

Tivoli Systems

Storage Management

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VP of Tivoli Storage

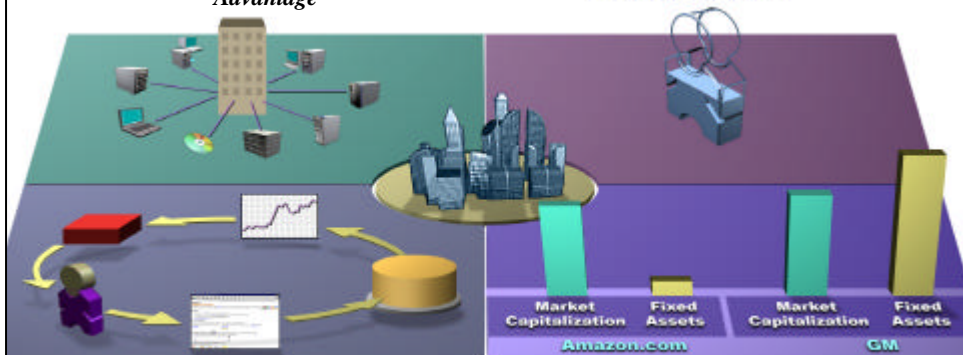


IBM/Tivoli Confidential

Business Drivers

Technology becomes a competitive Advantage

Managing the Customer Experience is key



The Internet is revolutionizing the way business is conducted

Value is in the Information

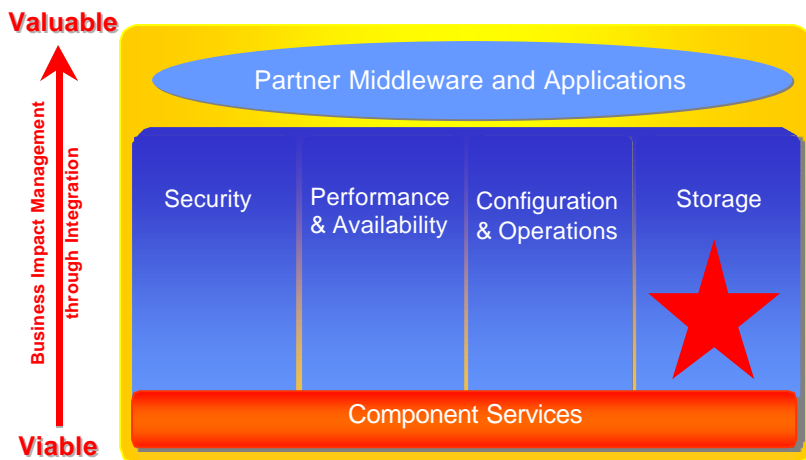


Tivoli's Value Proposition

- Maximize IT's business value with integrated e-business infrastructure management
- Making Technology Viable
 - Manage the complex technology infrastructure of your business
 - Improve processes and automation to achieve efficiency and effectiveness in operational execution
 - Focus on providing management for highly distributed, heterogeneous computing environments
 - Provide open and flexible, modular set of seamlessly interoperable management solutions from Tivoli and our partners
- Making Technology Valuable
 - Align e-business management infrastructure with business goals
 - Transform technology assets from a back-office cost center to a customer facing competitive advantage for revenue generation
 - Enable performance assurances for web-based businesses

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Tivoli e-business Infrastructure Management



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Our Approach to the Market

- Solutions to solve immediate customer pains
 - Storage, security, network, performance/availability, service delivery management
 - Manage complex business processes
- Simplify management control
 - Multiple platforms and scale
 - Reduce skill requirements
 - Centralize control
- Rapidly expand to new and extended opportunities
 - Quickly deploy new applications
 - Expand beyond the enterprise to SP, NetGen, GMB, Extended Enterprise
 - Enable an expanding array of devices
- Integrate into the larger IBM middleware solution to complete the infrastructure story

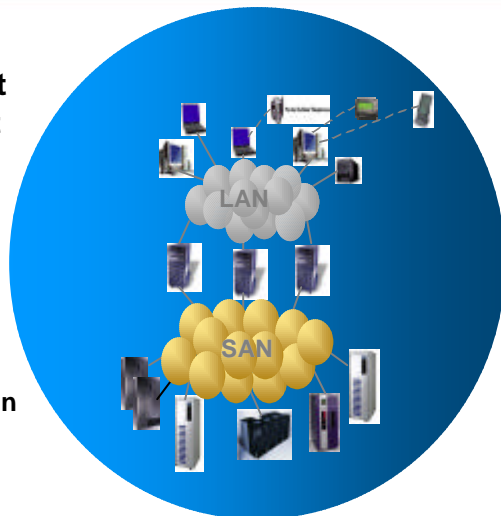
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Storage Management:

The single largest total cost of ownership component today

Includes management of:

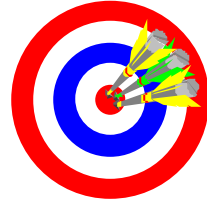
- Storage Performance
- Storage Availability
- Space Management
- Device migration
- Storage hierarchy migration



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Storage Management Objectives

- Improve manageability
- Reduce complexity
- Increase efficiency
- Support business-process continuance
- Reduce cost element of storage



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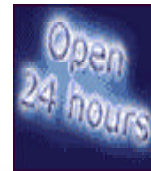
Tivoli Storage Management Value

- Meet service-level-agreements and align IT with business objectives
- Scale storage requirements to business needs to win new customers, increase revenue, improve competitive position.
- Simplify storage management task with centralized open-standards tools
- Maximize and protect overall storage ROI
- Improve efficiency, productivity, and effectiveness of people resources

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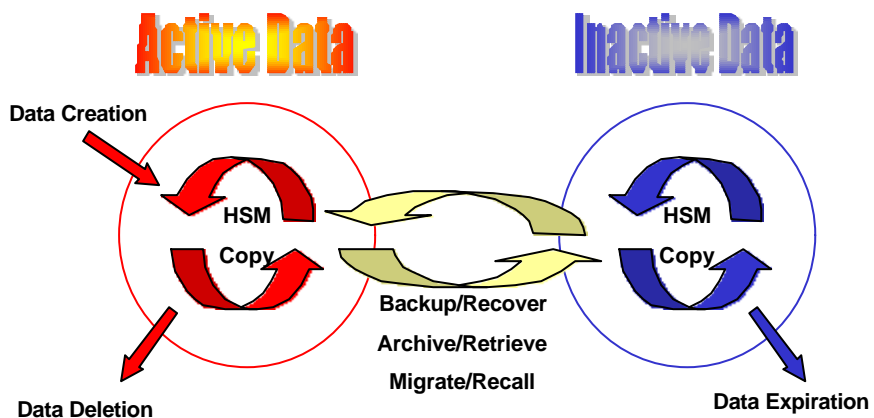
What Is Storage Policy-based Management?

- A methodology to apply rules to:
 - Extend service-level-agreements to the storage environment
 - Proactively address issues before they impact business operations
 - Active data and storage as well as inactive



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Storage Management Life-cycle



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Current Portfolio "Fit"

	Performance	Availability	Space Management	Device Migration	Hierarchical Migration	Security
Storage Management Products	Tivoli SANergy		Tivoli Storage Manager			Tivoli Secure way
	Tivoli Storage Network Manager					
	DFSMS					
	Tivoli Storage Resource Reporting (TDS)					
	StorWatch / DFSMS Optimizer / DCOLLECT					

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Policy Management Strategy

Policy Management Engine						
	Performance	Availability	Space Management	Device Migration	Hierarchical Migration	Security
Storage Management Products	Tivoli SANergy		Tivoli Storage Manager			Tivoli Secure way
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	StorWatch / DFSMS Optimizer / DCOLLECT					
	File System <i>(SSG Initiative)</i>					

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Tivoli Storage Solutions

Enterprise Data Protection

Tivoli Storage Manager

Tivoli Disaster Recovery Manager
Tivoli Data Protection for Applications
Tivoli Space Manager
Bare Metal Restore
DiskXtender2000

Storage Network Management & Exploitation

Tivoli Storage Network Manager

Tivoli SANergy

Reporting and Analysis

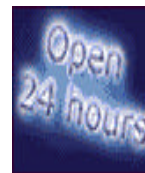
Tivoli Storage Resource Reporting

TDS for Storage Management Analysis
TDS for Storage Network Mgmt Analysis*



Tivoli Storage Manager

- Enterprise-wide data protection supports mission-critical business processes.
- Application-specific data protection provides total application coverage
- Policy-based automation reduces staff involvement and human errors
- Hardware cost reduction through resource sharing and storage efficiencies



Over 1 Million Computers
rely on
Tivoli Storage Manager
to protect their data



Only end-to-end solution supporting the mainframe to the desktop



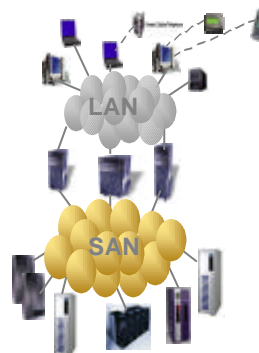
Tivoli Storage Manager - Direction

- **Continue Lowering cost of storage**
 - Enhanced usability to decrease the Time to Value
 - Surface application view of storage and data
 - Exploit new storage networking technologies
- **Increase the enterprise coverage**
 - Linux Intel & zSeries, iSeries
 - Exploitation of NAS architecture
 - Extend storage networking exploitation to zSeries
- **Maintain TSM as a leading edge product**
 - Embrace new emerging technologies
- **Integrate Internet environment into the Enterprise**
 - Seamless operation Inter/Intra/DMZ

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Tivoli Storage Network Manager

- Policy-based management provides linkage to business objectives
- Capacity-on-demand scales to support application growth
- Automatic discovery and topology mapping simplifies configuration management
- Open standards architecture insures interoperability with current and planned hardware improves storage ROI



Supports the broadest range and number of Storage Area Network devices available today

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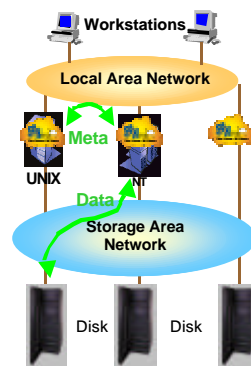
Tivoli Storage Network Manager – Direction

- **Manage aspects of Storage Network**
 - Continue support of fibre channel SAN's
 - Support emerging topologies such as iSCSI
 - Integrated device level fault isolation
 - Explicit support of NAS machines
- **Support business continuity**
 - Extend file system coverage of storage pool growth
 - Application view of storage resources
 - Rapid support of new storage network devices thru standard's adherence (ANSI T10)

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Tivoli SANergy

- High-performance file access and sharing to meet workload demands
- Sustain business growth by getting more revenue generating work done on the LAN
- Heterogeneous platform storage resource sharing reducing management complexity
- Reduced hardware and people cost



**Only high-performance file-sharing solution
supporting access to common files from 9 different
operating system platforms**



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Tivoli SANergy - Direction

- Meta-data controller file system
 - Third-party additions (via Tivoli Ready)
 - Extend to AIX JFS
 - Enable NAS servers functions
- Extend platform coverage
 - More MDCs, more clients
- Portfolio Integration
 - Technology Integration with Storage Manager
 - UI and Agent integration with Storage Network Manager

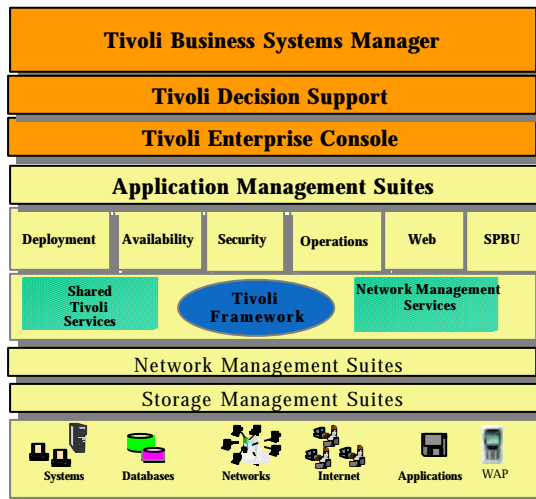
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Tivoli ready

Applications	
Databases	
Systems	<p>+ more than 30 others</p>
Networks	
Devices	

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Storage an Integrated part of Systems Management



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