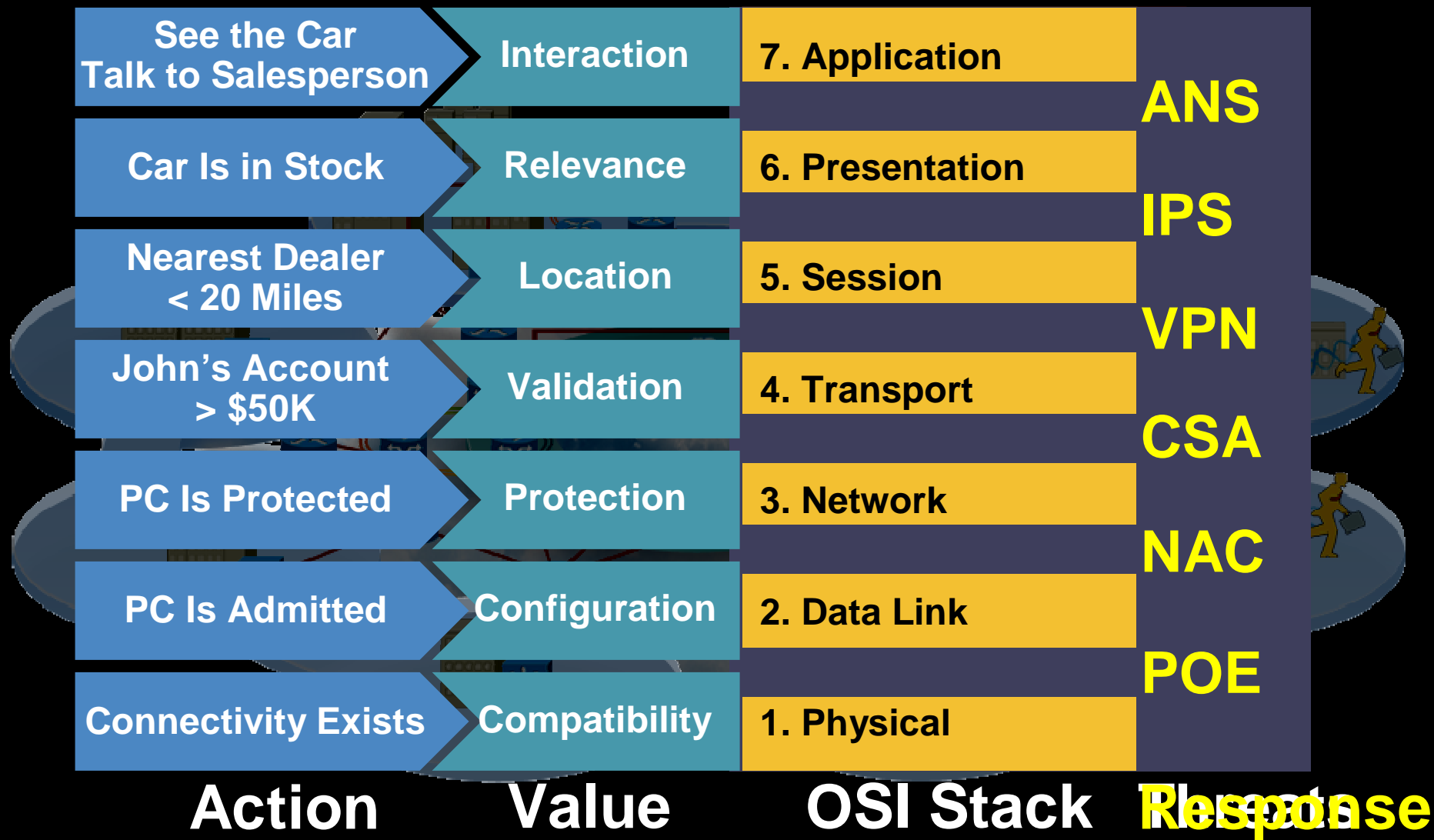
- Any-to-Any
- Multimedia
- Real-time
- Server-Less or Server-Assisted
- Shared information
- Dynamic sharing
- Wired and Wireless devices



# Why Integrated Architecture Matters...



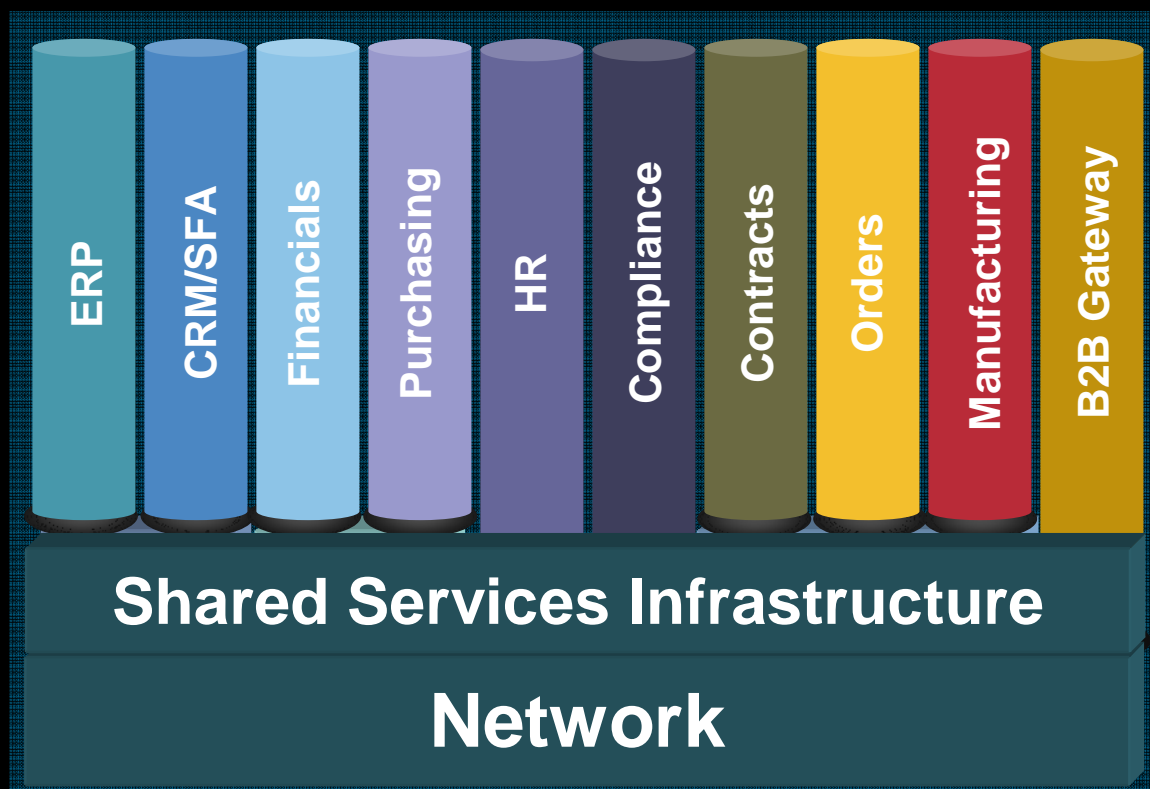
# Le réseau est présent dans toutes les couches



# The Expanding Role of the Network

## The Logical Place To Begin To Build An Extended Shared Services Infrastructure

### Today's Infrastructure



- Extensions for common, shared application and resource services
- Siloed applications not designed for integration and protocols
- Extend Cisco's industry leadership in protocol design, integration, and optimization
- Multiple application platforms
- Extend the network's legacy as a shared, virtualization-enabled (connected)

# Cisco Data Centre Network Architecture

End-users, Customers,  
Partners

Front-end  
(Access)  
Network

Applications  
(DB, CRM, ERP, etc.)

Back-end  
Network

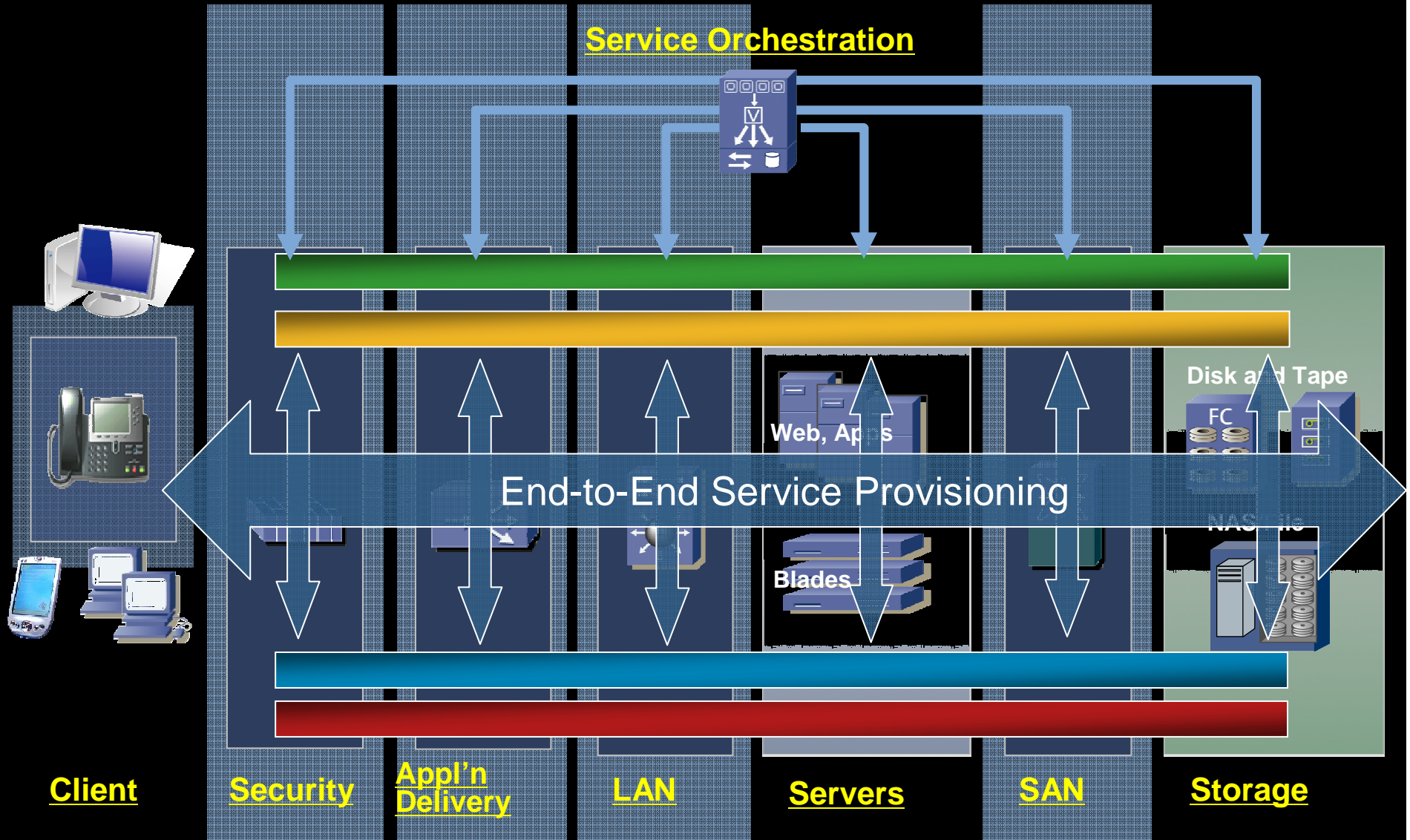
Pooled resources  
(Storage &  
Computing)

Amélioration → Risques de migration  
→ Temps de réponse  
→ Contrôle des coûts

Imbedded Network Services  
Application, Security  
Resilient Access

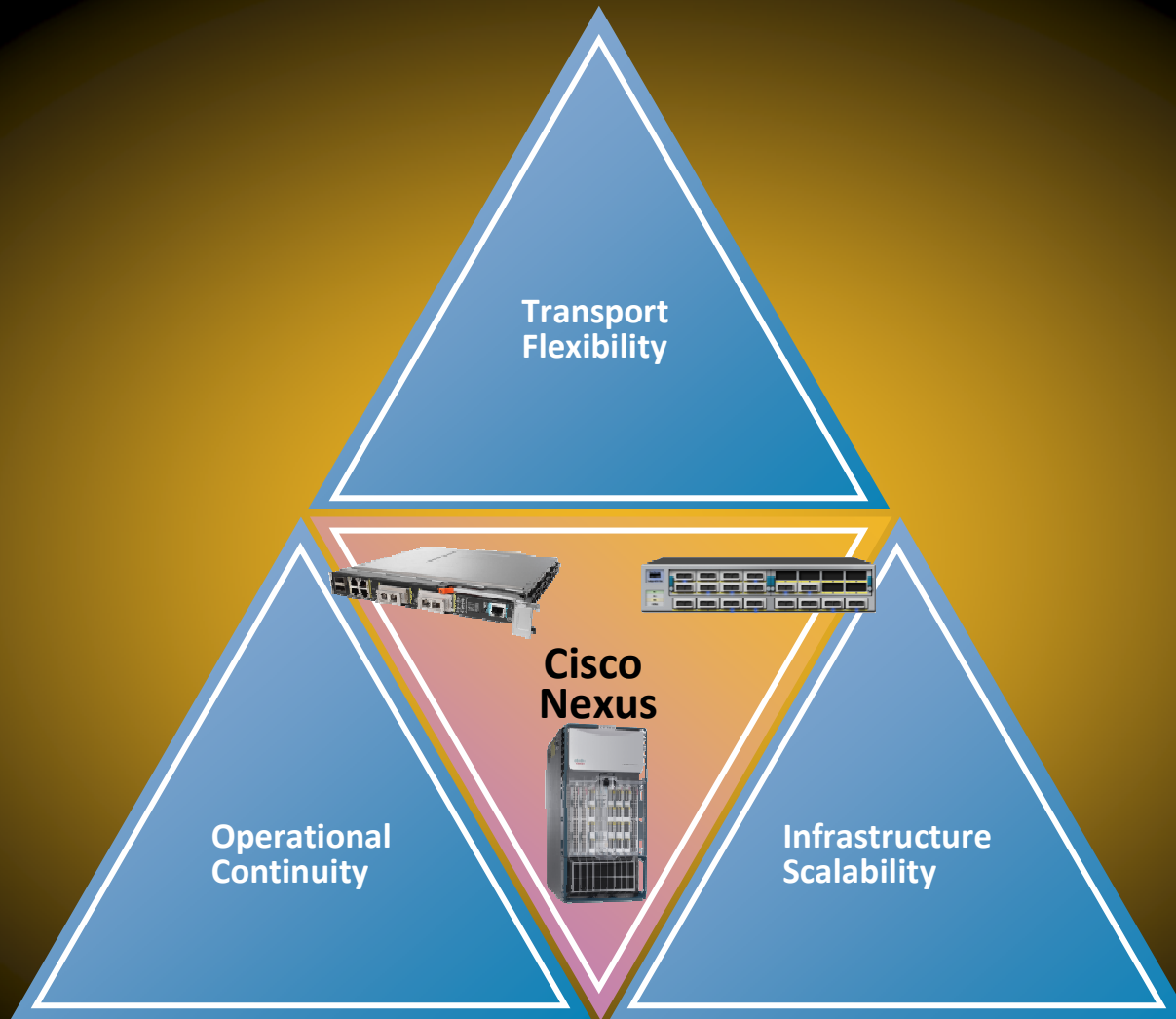
Resources Consolidation  
Network, Server, & Storage  
Resources Virtualization  
Network, Server, & Storage  
Network Services Integration  
Security, Storage, & Compute  
Network Services Automation  
Application offload, Provisioning  
Services orchestration

# Data Center Virtualization via the Network





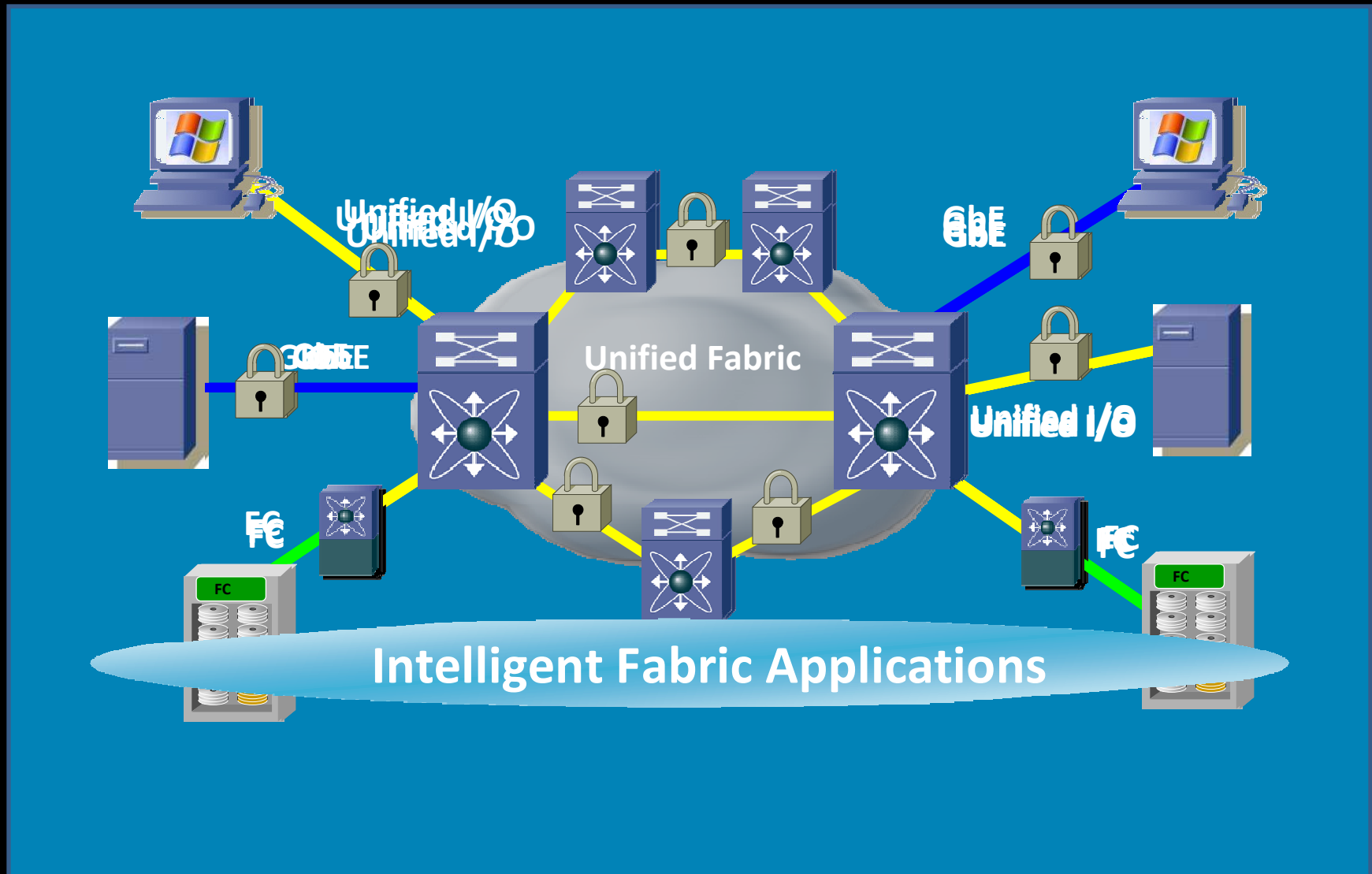
# Introducing the Cisco Nexus Family



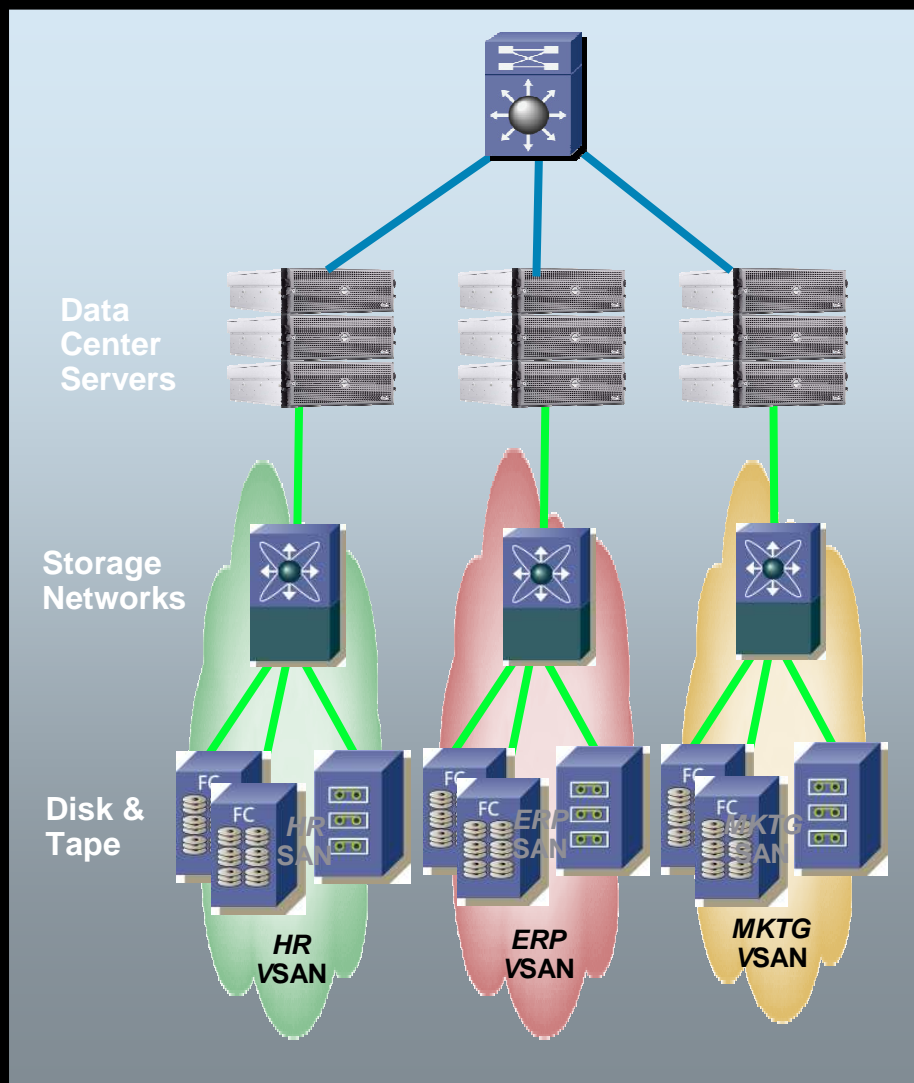
# Cisco NX-OS



# The Cisco Data Center Revolution



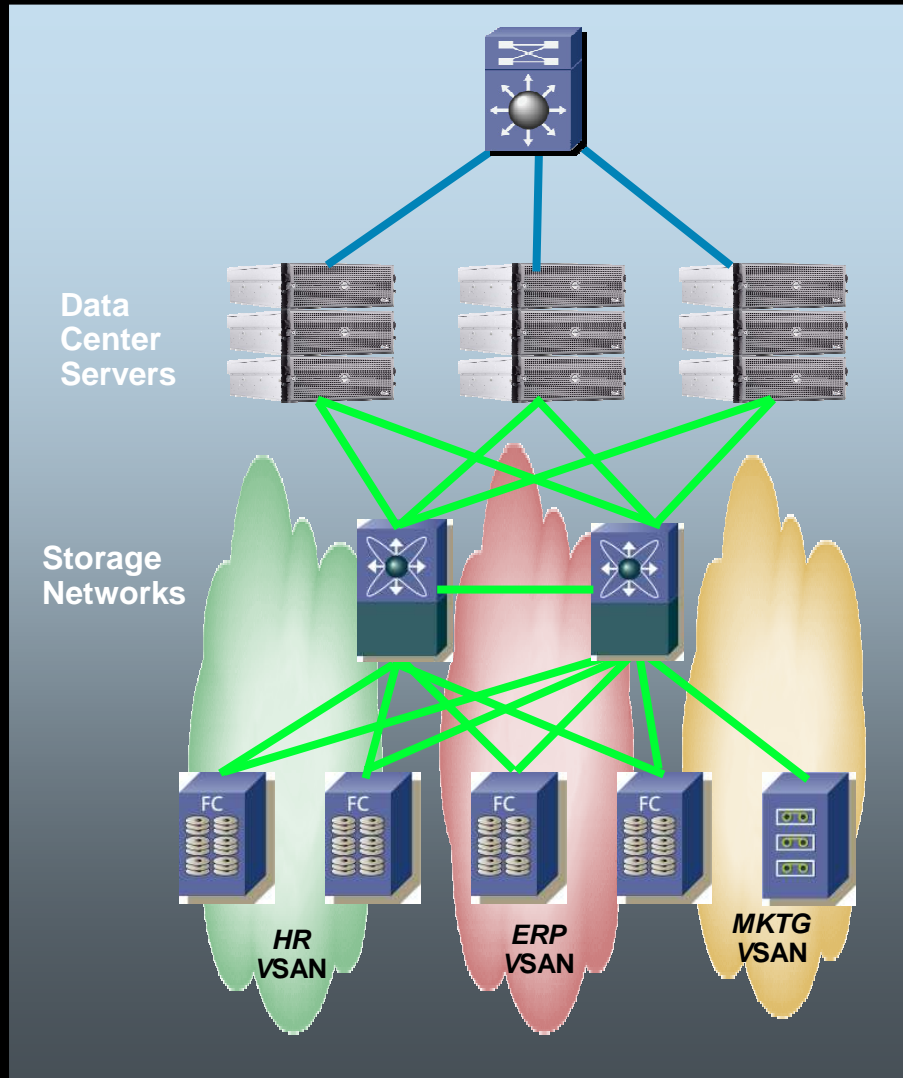
# SAN Storage Consolidation & Virtualization



- Storage Networks allow sharing and Consolidation of Disc & Tape across multiple servers
- Utilization increased to ~50%
- Leads to SAN Proliferation and 'Islands' based on capacity

# SAN Storage Consolidation & Virtualization

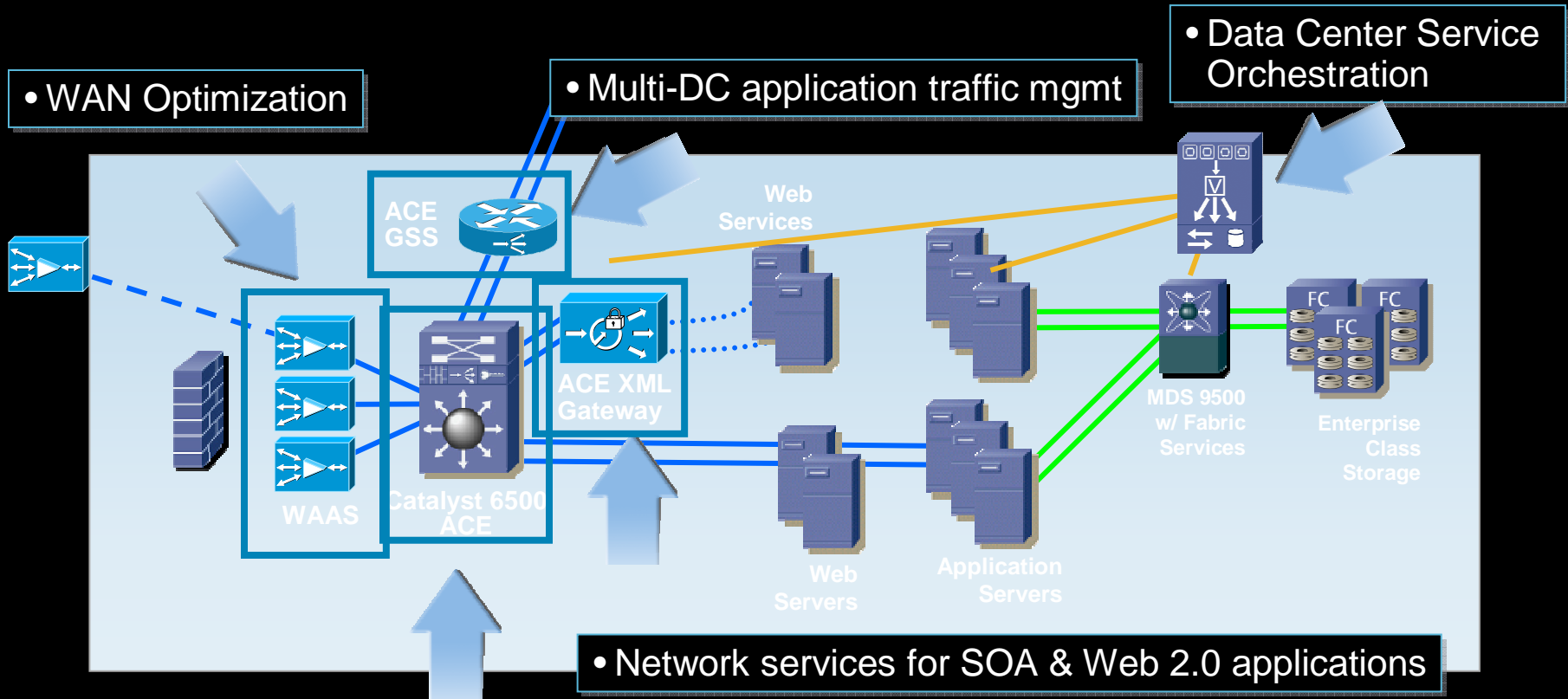
## Solution: Intelligent Storage Services



- Storage Networks allow sharing and Consolidation of Disc & Tape across multiple servers
- Utilization increased to ~50%
- Leads to SAN Proliferation and 'Islands' based on capacity
- Virtual SANs (VSANs) allow the further consolidation and virtualization of SAN islands into a large common resource pool
- Utilization increases to ~70%

# Addressing Critical Challenges

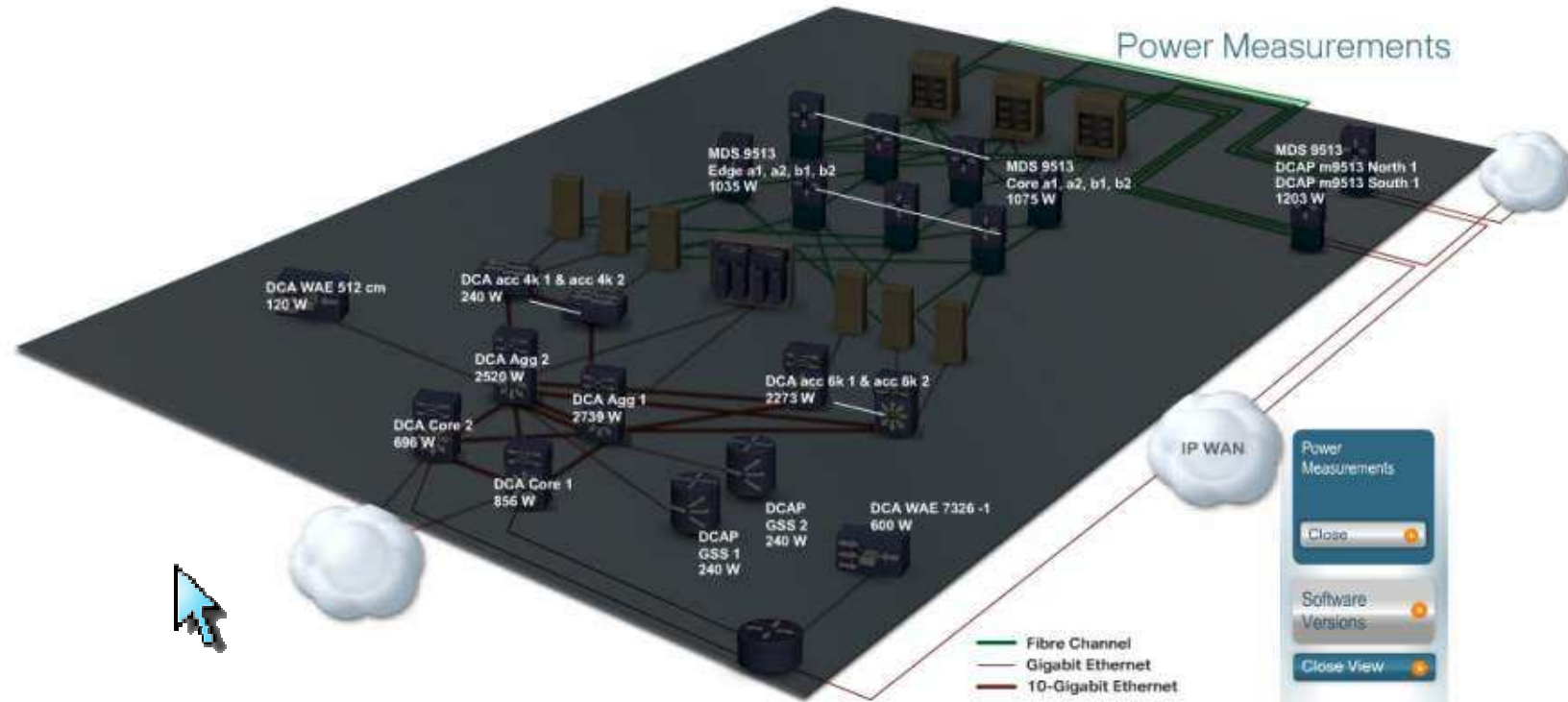
## Cisco Application Networking Solutions



- Virtualized application services
- Application Switching and Server Offload
- Application Acceleration
- Application and Server Farm Security

- Solution Benefits:**
- Faster application deployment/scale
  - Maximum availability & performance
  - Comprehensive security
  - Ready for SOA evolution
  - Fully integrated into the network

# Data Center Assurance: Tested Models, Best Practices



[http://www.cisco.com/en/US/netsol/ns758/networking\\_solutions\\_sub\\_program\\_home.html](http://www.cisco.com/en/US/netsol/ns758/networking_solutions_sub_program_home.html)

# Data Center Assurance Program (DCAP)

## A Range of Selling Resources

Worldwide [change]

Search

Solutions Products & Services Ordering Support Training & Events Partner Central

HOME  
SOLUTIONS  
ENTERPRISE  
ENTERPRISE ARCHITECTURES  
ENTERPRISE DATA CENTER  
APPLICATION NETWORKING SOLUTIONS  
**Cisco Application Partner Solutions**

Application Networking Solutions  
**Cisco Application Partner Solutions**

Through the expanded Data Center Assurance Program, Cisco is working with key application vendors to jointly validate their applications on the Cisco network infrastructure.

**SELECT PARTNER** **BEA Weblogic**  
BEA WebLogic Server provides industry-leading, standards-based enterprise infrastructure software to accelerate the secure flow of information and services, reduce IT complexity, and deploy service-oriented architectures (SOA) to improve business agility and efficiency.  
> [Learn More](#)

**IBM WebSphere Portal and iNotes**  
IBM WebSphere Portal software provides a composite application framework, the advanced tooling needed for flexible, SOA-based solutions, and industry-leading scalability.  
> [Learn More](#)

**Isilon Systems**  
Isilon Systems is a leader in clustered storage systems and software for digital content and unstructured data. Isilon's award-winning family of IQ clustered storage systems combines with Isilon's OneFS operating system software to deliver modular, pay-as-you-grow, enterprise-class storage solutions. Isilon's clustered storage systems speed access to critical business information while dramatically reducing the cost and complexity of storing it.  
> [Learn More](#)

**Microsoft Exchange Server and Office SharePoint Server**  
Microsoft Exchange Server provides industry-leading e-mail, calendaring, and unified messaging solutions. Office SharePoint Server facilitates collaboration, provides content management, and supplies access to information that is essential to organizational goals and processes.  
> [Learn More](#)

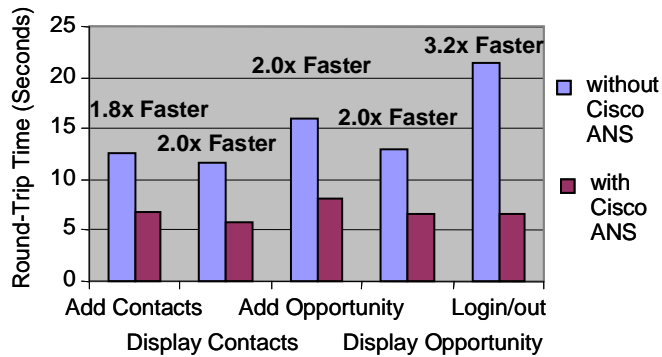
**PARTNER NETWORK** **Oracle E-Business Suite, Fusion Middleware, Siebel, and PeopleSoft**  
Oracle E-Business Suite, Siebel Customer Relationship Management, and PeopleSoft Enterprise address complex business requirements and enhance the customer experience. Oracle Fusion Middleware spans from portals and process managers to application infrastructure, developer tools, and business intelligence.  
> [Learn More](#)

**Certified Integration** **SAP Business Suite and SAP Net Weaver**  
SAP Business Suite applications, based on SAP NetWeaver, combine composition technologies and application functionality to reduce IT complexity and increase business flexibility.  
> [Learn More](#)



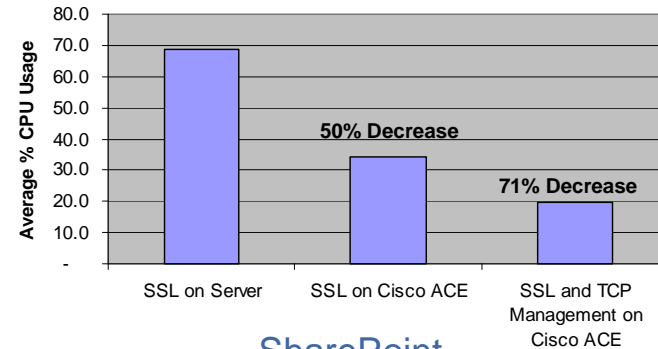
# ...and Real Results for Your Customers

Siebel 8.0 over T1, 80ms latency, .1% packet loss



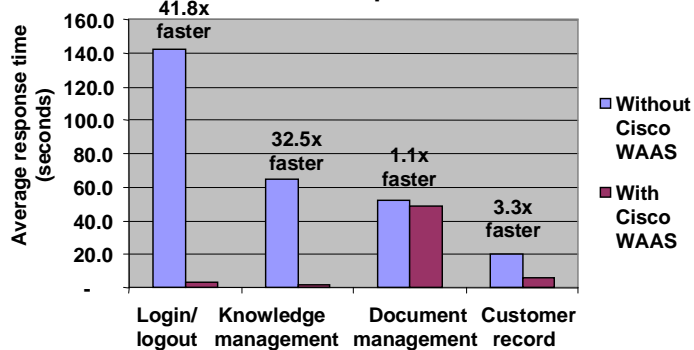
Siebel 8.0

Microsoft SharePoint -- server CPU savings



SharePoint

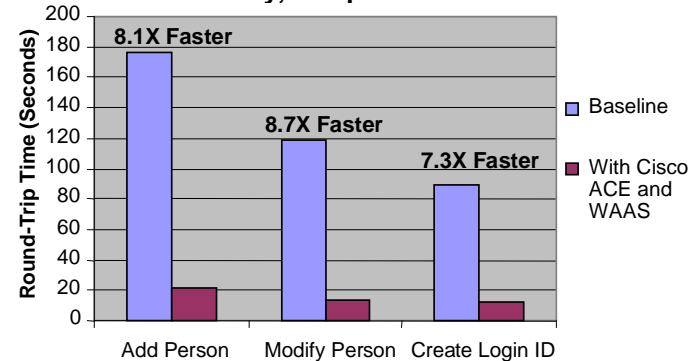
SAP Enterprise Portal



WAN – 780Kbps, 40ms latency, 1% packet loss

Enterprise Portal & NetWeaver

PeopleSoft Enterprise over T1, 80ms latency, .1% packet loss



PeopleSoft

ORACLE®

SAP®

Microsoft®

# In Summary



## Important changes to customer and market requirements are taking place:

- Data Center consolidation and virtualization
- Web 2.0 and SOA
- Continued branch office growth



## New customer requirements include:

- Simplifying deployment of Web2.0 and SOA
- Dynamic provisioning of DC infrastructure
- WAN Optimization maintaining security & visibility



## To meet these requirements you need solutions, not point products

**Cisco ANS solutions extend application awareness end-to-end. Any application, anytime, anywhere**