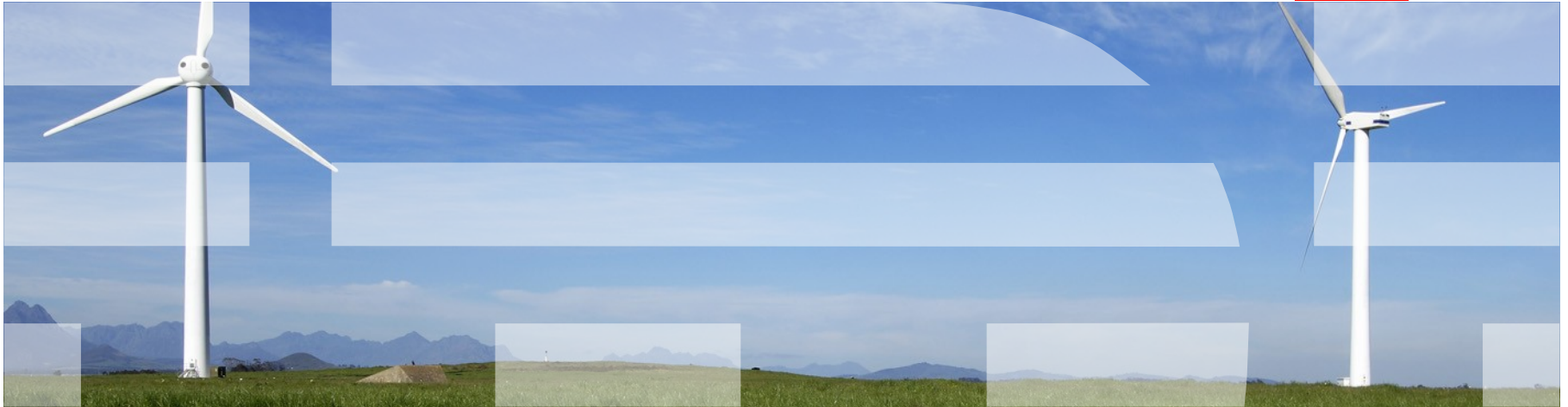


Smarter Management Clients and Servers

Tivoli software



“Endpoint” Spectrum

SERVER ENDPOINT



DESKTOP & LAPTOP ENDPOINT



Endpoint Spectrum

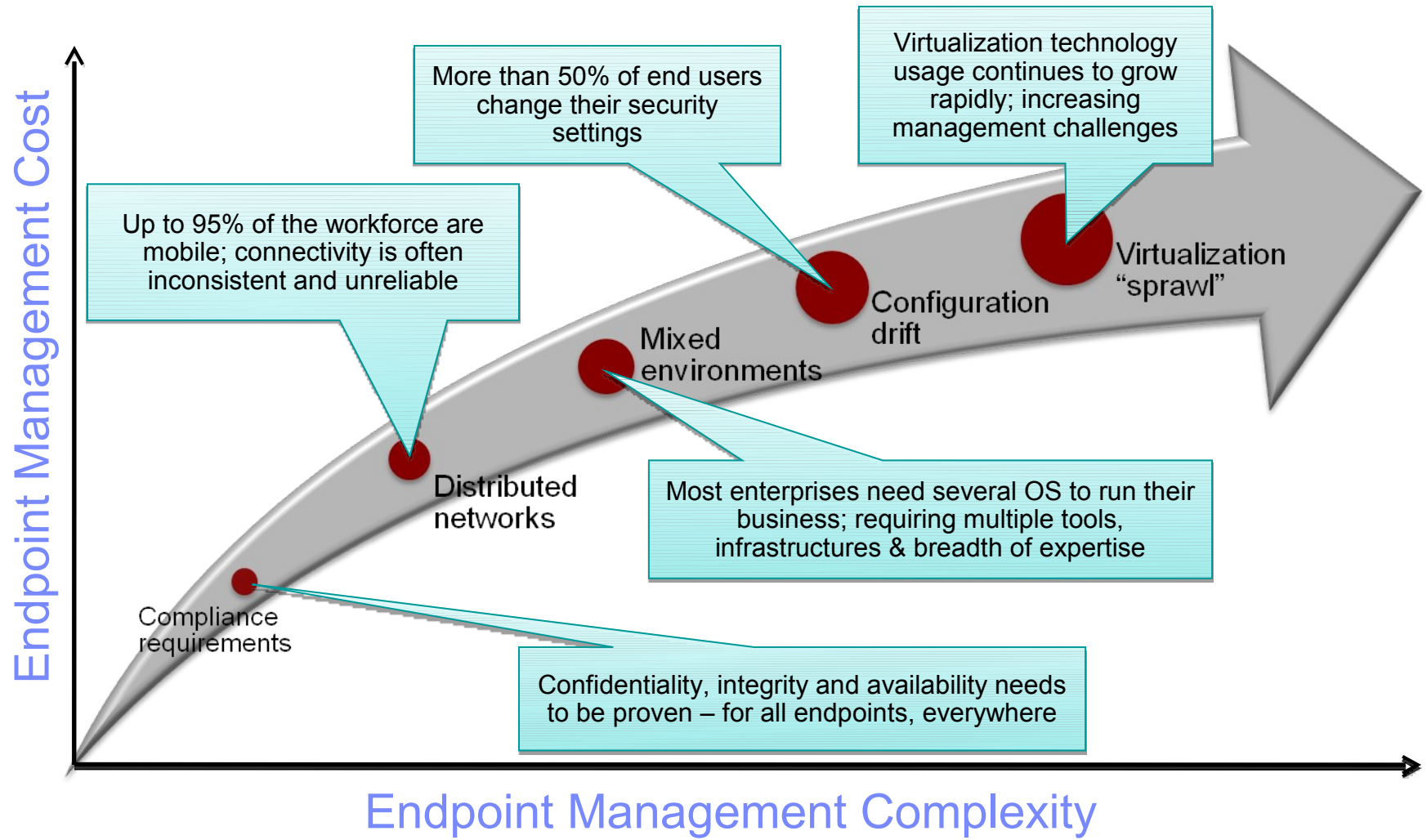


MOBILE ENDPOINT



PURPOSE SPECIFIC ENDPOINT

Endpoint Management Challenges Drive IT Costs Up



Endpoint Management: The Three Cs

Manage **Complexity** , **Simplify** and **Automate**

- Coordination across business processes through the organization
- Heterogeneous endpoints, networks, applications and OSes

Compliance

– **Ensure Compliance, Reduce Risk**

- Security vulnerabilities
- Inaccurate inventory
- Industry regulation compliance and auditing (SOX, COBIT, HIPAA, and more)

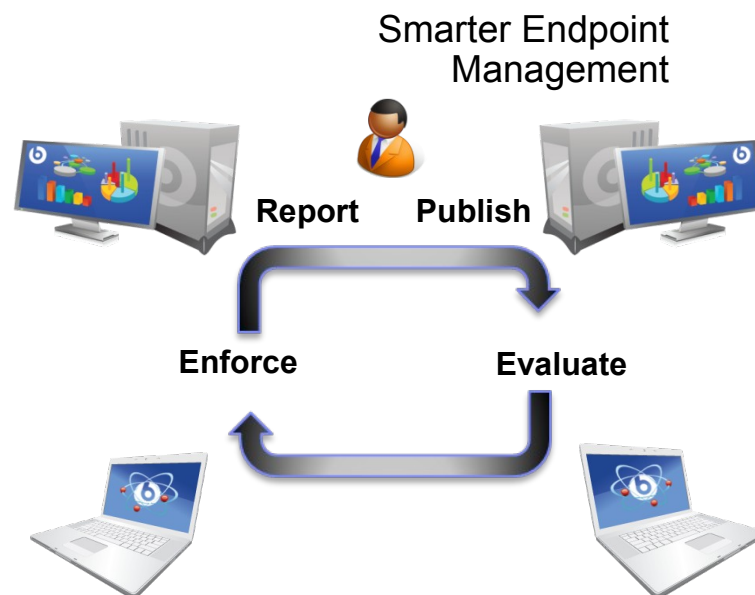
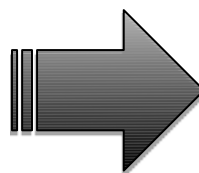
Cost

– **Reduce TCO & Operational Costs**

- Remove manual intervention
- Remove unnecessary configuration diversity
- Improve efficiency



Traditional Management vs. Smarter Approach



Challenge

Traditional client/server tools

IBM Way

Complete the policy enforcement loop

Everything is controlled by the server, which is slow

A new way to do systems and security management

Increase the accuracy and speed of your knowledge

It can take days to accurately close the enforcement loop

Policy enforcement is accomplished and proven in minutes instead of days

Scalability cannot be attained without large infrastructure investments

Administrators are still managing tools instead of being productive

Distributed processing means scalability is unlimited

Adjust system policies depending on environment, location

Scan-based assessment, leading to stale data false sense of awareness

Real-time situational awareness

Simplifying Endpoint Operations and Security

We believe IT and security operations should be simple.

▪ **Tivoli Endpoint Manager** allows clients to consolidate IT operations and IT security functions in a single view, delivery model and software offering.

– **Helping to provide...**

- Total visibility
- Quality of control
- Speed to remediation
- High scalability
- Versatile framework
- Rapid time to value
- Cost reduction

– **Through....**

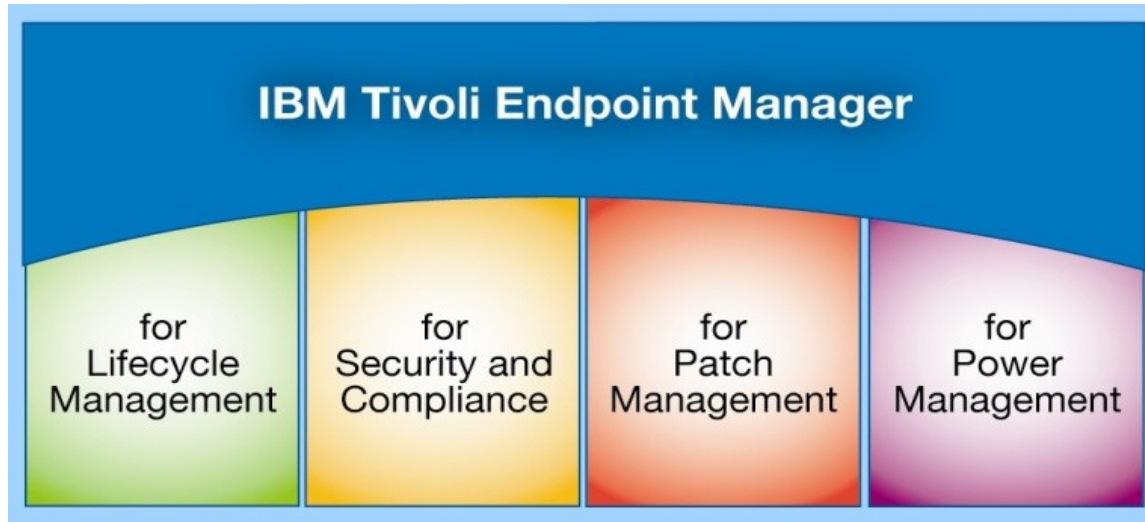
- Security configuration and vulnerability management
- Systems lifecycle management
- Endpoint protection
- Power management

– **To help...**

- Improve visibility and central control across desktops, laptops
- Consolidate management of multiple endpoint applications
- Reduce costs associated with endpoint management
- Simplify endpoint operations and security to drive business value



Tivoli Endpoint Manager

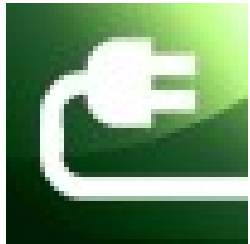


Using Tivoli Endpoint Manager, you can:

See all endpoints: physical, virtual, fixed or mobile

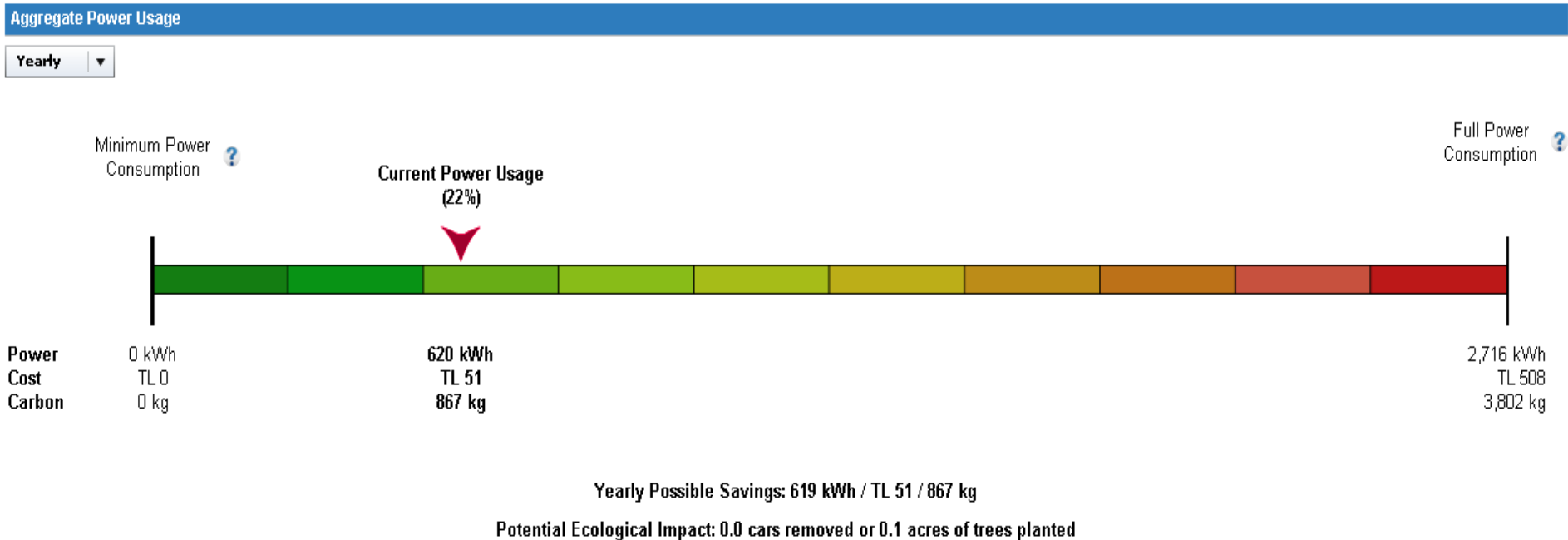
Fix issues anywhere in minutes, regardless of bandwidth or connectivity

7 Deploy in days, over any network or geography



IBM Tivoli Endpoint Manager for Power Management

Full-spectrum, flexible power management made simple



- Apply out-of-the-box capabilities to deal with common power management issues



IBM Tivoli Endpoint Manager for Patch Management

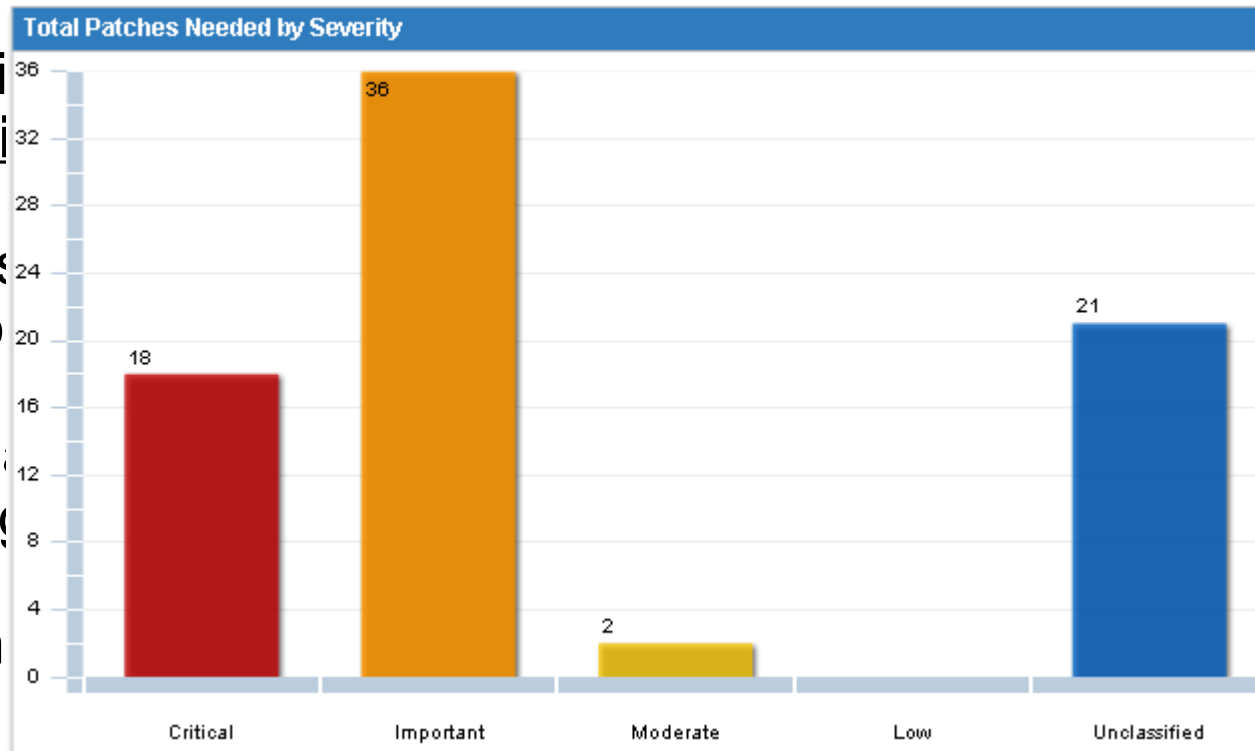
Continuous patch compliance visibility and enforcement

•Automate
and apply

•Reduce s
cycles fro

•Gain gre
monitoring

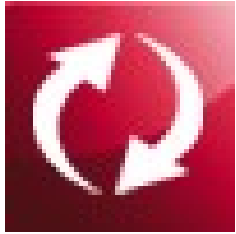
•Apply on



systems

tion

real-time



IBM Tivoli Endpoint Manager for Lifecycle Management

A single-agent, single-console approach for endpoint management across the enterprise

- Asset discovery and inventory
- Inventory Management like Software Usage Information
- Software distribution with policy-based installation and closed-loop verification
- Simplify operating system deployment for new workstations, laptops and servers throughout the network
- Remote Control
- Manage heterogeneous platforms Microsoft Windows, UNIX, Linux and Mac running on physical or virtual machines



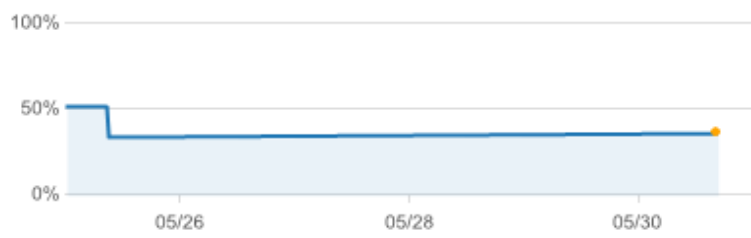
IBM Tivoli Endpoint Manager: Security and Compliance

A single solution for managing endpoint security across the organization

- Continuous enforcement of security configurations and patches
- Centralized management of third-party anti-malware and firewall protection
- Out-of-box best practices to help meet regulations
- Trending and analysis of security changes through advanced reporting
- Discover endpoints that organizations may not be aware of in their environment
- Network Self Quarantine

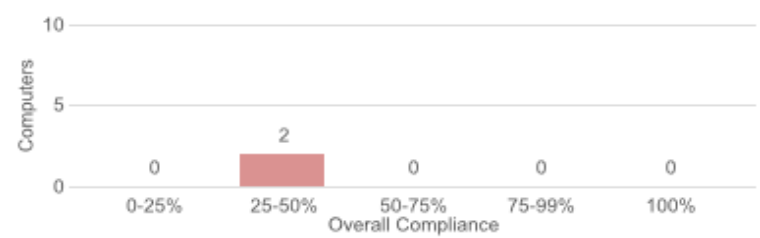
Bringing Sanity To Endpoint Compliance

Compliance History



36%
Compliant

Computers by Compliance Quartile



0 Computer Groups



2 Computers with OSs including WinXP 5.1.2600 and Win2003 5.2.3790



7 Checklists including SCM Checklist for DISA STIG on Windows 2003, SCM Checklist for FDCC on Windows XP, and SCM Checklist for FDCC on Windows XP Firewall



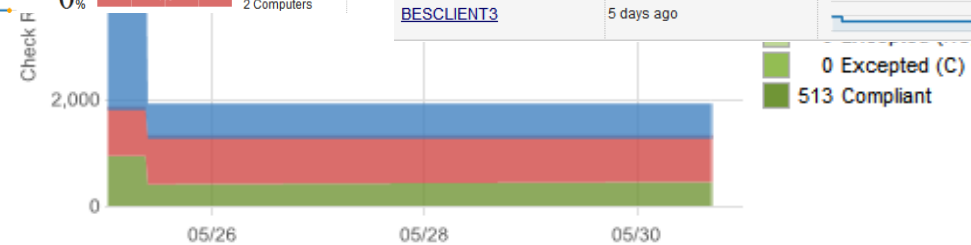
3,281 Checks in categories including N/A, Security Options Settings, File / Directory Access, and General Security Settings



SCM Checklist for DISA STIG on Windows 2003		51%		145		134	279 Checks 1 Computer
SCM Checklist for FDCC on Windows XP		35%		92		149	231 Checks 1 Computer
SCM Checklist for FDCC on Windows XP Firewall		8%		2		23	25 Checks 1 Computer
SCM Checklist for DISA STIG on Windows XP		37%		74		122	196 Checks 1 Computer
DISA STIG on Windows XP v6r1.18		27%		78		203	281 Checks 2 Computers
DISA STIG on Windows 2003 MS v6r1.18		48%		132		140	272 Checks 2 Computers
USGCB Checklist for Internet Explorer 8		0%		0		110	110 Checks 2 Computers

Check Results History

Computers				
(Base Report) Save As... CSV 2 rows Configure View...				
Computer Name	Last Seen	Compliance		
		05/25/2011 - 05/31/2011	0% 25% 50% 75% 100%	
BFDEMO	about 18 hours ago		41%	4 Checklists 942 Checks
BESCLIENT3	5 days ago		32%	6 Checklists 1,115 Checks

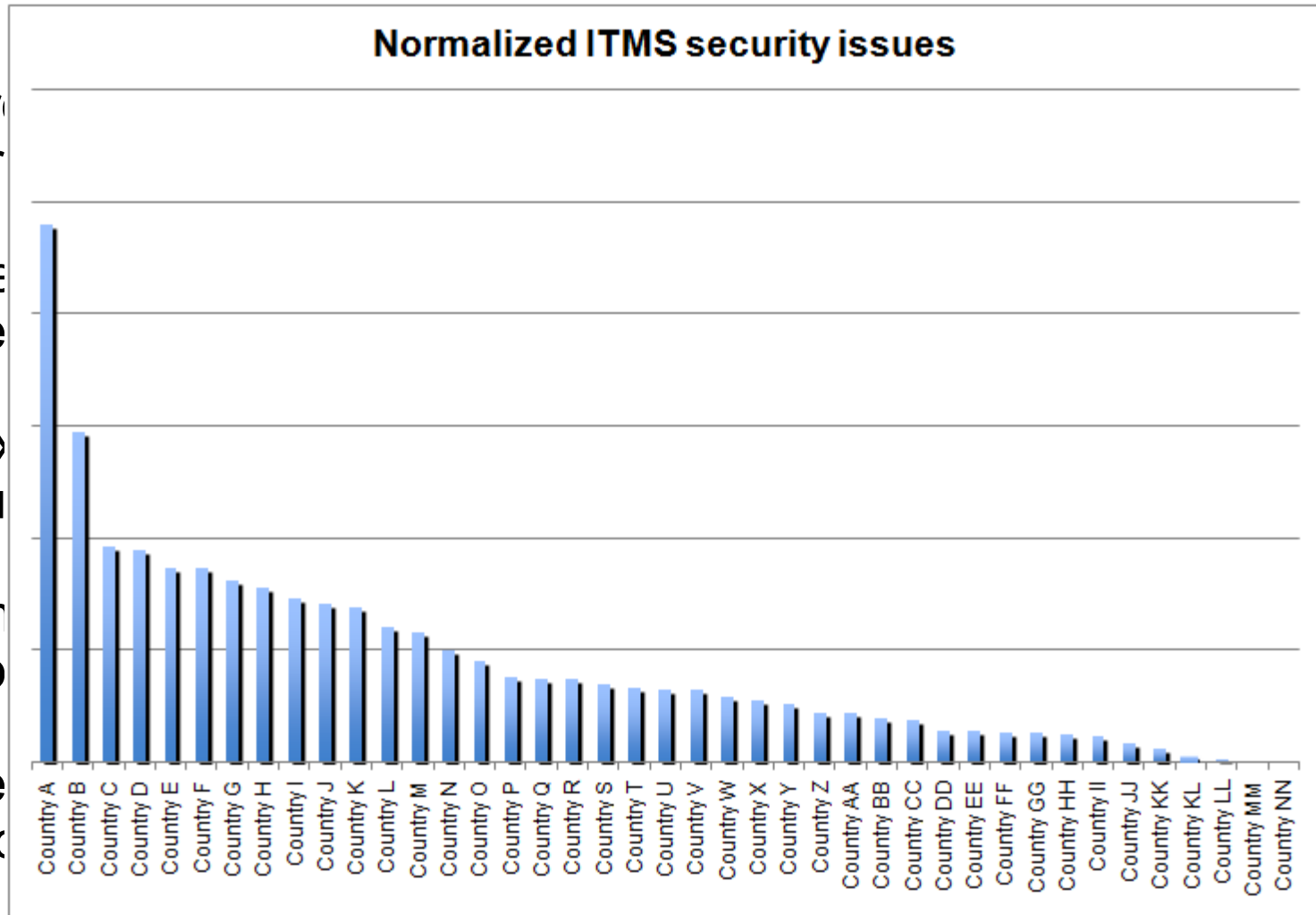




IBM Tivoli Endpoint Manager for Core Protection

Real-time protection from malware and other vulnerabilities

- Provide
- Reduce
- Fix
- Enable
- Leverage

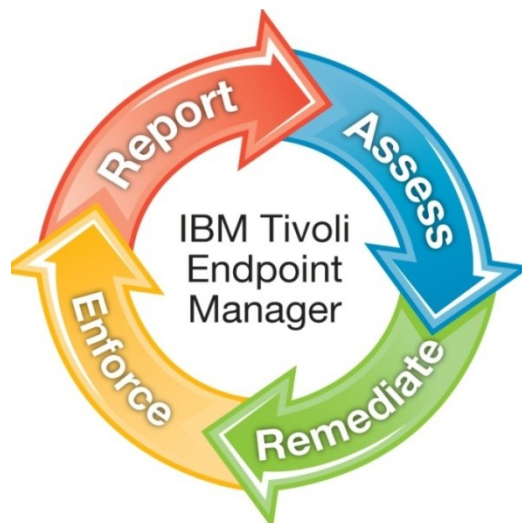


by its
on, wall
and
ire

See More, Secure More

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



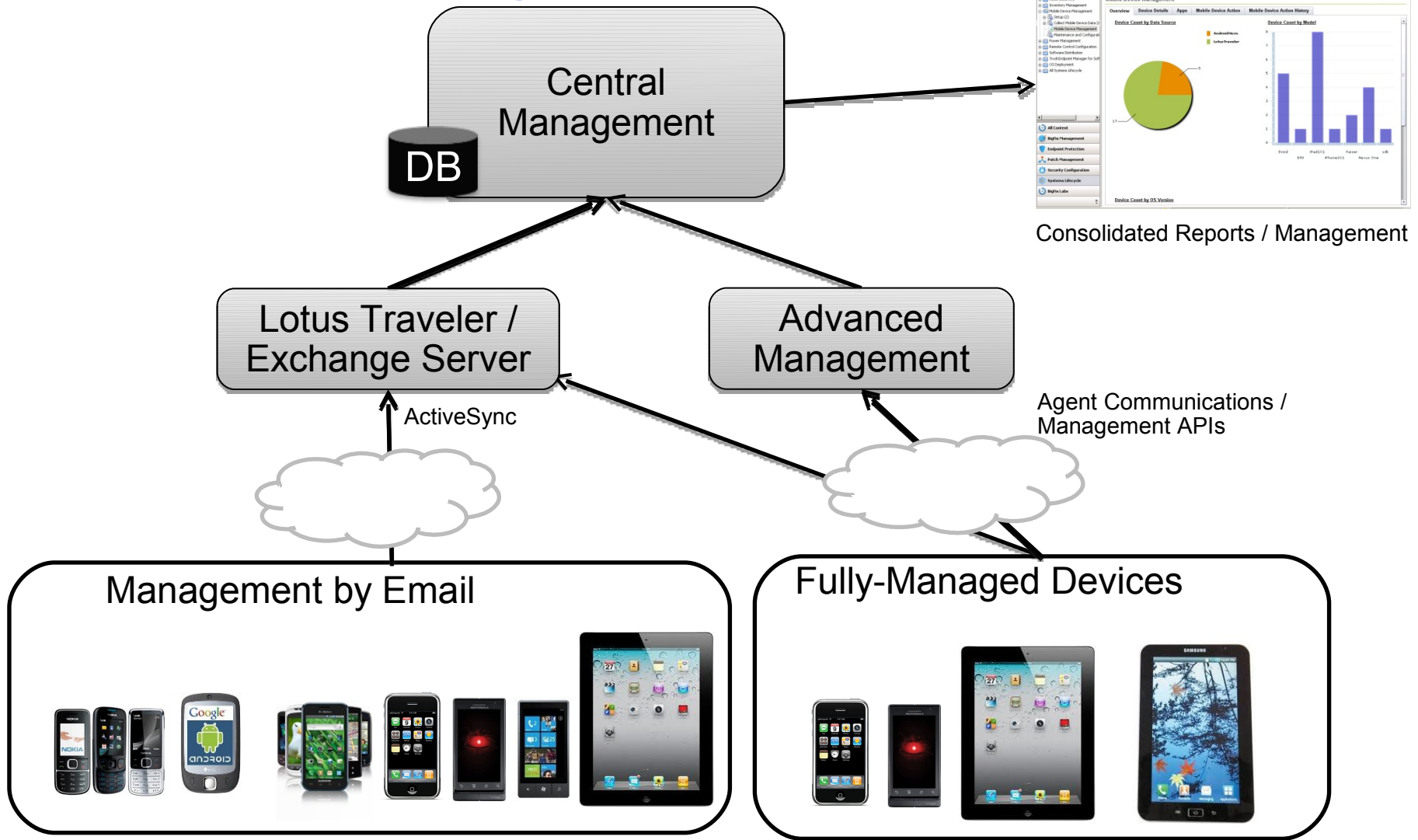


IBM Tivoli Endpoint Manager for Mobile Devices

Visibility and Control Everywhere

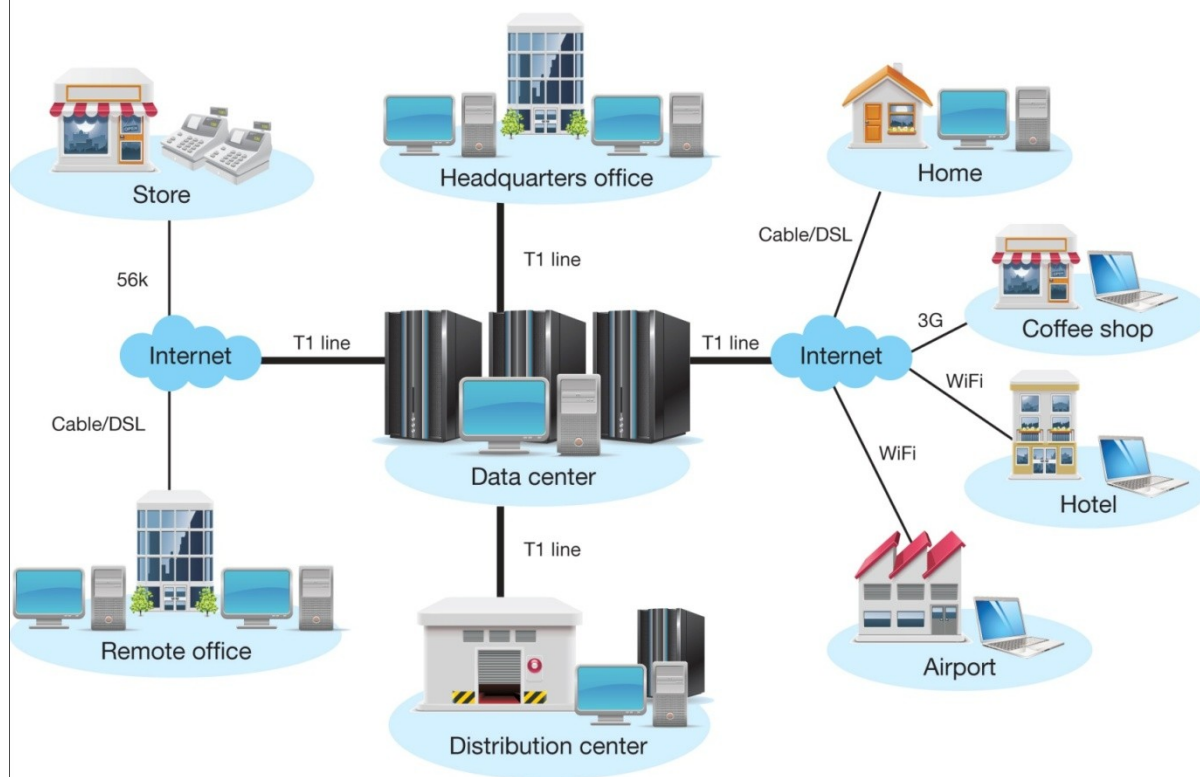
- What are my mobile devices? Deep device inventory
- Are they secure? Pin lock password policies
- Is my data secure? Remote wipe
- Application Management
- Configuration Management

Mobile Device Management



Tivoli Endpoint Manager: Smarter, Faster Endpoint Management

- Network Asset Discovery
- Endpoint HW, SW Inventory
- Patch Management
- Software Distribution
- OS Deployment
- Remote Desktop Control
- Software Use Analysis (add on)
- Power Management (add on)



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

Why to choose Smarter Management?

- Real-time visibility
 - See all, Do all
- Attain scalability
 - One server for > 250K endpoints
- Broad coverage
 - Multi-platform, multi-purpose, on-network, off-network
- Rapid time-to-value
 - Installs in hours, remediates in minutes

Thank
You

BACKUP SLIDES

Tivoli Endpoint Manager Sample Use Cases

Tivoli Endpoint Manager does anything and everything that the local administrator can do – AND - does it all at the same time on every asset in the enterprise

With Tivoli Endpoint Manager, you can...

- Discover 25-30% more assets than you realized you had
- Patch 3500 computers at HQ in Alberta, Canada from a Starbucks in Palm Springs - within minutes
- Distribute and install WinXP SP2 over 56K lines from Madison, WI to PCs in Kuala Lumpur - with zero impact to network QoS
- Monitor printer usage at a global level to reduce costs and environmental harm - with little administrative overhead

Customers on Tivoli Endpoint Manager



IT SERVICES

“Tivoli Endpoint Manager is my IT army. It’s just too damn easy—the only thing you are limited by is your creativity.”

--Mike Morse, Director of IT

EDUCATION (K-12)

“These \$4.2M savings [from Tivoli Endpoint Manager Power Management] are impressive, but they are just the beginning.”

--Tom Sims, Director of Network Systems



Customers on Tivoli Endpoint Manager

FINANCIAL SERVICES

“It’s not a fair fight [between Tivoli Endpoint Manager and the competition]”. The ability to solve multiple challenges by leveraging a multi-purpose agent, residing in a single console was ultimately the compelling reason for BGC to choose Tivoli Endpoint Manager. Additionally, Tivoli Endpoint Manager’s speed was another big consideration.”

--Chris Marino, SVP of Global IT Procurement



HEALTHCARE

“We’ve been impressed with how Tivoli Endpoint Manager has helped meet our goals and we’re finding new uses for it all the time.”

- Mark Starry, Manager of IT Infrastructure & Security



Customers on Tivoli Endpoint Manager



RETAIL

“Tivoli Endpoint Manager simplifies processes and gives us fewer vendors to manage - saving money, reducing stress and improving the quality of service we can deliver to the organization.”

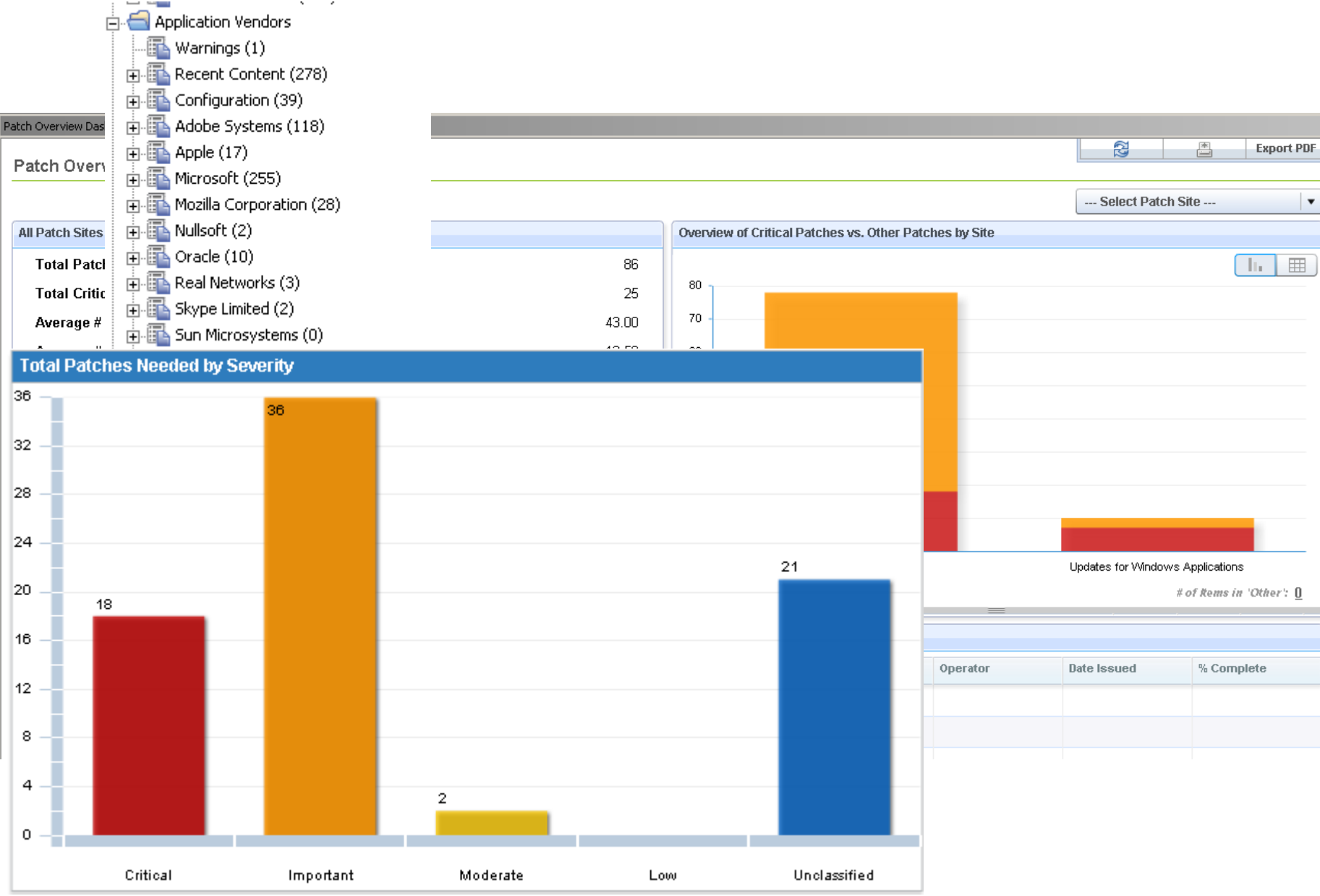
--Michael Schaefer, Network Analyst

STATE AND LOCAL GOVERNMENT

“Tivoli Endpoint Manager just makes sense. Instead of having separate tools for separate functions like power management and patch management, Tivoli Endpoint Manager gives us multiple functionality—with a single agent, using a single console.”



--Mark Dorry, CIO



Updates for Windows Applications

of Items in 'Other': 0

Operator	Date Issued	% Complete

Meat Compliance History Computers by Compliance Quartile

IBM Software Group | Tivoli Software
© 2011 IBM Corp.

Security Configuration and Compliance

Out-of-the-box Policy Definitions

Custom Policy Definitions

5000+

Wide Coverage

Remediation

Vulnerability

End Point

Device

Total Computers by Maximum Vulnerability Rating Summary

Total Computers by Vulnerability Rating

Total Computers with Maximum Vulnerability Rating of High:

2

Maximum Vulnerability Rating of Medium:

0

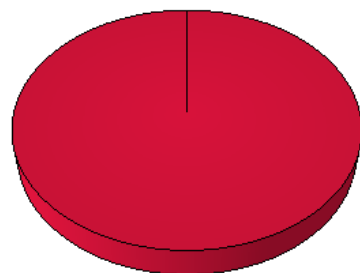
Maximum Vulnerability Rating of Low:

0

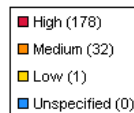
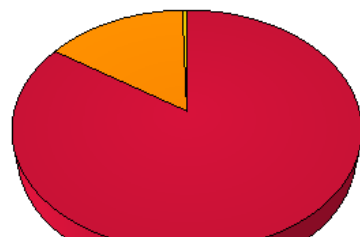
Maximum Vulnerability Rating of Unspecified:

0

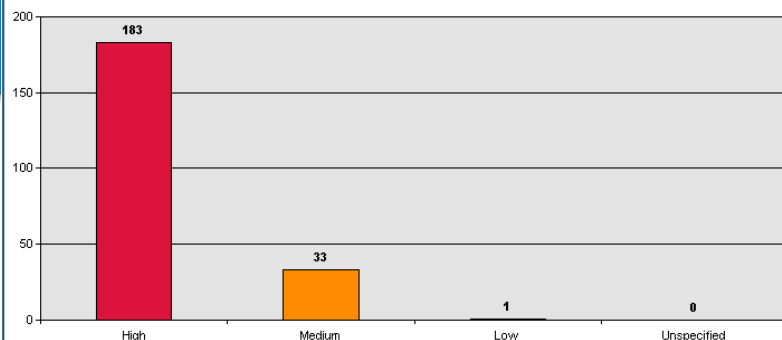
Total Computers by Maximum Detected Vulnerability Rating



Severity of Uniquely Detected Vulnerabilities



Total Detected Vulnerabilities by Severity



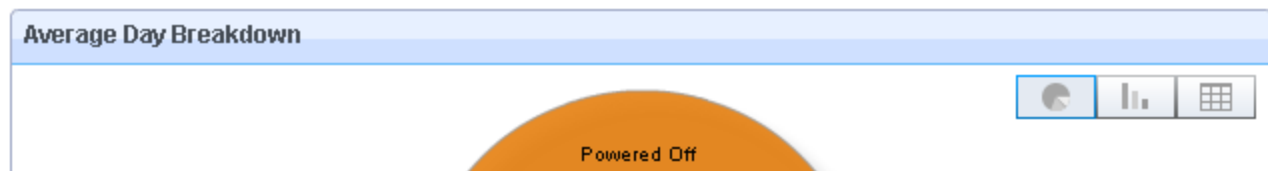
Information

es:

217

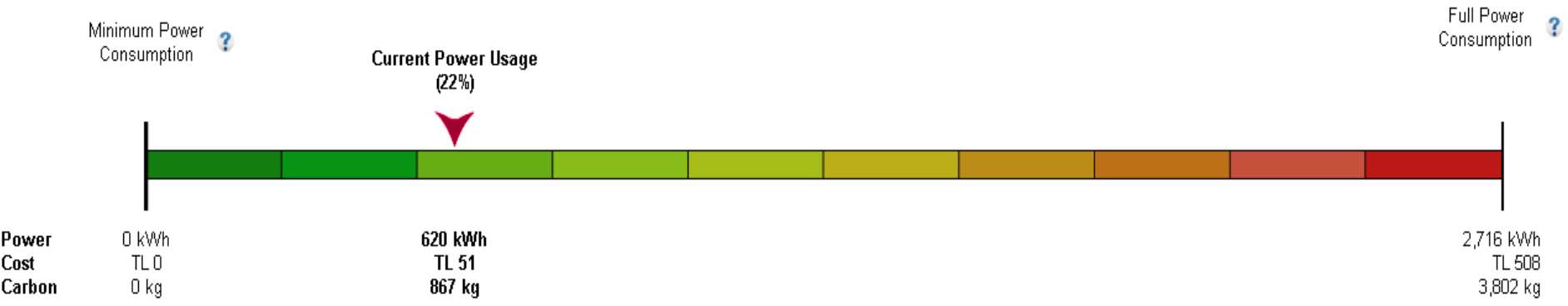
Top 10 Detected Vulnerabilities

Rank	Vulnerability	Severity	OVAL-ID	Total Applicable Computers
1.	Untrusted search path vulnerability in Adobe Flash Player version less than 9.0.289.0 and 10.x before 10.1.102.64	High	OVAL6926	2
2.	MHTML Mime-Formatted Request Vulnerability	Medium	OVAL6956	2
3.	OpenType Font Encoded Character Vulnerability	High	OVAL11593	2
4.	Win32k Window Class Improper Pointer Validation Vulnerability	High	OVAL11638	2
5.	Remote Code Execution Vulnerability in Microsoft Graphics Rendering Engine	High	OVAL11671	2
6.	Win32k Improper User Input Validation Vulnerability	High	OVAL12070	2
7.	Microsoft RichEdit Vulnerability	High	OVAL1090	1
8.	Windows Active Directory Denial of Service Vulnerability	High	OVAL4910	1
9.	Windows Active Directory Denial of Service Vulnerability	Medium	OVAL5181	1
10.	LSASS Recursive Stack Overflow Vulnerability	High	OVAL5890	1



Aggregate Power Usage

Yearly ▼



Yearly Possible Savings: 619 kWh / TL 51 / 867 kg

Potential Ecological Impact: 0.0 cars removed or 0.1 acres of trees planted

Active	0 (0.0 %)
Standby	0 (0.0 %)

PM Efficiency Rating ? : **0%**

Powered On Computers

Endpoint Protection

Welcome to the Client Compliance Policy Wizard

➔

Set Name and Applicable Machines

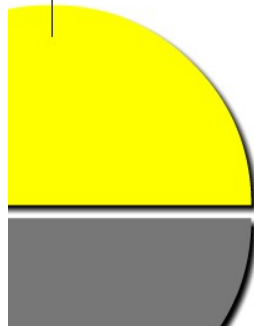
➔

Set Basic Quarantine Settings

➔

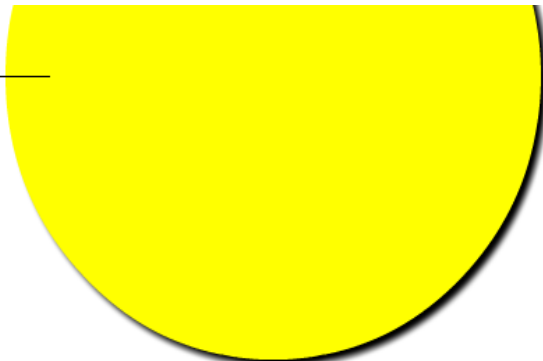
Note: Leave check boxes cleared and click "Next" if you do not want to set any basic settings.

- ☒ Maximum number of relevant critical patches: 10
- ☒ Minimum service pack level for Windows 2000: Service Pack 4
- ☒ Minimum service pack level for Windows XP: Service Pack 2
- ☒ Minimum service pack level for Windows 2003: Service Pack 2
- ☒ Minimum service pack level for Windows Vista: Service Pack 1
- ☒ Minimum service pack level for Windows 2008: Service Pack 0
- ☒ Maximum age of any relevant critical patch: In day(s) 30
- ☒ Name of a process required to be running: DefWatch.exe



111

	Activated
/XP/2003/Vista/2008/7/2008	Activated .1
	.1
	.1
	.1
	/a
	.1
	/a
	/a



■ Healthy ■ Need Update ■ Not Running

Anti-Virus Health Status

1

Name

Removable Media: Disable Future Use of CD-ROM Drives

Removable Media: Disable Future Use of Floppy Disk Drives

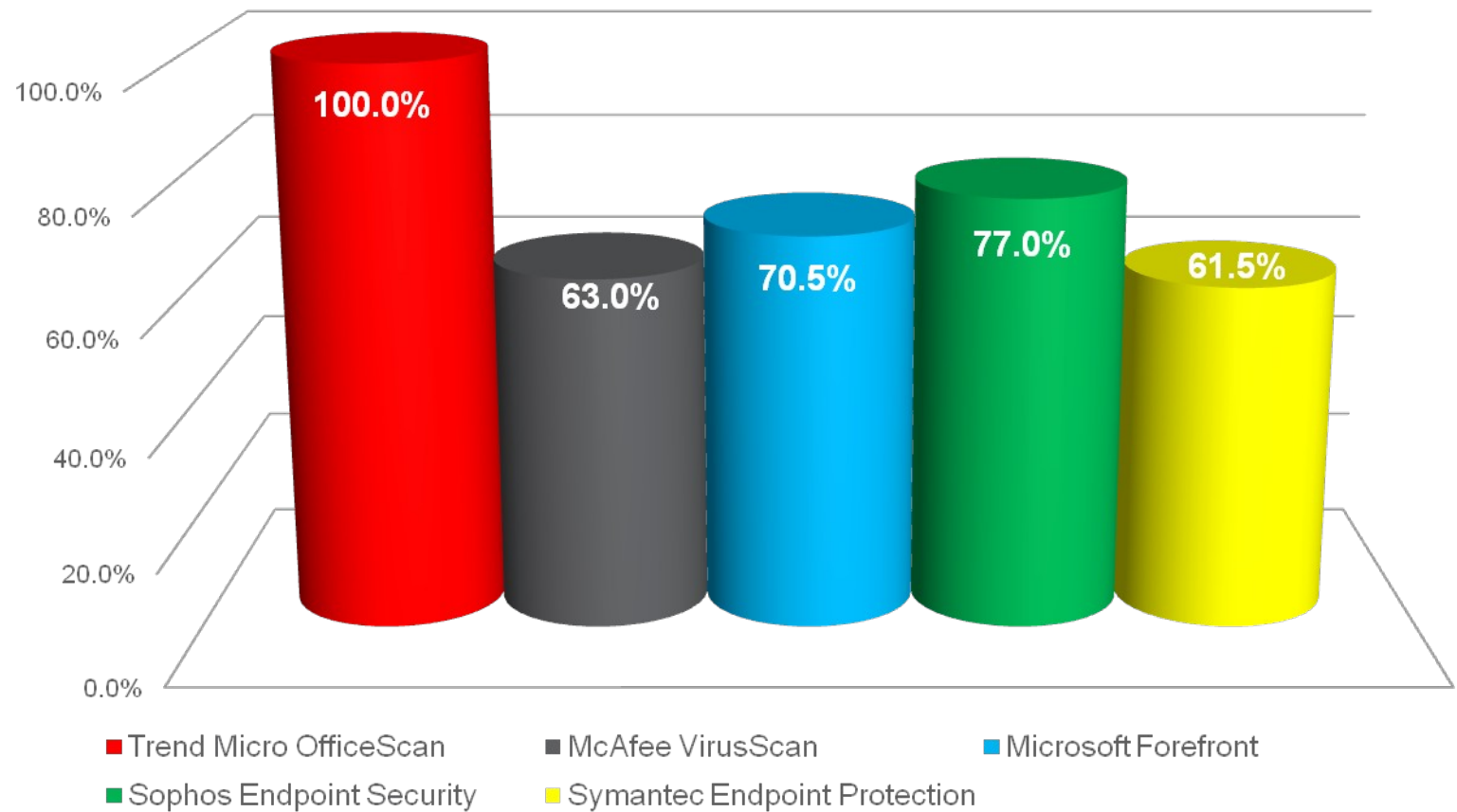
Removable Media: Disable Future Use of High Capacity Floppy Disk Drives

Removable Media: Disable Future Use of Parallel Port Devices

Removable Media: Disable Future Use of USB Storage Devices

Market-Leading Protection w/ Trend's Cloud-Based Smart Protection Network

**Total Percentage of threats blocked by all layers:
Exposure, Infection, Dynamic**



- Jan 2011 results of testing conducted by AV-Test.org ([qualified for internal use](#))
- Results from T+60 test

Tivoli Endpoint Manager MDM

The screenshot displays the Tivoli Endpoint Manager Console with the Mobile Device Management (MDM) section active. The left sidebar shows the 'Systems Lifecycle' menu with 'Mobile Device Management' selected. The main area features a 'Mobile Device Management' header with tabs for Overview, Device Details, Apps, Mobile Device Action, and Mobile Device Action History. The 'Overview' tab is selected, showing a table of mobile devices. The table has columns for Device Name, Model, OS Version, and Current User. The status bar at the bottom indicates '0 items in list, 0 selected.' and 'Connected to database 'bfenterprise' as user 'naveed'.

Mobile Device Management

Overview | Device Details | Apps | Mobile Device Action | Mobile Device Action History

Mobile Devices

Device Name	Model	OS Version	Current User
android sdk	sdk	Android 2.3.1	android-build
Android_624fd75a60cda3	Nexus One	Android 2.2.2	android j test/IBM
Android_22a0000015efaa	Droid	Android 2.2	android j test/IBM
Android_8ca4947e80c26e	Droid	Android 2.2.1	android j test/IBM
IMEI:353659012455370	E90	Nokia S60/300.34.84 27-08-201	android j test/IBM
Android_d63dba357ae2cc	Nexus One	Android 2.2.2	android j test/IBM
201D390C8AA29FFE2DA	Kaiser	PocketPC/6(5.2.1622)	android j test/IBM
AppI88925DV83NS	iPhone2C1	Apple-iPhone2C1/803.1480000	android j test/IBM
AppIV5044H82Z39	iPad1C1	Apple-iPad1C1/803.148 (OS 4)	android j test/IBM
Android_22a0000015efaa	Droid	Android 2.2	android j test/IBM
Android_8ca4947e80c26e	Droid	Android 2.2.1	android j test/IBM
IMEI:353659012455370	E90	Nokia S60/300.34.84 27-08-201	android j test/IBM

0 items in list, 0 selected. Connected to database 'bfenterprise' as user 'naveed'

Tivoli Endpoint Manager Platform Elements



Single Intelligent Agent

- Continuous self-assessment
- Continuous Policy enforcement
- Minimal system impact (<2% cpu)



Powerful policy language (Fixlets)

- Thousands of out-of-the-box policies
- Best practices for ops and security
- Simple custom policy authoring
- Highly extensible / applicable across all platforms



Single Server & Console

- Highly secure, highly available
- Aggregates data, analyzes & reports
- **Manages >250k endpoints**



An existing TEM managed asset can become a relay in minutes

Virtual Infrastructure

- Designate any agent a relay or scan point
- Built-in redundancy
- Leverage existing infrastructure

Tivoli Endpoint Manager: Low TCO, Real Savings

	Previous Approach	With TEM
90K device deployment	6 months	1 week
# of Management Servers	25	1
Annual Electricity Costs	\$6.9M	\$4M
Patch Cycle	7 Days	5 minutes
Software Inventory Cycle (license "true-up")	3 weeks	20 minutes
Vulnerability Assessment Cycle	6 months	3 days
Security Configuration Cycle	5 months, 6 FTEs	2 weeks, 1 FTE

"I just wanted to share this with you and the guys.... The April Microsoft Patch push began at 5:00 AM on 4/20 with 579,047 affected patch instances to push, the largest push to date. At 3:00 PM on 4/20 a total of 527,916 affected patch instances were fixed. This gives us a 91.17% affected patch instances fixed in only 10 hours!

I don't believe any other product could have accomplished what Tivoli Endpoint Manager accomplished here today."

--IT Manager, Large Healthcare Organization