

# Blade Servers

## State of the Industry 2005

Special Industry Keynote

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*Your way to profitable technology markets.*

- **Markets Drivers/Industry Dynamics**

Blades – An evolution from PC Servers to Supercomputers

Major Applications – Access, HPC, NIC, TP

4 Tiered Computing & Telecom Markets by Environment

Incumbents vs. Startups

- **Market Segments – Mkt.Fcst./Shares/Channels**

Market Forecast, Migrations, Supply Chain, Channels, Price Erosion

- **Industry Issues/Technology Hurdles**

Stds./Midplane, Server Mgmt/DMTF, Fabric Choices

Thermals, IP Acceleration

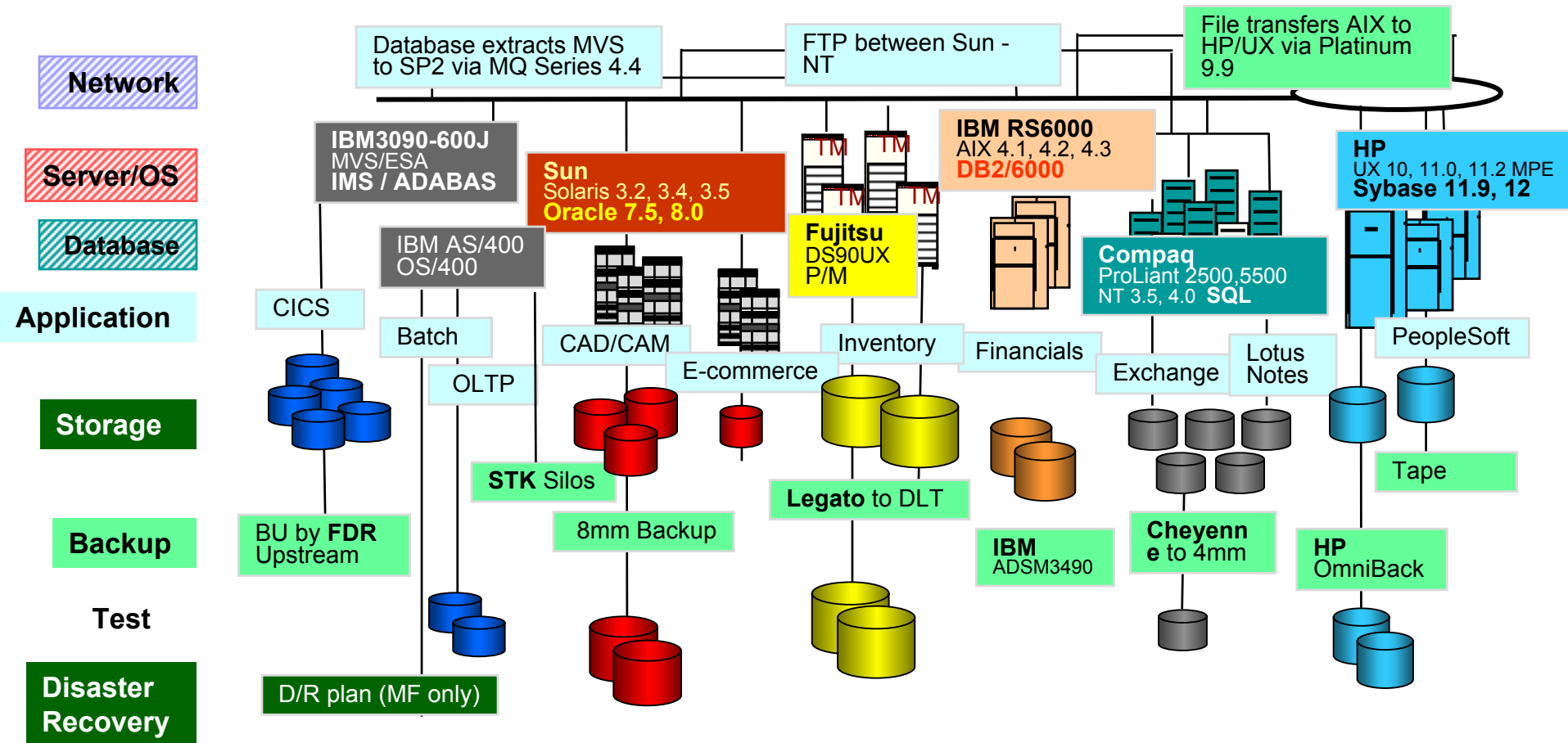
- **Futures Opportunities for Startups**

Complexity Reduction, Data Center Mgmt ,

From Next Gen PCs to Clustered Supercomputers

Interested Venture Capital

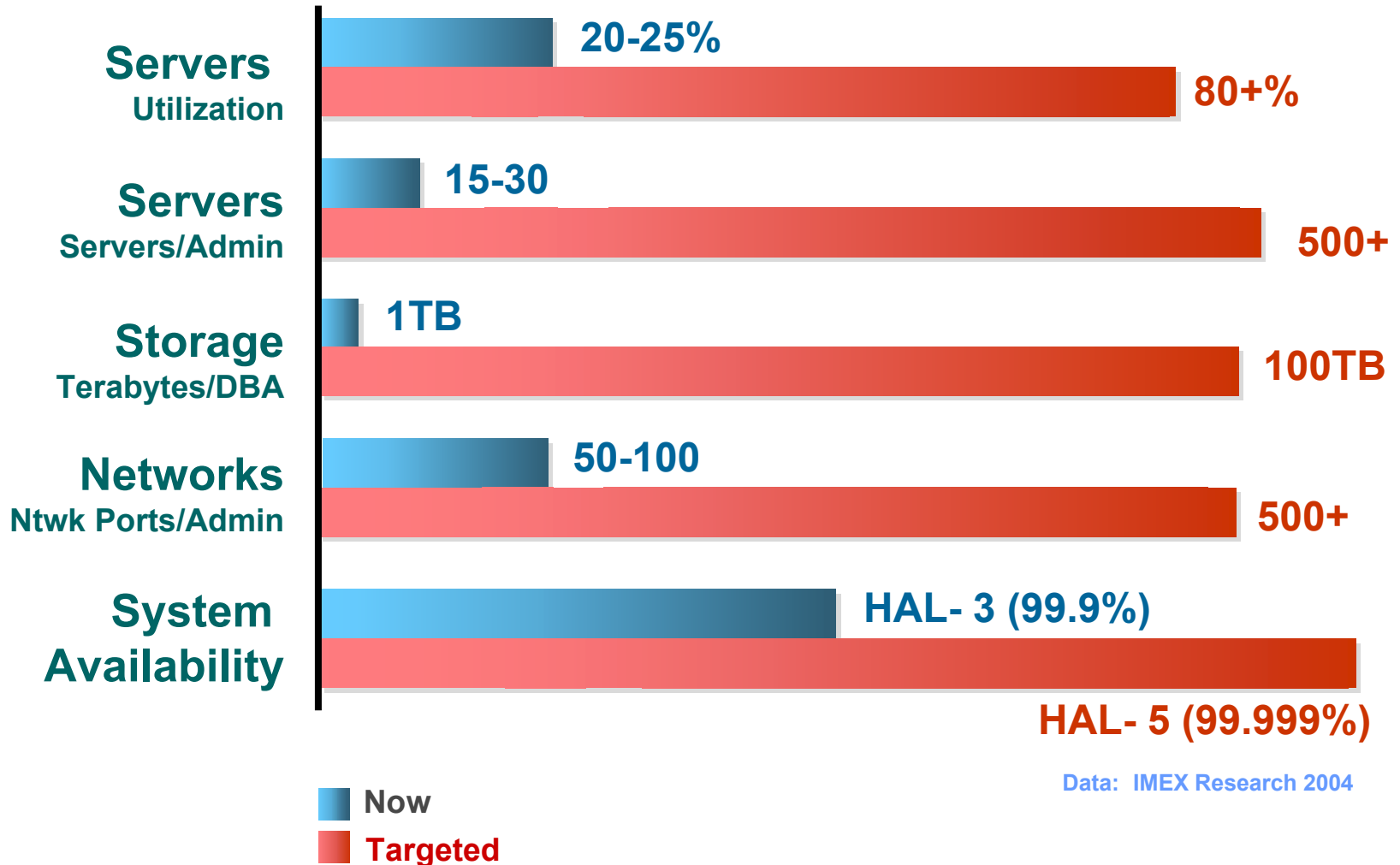
# ► Chaos in the Enterprise . . .



(1) Scales poorly (2) Difficult to manage (3) Reliability is questionable (4) Management costs out of control

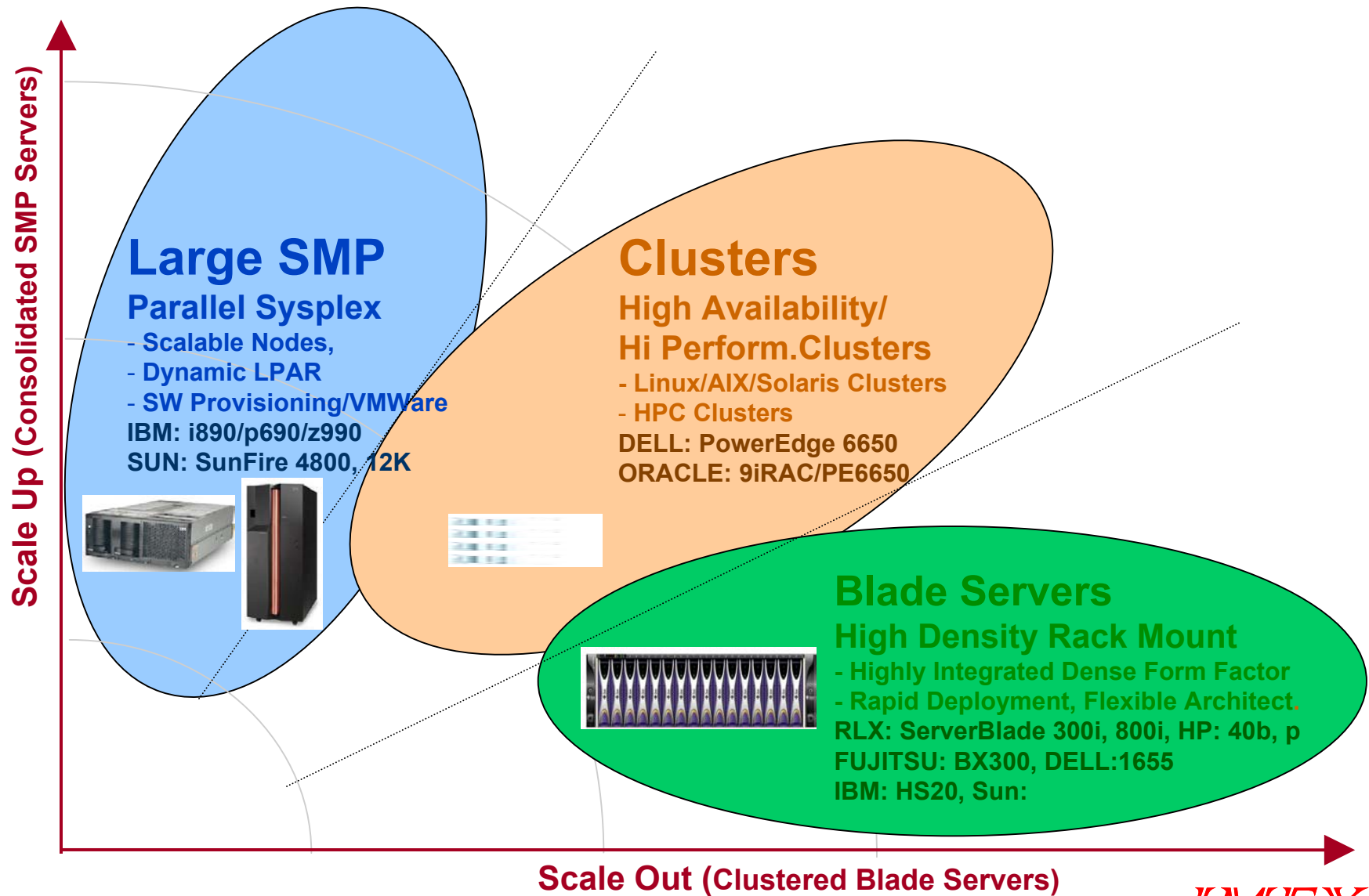


# DataCenter Automation Targets

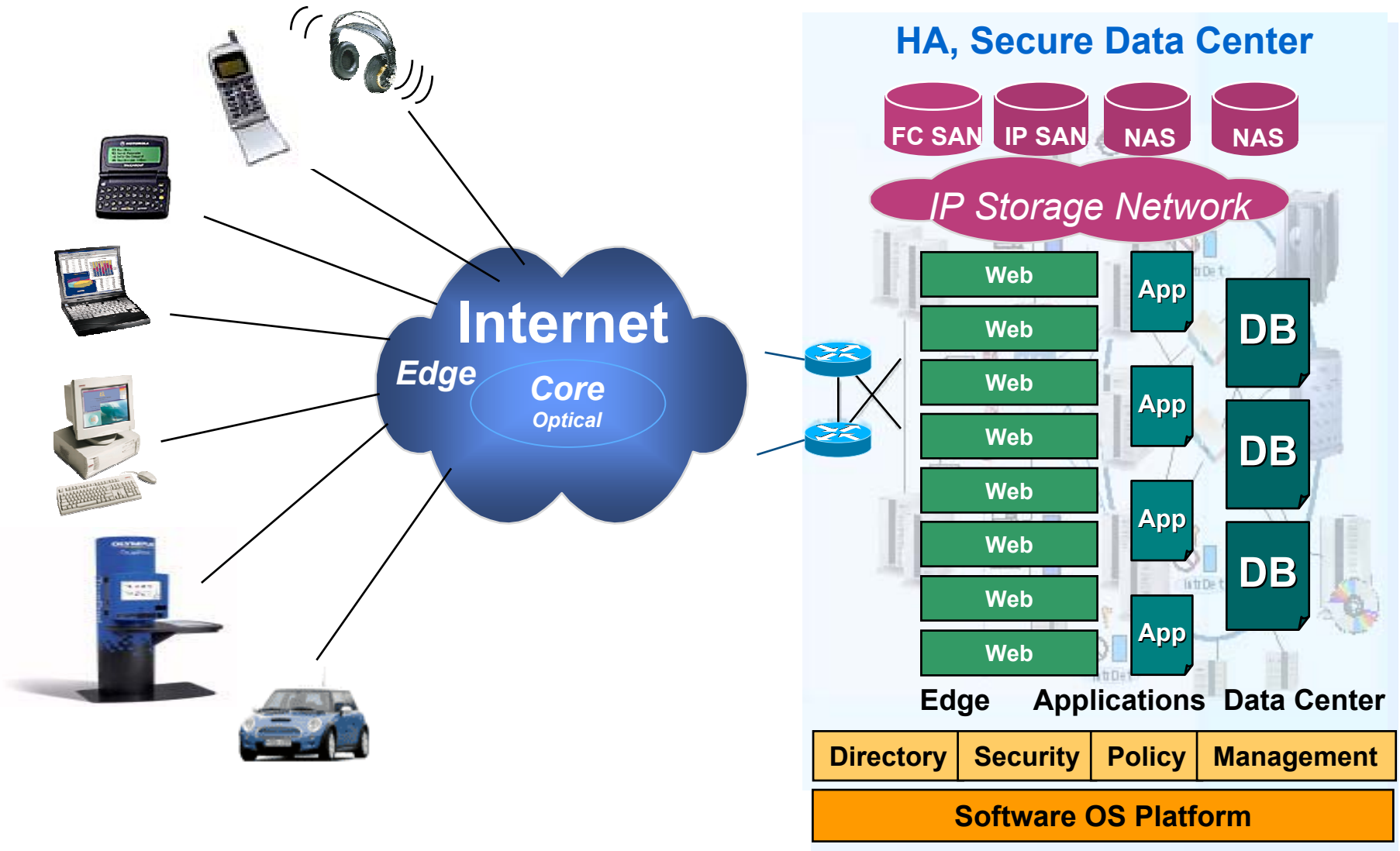


Data: IMEX Research 2004

# ► Server Market Segmentation - Platforms

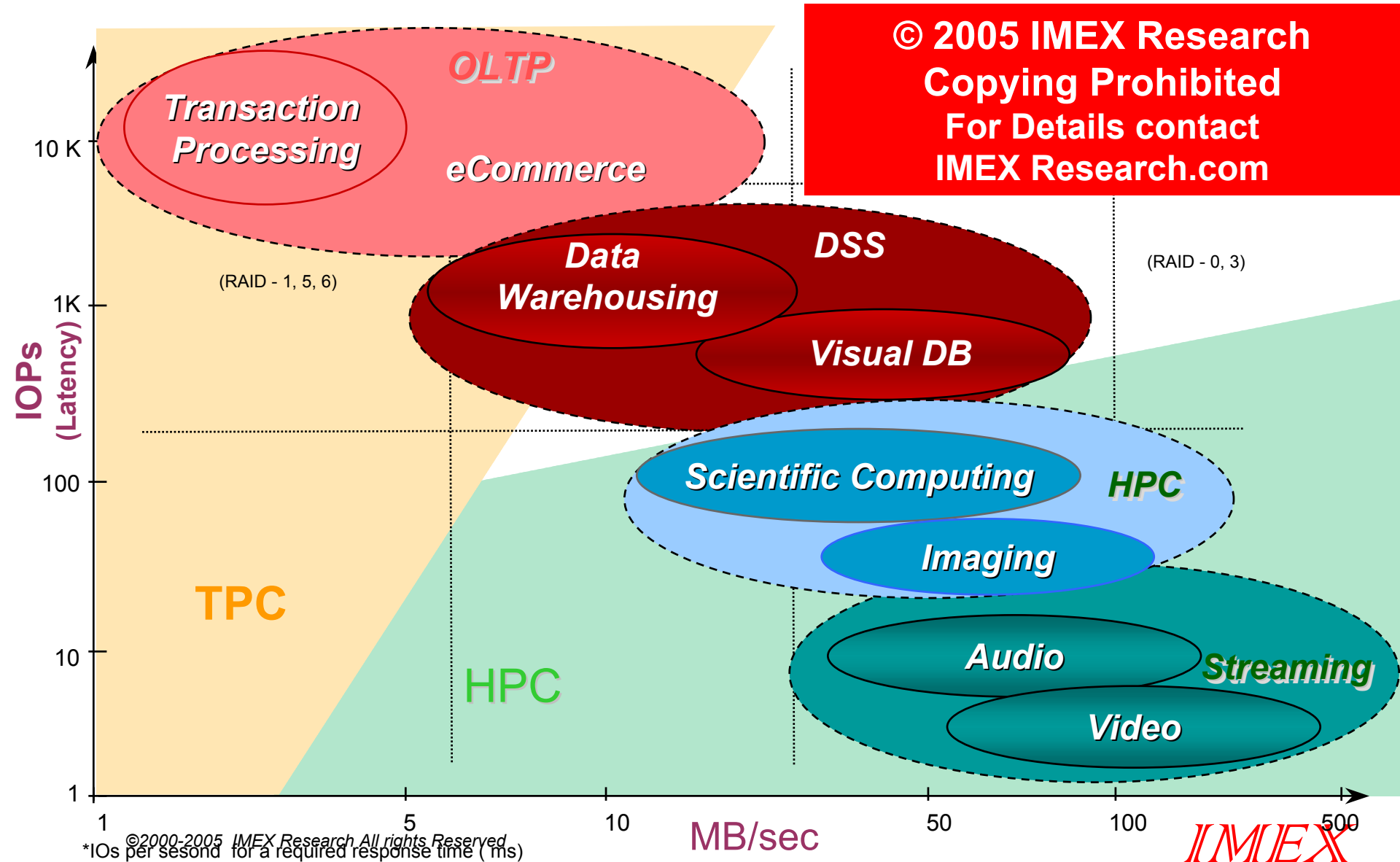


# ► End to End Internet



# ► Market Segments by Applications

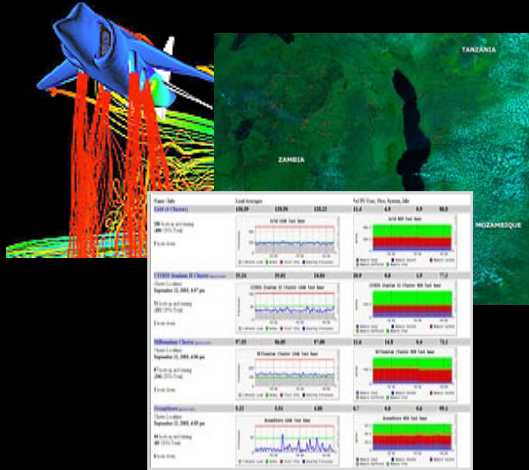
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# High Performance Computing

## High Performance Computing



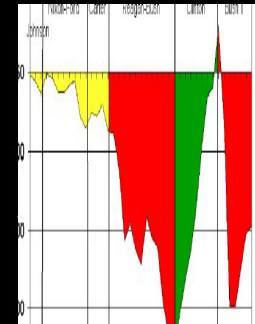
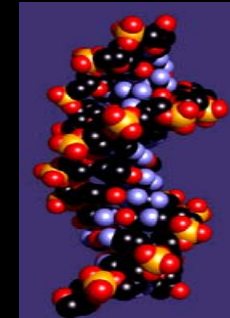
- 100+ Teraflops
- Throughput = 100 GB/s

## Commercial Visualization



- Rendering & Post-Production
- Throughput = 1.2 GB/s texture & polygons

## BioInformatics Wall Street, DSS



## Audio/Video On Demand

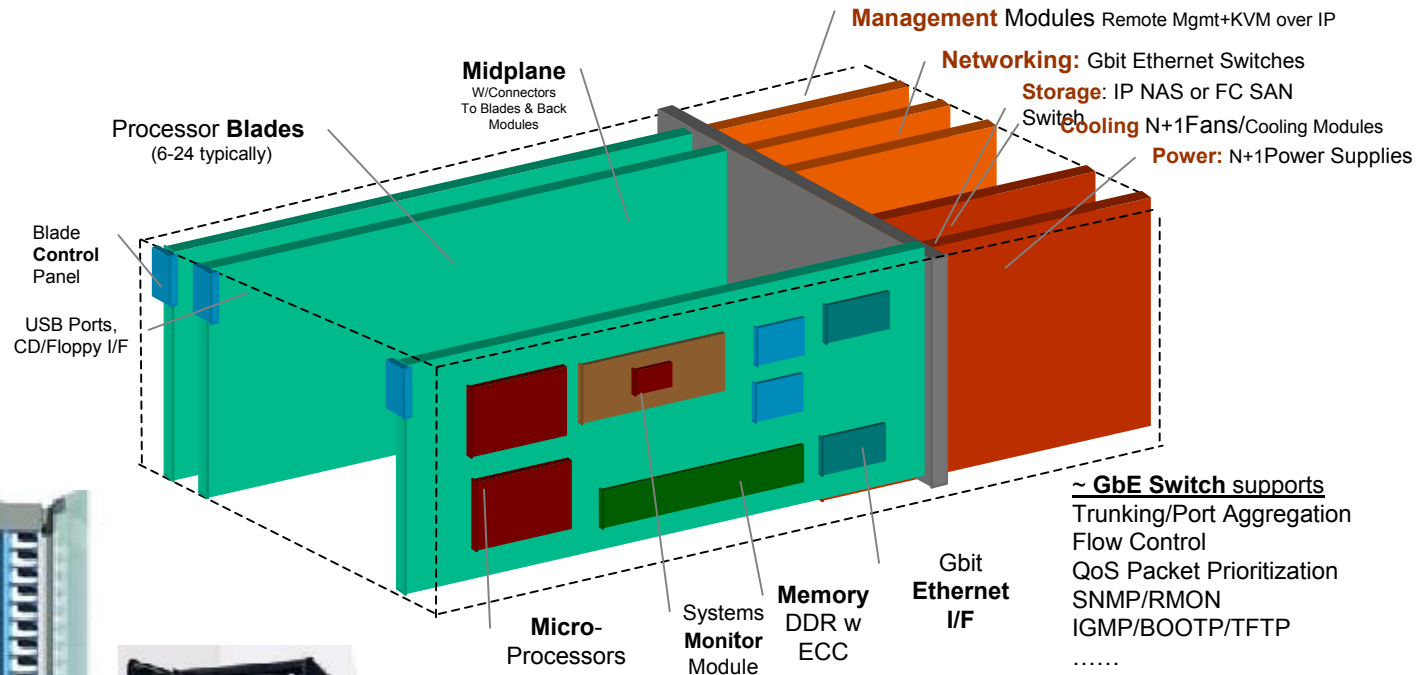


- Data rate & capacity
- Throughput : market





# Blades Servers - Infrastructure



© 2003 Source: IMEX Research



Sum  
microsystem

# ***System Cost vs. High Availability***

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**Or visit:**

**<http://www.imexresearch.com/reports/highavailability.shtml>**



# ***Blades - TCO Savings & ROI***

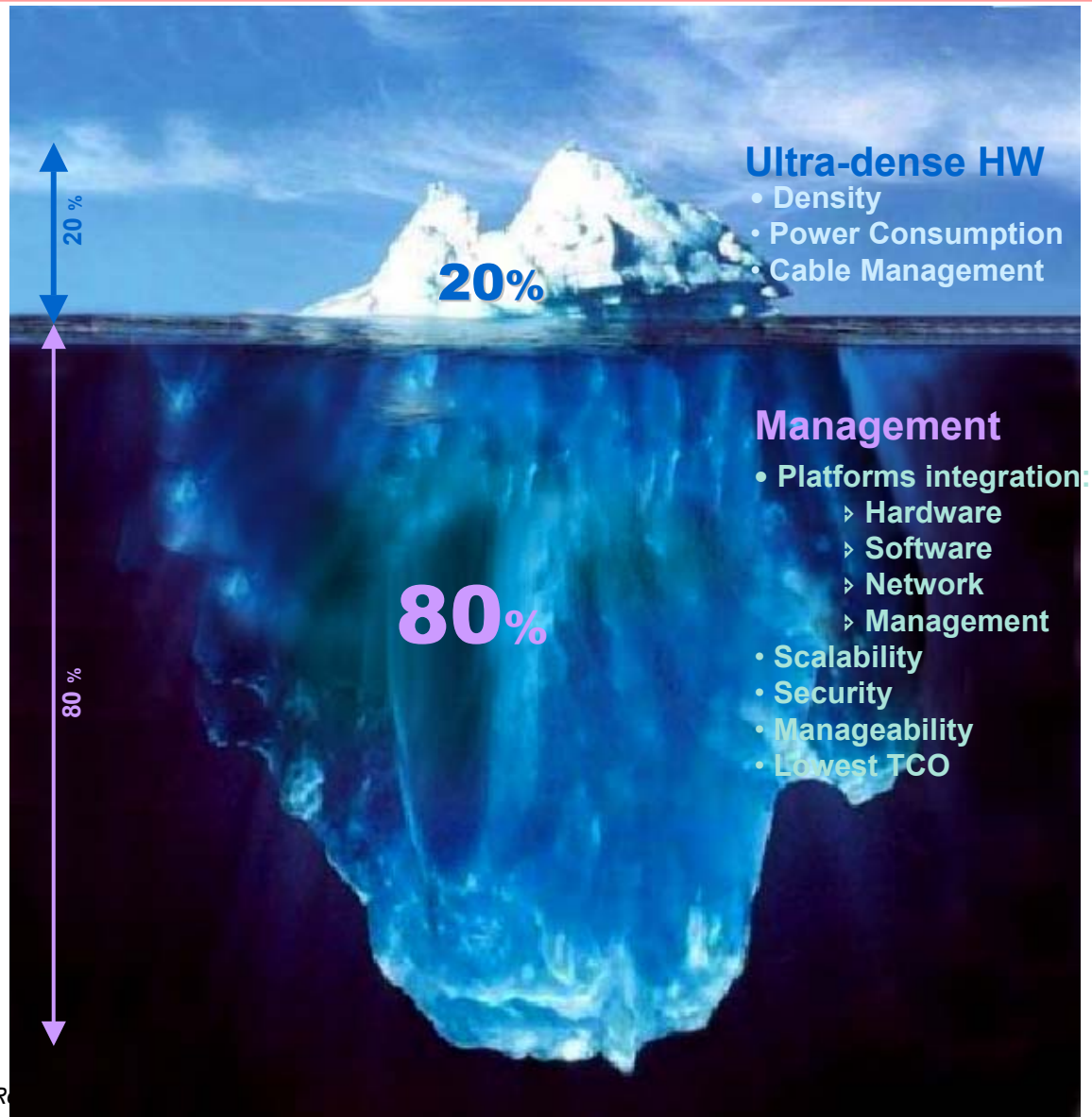
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**Contact [information@imexresearch.com](mailto:information@imexresearch.com) for additional information.**

**Or visit:**

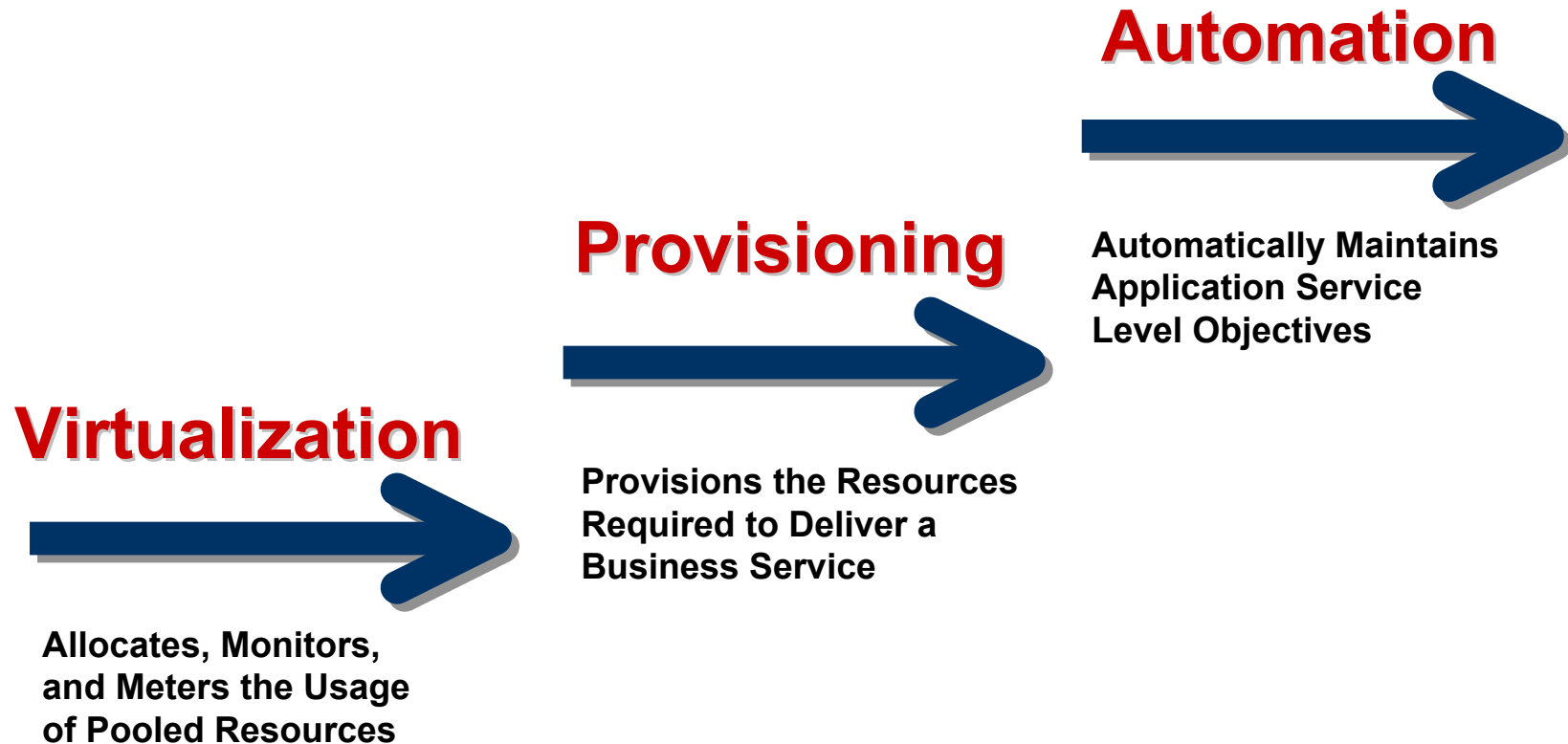
**<http://www.imexresearch.com/newsletters/jan05a.html#TCO>**

# ► Management – Blade Servers

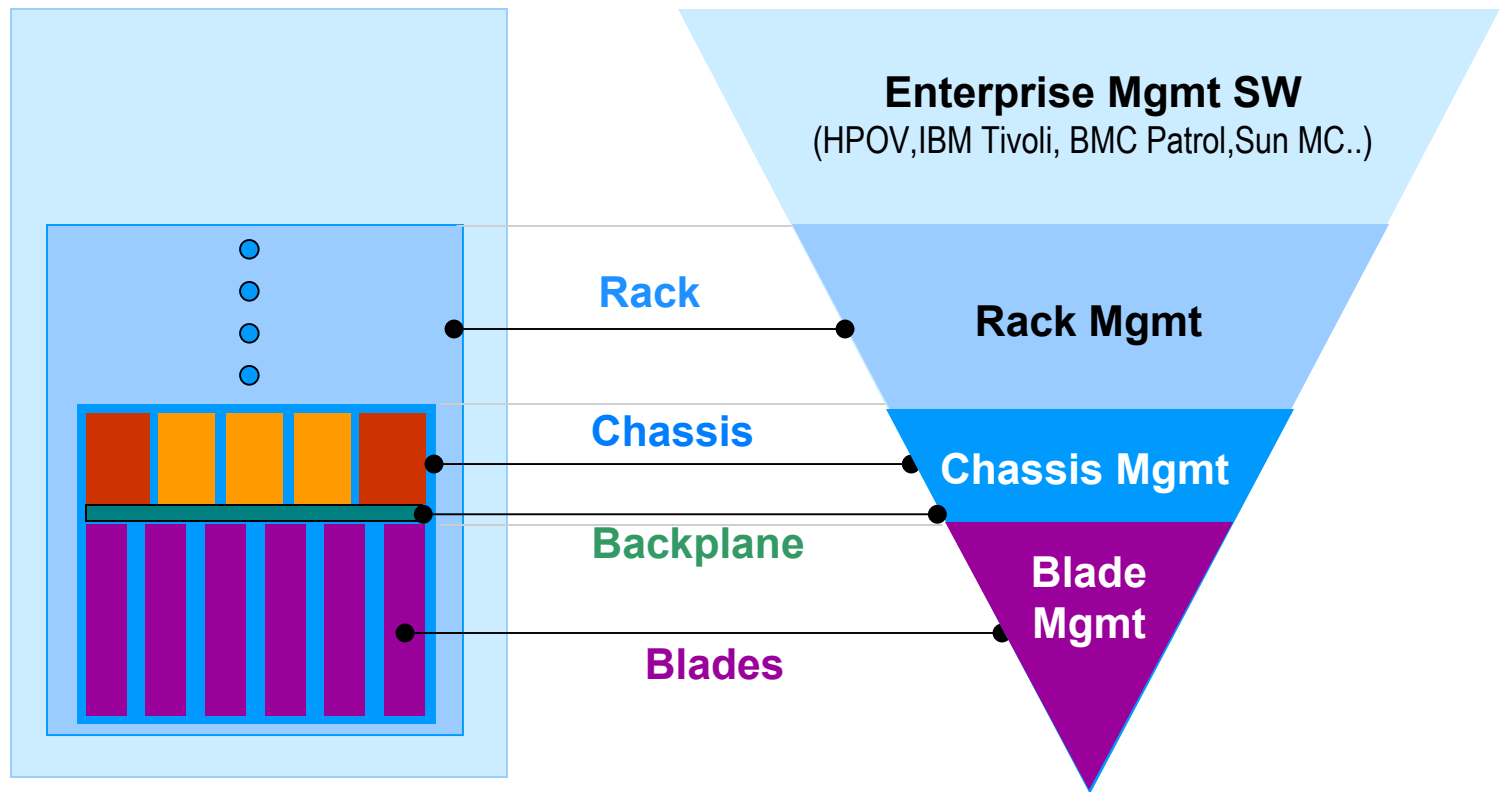


# ► *Blade Server Management Software*

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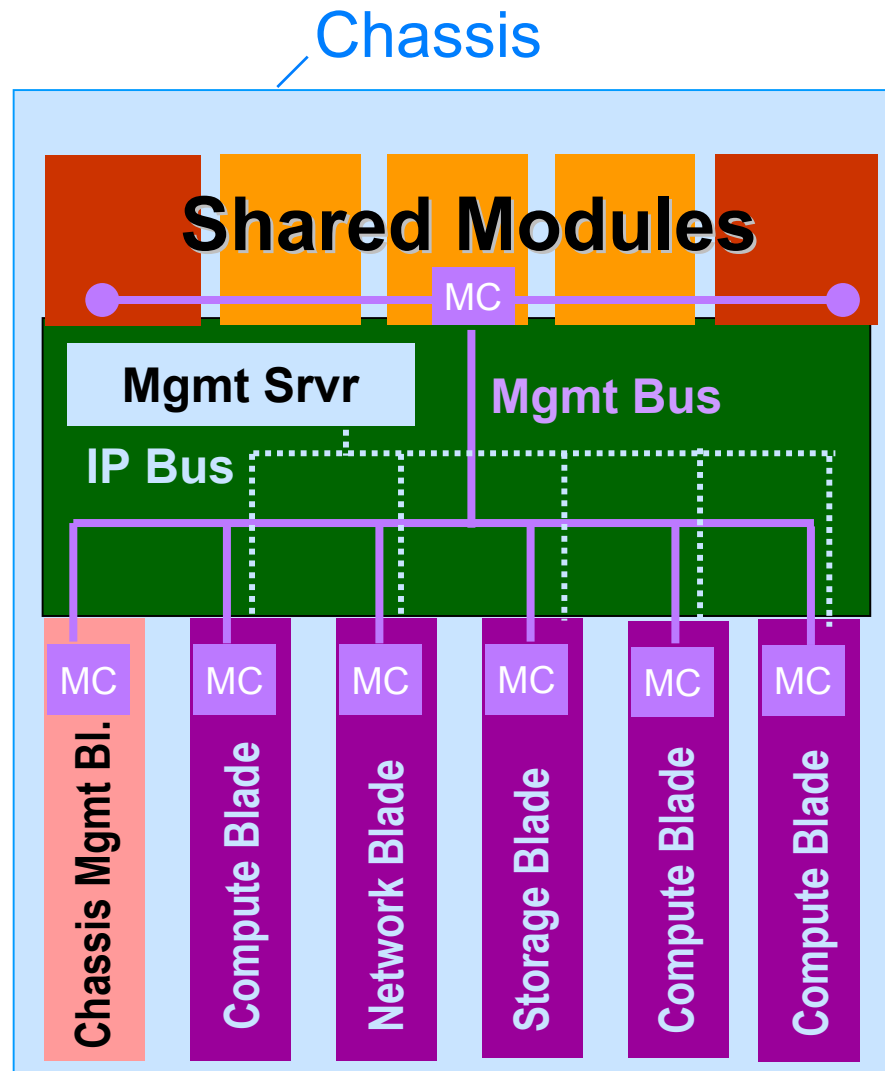


# ► Blade Server Management Software





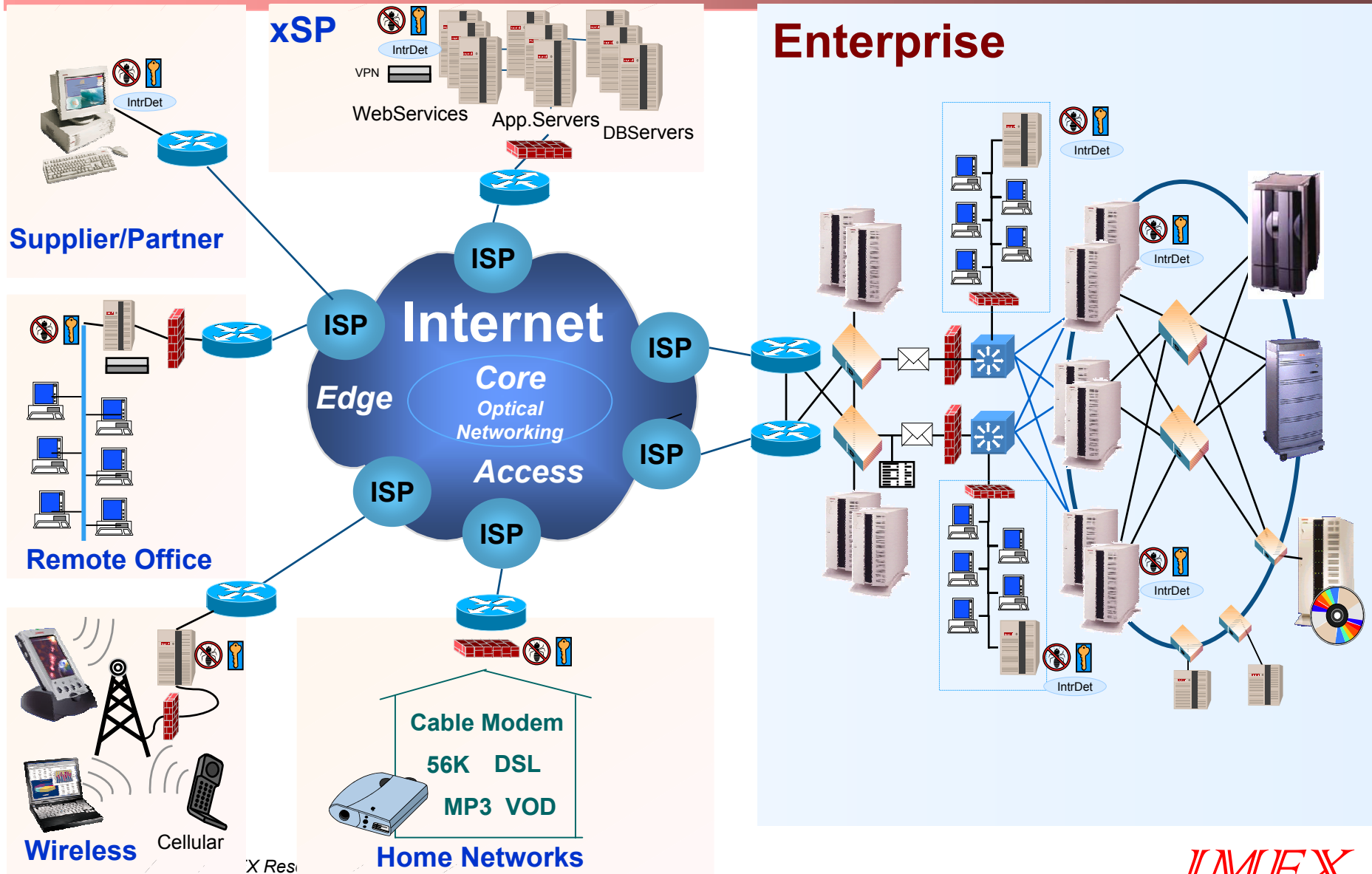
# ► *Blades Management Architecture*





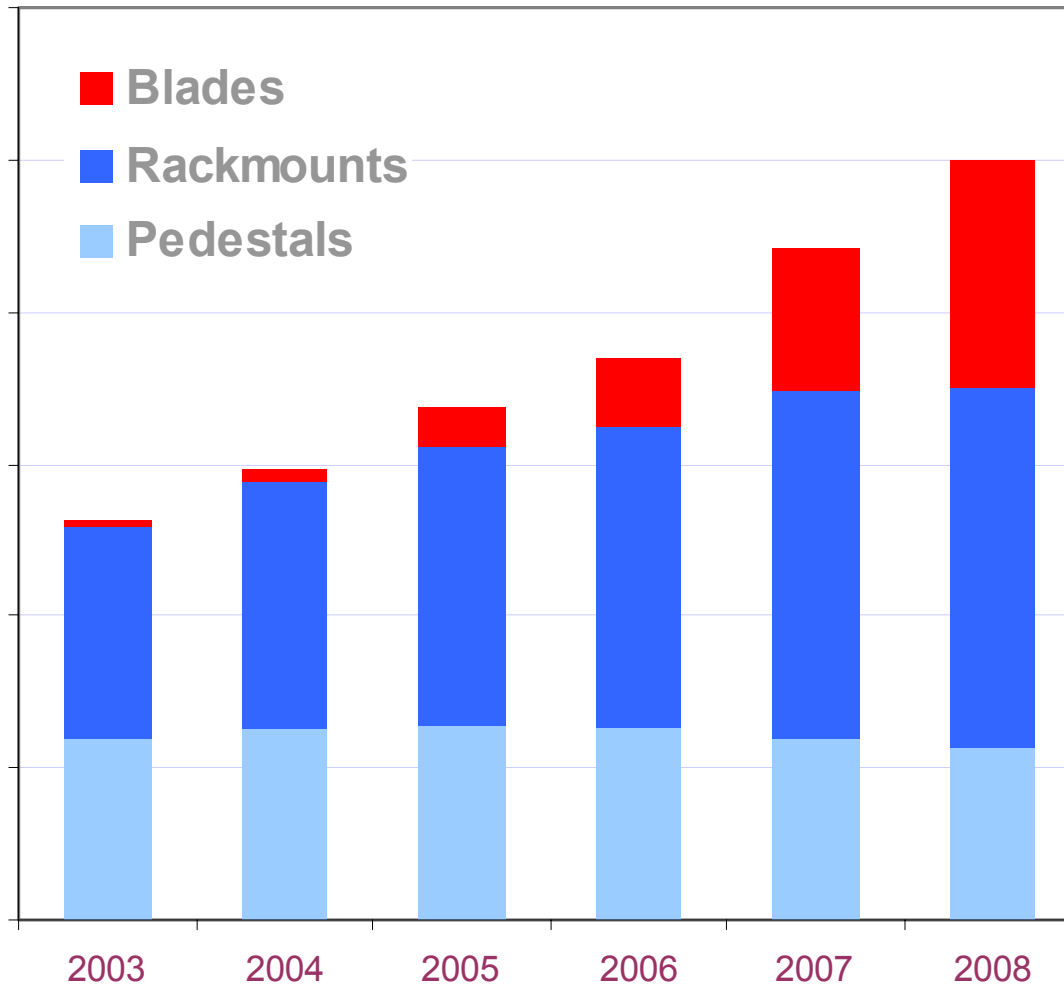
the rise of  
**Blade  
Computing**

# HA End to End Internet with Security Products

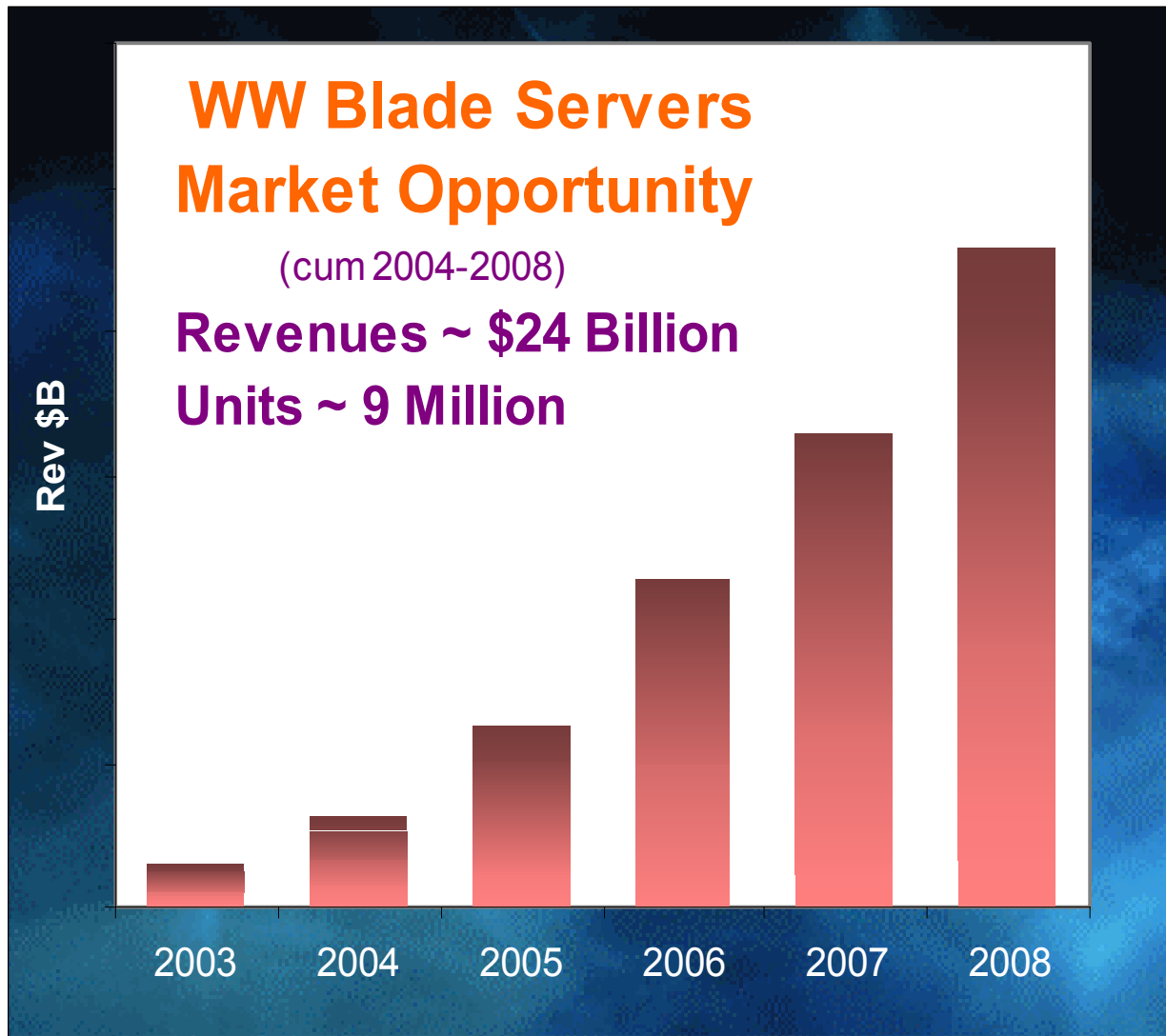




# Industry Standard Servers Market (x86 based)



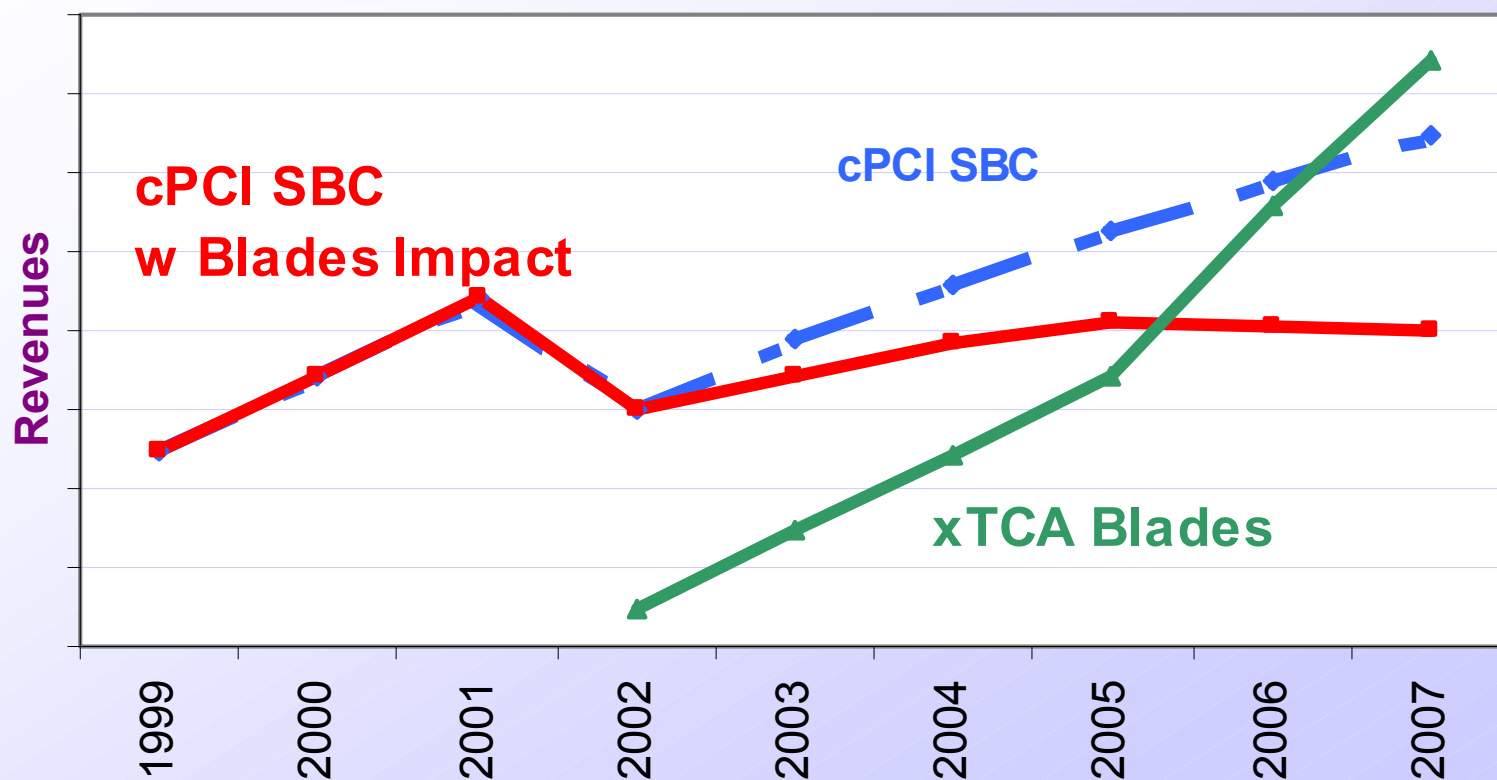
# ► Blade Servers Market Opportunity





# SBC & ATCA Telecom Blades Market

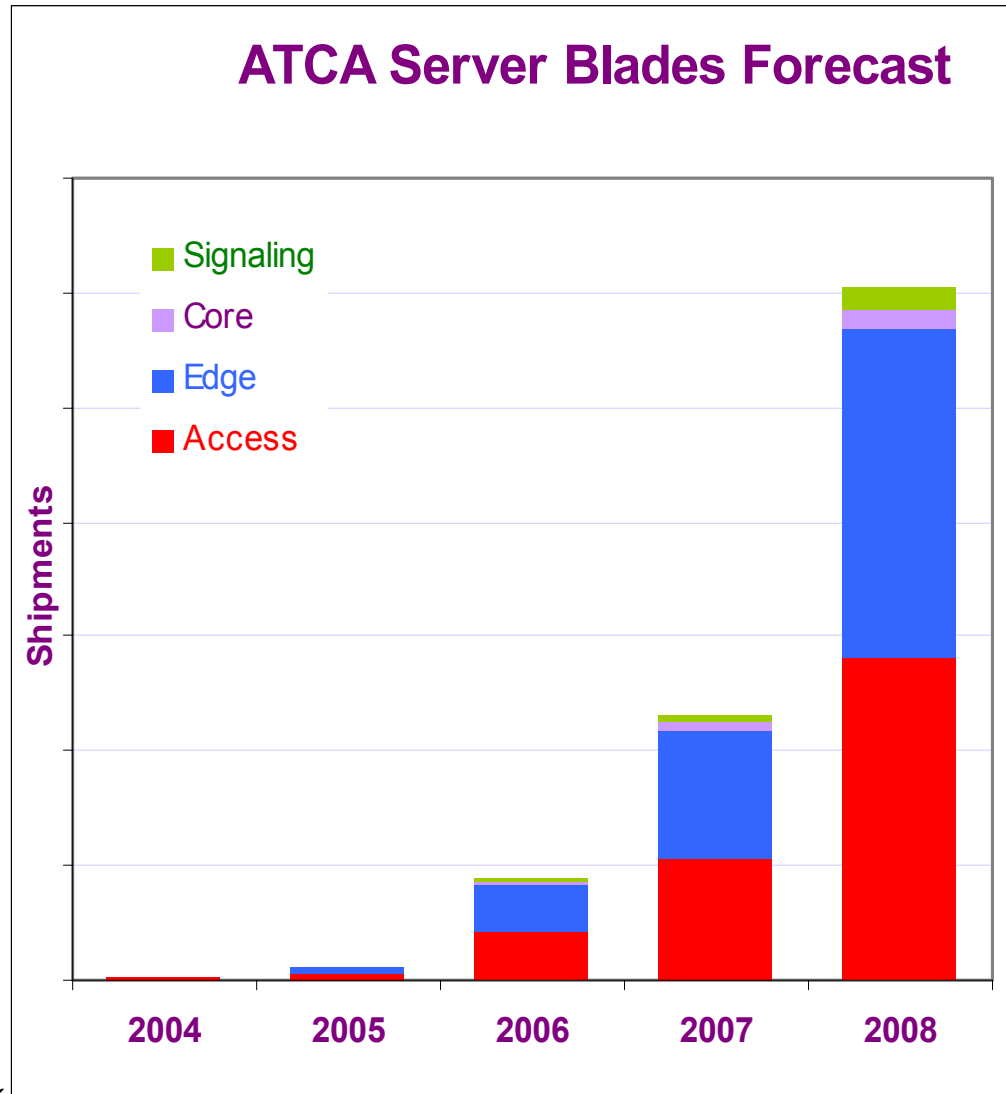
Market - SBC & xTCA Revenues





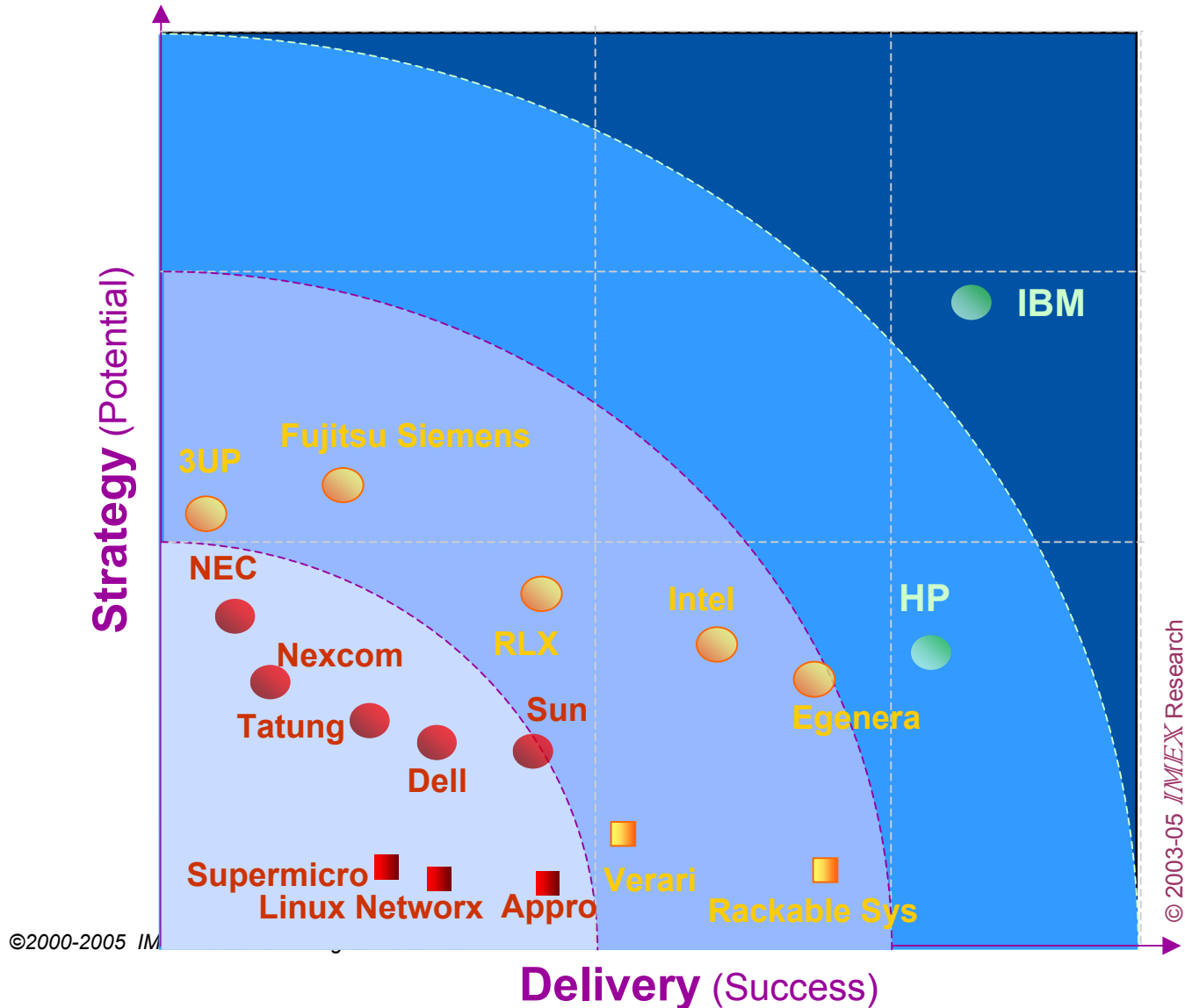


# IP Telecom Server Blades




















# ► Blade Servers: Vendor Positioning Index

(As of Sep.04 - See IMEX Blade Servers Report 2005 for new data and index metrics)

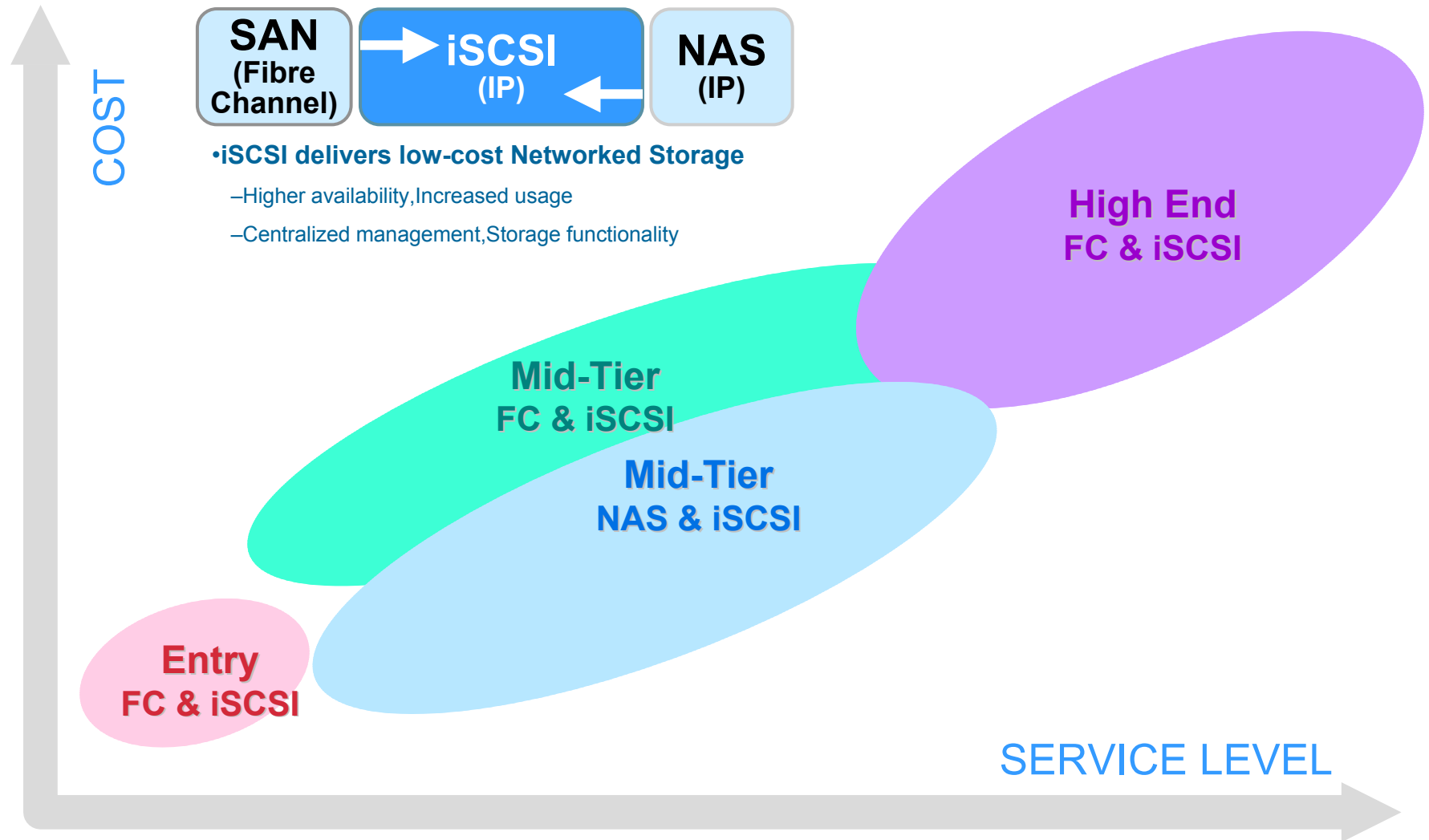


# ► Blade Servers – Low Cost Suppliers?

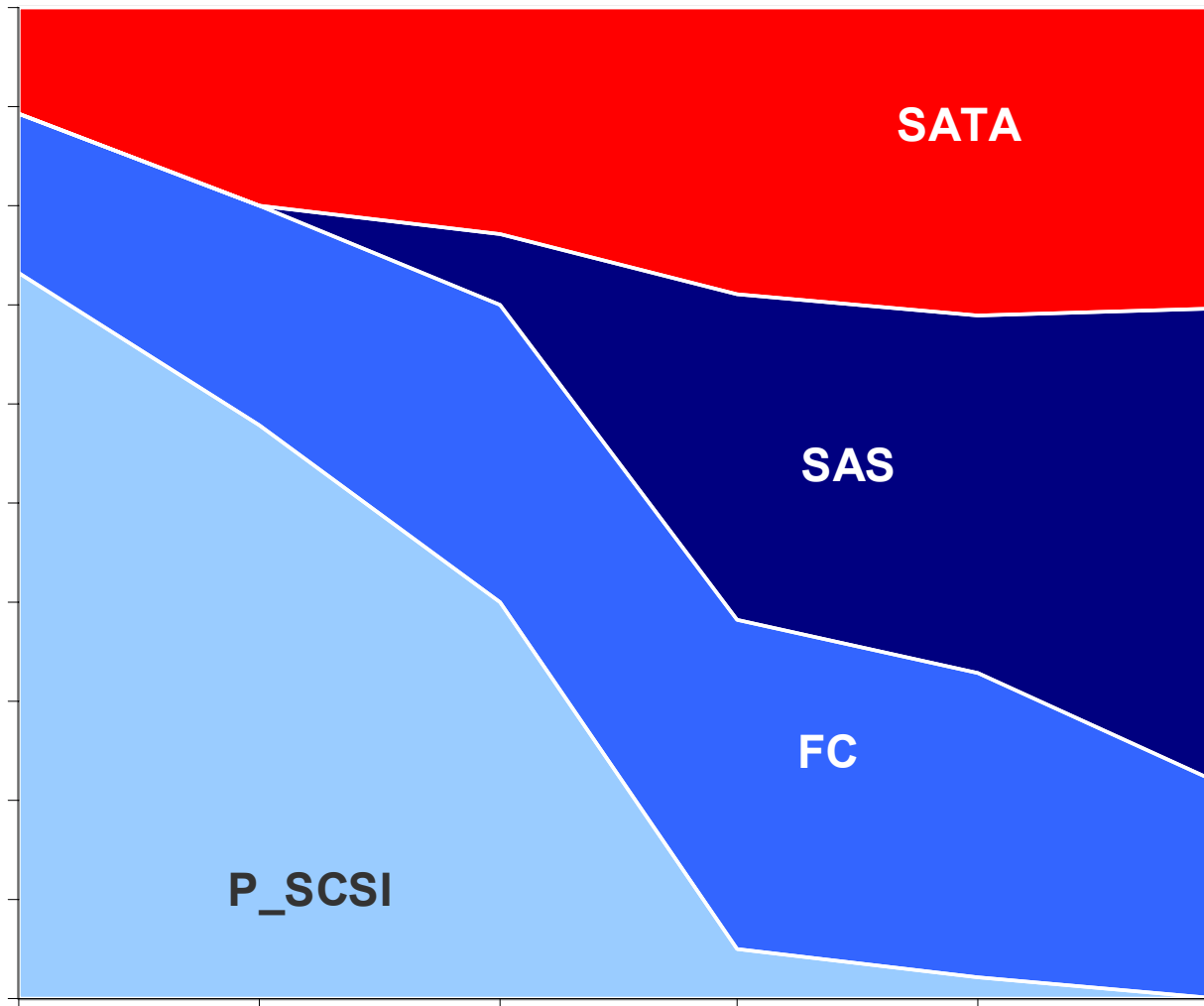
FY2003E		Taiwan NB OEM/ODM							
Taiwan NB		Quanta	Compal	Wistron	Inventec	Arima	Asustek	FIC	Others
ODM/OEM		 2382.TW	 2324.TW	 not-listed	 2356.TW	 2381.TW	 2317.TW	 2319.TW	 2319.TW
International Vendors	Dell								
	Toshiba								
	IBM								
	Fujitsu / Siemens								
	HPQ								
	NEC								
	Apple								
	Sony								
	Gateway								
	Acer								
	Hitachi								
	Asustek								
	Tatung								
	Others								
3In Sbst									



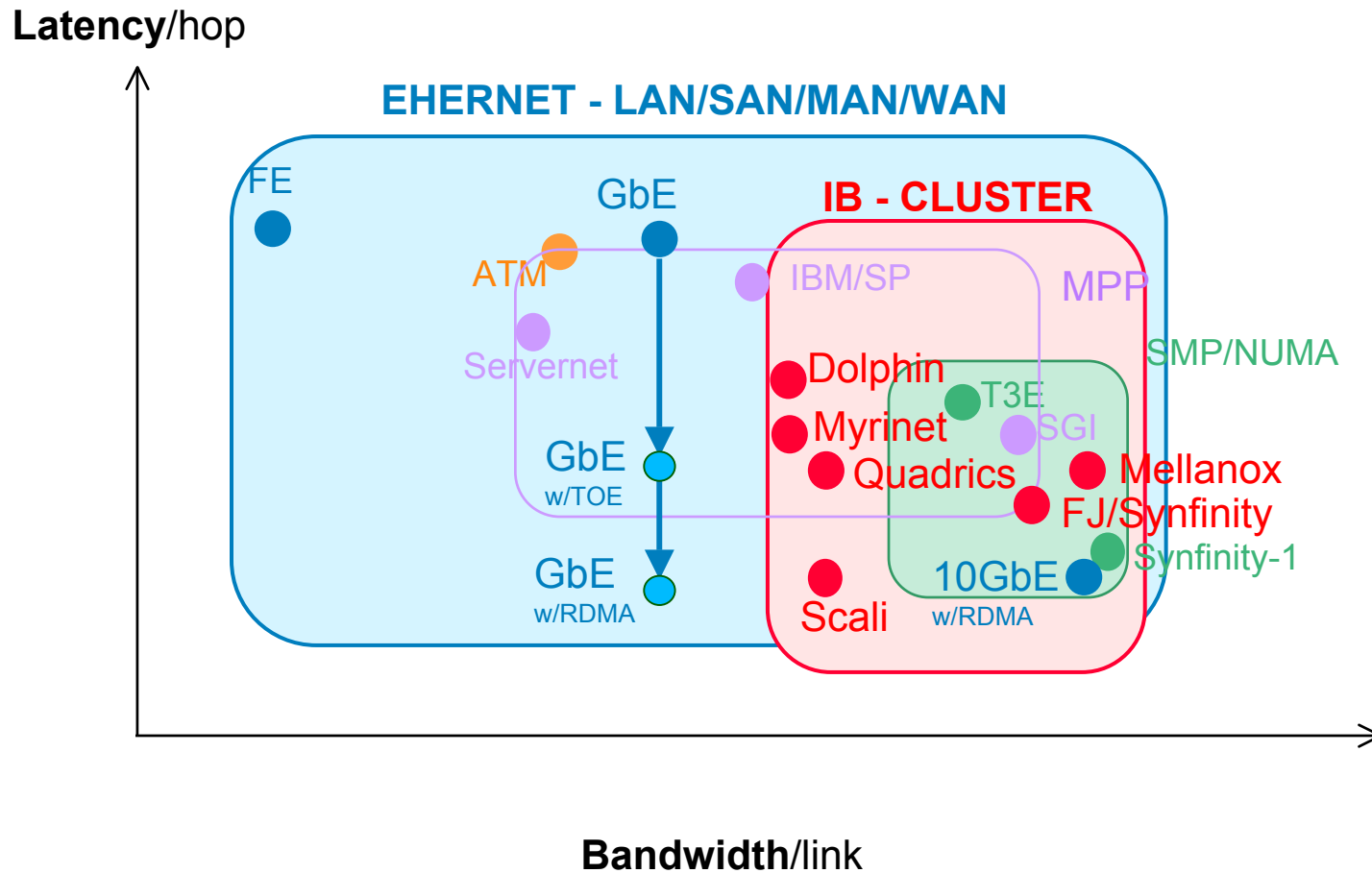
# *iSCSI on roadmap of storage vendors*



# ► *Enterprise Market is cost conscious*

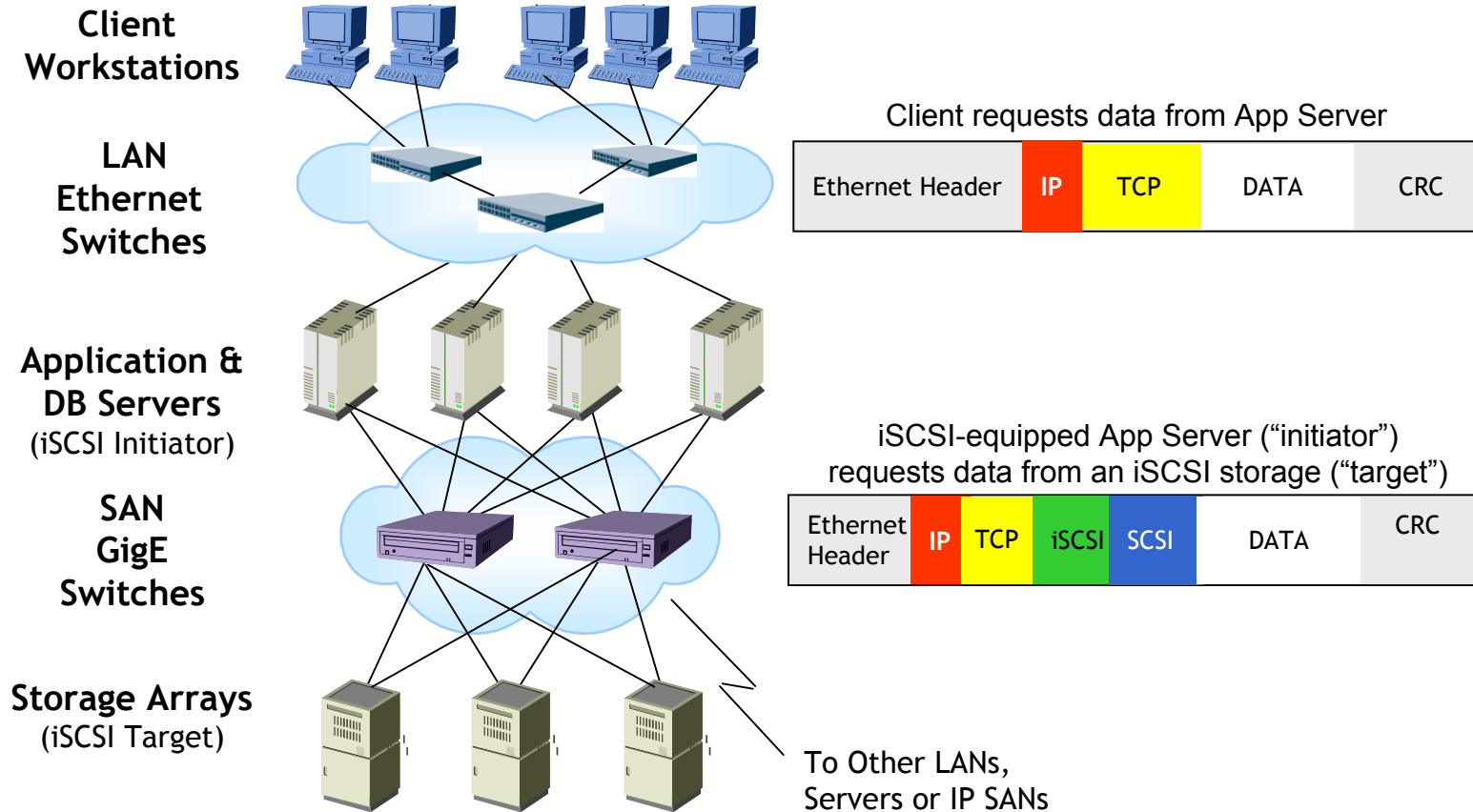


# ► State of Interconnect Fabrics



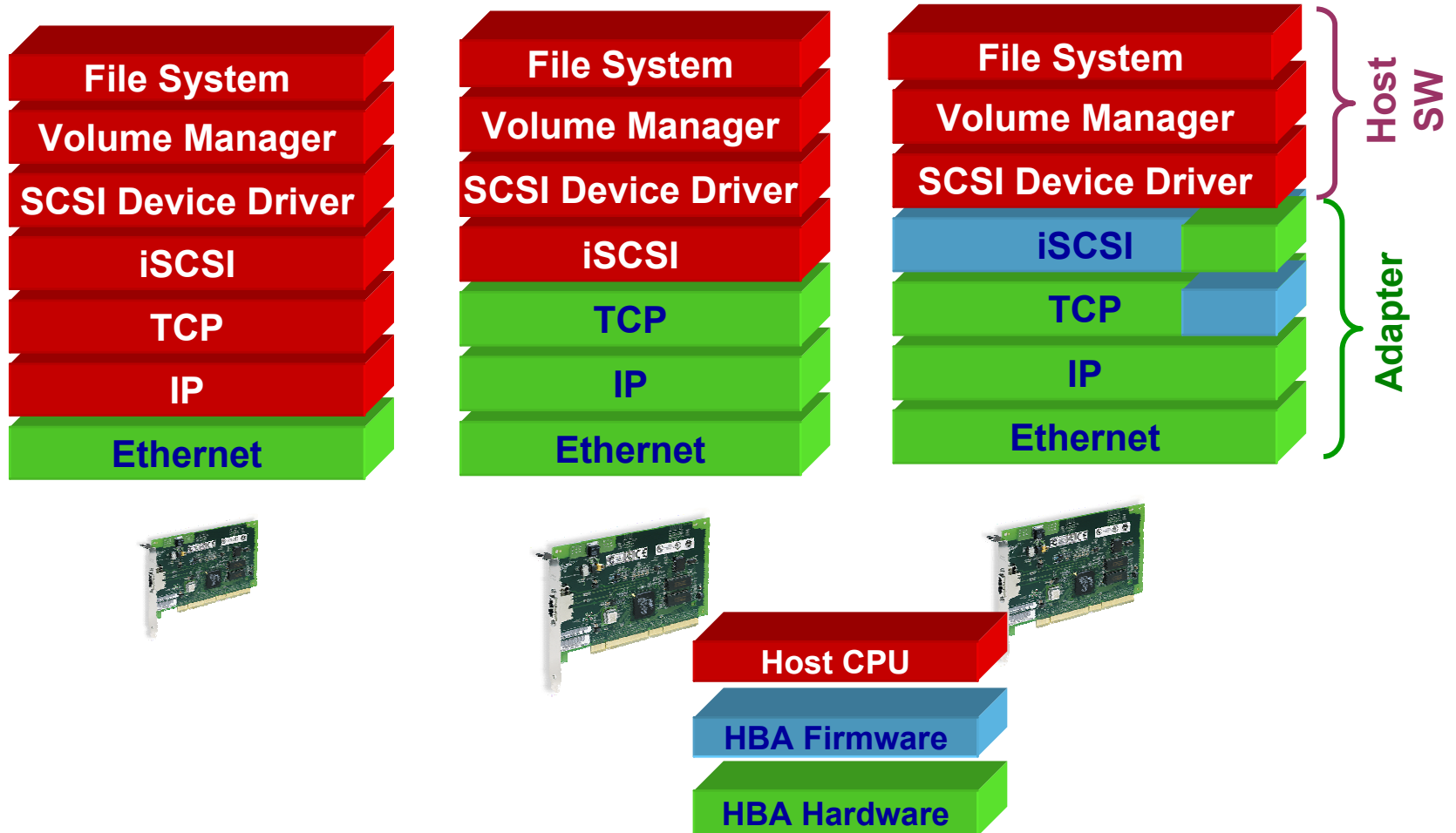


# ► The iSCSI SAN

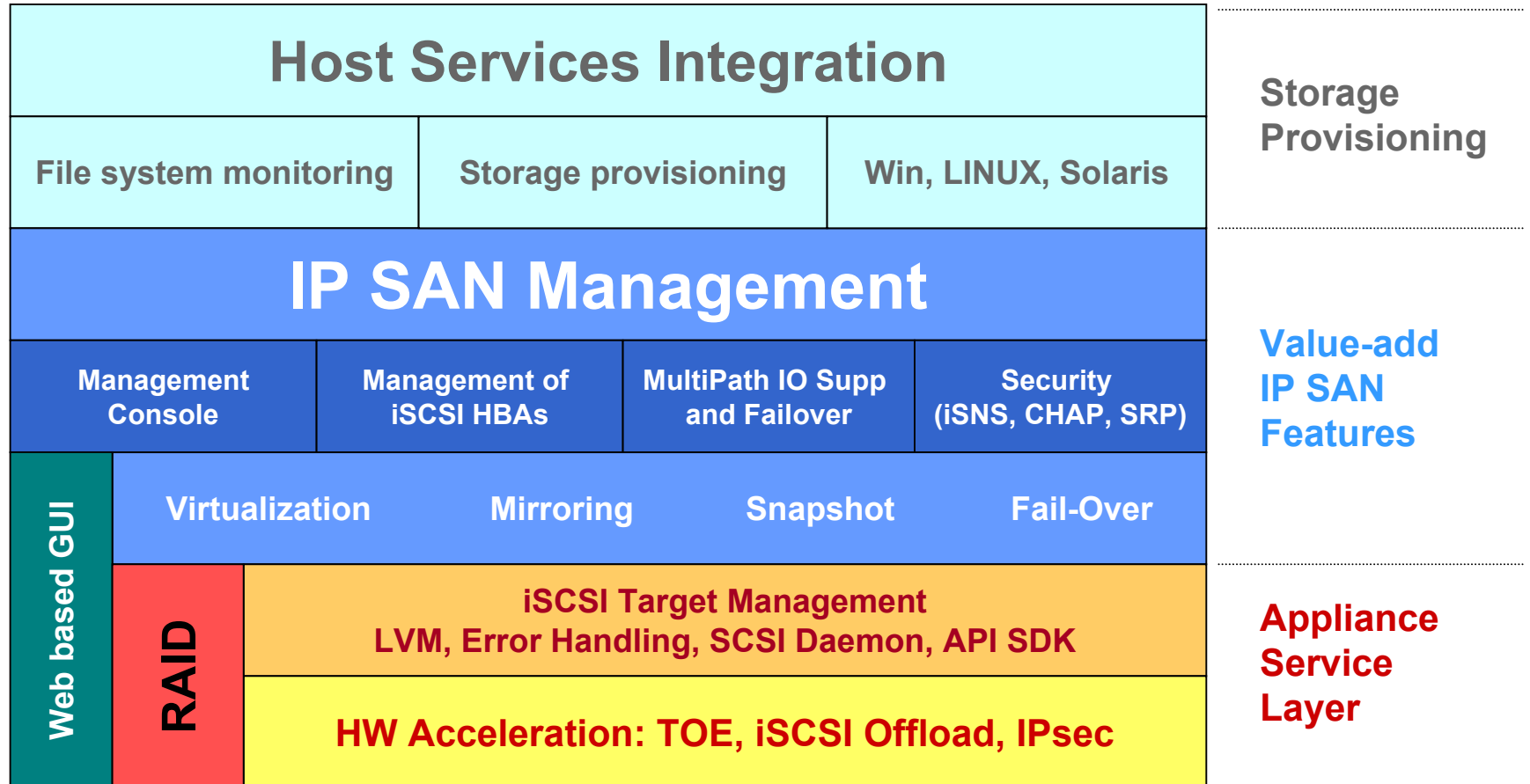


# ► *TCP + iSCSI Offload Engines*

## Typical 1GbE NIC

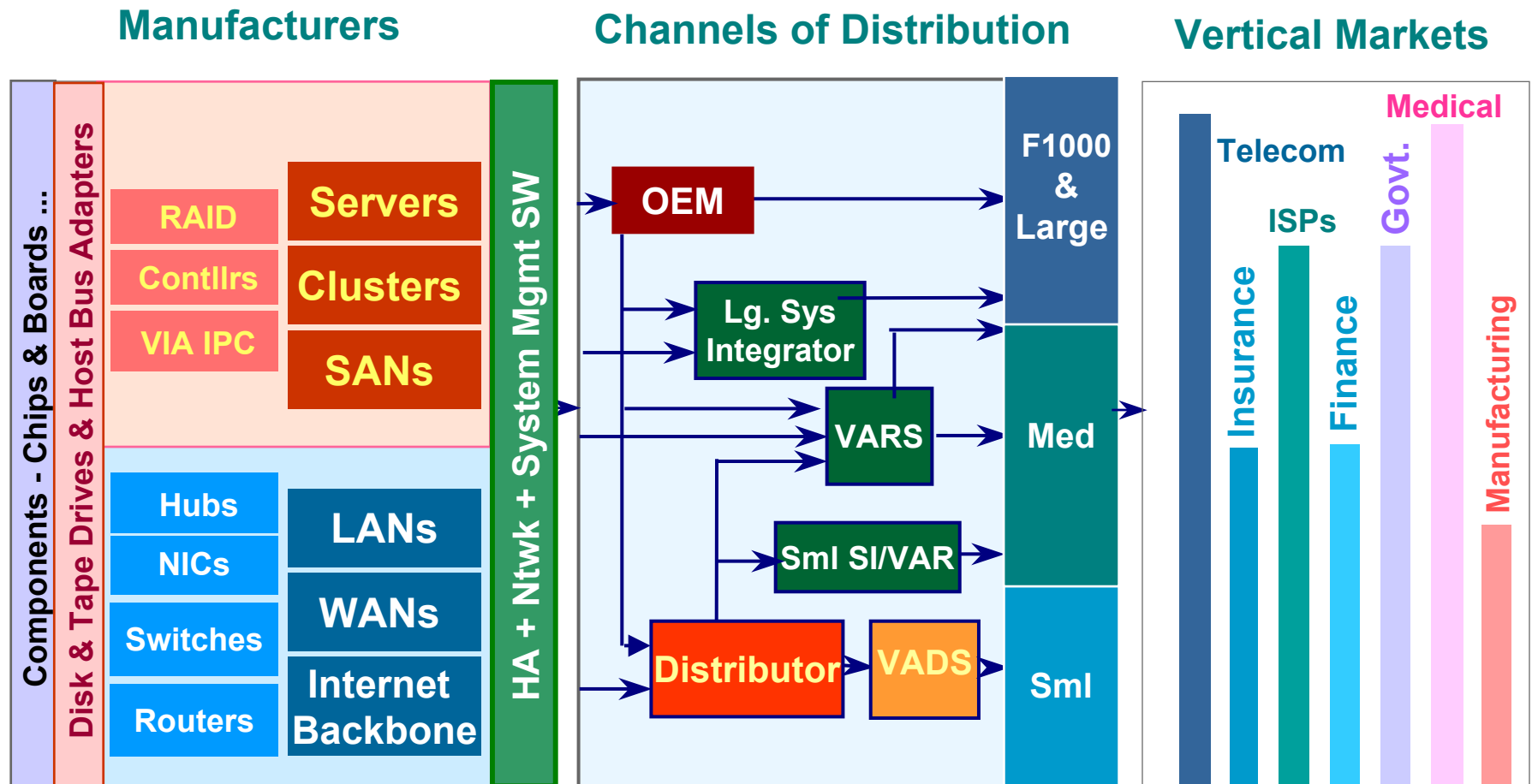


# ► IP SAN Management

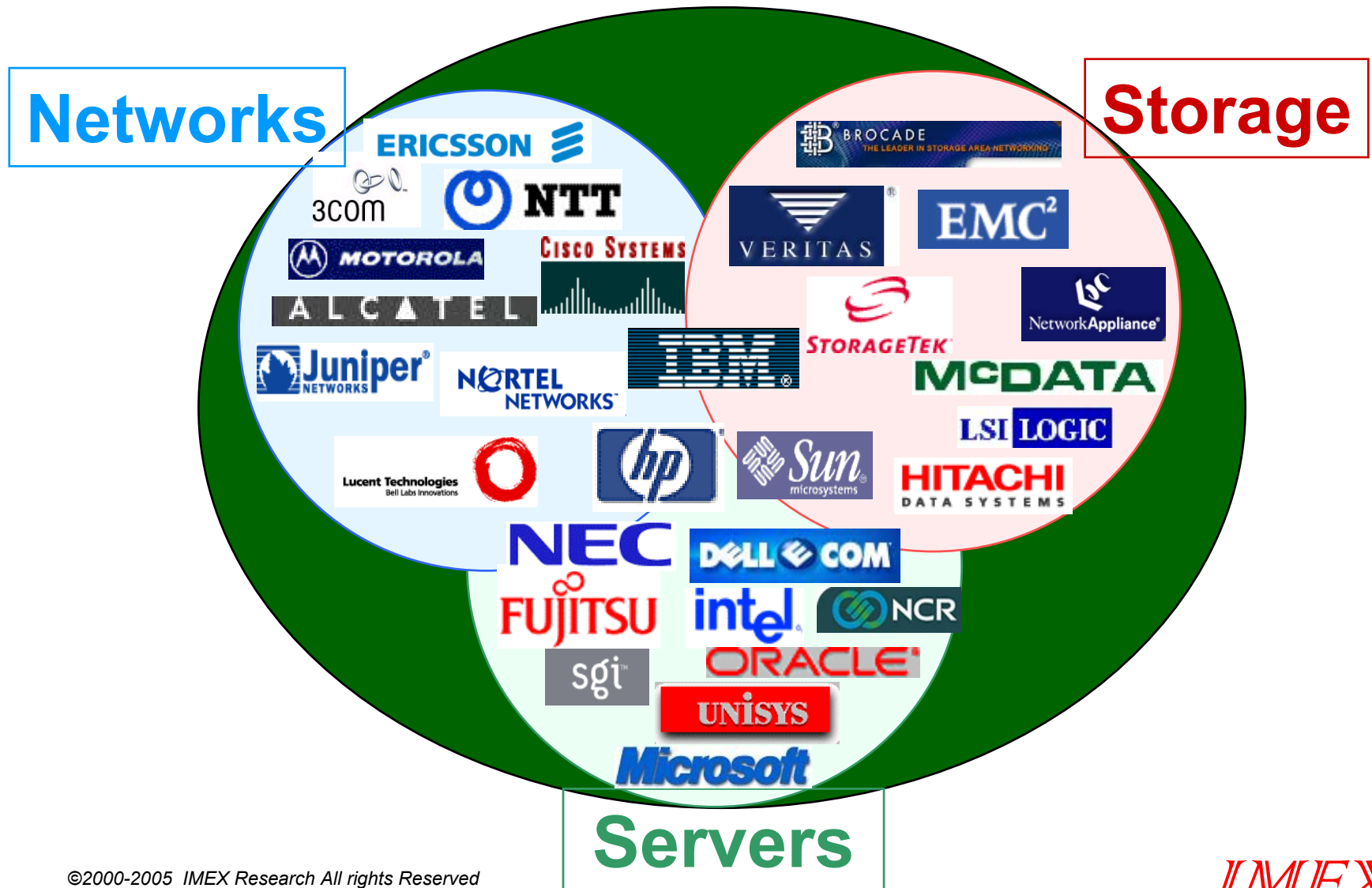


# Go-to-market: Channels of Distribution

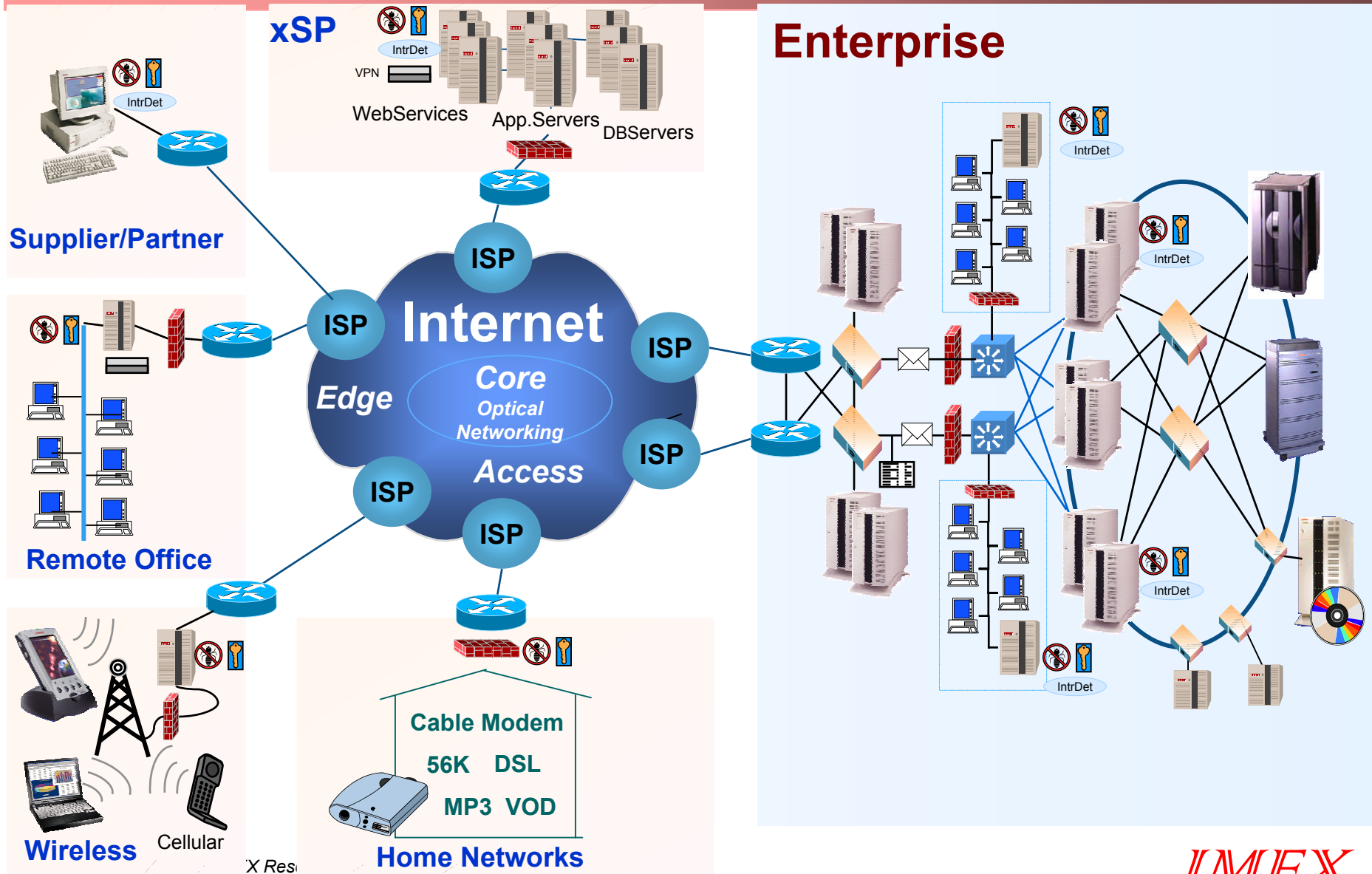
## Industry Structure



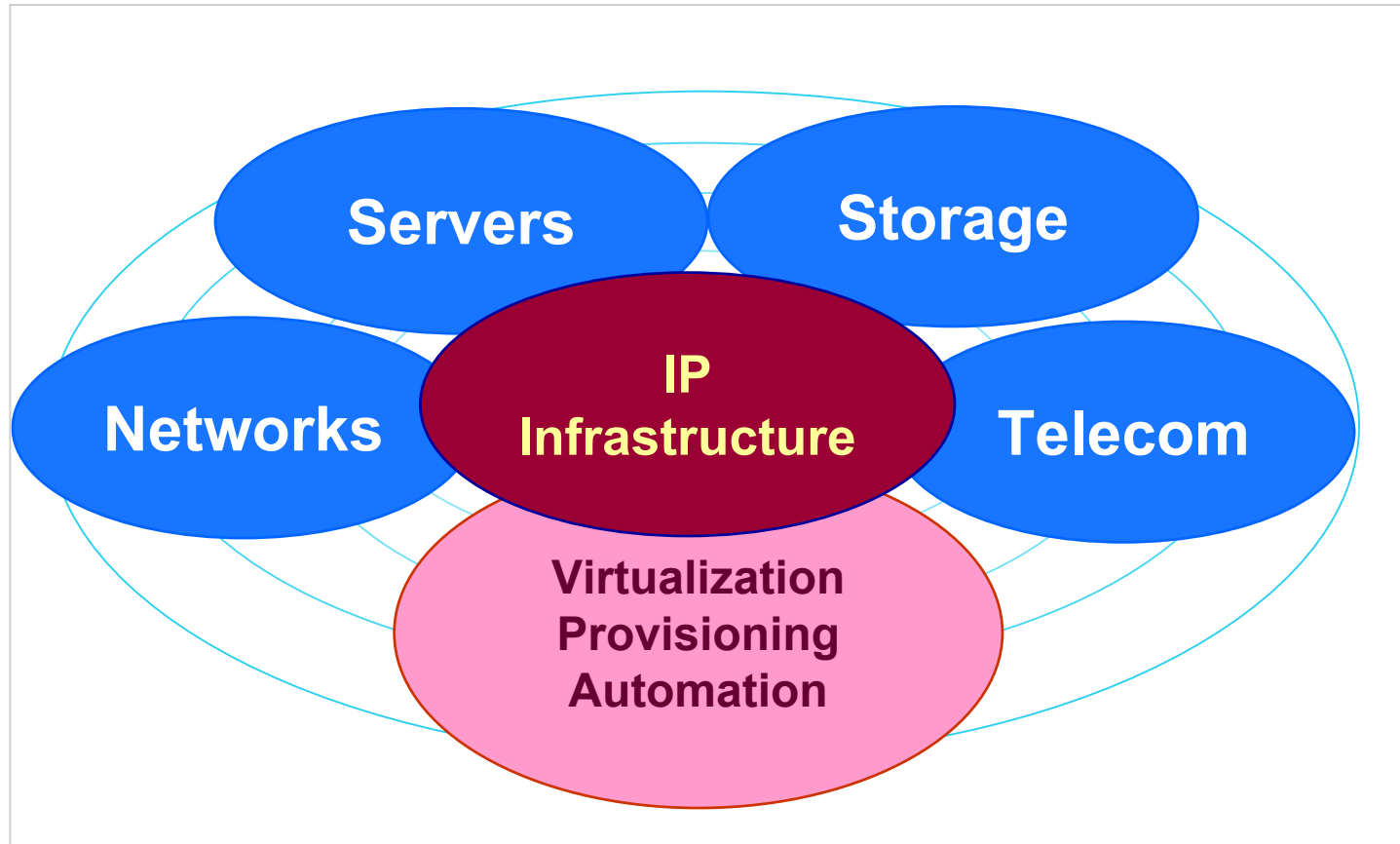
# ► Major Players in Infrastructure Convergence



# *HA End to End Internet* with Security Products



# ► *Emerging IP Based Infrastructure*



 ***For Further Information...***

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