



Securing SharePoint 101

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Imperva



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Major SharePoint Deployment Types

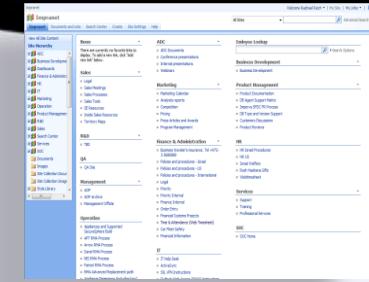


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Internal Portal

- Uses include SharePoint as a file repository
- Only accessible by internal users



Company Intranet

External Portal

- Uses include SharePoint as a file repository
- Accessible from the Internet
- For customers, partners or the public



Client access

Internet Website

- SharePoint as the Web site infrastructure
- Not used as a file repository



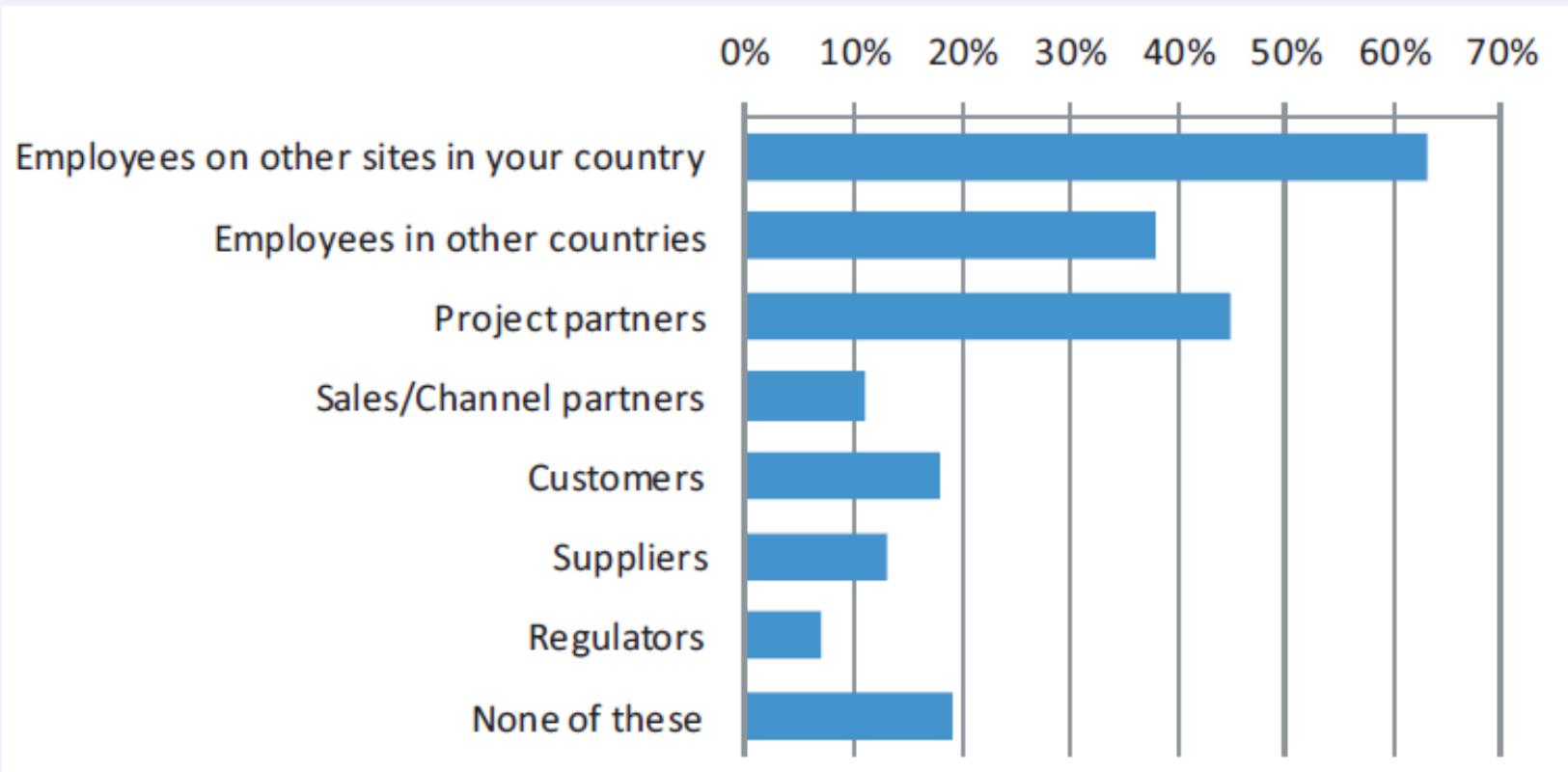
Public website



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Do you use SharePoint for collaboration with any of the following?



The SharePoint Footprint



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www.wssdemo.com/livepivot/

Top SharePoint Internet Sites

WSSDemo.com | All Internet Sites | 2010 Internet Sites | SharePoint Books

Sort Order: Industry

Search here...

Industry

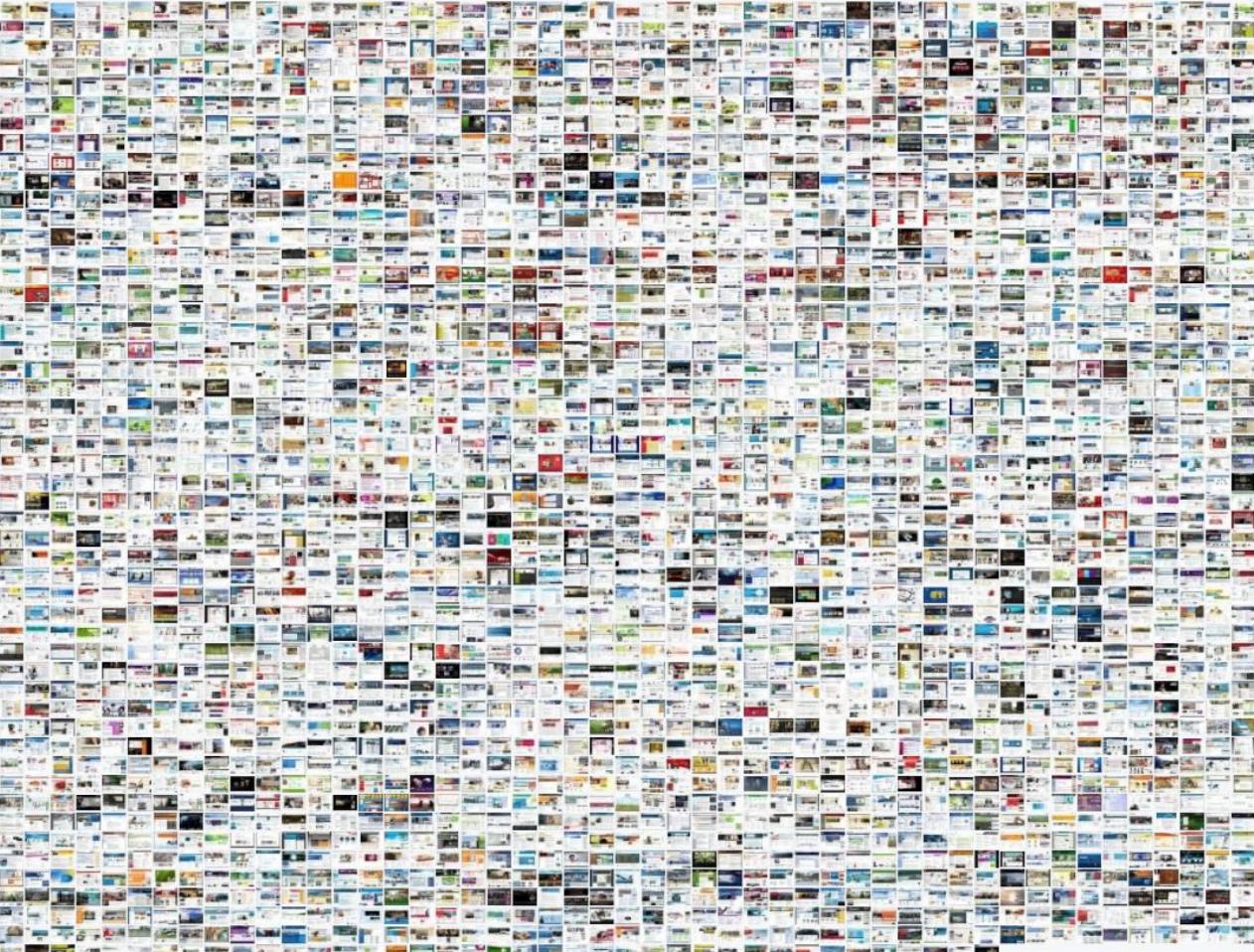
Industry	Sort Order: Quantity
Government	326
MS Certified Partners	223
Education	212
Industrial	208
Health	194
Financial	179
Technology	171
Professional Services	143
Charity/Club/Community	123
Retail	91
Transportation	89
Professional Association	88
Entertainment	78
Utilities and Energy	77
Other	63
Tourism	63
Education - School District	53
Education - University	51
Food and Beverage	42
Telecommunications	15

Country

Platform

Rating

Created



SharePoint Sidesteps IT—and Security



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“Much of SharePoint's appeal is that it enables users to bypass the explicit and organizational and process barriers of the organization.”

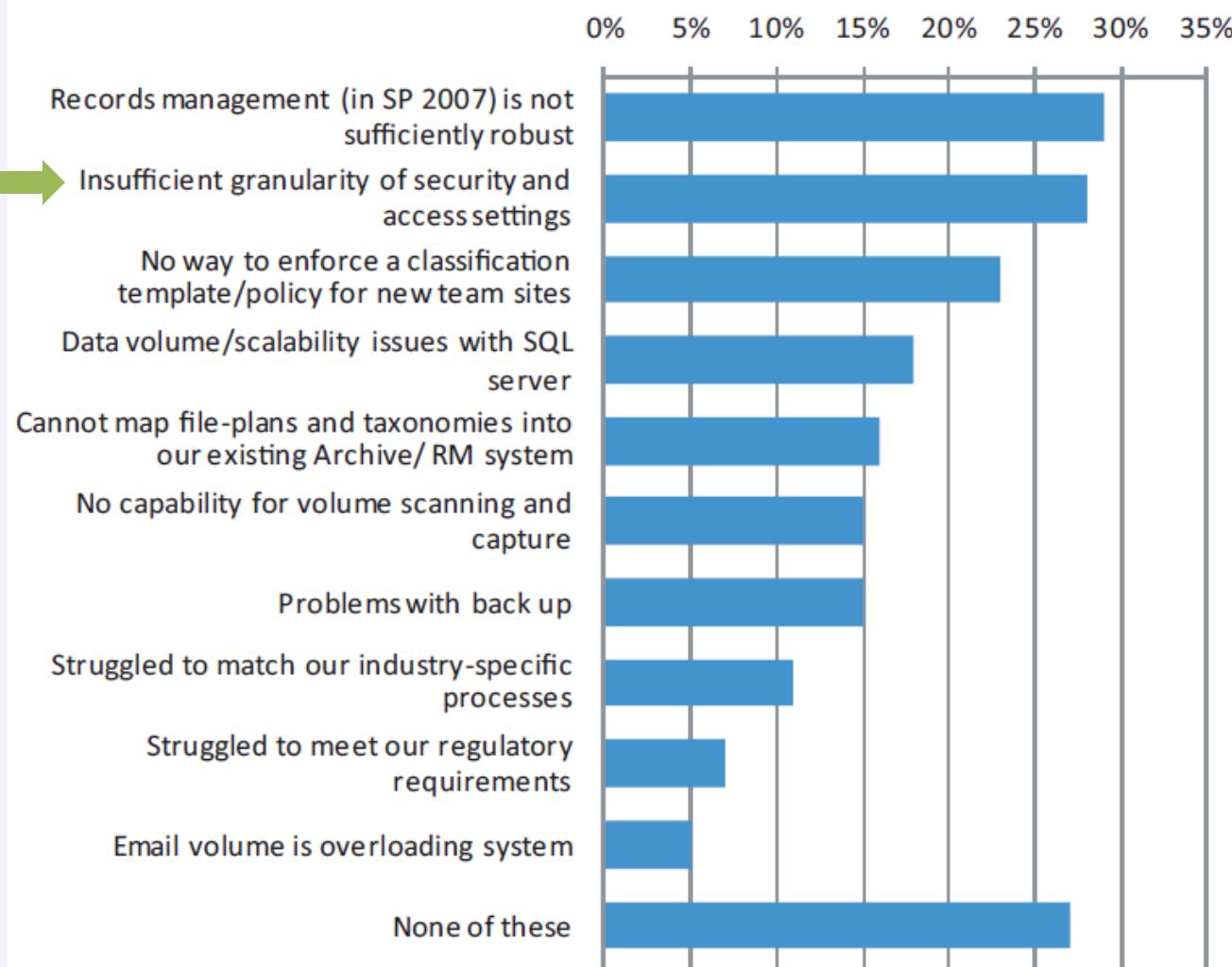
—Gartner, 2009

Key Issues With SharePoint



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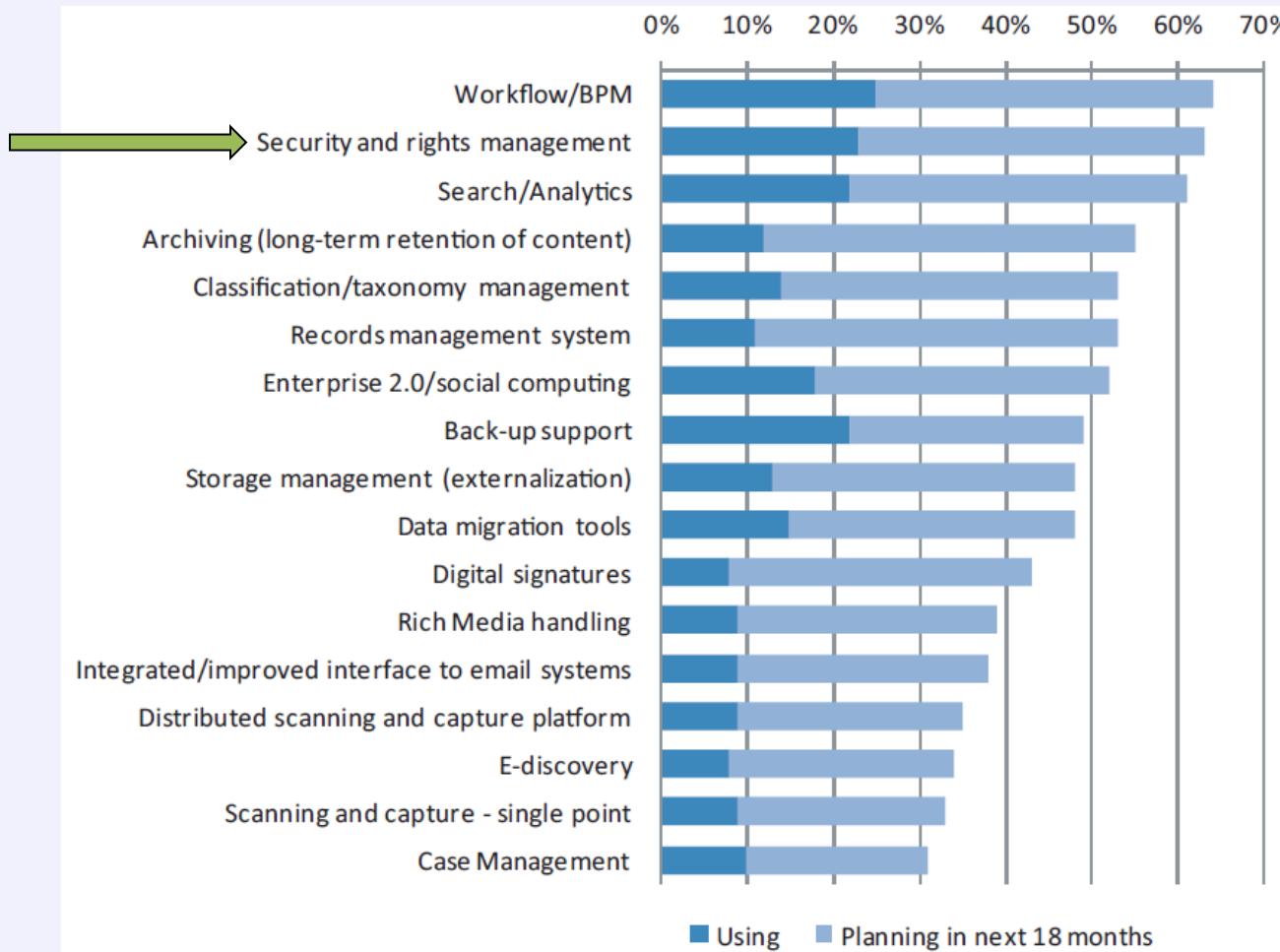


Third-Party Additions



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The Register®

SharePoint gods peek into colleagues' info – poll

Security is for other people

By [Gavin Clarke](#) • Get more from this author

Posted in [Software](#), 23rd January 2012 13:22 GMT

[Free whitepaper – Reshaping IT](#)

SharePoint admins are abusing their privileged status to sneak a peak at classified documents according to a poll that shows consistent abuse of security in Microsoft's business collaboration server.

A third of IT administrators or somebody they know with admin rights have read documents hosted in Microsoft's collaboration server that they are not meant to read.

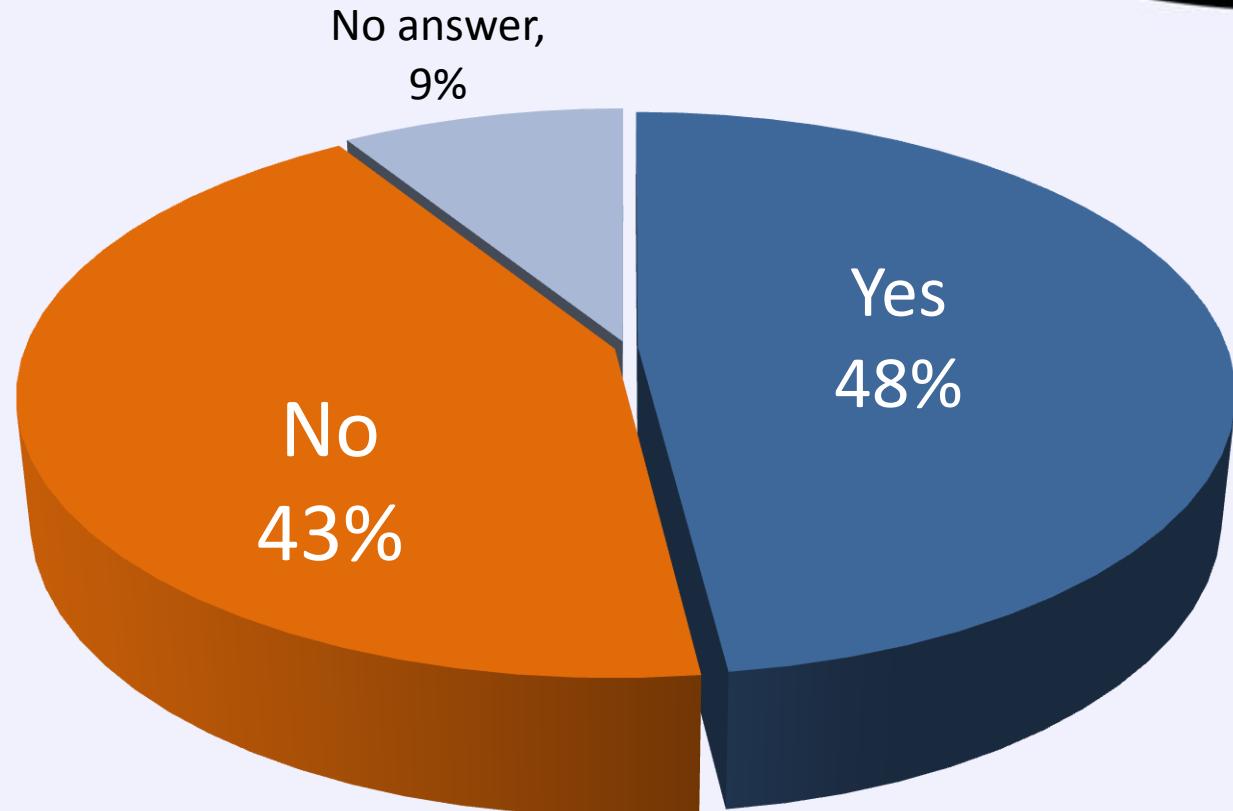
Most popular documents eyeballed were those containing the details of their fellow employees, 34 per cent, followed by salary – 23 per cent – and 30 per cent said "other."

Have Your Shared Privileged Info via SharePoint?



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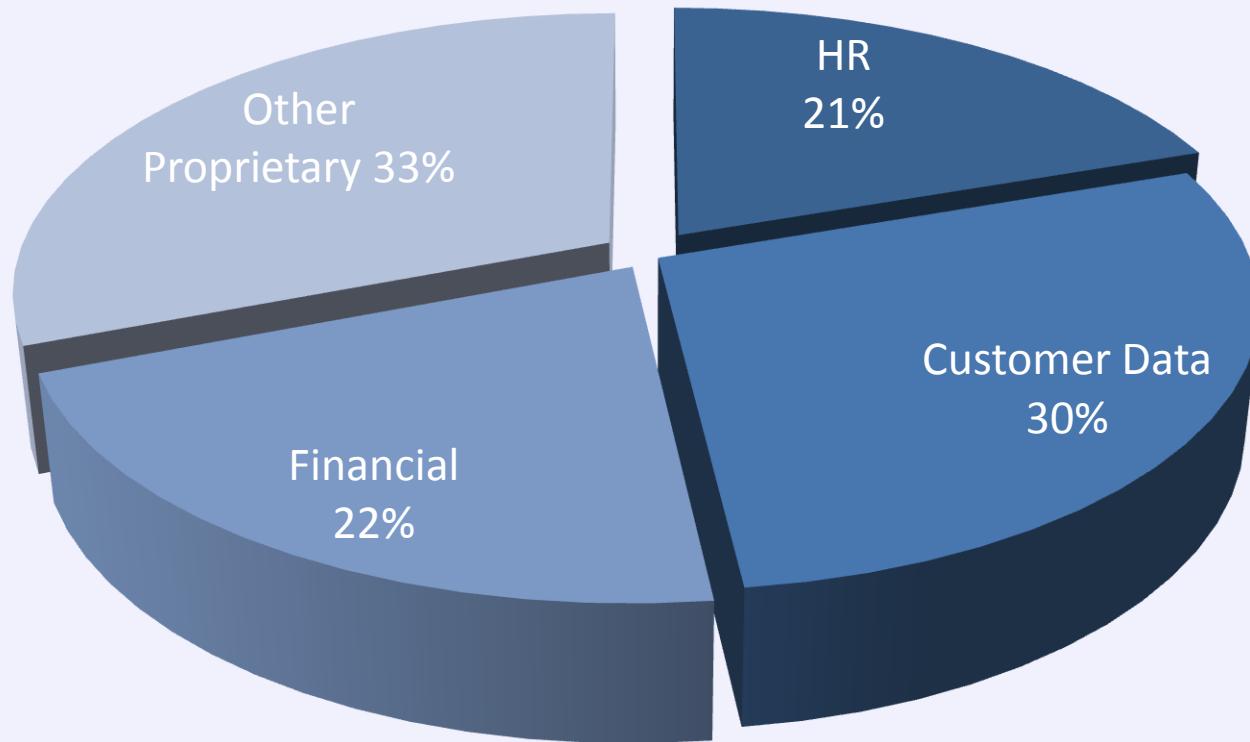


Type of Content Shared



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Impact of SharePoint Insecurity



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“[Investigating] Manning’s use of SharePoint. He ran the code, then downloaded and published



scripts on Microsoft documents. documents, leaks had the same.”

SharePoint Security Capabilities: 2007 vs 2010



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2007

- Encryption
- Authentication
- Permissions

2010

- Encryption
- Authentication
- Permissions
- Some policy management
- Metadata tagging
- Versioning
- Workflow
- Info rights management



- **Functionality**
 - Proper auditing
 - Web-based protection
 - Security-centric reporting
 - Security-centric policies
- **Bottom line**
 - SharePoint is built for collaboration first.
 - Features may provide security, but aren't inherent security tools
 - Did you know?
 - SSL is NOT turned on by default for downloading.
 - Remote binary large object (BLOB) storage does not coordinate underlying storage permissions with its own access control lists.



“In general, SharePoint involves a complex set of interactions that makes it difficult for security teams to know if all their concerns are covered.”

—Burton Group, 2010

Key SharePoint Security Issues



- **Summary:**
 - Microsoft's advice begins with permissions
 - "Content should not be available to all users... information should be accessible on a need-to-know basis"
- **Why challenging?**
 - Difficult to track and maintain
 - Constantly change
 - No automation or aggregation
- **What is Required?**
 - Automated permissions review tools
 - Baseline and change reports
 - Simplify rights reviews
- **Example:** If a hospital uses SharePoint for patient data and the system is managed by hospital staff, then who keeps track of which doctors, nurses, or administrators can see patient data? Further, who maintains and updates these permissions over time? How are they able to do what they do? How do you identify excessive or dormant rights?

SharePoint Access Controls



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Permissions: Home - Windows Internet Explorer
http://192.168.77.79/_layouts/user.aspx

File Edit View Favorites Tools Help

Share Browser WebEx

Favorites Imperva stuff Technology DEMO GEAR Mifi

Permissions: Home

Grant Permissions Create Group Edit User Permissions Remove User Permissions Check Permissions Permission Levels Site Collection Administrators

Grant Modify Check Manage

	Name	Type	Permission Levels
Libraries	Alfred LOPEZ (DARK\ALOPEZ)	User	Full Control
Site Pages	Bobby R. Hernandez (DARK\bhernandez)	User	Full Control
Shared Documents	Chester COX (DARK\ccox)	User	Full Control
Lists	Cosmo Romero Admin Account (DARK\cromeroadmin)	User	Full Control
Calendar	DARK\Administrator (DARK\administrator)	User	Limited Access
Tasks	Home Members	SharePoint Group	Contribute
Discussions	Home Owners	SharePoint Group	Full Control
Team Discussion	Home Visitors	SharePoint Group	Read
Recycle Bin	Ian Shiff (DARK\jshift)	User	Full Control
All Site Content	Melissa Warwick (DARK\mwarwick)	User	Full Control
	Neil R. Hunt (DARK\nhunt)	User	Full Control
	RequestedAccess	SharePoint Group	Full Control
	SharePoint Users	SharePoint Group	Read

Basic Elements: User Rights Management



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- Aggregate user rights across systems
- Identify data owners
- Detect excessive rights, reduce access to business-need-to-know
- Formalize and automate approval cycle



Finding Excessive Permissions



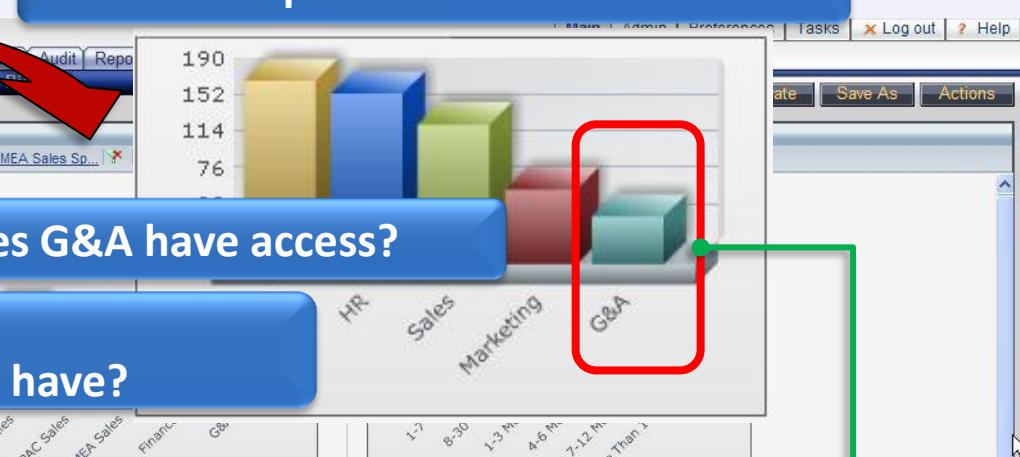
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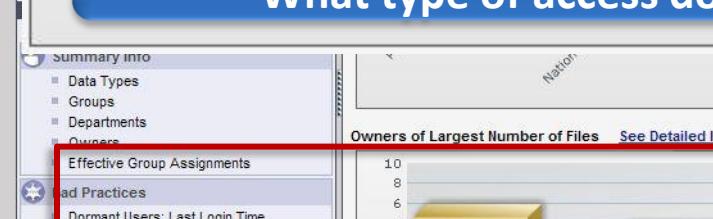
Focus on access to HIPAA regulated data



What departments have access?



Who are the users?
What type of access do they have?



Account Name	Account Department	Permission
Edward WILSON	G&A	Read
Frank MILLER	G&A	Read
Henry MOORE	G&A	Read

How did they get the access?



Automatic Identification of Excessive Rights



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Bad Practices

81 [Dormant Users](#)

381 [Unused files](#)

Should “Everyone” have access to sensitive data?

- “Everyone” group literally means all users

1 Files Accessible by [Global Groups](#) (everyone)

4 Permissions [Directly Assigned to Users](#) Who Are Not Owners

Are there any direct user permissions?

Account Name	Account Department	Permission	Type	Full Path	File Owner	Data Types	Last activity (from audit)
Albert HARRIS	HR	Read	Library	Finance/Budgets	Chester COX	Financial Data	09/02/2011 12:00:00 AM
Arthur JACKSON	HR	Read	Library	Finance/Budgets	Chester COX	Financial Data	
Daniel REED	Finance	Read	Library	Finance/Budgets	Chester COX	Financial Data	09/02/2011 12:00:00 AM
Edward WILSON	G&A	Read	Library	Finance/Budgets	Chester COX	Financial Data	
Eugene EVANS	Finance	Read	Library	Finance/Budgets	Chester COX	Financial Data	
Floyd EDWARDS	Finance	Read	Library	Finance/Budgets	Chester COX	Financial Data	
Harold WHITE	HR	Read	Library	Finance/Budgets	Chester COX	Financial Data	09/02/2011 12:00:00 AM

What rights are not used?

- Users with access they appear not to need

Identifying Dormant Users



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Are there dormant users?

Scans

Scope: Policy: sp2007-win2003-urm2 Service IP: SharePoint File Service - 10.1.2.220

Effective Permissions

Manage Group Assignments

Manage File Permissions

Views

- Summary Graphs
- Effective Permissions (Tabular)

Summary Info

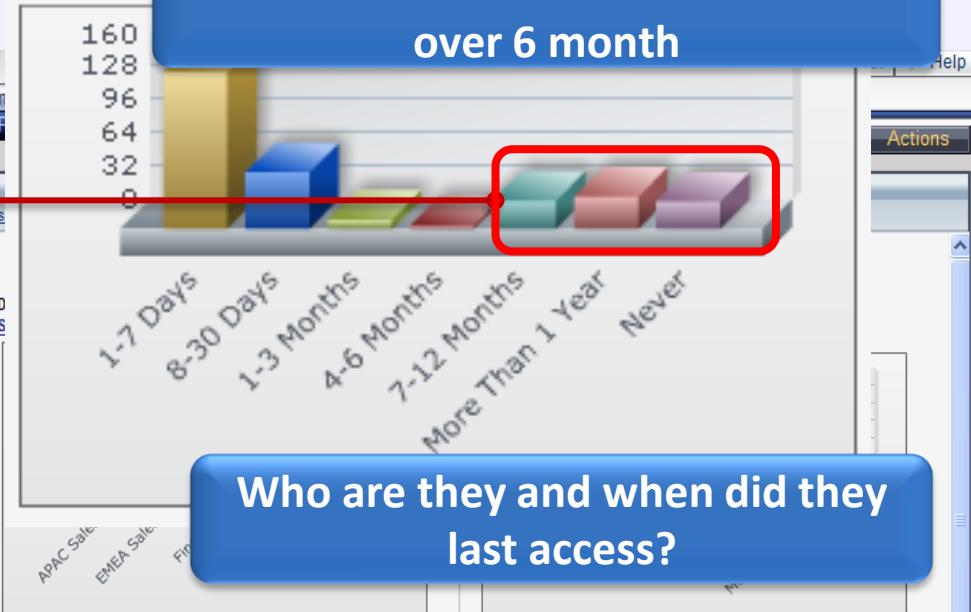
- Data Types
- Groups
- Departments
- Owners
- Effective Group Assignments

Bad Practices

- Dormant Users: Last Login Time
- Unused Files
- Files Accessible by Global Groups
- Direct Permissions to Non-owners

Main > Discovery & Classification > File Usage

Focus on users that are dormant for over 6 month



Who are they and when did they last access?

Account Name	Account Department	Last Login (from server)
Joseph JONES	Sales	05/24/2010 12:00:00 AM
Elmer GREEN	RnD	05/23/2010 12:00:00 AM
Samuel KING	IT	04/12/2010 12:00:00 AM
Alfred LOPEZ	IT	04/12/2010 12:00:00 AM
Frederick RIVERA	Finance	04/12/2010 12:00:00 AM
Oscar COOK	Finance	04/12/2010 12:00:00 AM
Joe BAKER	Marketing	04/12/2010 12:00:00 AM
Lawrence HILL	IT	04/11/2010 12:00:00 AM
Raymond CLARK	Finance	04/11/2010 12:00:00 AM
Harold WHITE	HR	04/11/2010 12:00:00 AM
Richard LEE	IT	04/11/2010 12:00:00 AM

Used files: Last Access Time See Detailed Info

Last Access Time	Count
1-7 Days	90
8-30 Days	72
Never	54

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Reviewing User Rights with Data Owners



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Create permission reports for data owners

Grantee Type	Grantee Name	Permission	Full Path	File Owner	Data Types
User	Administrator	Change Permissions	Finance	Chester COX	Financial Data
User	Administrator	Create	Finance	Chester COX	Financial Data
User	Administrator	Delete	Finance	Chester COX	Financial Data
User	Administrator	Read	Finance	Chester COX	Financial Data
User	Administrator	Write	Finance	Chester COX	Financial Data

Select Columns		Page	1 of 1	Showing records 1-20 out of 20 available	Approve	Reject	Review	Users
Status	Grantee Type	Grantee Name	Permission	Full Path	File Owner	Data Types	Status Change Date	
Approved	User	Administrator	Change Permissions	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:40 AM	
In Review	User	Administrator	Change Permissions	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:21 AM	
Approved	User	Administrator	Change Permissions	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:40 AM	
Approved	User	Administrator	Change Permissions	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:40 AM	
In Review	User	Administrator	Change Permissions	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:21 AM	
Unmanaged	AD Group	Finance	Create	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:13:57 AM	
Unmanaged	AD Group	Finance	Delete	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Unmanaged	AD Group	Finance	Read	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Unmanaged	AD Group	Finance	Write	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Reject	AD Group	Finance	Change Permissions	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Approved	SP Group	Home/Home Members	Create	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Approved	SP Group	Home/Home Members	Delete	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Approved	SP Group	Home/Home Owners	Read	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Approved	SP Group	Home/Home Owners	Write	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Approved	SP Group	Home/Home Owners	Change Permissions	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Approved	SP Group	Home/Home Owners	Create	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Approved	SP Group	Home/Home Owners	Delete	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Approved	SP Group	Home/Home Owners	Read	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Approved	SP Group	Home/Home Owners	Write	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Approved	SP Group	Home/Home Visitors	Change Permissions	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Approved	SP Group	Home/Home Visitors	Create	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Approved	SP Group	Home/Home Visitors	Delete	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Approved	SP Group	Home/Home Visitors	Read	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	
Approved	SP Group	Home/Home Visitors	Write	Finance/Budgets	Chester COX	Financial Data	09/09/2011 11:14:10 AM	

#2: Automate Compliance Reporting



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- **Summary:**
 - SharePoint makes collaboration and document storage easy
 - If you store business data, you must be able to demonstrate compliance with regulations and mandates
- **Why challenging?**
 - Manual process – minimal inherent data audit capability
 - Native audit trail is not usable/readable
- **What is Required?**
 - Automated, human-readable activity auditing and reporting
 - Blended with enrichment data to simplify compliance process
- **Example:** In August 2011, Bloomberg reported on 300,000 healthcare records that appeared in an Excel file. No one knows where the file came from, indicating a lack of auditing.



Site Id	Item Id	Item Type	User Id	Document Location	Occurred (GMT)	Event	Event Data
(98625596-3b2b-4005-83:[71f424dd-6697-4d3a-8-Folder	IL\moshe <IL\Moshe>	tsvikalib/testDocSet		2011-06-22T13:20:01	Update		<Version><Major>1</Major><Minor>0</Minor></Version><url>tsvikalib/testDocSet</url><scope>518B480E-3D18-464B-B376-422D62E7DE67</scope>
(98625596-3b2b-4005-83:[71f424dd-6697-4d3a-8-Site	IL\moshe <IL\Moshe>	tsvikalib/testDocSet		2011-06-22T13:20:50	Security Role Bind Break Inhe	464B-B376-422D62E7DE67</scope><roleid>1073741829</roleid><principalid>16</principalid><scope>518B480E-3D18-464B-B376-422D62E7DE67</scope><operation>ensure	
(98625596-3b2b-4005-83:[71f424dd-6697-4d3a-8-Site	IL\moshe <IL\Moshe>	tsvikalib/testDocSet		2011-06-22T13:21:09	Security Role Bind Update		added</operation>

Basic Elements: Access Auditing and Alerting



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- Full audit trail
 - Audit all access activity
 - No performance impact
- Analytics and reporting
 - Automatic reports to data owners
 - Forensics for incidents
 - Compliance reporting

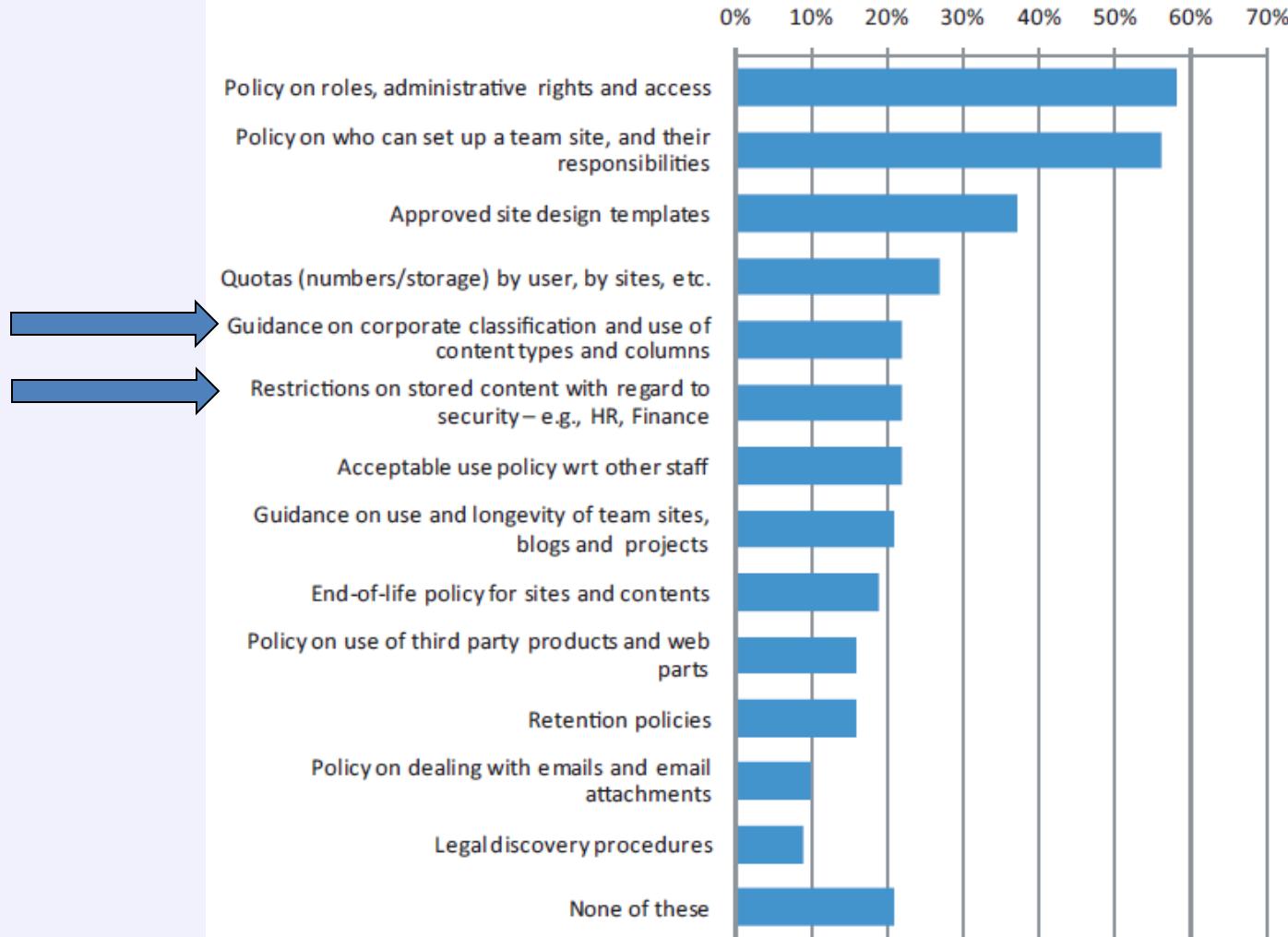


Governance Policies in Place



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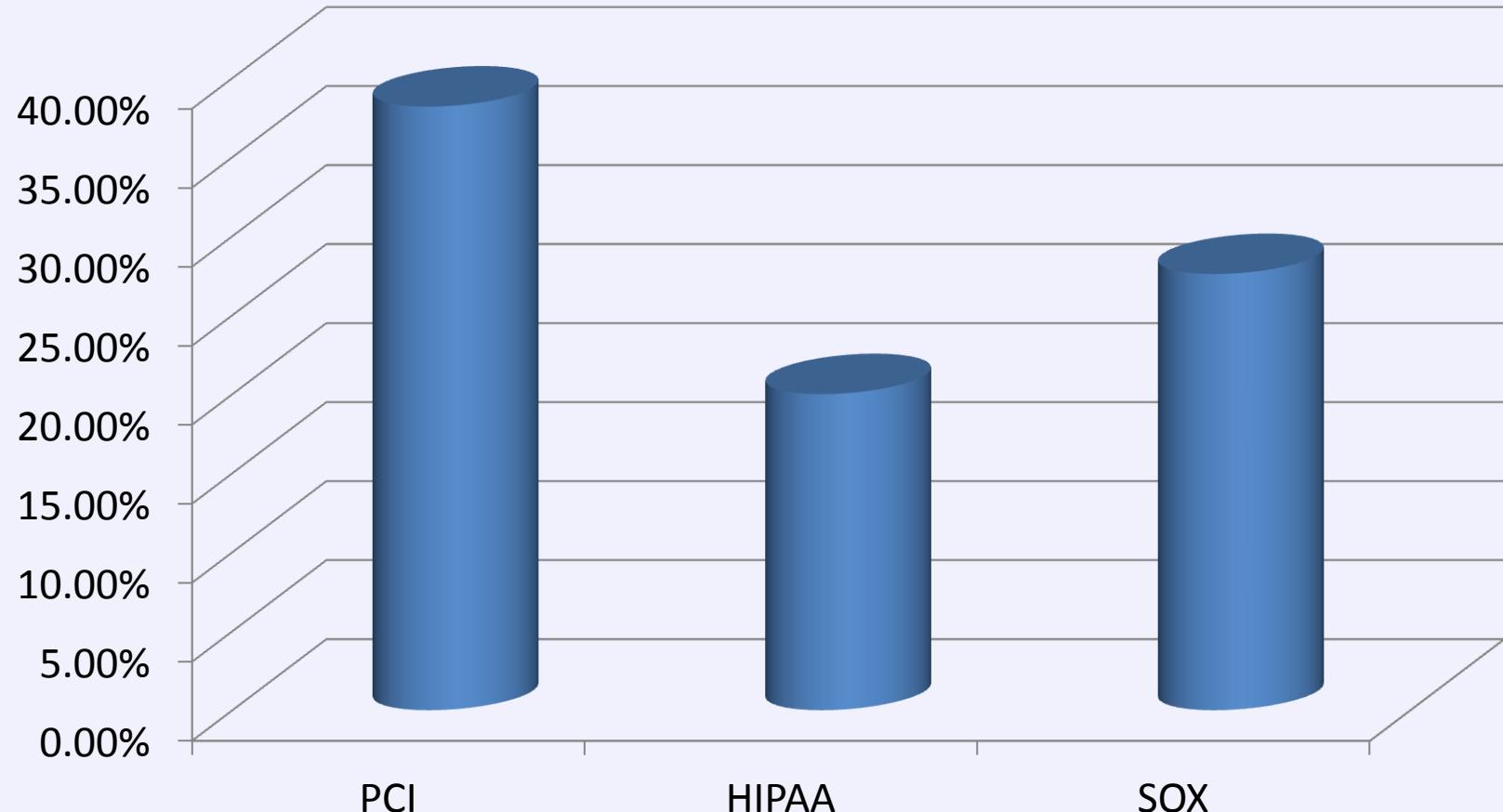


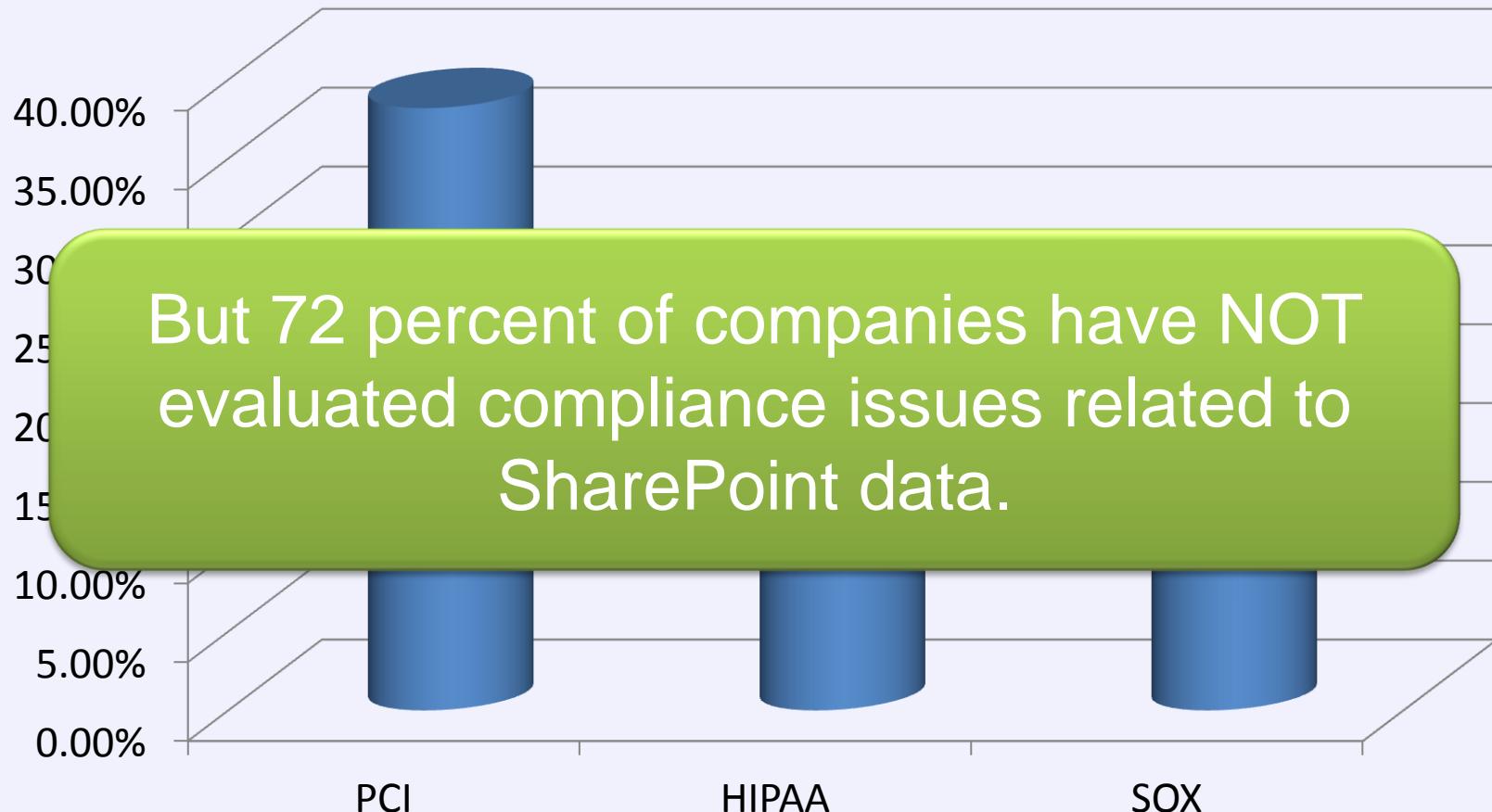
Regulations and SharePoint



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Full Audit Trail



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Discovery & Classification | Setup | Profile | Risk Management | Policies | Audit | Reports | Monitor | ThreatRadar

Main Admin Preferences Tasks Log out Help

DB Audit Data | File Audit Data | SharePoint Audit Data | Audit Management Statistics | Archive Management

Activate Save As Actions

When	Who	Where	What	Data Type
September 2, 2011 5:01:48 AM	administrator		Read	Finance/Teams/Forms
September 2, 2011 5:02:49 AM	administrator		Read	Finance/Teams/Forms
September 2, 2011 5:03:51 AM	ccox	Finance	Read	Finance/Teams/Payable
September 2, 2011 5:06:55 AM	system		Read	Finance/Teams/Payable
September 2, 2011 5:08:56 AM	ccox	Finance	Read	Finance/Management Documents
September 2, 2011 5:08:56 AM	ccox	Finance	Read	Finance/Management Documents/Committees.rtf
September 2, 2011 5:12:58 AM	AHARRIS	HR	Read	HR/Benefits
September 2, 2011 5:12:58 AM	AHARRIS	HR	Read	HR/Benefits/Forms
September 2, 2011 5:12:58 AM	AHARRIS	HR	Read	HR/Benefits/HR Budget.doc

Operation Analysis
Data Type Analysis
Permission Changes

Time Based Analysis
Daily
Day of the Week
Hour of the Day

Broad visibility: All folders, lists and files

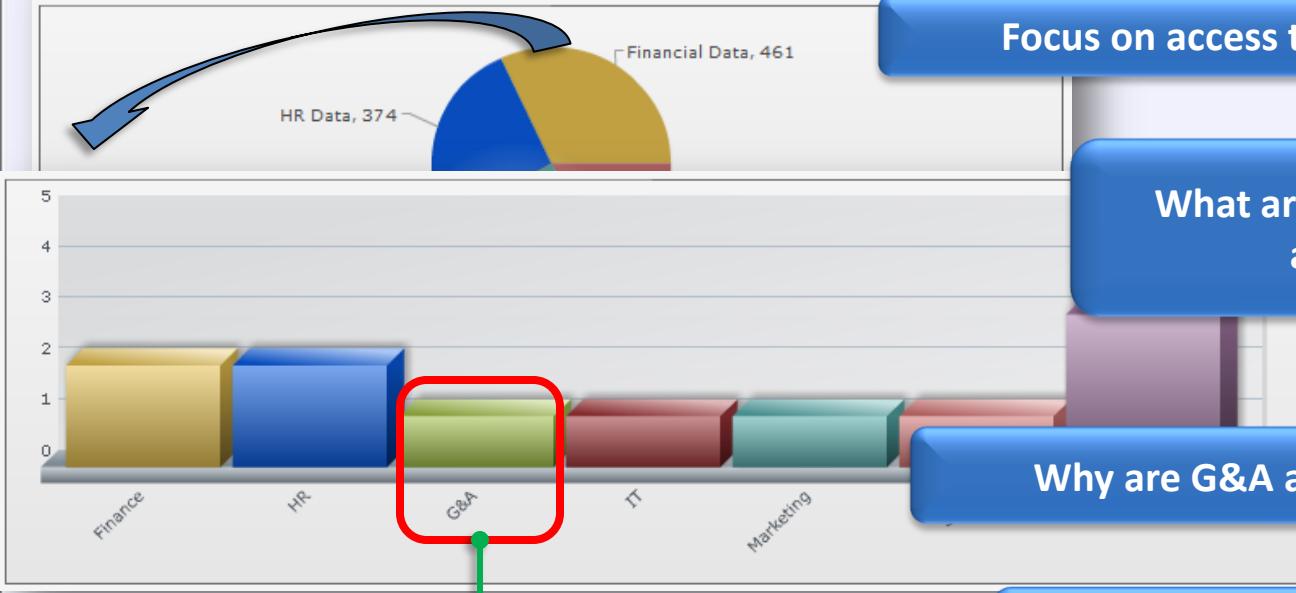
Minimal impact

- Doesn't degrade performance

Detailed Analytics for Forensics



File Access Breakdown By Data Type



Focus on access to financial data

What are the primary departments accessing this data?

Why are G&A accessing financial data?

Who accessed this data?
When & what did they access?

Event Date and Time	User Name	User Department	Operation	Full Path	Data Type	Data Owner
September 9, 2011 8:21:59 AM	BWLSON	G&A	Read	Finance/Budgets	Financial Data	Chester COX
September 9, 2011 8:21:59 AM	BWLSON	G&A	Read	Finance/Budgets/Budget Prep FY10.pptx	Financial Data, National ID	Chester COX
September 9, 2011 8:21:59 AM	BWLSON	G&A	Read	Finance/Budgets/Forms	Financial Data	Chester COX
September 9, 2011 8:20:57 AM	BWLSON	G&A	Read	Finance/Budgets/Forms	Financial Data	Chester COX

Who owns this data?

#3: Respond to Suspicious Activity



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- **Summary:**
 - SharePoint is used as a place to share information
 - A broad range of internal and external groups are given access
 - Organizations need to balance trust and openness with the ability to detect and alert on suspicious activity
- **Why challenging?**
 - No automated analysis of access activity
 - Rights management (RMS) is complex to configure and maintain
- **What is Required?**
 - Policy framework layered on top of the audit record can identify suspicious behavior
 - Pre-configured policies simplify monitoring and response processes
- **Example:** In the WikiLeaks scenario, Manning used an automated process to crawl the SharePoint system and to siphon out available files. A simple occurrences policy would have alerted if a certain number of files were touched in a small timeframe.



Basic Elements: Alerting



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- Access control
 - Alert/Block access that violates corporate policies



Real-time Enforcement: Possible Data Leakage



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Is someone accessing large amounts of data?

The screenshot shows the Imperva SecureSphere interface with a policy configuration window for "SharePoint - Suspicious". The window includes sections for "Match Criteria" (File Operations: Read selected), "Occurrence" (Occurred more than: 100 Times, Within: 3600 Seconds), and "Available Match Criteria" (Additional Operation Data, Data Set Attribute Lookup). A blue callout box highlights the "Selected: Read" entry, and another highlights the occurrence criteria.

SharePoint - Suspicious Data Leakage Activity

Policy Configuration: File Operations is [Read]

Match Criteria

File Operations

Operations: At least one

Operations: Selected: Read

Operations: Checkin, Checkout, Copy

Occurrence

Occurred more than: 100 Times

Within: 3600 Seconds

Available Match Criteria

- Additional Operation Data
- Data Set Attribute Lookup

Out-of-the-box policies

Alert when a user reads 100 files within the same hour

Real-time Enforcement: Possible Data Leakage



See triggered alerts

IMPERVA SECURE SPHERE

Dashboard | Alerts | Violations | System

Alerts (filtered) Page 1 of 1 Updated Alert Description

Filter

Today (13)

150	14:35:08	1	SharePoint - Suspicious Data Leakage Activity
151	14:35:08	1	SharePoint - Suspicious Data Leakage Activity
152	14:35:08	1	SharePoint - Suspicious Data Leakage Activity
141	14:28:07	1	SharePoint - Suspicious Data Leakage Activity
137	14:27:07	1	SharePoint Changes to Permission Level
138	14:27:07	1	SharePoint Changes to Permission Level
139			SharePoint Changes to Permission Level
136			SharePoint Changes to Permission Level
135			SharePoint Changes to Permission Level
134			SharePoint Changes to Permission Level
131			SharePoint Changes to Permission Level
125			SharePoint Changes to Permission Level
127			SharePoint Changes to Permission Level

Yesterday (3)

106	7/10/11	1	SharePoint - Suspicious Data Leakage Activity
107	7/10/11	1	SharePoint - Suspicious Data Leakage Activity
108	7/10/11	1	SharePoint - Suspicious Data Leakage Activity

Details

Event 8718634592694701531: Custom Rule Violation

Key	Value
Violation Type	file
Severity	High
Policy Name	SharePoint - Suspicious Data Leakage Activity
Alert Number	150
Violation Description	SharePoint - Suspicious Data Leakage Activity
Violated Item	Custom Violation
Immediate Action	None
Matched Patterns	

Owner Name Owner Domain Owner Group Owner Department

Full Path File Name File Extension

admin Version: 9.0.0.0 Enterprise Edition © 2011 Imperva Inc.

Drill down for details on “who, what , when, where”

Following an alert:

- Send emails automatically
- Create security events in SIEM tools

Data Owner Identification



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Data ownership

- Top users are either owners or can identify them
- Go-to people key for business-based decision making
- Save data owners information for decision making

File Explorer

URL: http://SP2010:80

Page 1 of 1

Import

Name	Creation Date	Classification	Type
Announcements			List
Calendar			List
Content type publishing error log			List
Finance		Financial Data	Site / Sub-Site
HR			
IT			
Links			
List Template Gallery			
Marketing			
Master Page Gallery			
Reporting Metadata			
Reporting Templates			
Sales			
Shared Documents			
Site Assets			
Site Pages			
Solution Gallery			
Style Library			
Tasks			
TaxonomyHiddenList			
Team Discussion			
Theme Gallery			
Trading			
User Information List			
Web Part Gallery			

Created: Modified:

Classification

Name

Source

Administrator, 36

Daniel REED, 27

Chester COX, 24

system, 3

Set User as Owner

Administrator, 36

Chester COX, 24

system, 3

Change Owner

Administrator

Daniel REED

Chester COX

system

Department

Hits

User	Department	Hits
Administrator		36
Daniel REED	Finance	27
Chester COX	Finance	24
system		3



- **Summary:**
 - Web applications and portals are a common threat vector for hacker attacks
 - 30% of organizations have external-facing SharePoint sites
- **Why challenging?**
 - Time consuming process to discover, patch, and test vulnerabilities
- **What is Required?**
 - Real-time hack protection
 - Allows flexibility in resolution timelines
 - Includes out of the box policies to protect SharePoint
- **Example:** According to CVE details, XSS is the most commonly reported vulnerability in SharePoint.





Another thing, I have a registered account on there Sharepoint - if anyone knows any 2010 Sharepoint exploits/vulns please PM me them.

Example: April 2010, Microsoft reveals a SharePoint issue

The vulnerability could allow escalation of privilege (EoP) within the SharePoint site. If an attacker successfully exploits the vulnerability, the person could run commands against the SharePoint server with the privileges of the compromised user.

Source: <http://www.eweek.com/c/a/Security/Microsoft-Confirms-SharePoint-Security-Vulnerability-187410/>



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- Web Application Firewall
 - Attack protection
 - Reputation controls
- Database protection
 - Fully audit SQL Server local activities
 - Block unapproved database changes
- SharePoint Web Policies
 - Out-of-the-box security and compliance
 - Always up-to-date



Attack Protection



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Discovery & Classification Setup Profile Risk Management Policies Audit Reports Monitor ThreatRadar

Sites | Applications | Global Objects | Signatures | Gateways | Agents | Settings | Active Modules

Activate Save As Actions

WAF Policies customized for SharePoint based sites

Sites Tree

⋮ ⌂ All

Default Si

sharepoint 2010 - DB Cluster

SharePoint DB Service

sharepoint 2010 - WFF Clu

SharePoint File Service

SharePoint Home

OOTB Security Policies

Are external users accessing admin pages?

Web Service Custom
Web Service Custom
Web Service Custom
Web Service Custom

Repeated failed login attempts?

Main > Setup > Sites

User: admin | Version: 9.0.0.0 Enterprise Edition | © 2011 Imperva Inc.

Google Diggity Project



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Search Diggity

File Options Help

GoogleDiggity CodeSearchDiggity BingDiggity LinkFromDomainDiggity DLDiggity FlashDiggity MalwareDiggity

Advanced Simple

SCAN Cancel Download

Sites/Domains Add

Query Appender

API Key: [Create](#)

Google Custom Search ID: [Create](#)

Import Clear

Queries

- FSDB
- GHDB
- GHDBReborn
- SLDB
- SLDBNEW
- SharePoint Diggity
- FlashDiggity Initial
- DLDiggity Initial

Category	Subcategory	Search String	Page Title	URL
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Video - All Pictures	http://██████████.edu/tsc/Video/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Calendars - All Documents	http://██████████.edu/Hours/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Video - All Pictures	http://██████████.edu/tsc/Video/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Calendars - All Documents	http://██████████.edu/Hours/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Video - All Pictures	http://██████████.edu/tsc/Video/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Calendars - All Documents	http://██████████.edu/Hours/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Video - All Pictures	http://██████████.edu/tsc/Video/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Calendars - All Documents	http://██████████.edu/Hours/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Video - All Pictures	http://██████████.edu/tsc/Video/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Calendars - All Documents	http://██████████.edu/Hours/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Video - All Pictures	http://██████████.edu/tsc/Video/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Calendars - All Documents	http://██████████.edu/Hours/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Video - All Pictures	http://██████████.edu/tsc/Video/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Calendars - All Documents	http://██████████.edu/Hours/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Video - All Pictures	http://██████████.edu/tsc/Video/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Calendars - All Documents	http://██████████.edu/Hours/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Video - All Pictures	http://██████████.edu/tsc/Video/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Calendars - All Documents	http://██████████.edu/Hours/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Video - All Pictures	http://██████████.edu/tsc/Video/Forms/AllItems.aspx
SharePoint Diggity	Forms	inurl:"/forms/allitems.aspx" ext:aspx site: ██████████.edu	Calendars - All Documents	http://██████████.edu/Hours/Forms/AllItems.aspx
Output	Selected Result	<p>The remote server returned an error: (403) Forbidden. Error at query, "inurl:"/_vti_bin/UserProfileService.asmx" ext:asmx": The remote server returned an error: (403) Forbidden. Error at query, "inurl:"/_vti_bin/spcrawl.asmx" ext:asmx": The remote server returned an error: (403) Forbidden. Error at query, "inurl:"/_vti_bin/pscrawl.asmx" ext:asmx": The remote server returned an error: (403) Forbidden. Error at query, "inurl:"/_vti_bin/AreaService.asmx" ext:asmx": The remote server returned an error: (403) Forbidden. Error at query, "inurl:"/_vti_bin/WebPartPages.asmx" ext:asmx": The remote server returned an error: (403) Forbidden. Error at query, "inurl:"/_vti_bin/spsearch.asmx" ext:asmx": The remote server returned an error: (403) Forbidden. Total Results: 126. Scan Complete. [12/13/2011 5:38:35 PM]</p>		
Download Progress: Idle Open Folder				
Google Status: Ready				

#5: Take Control When Migrating Data



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- **Summary:**
 - SharePoint 2010 deployments are up 5X
 - Companies are using SharePoint as a replacement for other data repositories
 - Migration projects are a good time to remediate permissions chaos
- **Why challenging?**
 - AD users and groups fall out of sync with business requirements
 - Unused (stale) data accumulates over time
 - Manual approaches are overly time consuming
- **What is Required?**
 - Visibility and rights review tools reduce cost and streamline migrations



A Checklist to Securing SharePoint



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Get ahead of all SharePoint deployments

- Implement a SharePoint governance policy.
- Put in place security requirements when SharePoint instances go live.
- Don't trust native security features.
- Specify what kind of information can be put in SharePoint.

Identify sensitive data and protect it

- Use search capabilities to identify sensitive data.
- Sensitive data in databases: use database activity monitoring to identify and protect confidential data.
- Sensitive data transacted by SharePoint Web applications
- Secure sensitive data held in files: use file activity monitoring to apply user rights management and auditing capabilities.

A Checklist to Securing SharePoint



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Deploy user rights management to identify data ownership

- Ensure legitimate access to data.
- Accelerate permissions reviews and management.
- Identify and delete dormant users. Check for dormant users on a regular basis.
- Focus on regulated data and streamline access.
- Adjust department-level access.
- Create permission reports for data owners.
- Implement ownership policies – especially for alerts around unauthorized access.

Protect Web sites

- Identify sensitive data transacted by SharePoint Web applications and use Web application firewalls to monitor and protect intranets, portals, and Web sites.
- Log all failed login attempts.

A Checklist to Securing SharePoint



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Enable auditing for compliance and forensics

- Who accessed this data?
- When and what did they access?
- Who owns this data?
- Are external users accessing admin pages?
- Have there been repeat failed login attempts?



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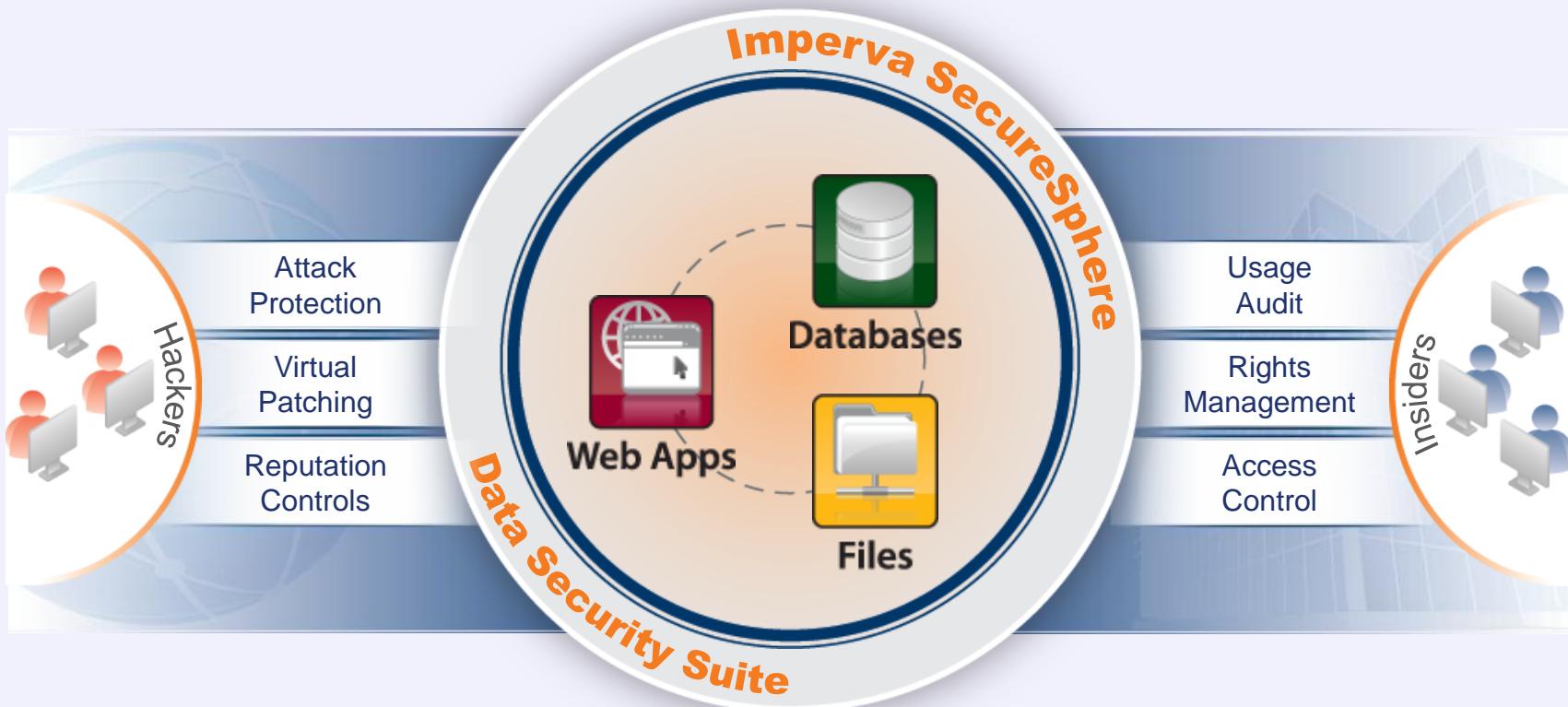
SecureSphere for SharePoint

Imperva Data Security in 60 Seconds



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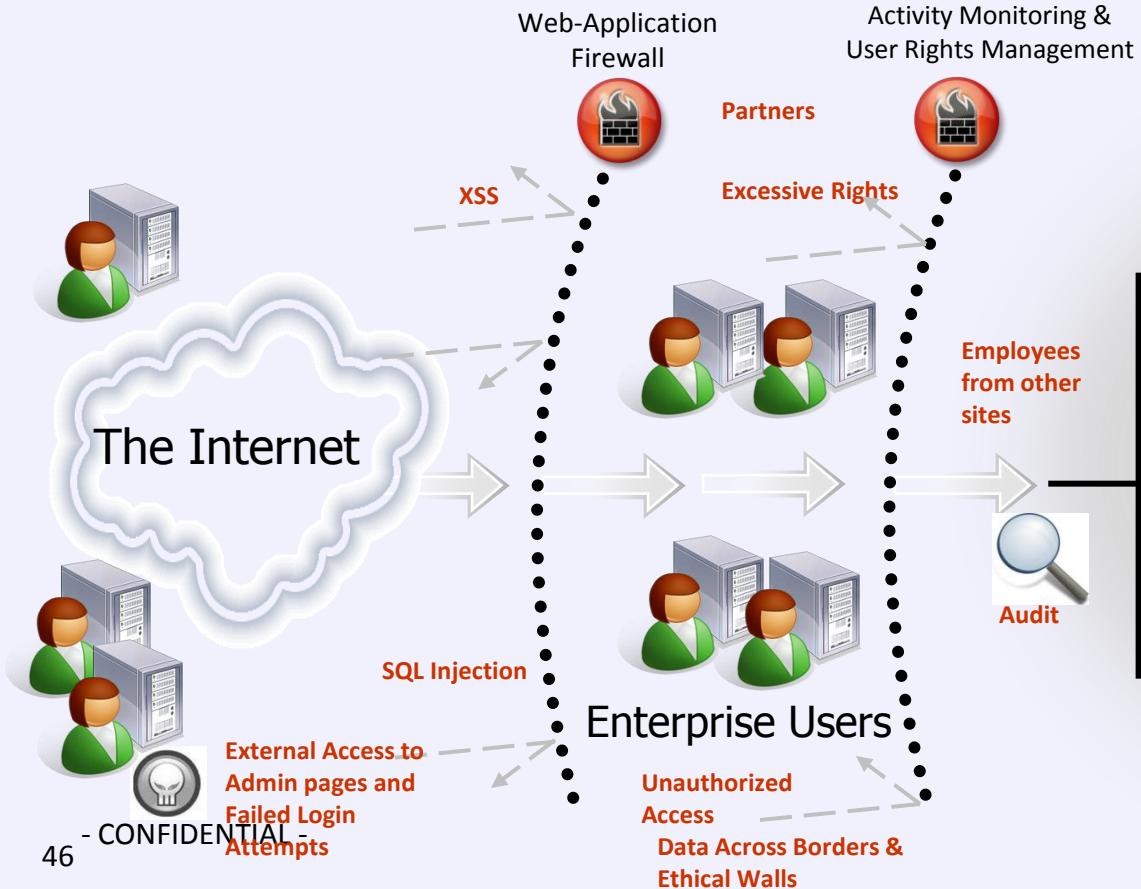
SharePoint & SecureSphere for SharePoint



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Administrators



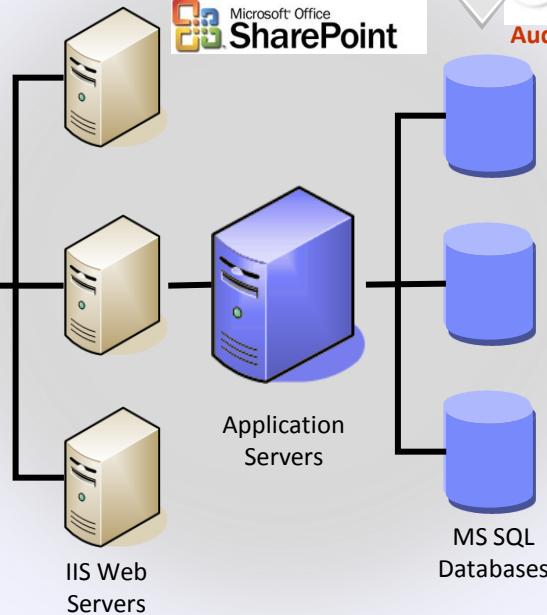
Migrations
- Permissions
- Data ownership
- Data cleanup

DB Activity Monitoring & Access Control



Unauthorized Changes

Audit





- User rights management
 - Aggregate and visualize rights
 - Identify excessive and dormant rights
 - Streamline rights reviews
 - Identify data owners
- Activity monitoring
 - Monitor file & list access in real-time
 - Find unused data
- Policy based threat protection
 - Defend against file, Web and database threats





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Questions



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