

SolutionsConnect
IBM Software Universe 2013
Meet Possible



Title: Data Protection and
Endpoint management

Speaker: [Debabrata Das](#)

Is your backup environment breaking or broken?

- Data growth is a major pain and cause for concern
 - 40% to 60% AGR with no relief in sight
 - Straining budgets, personnel, facilities, business performance
 - Increasing risk of data loss coupled with rising costs of data loss
- The IT environment is increasingly complex and difficult to manage
 - Many types of systems and applications
 - Storage and data are widely distributed
 - Need to protect against a wide range of threats
- You would love to reduce costs, improve service levels and eliminate risks
 - Store more with less infrastructure / software / people
 - Improve the utilization and performance of storage
 - Reduce data storage footprint and simplify administration



Challenges in Management

- **Data growth**
 - It takes longer to back it up, longer to restore
- **Higher service level requirements**
 - You can't afford down time
 - You can't afford to lose any data, anywhere
- **Longer retention periods for more data**
 - Need more capacity; need to manage it
 - Unsure what you can delete, or when
- **Mergers and acquisitions**
 - Need to consolidate systems, processes
- **Security requirements**
 - Need to protect your customers' data as well as your own
- **Remote/branch offices and mobile workers**
 - creating and storing more business-critical data

Data Protection - Components

- Data Protection: Backup & Recovery
 - Applications & Databases
 - Virtual Servers
 - NAS Filers
 - Bare Machine Recovery
- Disaster Recovery
- Data Reduction and Lifecycle Management
 - Progressive Incremental Backup
 - Data Deduplication
 - Data Lifecycle Management
 - Tape Management



Data Protection and Unified Recovery Management

Ensure data availability and business continuity in a cost effective manner.

Goals

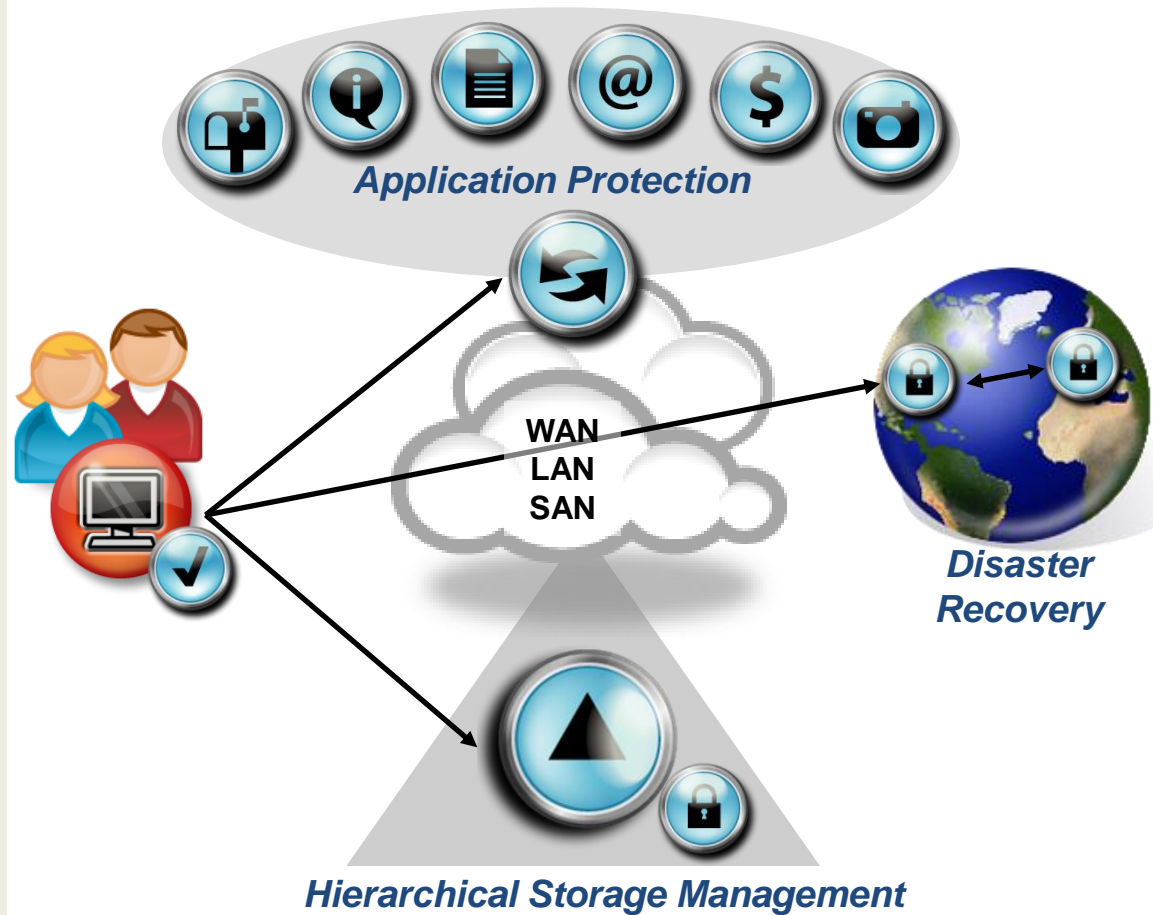
Backup and protect critical applications and files to enable quick and automatic data recovery

Set data protection policies that align with data availability service levels of the applications

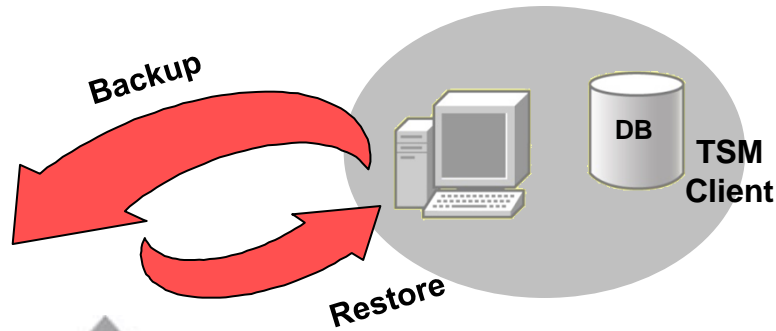
Include data recovery analysis in a comprehensive disaster recovery plan

Store backup copies in a hierarchy of lower-cost storage

Easily manage backup and recovery across disk and tape from a single point of control



Protecting Databases and Applications



Required Outcomes

- **Online (hot) backup**
 - No downtime for critical applications
 - 24x7 application availability can be guaranteed
- **Incremental backup**
 - Minimize data to store and maintain
 - Faster backups
- **Data integrity**
 - Guaranteed by the use of certified application APIs
 - All required files automatically backed up consistently
- **Automation & Scheduling**
 - No shutdown required
 - Automated restore of consistently backed up files
 - No customized scripts and manual interaction

Virtual server environments have changed the game

- Virtual machines take advantage of the growth in processor power, memory and I/O
- Virtual machines can be created very quickly
- Tremendous savings in hardware, power/cooling, floor space and management costs
- VMs enable new levels of service management and new delivery models



Requirements of BMR – An intrinsic component of Data Protection and business continuity

Features

- Brings back system to state of last backup
 - Recovers all the OS changes and customizations
- Streamlines and automates the OS recovery process
 - Eliminates the need for highly skilled professionals to manually reinstall hardware, network, patches...
 - Speeds up the recovery time
- Integrates bare machine backups directly to Tivoli Storage Manager server

Benefits

- ✓ Ensure business continuity
 - Restore systems back to original state rapidly, therefore, getting business back up and running faster
- ✓ Reduce administrative costs
 - Enable less technical people to run the recovery, because all the critical networking, patches, and device driver information will automatically be brought back
- ✓ Maximize current hardware investment
 - By integrating with TSM, there is no additional hardware needed to support the bare machine recovery

Platform Coverage

Tivoli Storage Manager for System Backup and Recovery

AIX 4.3.X, 5.1, 5.2, 5.3

Tivoli Storage Manager FastBack

Windows, Linux

Cristie Bare Machine Recovery (CBMR & TBMR)

Windows, HP, Linux, Solaris

Disaster Recovery Planning and Management

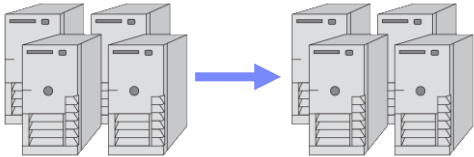


- Automated generation of a customized server disaster recovery plan
- Detailed off-site recovery media management
- Inventory of machine information required to recover the server and its clients
- Centralized management of the disaster recovery process
- Executable scripts that assist in recovery automation
- Electronic vaulting of storage pool and database backups

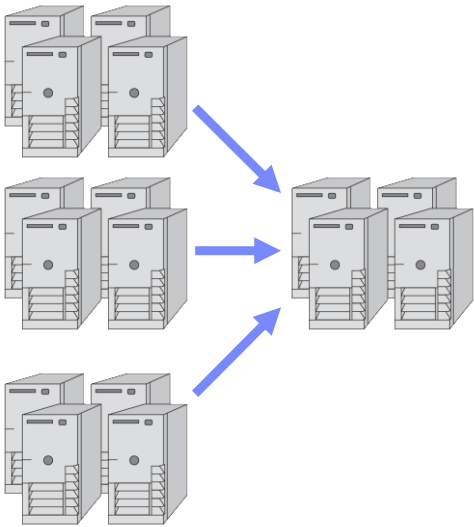
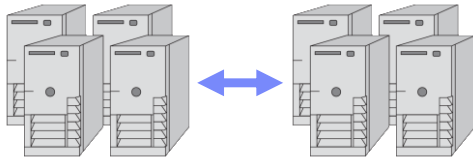


Disaster Recovery Multiple Configuration options Used

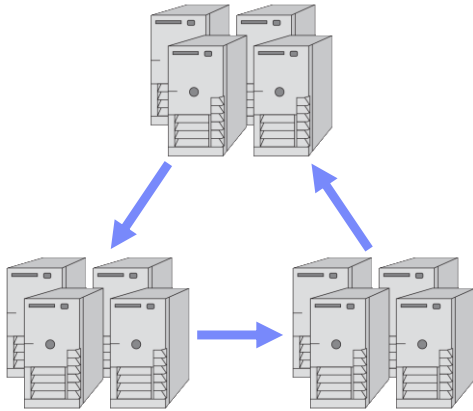
Source to Target



Between active Sources



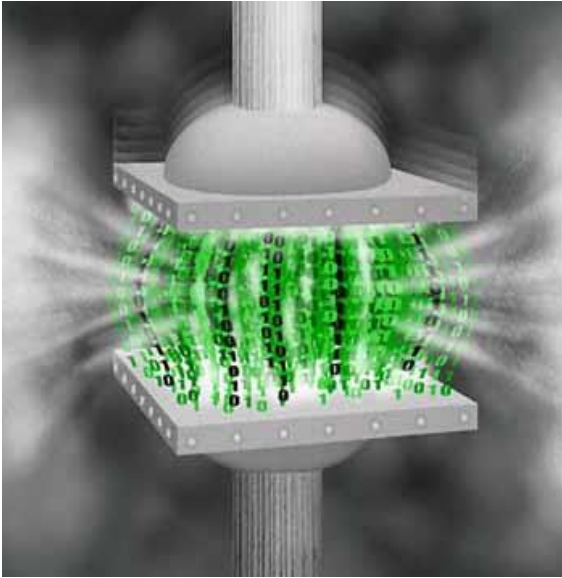
Many to One



Round Robin



Reducing your data storage footprint will help ...



- Reduce your costs
 - Less storage = less capital expenditures
 - Less data = simplified management and administration
- Improve service levels
 - Less downtime = higher application availability
 - Improved competitiveness and customer satisfaction
- Mitigate risks
 - Eliminate consequences of data loss
 - Respond faster to events and legal/government inquiries

Choices for reducing your data storage footprint

- Automate data lifecycle management
 - Tivoli Storage Manager HSM for Windows
 - Tivoli Storage Manager for Space Management
- Avoid data duplication
 - Progressive incremental 'forever' backup
- Compress and de-duplicate
 - Built-in source and target data de-duplication
 - Standard data compression
 - Best-in class tape utilization and management

Avoiding data duplication – treat the cause, not the symptom`

- Performing periodic full backups is typically the largest contributor to data growth in a data center
- As much as 95% of your data doesn't change from week-to-week
- Are you making another copy of that data every weekend?
- Data deduplication solutions were created to address this problem
 - ***They claim 95% reduction ratios, this is the data they're talking about***

De-duplication – A Basic requirement

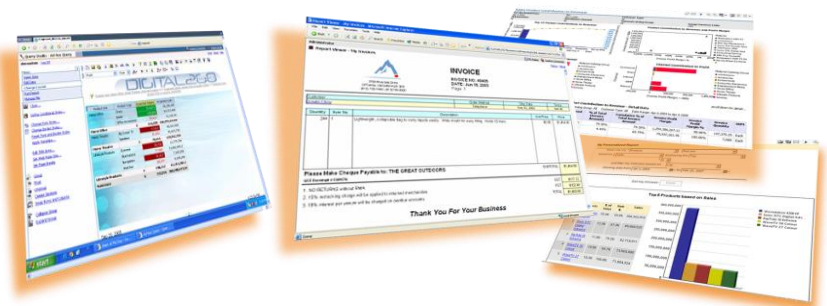
- **IBM Supports target-side** data deduplication
 - Improves recovery times and/or reduces capacity requirements
 - Uses data from any source including: API, backup, HSM, archive
 - Operates as a post-process; automatic space reclamation
 - Builds on automatic data compression & progressive-incremental
 - Applied to data replicated to an off-site TSM server for disaster recovery
- **IBM Technologies** includes **client-side** data deduplication
 - Reduces network traffic by determining if a chunk has already been backed up (maybe from a different client system)
- **IBM** includes data deduplication **across the WAN**
 - Reduces storage and bandwidth requirements by consolidating backups from multiple offices to a central TSM server

Tivoli Storage is powered by DB2 Relational Database and Cognos Reporting Features



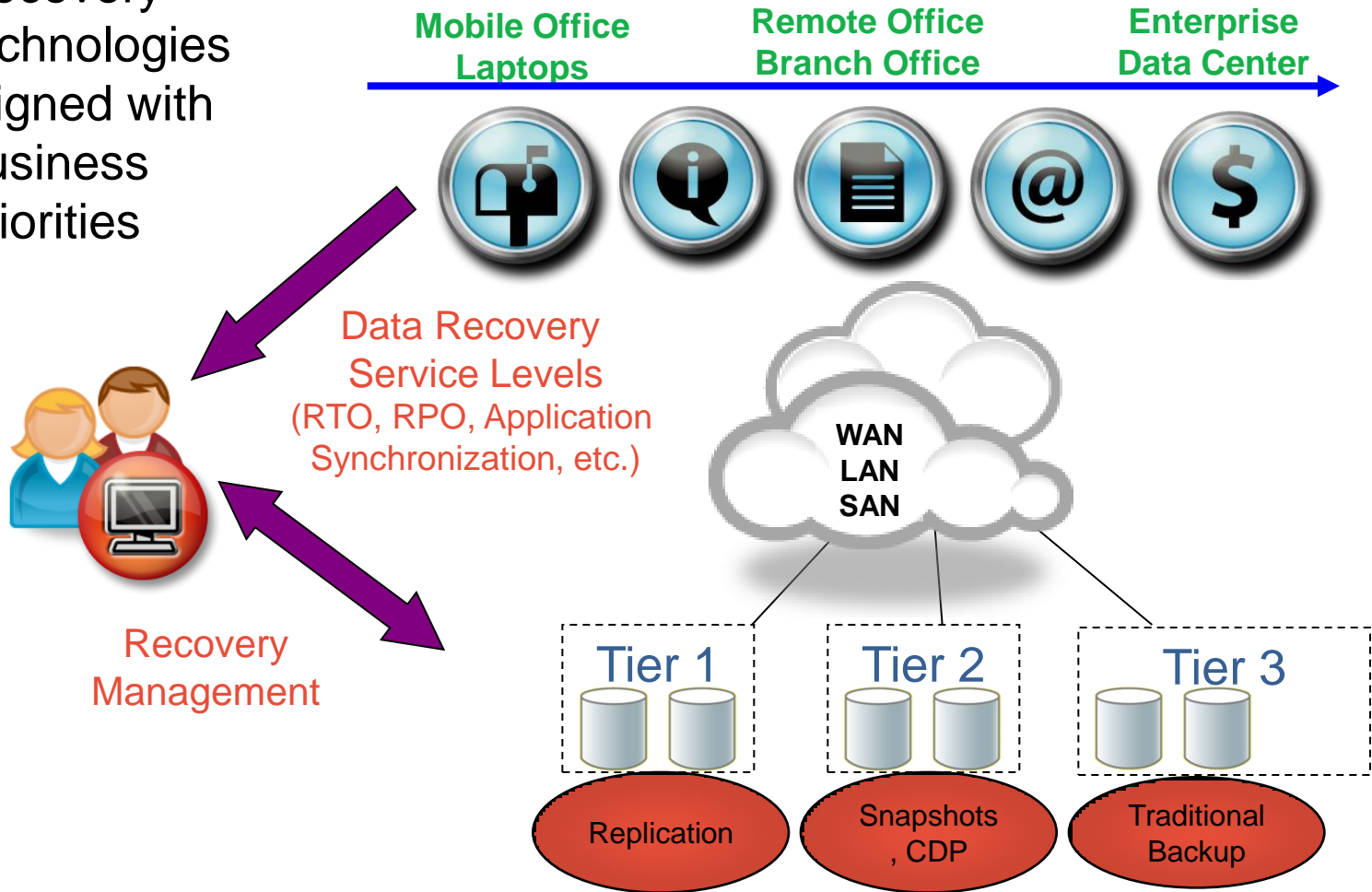
Benefits

- **Robust, Scalable, Available**
- High Performance
- Easier to Manager
- Ensures Data Integrity



Tiered Recovery with Unified Management

Recovery technologies aligned with business priorities



How IBM Addresses the requirements for Virtual Environments

- Reduced storage and networking requirements, and reduced application downtime due to:
 - Incremental ‘forever’ backups of VMware environments
 - Parallel processing for backup jobs
- Provides enhanced business continuity and disaster recovery

How IBM Can address these requirements

- Reduce infrastructure costs – servers, storage, bandwidth
- Reduce operational expenses
- Improve application availability and reduce downtime
- Efficiently protect Virtual environments
- Reduce risk associated with data loss
- Achieve regulatory and corporate compliance
- Manage your data throughout its lifecycle
- Future-proof your data management processes



- Tivoli Storage Manager is a key offering in IBM's Smarter Storage portfolio, helping clients build a smarter storage infrastructure

Ten Ways to Save Money with IBM Tivoli Storage Manager

1. Data Reduction
2. Unified Recovery Management
3. Capacity-Based Licensing
4. Scalability
5. High Performance
6. Data Lifecycle Management
7. Support for Virtualized Environments
8. Ease of Use
9. Reliability
10. Subscription and Support



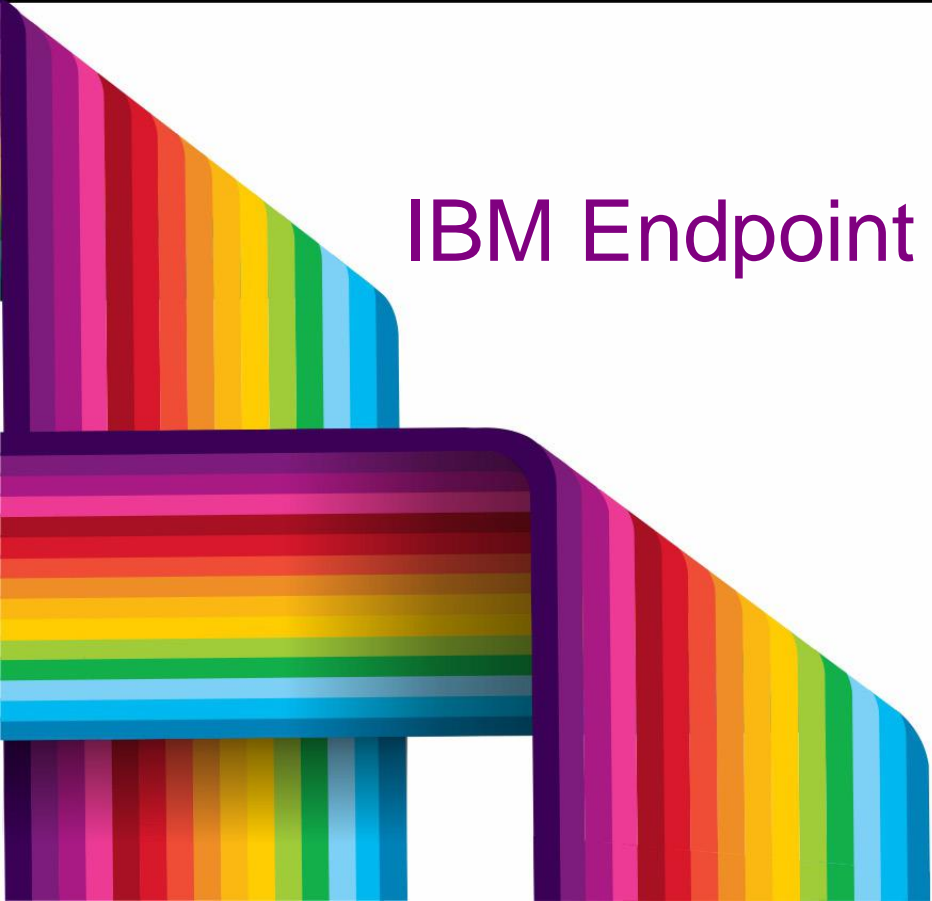
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IBM Endpoint Manager



Primary Issues with Endpoints

Critical systems are globally distributed and in constant flux

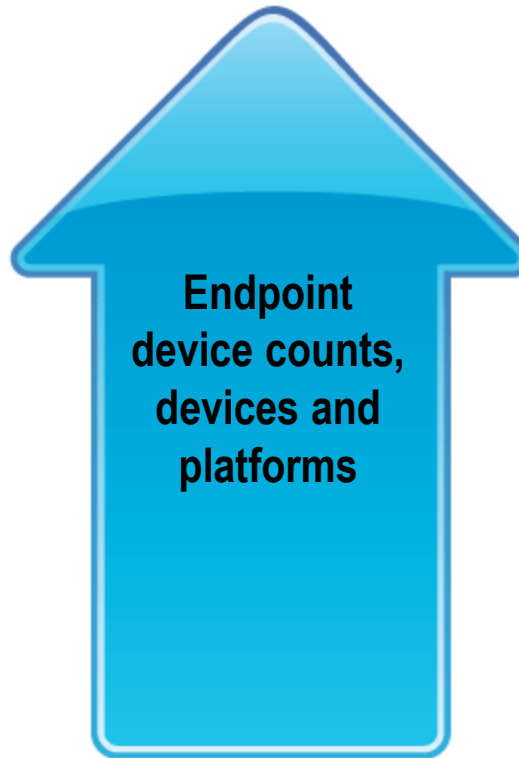


Endpoint complexity continues to increase



Patch O/S and application vulnerabilities with hours

Rapid, agile, automated remediation is needed



Mobile/roaming endpoints

New form factors and platforms

Employee-owned devices



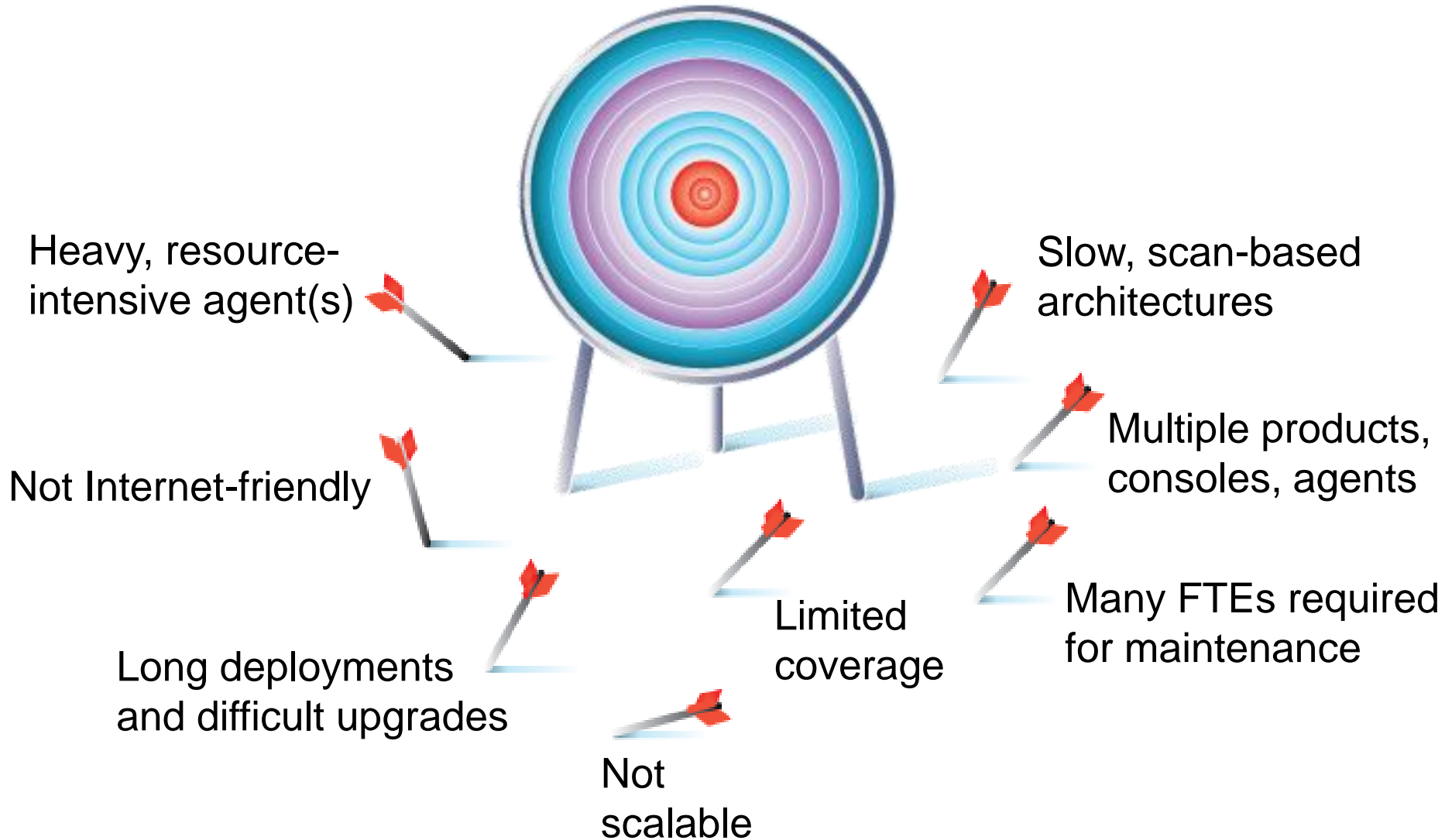
Establish, prove and maintain continuous compliance

In a perfect world, endpoint management would be delivered...

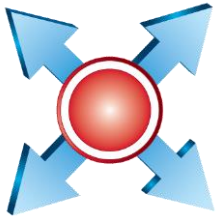
- Through a single, highly scalable product that supports major client, server and mobile platforms
- With an intuitive graphical user interface for all functions
- Via a single, Internet-friendly, low-overhead agent
- By a strong, financially viable vendor
- In days without requiring extensive staff, hardware and services
- At the lowest total cost, delivering rapid ROI
- Via an architecture that performs tasks within minutes or hours



Why so many endpoint management approaches fail



Agile endpoint management: a business necessity



- Rapid, agile, scalable, automated management capabilities
 - Reduce endpoint management costs while increasing service levels

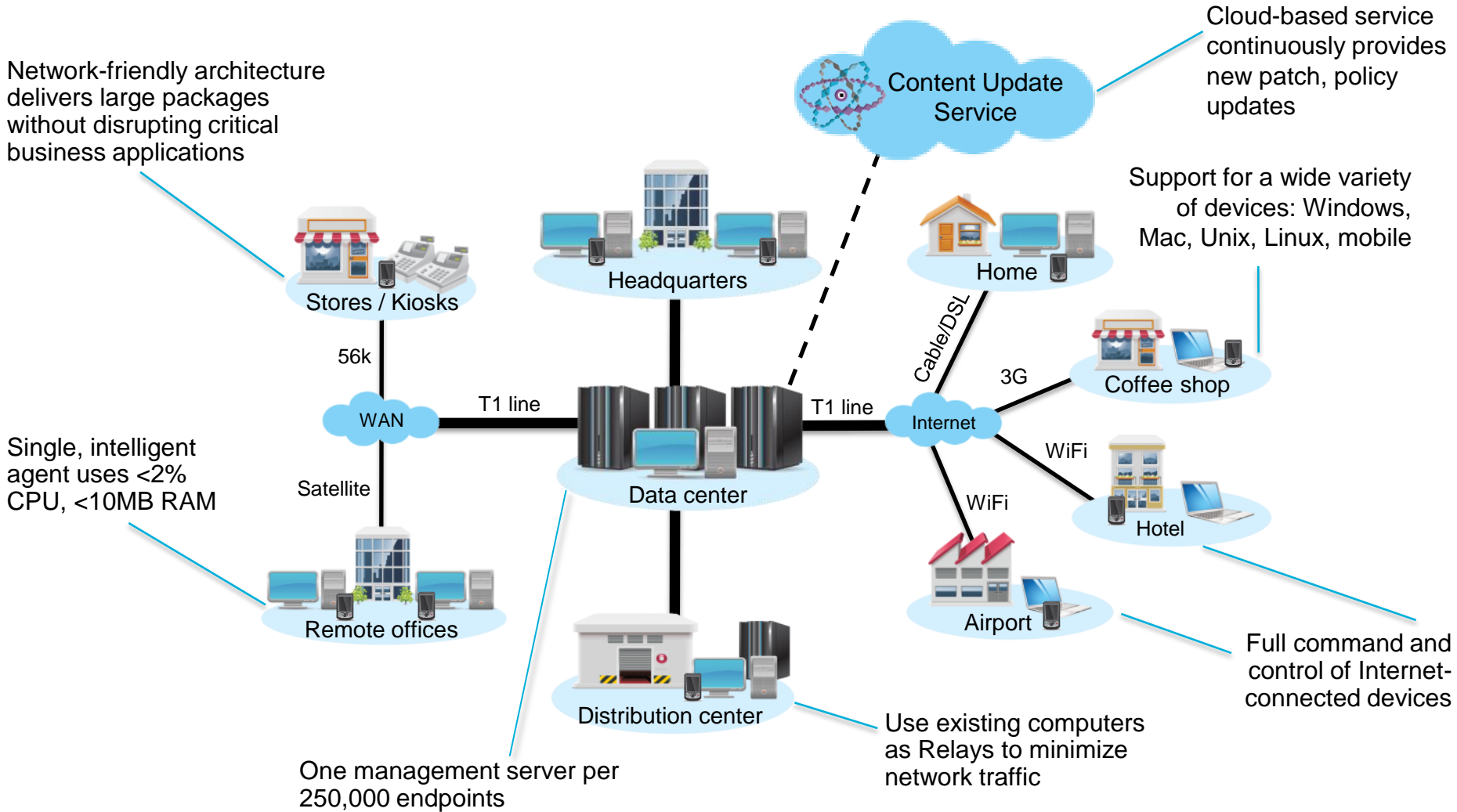


- Increased stability, security
 - Move from slow/reactive to real-time/proactive endpoint management
 - Ensure 90%+ first-pass remediation success within hours



- Continuous compliance reduces costs and risk
 - Many regulations and industry standards require proof of patch, configuration compliance

IBM Endpoint Manager



Whether it's a Mac connecting from hotel WiFi, a Windows laptop at 30K feet or a Red Hat Linux Server in your data center, IBM Endpoint Manager has it covered. In real time, at any scale.

IBM Endpoint Manager for Lifecycle Management

- Network Asset Discovery
- Endpoint Hardware & Software Inventory
- Patch Management
- Software Distribution
- OS Deployment
- Remote Desktop Control

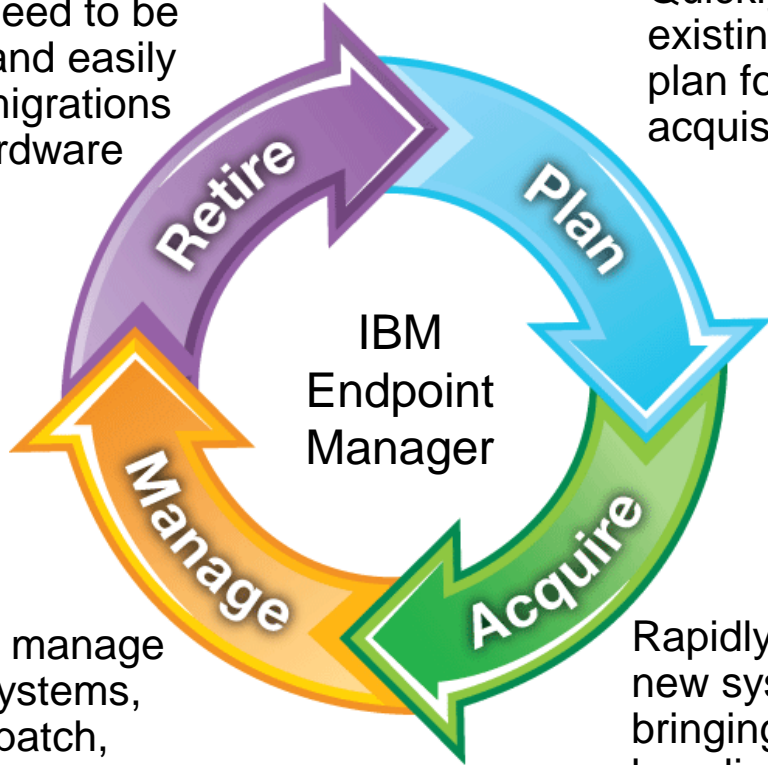
Available Separately:

- Software Use Analysis

- PC & Mac Power Management

Identify which systems need to be replaced and easily manage migrations to new hardware

Quickly discover existing assets and plan for future acquisitions



Efficiently manage existing systems, ensuring patch, configuration and other policies are continuously enforced

Rapidly provision new systems, bringing them up to baseline patch and configuration levels

IBM Endpoint Manager for Security and Compliance

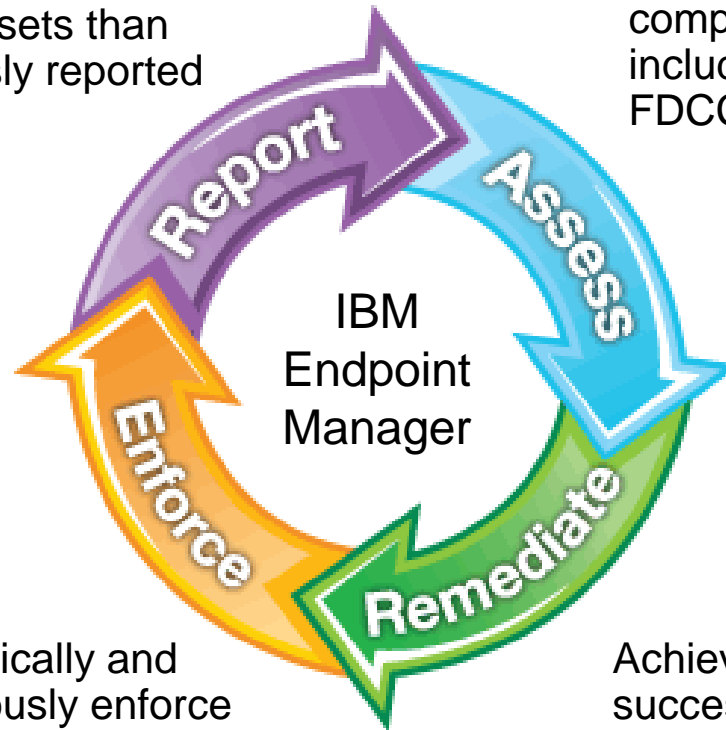
- Asset Discovery
- Compliance Analytics
- Patch Management
- Security Configuration Management
- Vulnerability Management
- Multi-Vendor Endpoint Protection Management

Available Separately:

- Core Protection
- Data Loss Prevention

Discover 10% - 30% more assets than previously reported

Library of 5,000+ compliance settings, including support for FDCC SCAP, DISA STIG



Automatically and continuously enforce policy at the end point

Achieve 95%+ first-pass success rates within hours of policy or patch deployment



Solution Sets

IBM Endpoint Manager

Network Discovery, Global Properties Inventory, Custom Fixlets, Wake-on-LAN, n-Tier Relay Architecture, Dynamic Bandwidth Throttling
SOAP APIs for integration with Service Desk, CMDB, SIEM, GRC, and other IT management, security, and compliance solutions



Lifecycle Management

Software Use Analysis

Power Management

Mobile Devices

Patch Management

Security and Compliance

Core Protection



Patch Management

Hardware, Software,
Configuration Inventory

Software Distribution

OS Deployment

Remote Control

Patch Management

Security Configuration
Management

Vulnerability Assessment

Compliance Analytics

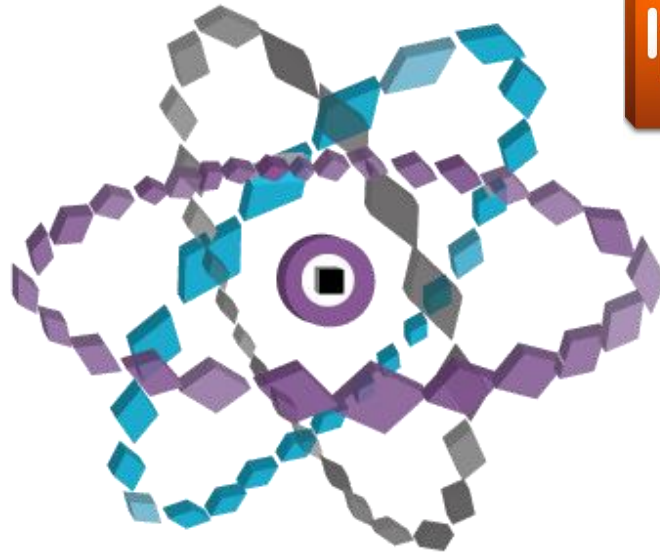
3rd Party Endpoint
Protection Management

Anti-Malware

Firewall

DLP / Device
Control
(add on)

Unified multi-platform, multi-application endpoint management





“Instead of just throwing more and more storage at it, we have to have better tools that allow us to understand what we have stored from a file perspective -- what's dormant data, what's duplicate data, and how we can actually move data to lower tiers of storage for cost effectiveness and storage optimization. It has to happen.”

–Tony Asaro, INI Group @ searchstorage.com



“The value proposition of data deduplication is so strong that failing to add it to a disk or tape-based backup, or to a disaster recovery strategy, can no longer be justified”

Michael Peterson, President, Strategic Research Corporation



“The combination of TSM progressive incremental backups and target-side data deduplication reduced disk capacity by a factor of 19:1 after just 10 backups”

Tony Palmer, Sr. Engineer and Analyst, Enterprise Strategy Group, “TSM 6 Lab Validation Report”

Questions



Thank You

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