

SPIRIONTM
formerly Identity Finder

Successful Data Stewardship Through Data Classification

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Speaker Biography



Cory Retherford (www.coryretherford.com)

Solutions Engineer, Spirion

- Specializing in security architecture and data management.
- Twenty years as an IT professional with focus in data security and operational data security risk reduction.
- Real world solutions implementation experience in large and complex environments.

Successful Data Stewardship Through Data Classification

Abstract

Will discuss the critical steps and fundamentals in protecting sensitive data against data leaks. Narrowing the project scope and creating data awareness is critical for a security programs success. Will discuss an approach to the implementation of a data steward project and implementing technical automation to help drive information worker security awareness and concentrating resources on protecting critical systems with personally identifiable information (PII).

Slides and Links will be available after the presentation at <http://www.coryrethford.com/Lists/Posts/Post.aspx?ID=382>

Successful Data Stewardship Through Data Classification

Agenda

- The Data Problem.
- Understanding What's Next.
- Problems that can be solved
 - “Understanding risk exposure across an entire organization”.
- Ways to solve.
 - “Accurate Discovery, Classification, and Remediation and Monitoring.”
- 10-15 min live demo.
- Questions.

Successful Data Stewardship Through Data Classification

Data Breaches are Inevitable but Data Leaks are Avoidable.

- Data breaches are intentional and data leaks are unintentional information disclosure typically result of lack of data security awareness and training.
 - Every company should be able to answer the Who, What, Where, When, and Why do we have this data.
- Knowing where sensitive data is such as PII, PCI, PHI, and Intellectual Property (IP) that is unique to the company is key to concentrating resources on protecting those critical systems.

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Data Breaches are Inevitable but Data Leaks are Avoidable.

Examples include

- Credit Card or Payment Card Industry (PCI) Information
- Defense Acquisition Federal Regulation Supplement (DFARS)
- General Data Protection Regulation (GDPR)
- IT Security Information (NIST 800-53...)
- Student Education Records (FERPA)
- Student Loan Application Information (GLBA)
- Export Controlled Research (ITAR, EAR)
- Federal Information Security Management Act (FISMA) Data
- Personally Identifiable Information (PII)
- Protected Health Information (HIPAA)
- Sensitive Identifiable Human Subject Research
- Social Security Numbers (SSN)

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Data Breaches are Inevitable but Data Leaks are Avoidable.

- Unauthorized disclosure may have serious adverse effects on business reputation, resources, or services or on individuals
 - It is protected under federal or state regulations.
 - There are proprietary, ethical, or privacy considerations.

Its all about protecting the human subject.

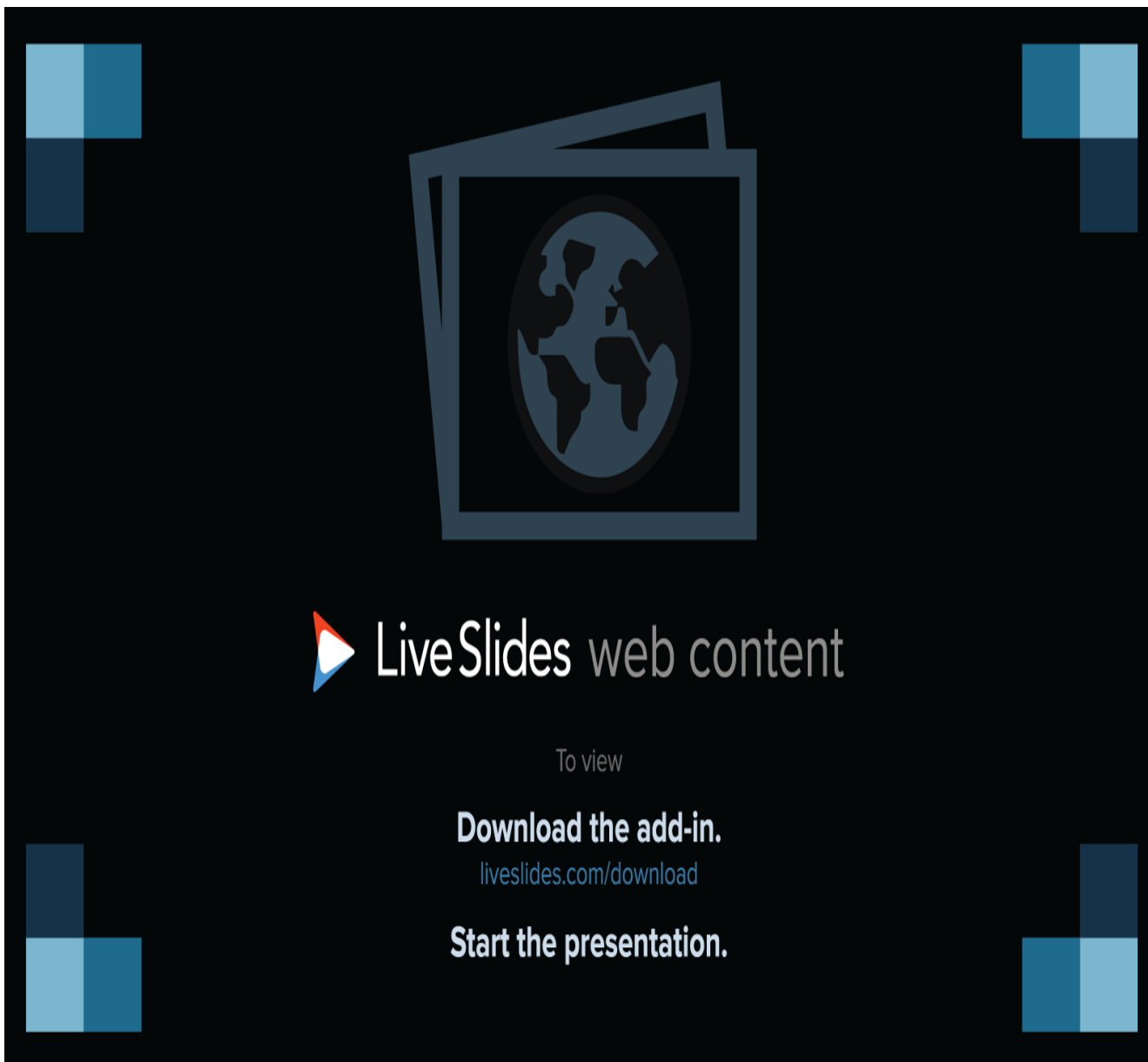
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Data Breaches are Inevitable but Data Leaks are Avoidable.

- For example the university I worked at for 17 years had an incidental data leak of clearing house data through SharePoint that included student names and other information that could have seriously damaged its reputation.
 - Having an inventory of the data helped us understand which systems were in scope during the triage.
 - Facilitated quick resolution.
 - Limited the scope of notifications.
 - Having had inventory for these locations was invaluable and provided quick triage and resolution, otherwise we would had a much large process involving the State Attorneys Office, Department of Justice ,and many other organizations.
 - Its worth a bit of upfront work by the adoption of a technology. Spirion saved us many times over!
 - Lost laptops.
 - Desktop breaches.



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World's Biggest Data Breaches

If a customer like Equifax, Anthem, Target, Deloitte, Sonic (burger chain), Home Depot, the United States Office of Personnel Management (OPM), Sony, CareFirst among the thousands others are losing data what are they doing wrong!?

<http://www.coryretherford.com/Lists/Posts/Post.aspx?ID=330>

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Data breaches are inevitable but data leaks are avoidable.

We have recently seen the chief information officer, David Webb, and chief security officer, Susan Mauldin from Equifax immediate retirement (Fired) along with resulting terminations of CIOs, CISOs, and CEOs throughout the industry.

- Taking a step back I asked myself if I was in the position to secure data as I have been for more than 20 years what would I had differently that they didn't do?

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Be Realistic

Go into the data project realistically knowing that you cant immediately protect ALL your data.

- Start by taking inventory of what sensitive data you have.
- It is likely a large percentage of data isn't needed or not where it belongs.
 - Laptops, thumbdrives, non approved cloud providers, etc.
- Reduce your risk by getting rid of old data “Shrink the Data Footprint”.
- What's left you need to prioritize so that it is secure.”

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Ask the relevant question.

- What is the fundamental first critical step in protecting against data leaks?
 - Where is the critical SSN, HIC, CCN, DLN, etc.
 - What is the sensitivity of the data (Data Classification).

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Why are we still losing sensitive data?

- A multi-layered approach is best using CIS standards (Firewalls, OS best practices, WDE), DLP, IPS, Endpoint Security (anti-malware), Encryption, education against phishing, and many more approaches.
- How are we still missing the big picture and still losing data?

NOISE!

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The Challenge (Indiana University and Me).

- I worked at Indiana University for 17 years as the University Manager of Information Technology Services, Lead Business Intelligence Architect, SharePoint Architect, MSSQL, SSAS, SSRS and Oracle Data Warehouse Administrator, Senior Lead Security Architect and Engineer for many services, Spirion which was included.
 - Data management was tough and knew it needed to be managed in an agile process to adapt to our existing and constantly changing process with high quality and granular controls.
- Find a solution that was accurate and resulted in low false positives.
 - Many good products that still resulted in too many false positives
 - **NOISE!**

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The Challenge (Indiana University and Me).

- Be realistic and iterative.
 - Get to know your data landscape, the real one.
- Ask the relevant questions.
 - What's the highest priority data and will cause compliance issues; fines, legal issues.

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The Challenge (Indiana University and Me).

- Find a tool that data definitions templates are included and of high quality which discovers sensitive data types.
 - That means validation algorithms that identify keywords, negative keywords, context awareness, minimum counts, allowing us to only match the sensitive information we are looking for and not all those false positives.
 - Allows you to build and a variety of user-customizable data definitions allowing the ability to define criteria to locate proprietary and data unique to organizations data.
 - Employee ID's, AD Usernames, for official use only (FOUO) data, etc.
 - Regular expressions (RegEx), Keywords, dictionaries, and automation to discover this data.

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Taking Inventory Through Data Discovery.


Step 1





- Start by taking inventory of what sensitive data you have.
 - We all are overwhelmed and tackling too much at once.
 - Break it down and make the data steward program iterative.
- The first step to any successful project is to understand what it is your tackling.
 - Find the data and the types of data and where its located through accurate results with very few false positives.
 - It is likely a large percentage of data isn't needed or not where it belongs.
- What's left you need to prioritize so that it is secure.”

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Classify Data! Step 2

- Group by sensitivity



| Data Domain | Critical | Restricted | Internal | Public |
|---------------------------------|---|---|--|--|
| Cross-domain identifiers | SSN, Passwords | | ID numbers | Username |
| Employees | Driver's license, passport, credit card or banking information, access card <u>magstripe</u> | Individual grades, academic transcript, class schedule, date of birth, advising notes | Address, Phone | Employee name, Position, Job title. |
| Human Resources | I-9 Form data; Payroll direct deposit account number | Employee home address | Employee offer letters, faculty tenure recommendations | Employee name and compensation |
| Health | Patient record | Faculty/Staff Immunization record | | |
| Facilities | | Detailed floor plans showing gas, water, sprinkler shut-offs, hazardous materials | Basic floor plans showing egress routes and shelter areas | Campus map showing buildings, names, addresses, parking, lighted pathways, emergency |
| |  Intellectual Property.docx |  Customer Contacts.xlsx |  Internal Communications.msg |  Icons.png |

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Remediate!

Step 3

- Once you perform a data inventory to understand your risk exposure you can start to make informative decisions about how you want to handle the different data types.
 - Automated data classification will take the majority of the labor out of classifying data so you can focus on other operations.
 - Automated data type awareness through Icon overlays and automation.

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How I Solved Our Organizational Data Challenges

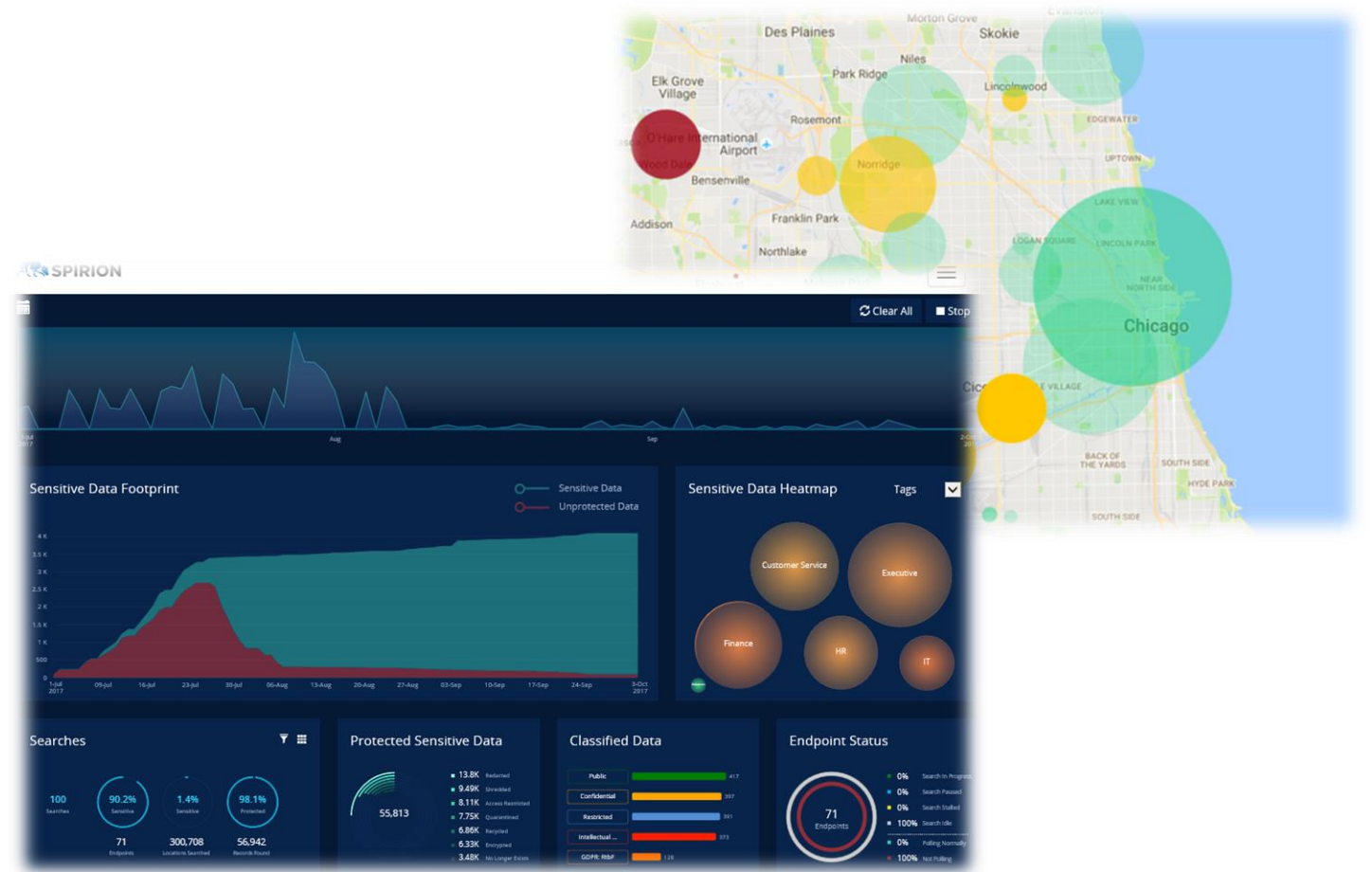
- Once you know your data footprint, types of data, and where they are located, you can start to make decisions about how you want to handle the different data types.
 - Reduce your risk by getting rid of it “Shrink the Data Footprint” or apply business process and rules to help control where data should be appropriately stored.
- Meet many compliance requirements such as PCI working with your QSA and other assessors for your other compliance needs.
- Case in point
 - Many organizations use McAfee for their DLP but still use Spirion for discovery and classification and integrate this into McAfee Orchestrator, using data type and classification.
 - They do this because the Spirion discovery accuracy is very good with little false positives.

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The Spirion Spyglass Console

It provides visibility into data risk across the organization by visualizing exposure you might have at any given point in time, where the largest risks of data exists, and Data Sprawl vs. Remediation.

- The console is analogous to a network traffic diagram.
 - Imagine a network diagram except heat mapped for where sensitive data is. That's what spyglass does.



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Lets take a look at a few examples of classification, rules, and action, “Live”

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Round Table Discussions Around a Square Table

Come talk with us!
Do you agree with our methodology

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Amazon Echo Giveaway

Add your business card to our fish bowl at the Spirion Table!



amazon echo

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