![comforte]

SecurDPS Discover & Classify

Data Discovery, Data-Centric Security,
Streamlined Privacy compliance

April 2023

Comforte - Products

HPE NonStop/Mission Critical

Connectivity

Modern User Interface to NonStop Systems.
MR-Win6530
J6530
Jpath
Kafka

Productivity

TOP
Windows Tandem Operations
SafePoint
(Safeguard, KSL, FIM, LogStream)

Modernize

Enterprise Integration using Modern Interfaces
CSL(REST/SOAP).
Escort/SQL
Convert legacy databases to SQL transparently.

Data Security

SecurDPS NonStop
Transparent NS Data Security

Breach risk reduction, data security compliance.

Risk and Compliance

- Protect offline media data - SecurTape
- Locate and identify unsecured PII data
  PANFinder
  Discover & Classify
- .

IT Security

- Single Sign on.
- Native TLS and SSH support.

SecurDPS Discover & Classify

Privacy Compliance Automation

SecurDPS Discover & Classify
AI-based PII Data Lineage discovery

Privacy Compliance Automation (GDPR, POPIA, CCPA).

Data Security

SecurDPS Enterprise
Transparent Enterprise & Cloud Data Security

Breach risk reduction, Privacy compliance (GDPR, POPIA, CCPA).

Transparent Integration

SecurDPS Connect
Transparent SaaS, Web and COTS App Data Security

Codeless deployment

Discovery & Classification of Structured/Unstructured Personal Data

- Learn what sensitive data is, where it is being used and who represents it. Not required to know where the data is before initial discovery.

- SecurDPS utilizes a unique and passive network capture process to identify personal information flowing through the environment.

- Discovery of "unknown unknown" data, combining structured, unstructured, in-motion and at-rest data sets into a "source of truth" catalogue

- Significant reduction in false positive and erroneous data / Compliancy scanning.

SecurDPS Discover and Classify

Instrument Data Security
Use discovered risks to drive appropriate controls

Monitor Network Traffic
Passively monitor network and identify network elements

Produce Data Lineage
Produce Master Catalog, Data Lineage and Data Flow

Identify Sensitive Data
Identify sensitive elements and data at rest repositories to be scanned

Consolidate Data
Consolidate sensitive data and combine with Root Data Asset

Scan Repositories
Scan data at rest structured and unstructured repositories

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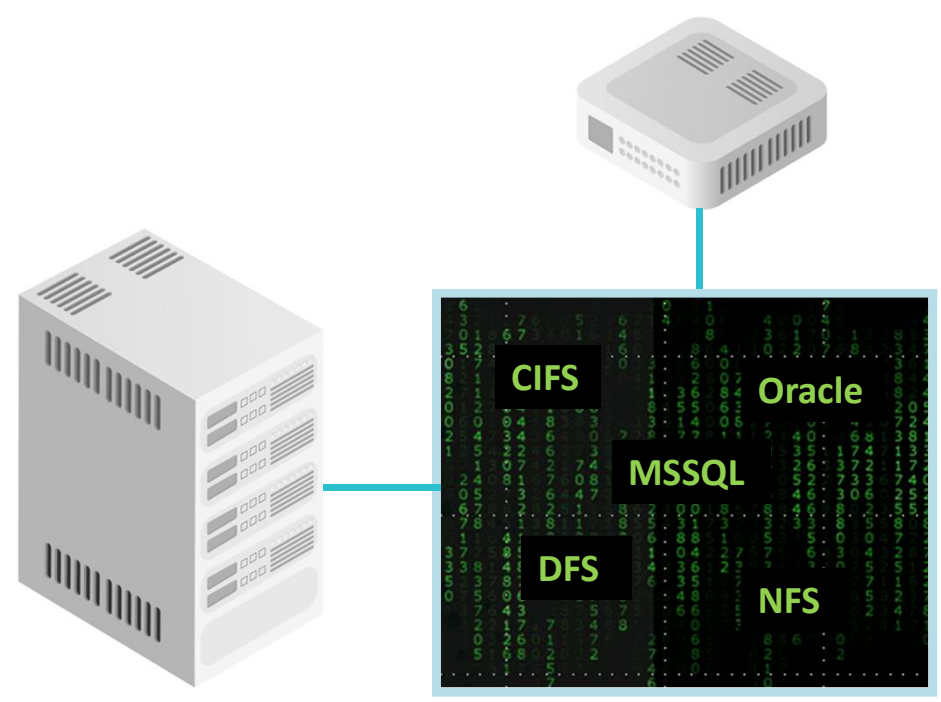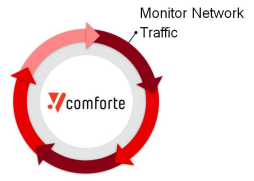
Monitor Network Traffic - discover network elements

- **We start from zero knowledge:**
  - Automatically discover both unknown and known data sources
  - Hardware accelerated appliance platform

Repository	FQDN	IP Address	Port

CIFS

Oracle

MSSQL

DFS

NFS

- **Continuously updated inventory; minimal resources required**

Monitor Network Traffic

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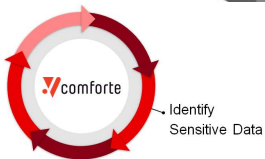# Monitor Network Traffic - Discover repositories with sensitive data

- **Discover personal data off the wire to ensure comprehensive discovery of personal data**
  - across data carrying protocols
  - clear-text or encrypted

SQL with Personal Data

SQL with Personal Data

HTTPS with Personal Data

SMB with Personal Data

HTTP with Personal Data

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Identify
Sensitive Data
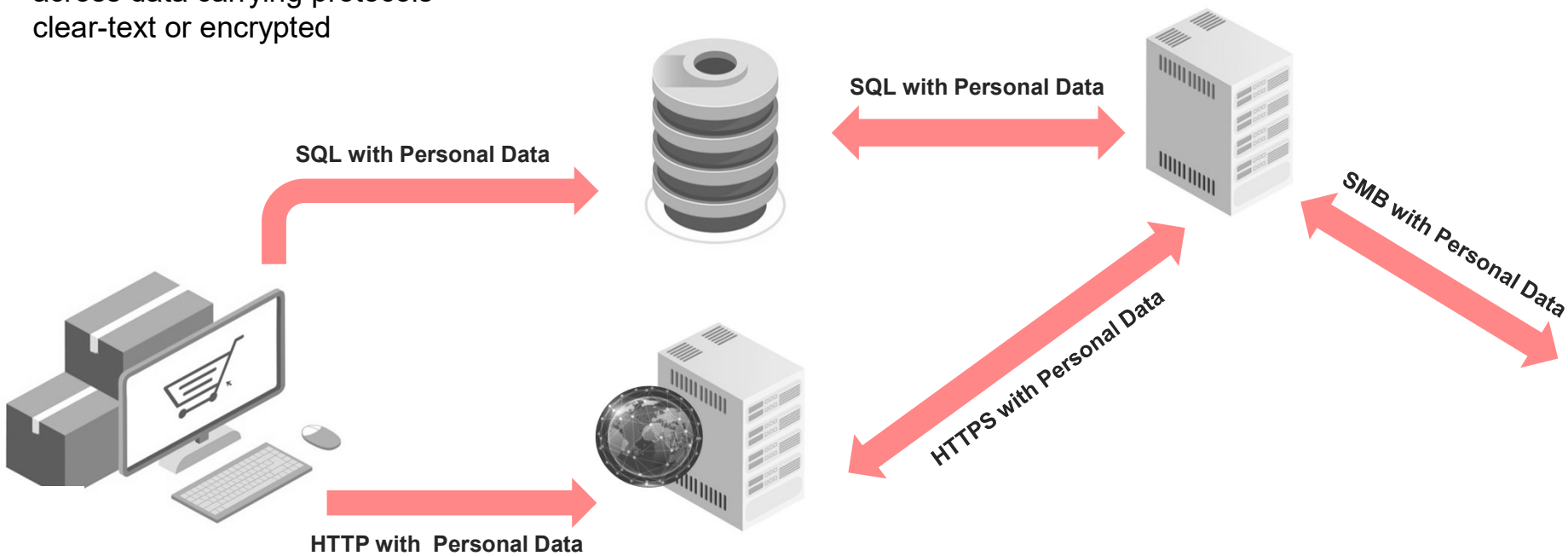
Confidential

Analyze Repositories

- **Analyze structured and unstructured repositories**
  - Databases
  - File systems, other repositories

Analyze file system (CIFS, NFS, etc.)

Analyze Cloud Storage (S3, OneDrive, etc.)

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Analyze DB (Oracle, MSSQL, etc.)

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Scan Repositories
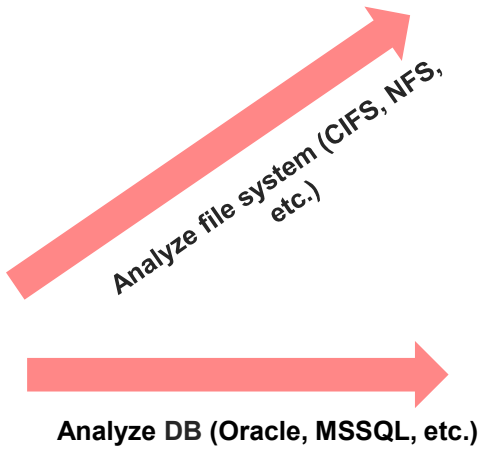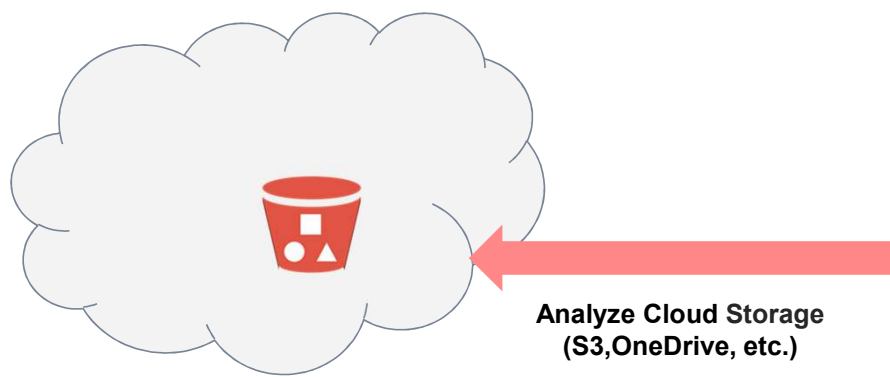
Consolidate PII with Root Data Asset
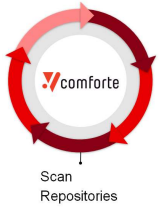
John Smith's
sensitive data

VIP Customers

Confirmed

Root Data Asset Data

Comforte
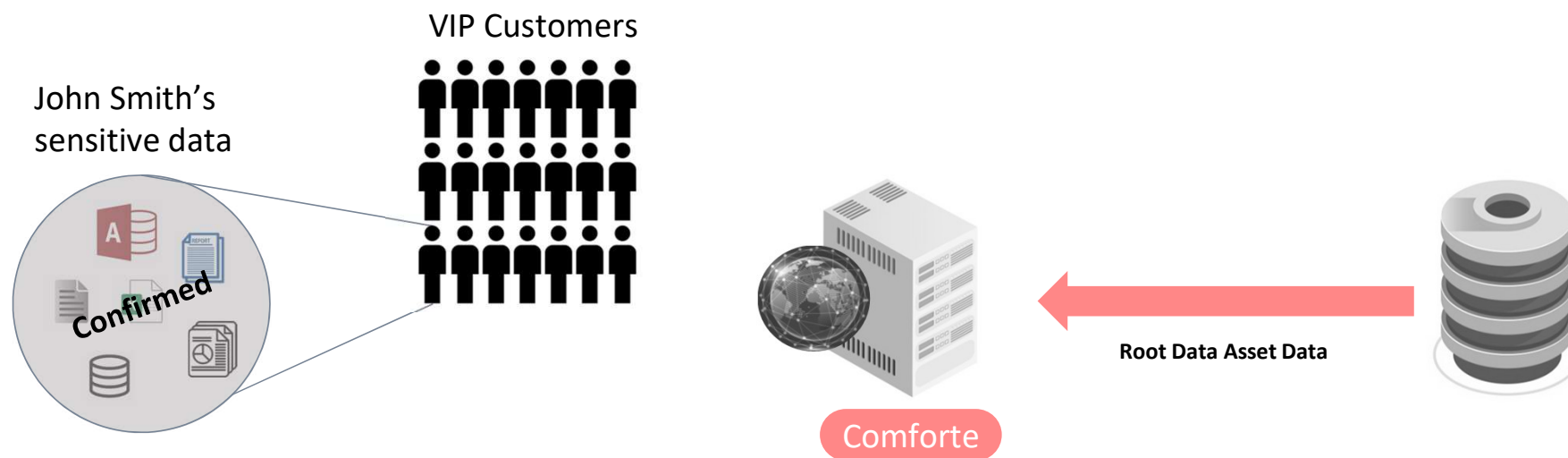
Consolidate
Data

- **Consolidate found PII and combine with Root Data Asset (RDA - virtual catalog per business use)**
  - Combine found sensitive data from disparate sources into one data subject record
  - Compare the data subject record with known business usage (RDA) to confirm known managed PII

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Produce Master Catalog, Data Lineage and Data Flow

- **Update data subject record and references to found PII**
  - Files, transactions, database records, log files, etc.
  - Data subject relationship(s) with company
  - PII shared with 3rd parties

VIP Customers

John Smith

← John Smith

Personal Data Usage

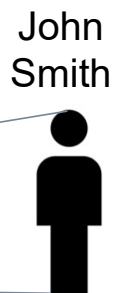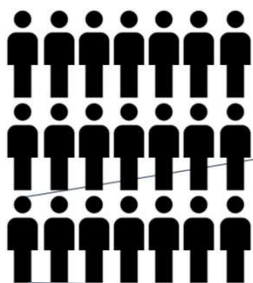John Smith Details   Copies of All Data Usage

Biometrics and Genetics	
DNA Sequence	EMBL
Facial Photographs	Image/scan
Fingerprints	Image/scan
Genetic Markers	RAPD
Other Genetic Data	ADQLTEEQIAEFKEAFSLFDKDGDGTITTKELGTVM RSLGQNPTEAELQDMINEVTAK*
Retina Scan	Image/scan

Contact Information	
City	New York
Country	United States of America
Device ID	112233:445566
Email Address	john.smith@email.net
IP Address	255.255.255.0
Phone Number	+1 985.698.1258
Postal Code	14075

⇄ Transactions ^ ...

Mar 12, 2018 12:53:32	2 Documents
storage.corp.com	2 Sensitive Categories
Mar 12, 2018 12:53:32	1 Documents
crmapp.corp.com	2 Sensitive Categories
Mar 12, 2018 12:53:32	1 Documents
mobile.corp.com	1 Sensitive Categories

🗀 File Browser ^ ...

Mar 12, 2018 12:53:32	customers-europe.csv
23.43 MB	No Sensitive Categories
Mar 12, 2018 12:53:32	customers-asia.csv
12.72 GB	1 Sensitive Categories
Mar 12, 2018 12:53:32	campaignJuly 2018
639.39 KB	No Sensitive Categories

🗄 Data Assets ^ ...

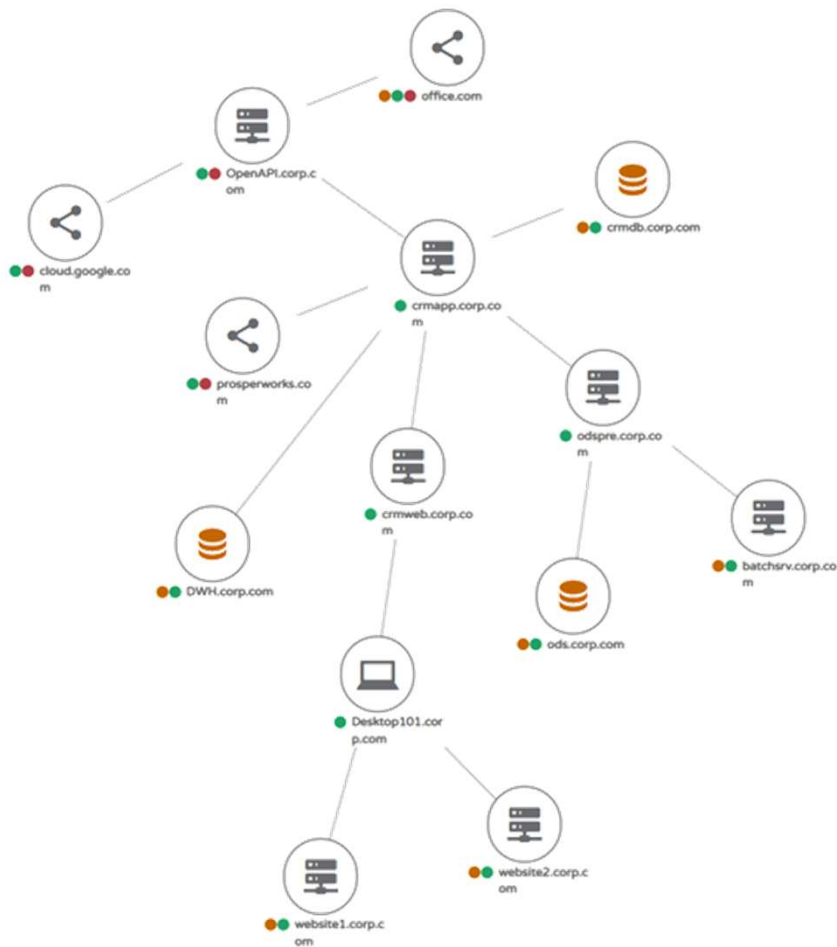|	
Default	General Privacy Flow
1 Sensitive Categories	
Customers	Customers of Europe, North America, Asia
2 Sensitive Categories	
VIP Program	Elite customers
2 Sensitive Categories	
Premium Program	Premium customers
1 Sensitive Categories	

Produce Data Lineage

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Path Analysis Through Network-Analytics

Using Network-Analytics

We follow the path of data by using network-analytics.

Using Analytics

We identify PII within the data, as if the data was actually at rest, whether structured or unstructured.

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Discover & Classify + SecurDPS using data catalog solution for governance

Structured Data

Classification Data

Unstructured Data

Discover & Classify

Data Catalog

SecurDPS Tokenization
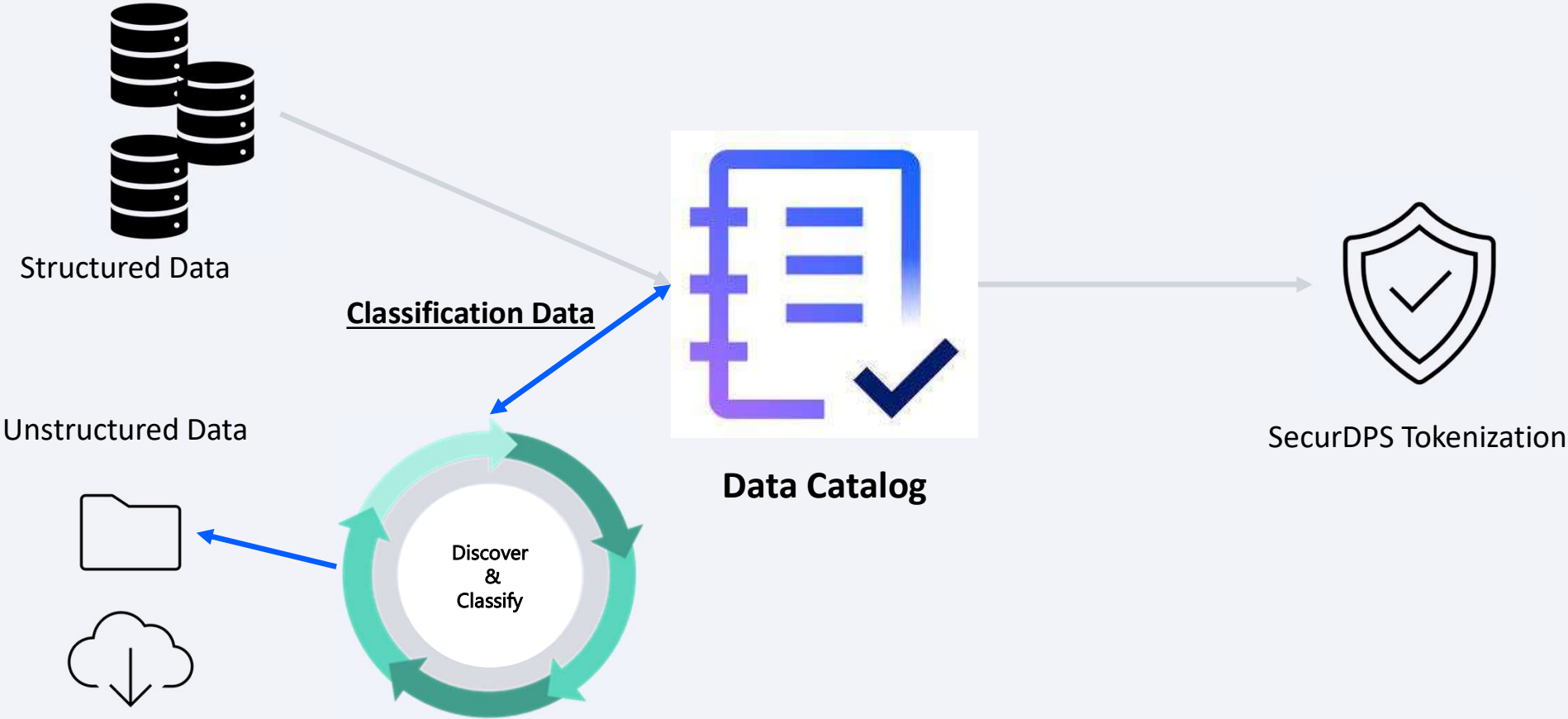
Root data assets can be associated with a single or multiple data assets, including GDPR, LGPD...etc..

Customers USA	Root Data Asset
	Default Data Asset
	Data Asset - Customers
	Data Asset - Employees
	Data Asset - GDPR regulations

- The Data Asset Management module deals with three types of data asset: root data asset, default data asset and custom data asset

- Here the Employees USA RDA is associated with one custom data asset - Employees, while the Employees EU RDA is associated with two - Employees and GDPR Regulations.

- Geographic location of individuals for compliance with local privacy regulations like GDPR, CCPA;

- Grouping individuals for compliance with security regulations for different types of data like PCI security policy for credit card data or HIPPA for medical data;

Data Discovery: Traditional vs. comforte's Approach

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Manual Snapshots

Survey data owners and classification by users & business owners

- People Intensive
- High Operational Costs
- Slow response
- Stale data
- Incomplete inventory

Continuously Updated

Automated continuous discovery, utilizing root data asset "source of truth" for context

- Rapid update & response time
- Reduced operational costs
- Continuous inventory updates

Pattern Scan

Scan structured or unstructured data using static regex, pattern matching (DLP, etc.)

- Poor Accuracy
- Intensive data and pattern cleanup required
- Limited actionability
- Limited business context

AI/ML Scan

AI/ML driven dynamic system, using root data asset "source of truth" context

- Much higher accuracy
- Lower false positives
- Business context
- More actionable data
- More input for 3rd party systems

Partial Coverage

Scan known locations for sensitive data

- Limited Visibility
- Don't know what you are missing (unknown unknowns)

Full Coverage

Network visibility to automatically identify new/unknown repositories and discover structured, unstructured and data in motion

- One system to discover all known & unknown sensitive data
- Full data lineage & history

Easily Manage the Repositories where Sensitive Data was Discovered

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Type		Product	URL	Creation Date	Next Analysis Schedule	Last Analysis Status	Analysis	Data Subjects
Choose ⌄		Choose ⌄	Search	Filter 📅	Filter 📅	Choose ⌄		Filter ▼
›	✉	Google Gmail	gmail://	10.25.2022 05:07:37 PM	From 10.27.2022 - 06:26 PM To 10.27.2022 - 11:18 AM	▶ In Progress	5 of 12	660,565
›	🗄	Oracle DB	jdbc:oracle:thin:@//210.163.76.140:1522/stats	10.25.2022 02:37:24 PM	From 10.27.2022 - 07:59 PM To 10.27.2022 - 08:15 PM	✓ Fully successful	7 of 11	367,850
›	🖥	NFS	nfs://102.221.193.157/home/user/shared	10.23.2022 10:07:10 PM	From 10.27.2022 - 05:35 AM To 10.28.2022 - 04:25 AM	✓ Fully successful	7 of 12	531,630
›	☁	Google Drive	google_drive://	10.25.2022 11:43:36 AM	From 10.27.2022 - 07:15 PM To 10.28.2022 - 10:44 AM	✓ Fully successful	6 of 12	86,893
›	✉	Amazon S3	microsoft_exchange://	10.26.2022 12:35:43 PM	From 10.27.2022 - 05:45 AM To 10.27.2022 - 01:59 PM	✓ Fully successful	8 of 11	434,802
›	☁	Amazon S3	s3://	10.24.2022 02:35:18 AM	From 10.27.2022 - 04:13 PM To 10.28.2022 - 12:31 AM	▶ In Progress	5 of 11	412,152
›	🖥	NFS	nfs://3.21.104.163/home/user/shared	10.24.2022 10:37:45 AM	From 10.27.2022 - 06:10 PM To 10.28.2022 - 05:53 PM	🕐 Not Scanned	5 of 12	219,283
›	🗄	Oracle DB	jdbc:oracle:thin:@//165.130.26.174:1522/users	10.25.2022 07:29:23 AM	From 10.27.2022 - 07:33 AM To 10.28.2022 - 12:28 AM	🕐 Not Scanned	8 of 12	260,690

Find results and deliverables in your custom labels and tags

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Inventory / Data Asset Management

🔍 Search   CRE

	Data Belongs To ↑↓	Data at Rest Data Sources ↑↓	Data in Motion Elements ↑↓	Data Asset Tags
📄 **Default**	N/A	586,631	+4.64M	N/A
📄 **Customers Europe**	Customers	7,347	64,365	Sensitive
📄 **Customers USA**	Customers	84,554	43	Sensitive, DoNotShare , +1 more
📄 **Employees**	Employees	8,457	734	Sensitive, DoNotShare
📄 **Employees Health**	Employees	53	634	Sensitive
📄 **Employees Insurance**	Employees	4	63	CarInsurance

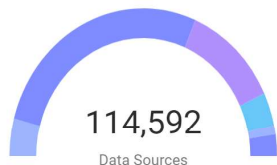# Breakdown Results to a Very Granular Level.

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← Inventory

Financial Investing Programs

Company investing programs for the last 5 years. Includes client credit history, SSN, and financial records

Inventory

← Inventory / Data at Rest

Data Source Type	
114,592 Data Sources	
✉ Email	**62,362**
Central Storage	**26,564**
Database	**9,531**
Cloud Storage	**8,465**
Notes	**5,435**
Communication Platform	**2,235**

Product	
12,384 Data Sources	
✉ Google Gmail	**7,643**
CIFS (SMB)	**2,354**
Microsoft	**1,234**
Oracle DB	**734**
Mysql	**357**
Slack	**62**
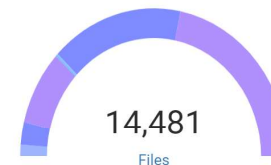
File Types	
14,481 Files	
XML	**6,325**
CSV	**4,623**
PDF	**2,354**
DOCX	**734**
DOC	**357**
JSON	**53**

Discovery Results at a Glance

Security

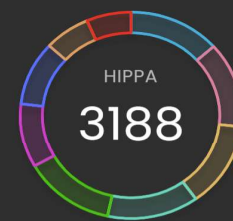### Overall security status

0%

100%

Security status need attention

50%

Security status for sensitive data

- Monitored
- Not monitored
- Unknown to GDP
- Not classified

Regulation status

HIPPA

3188

- HIPPA
- GDPR
- LGPD
- NYDFS
- CCPA
- PCI-DSS
- LGDP
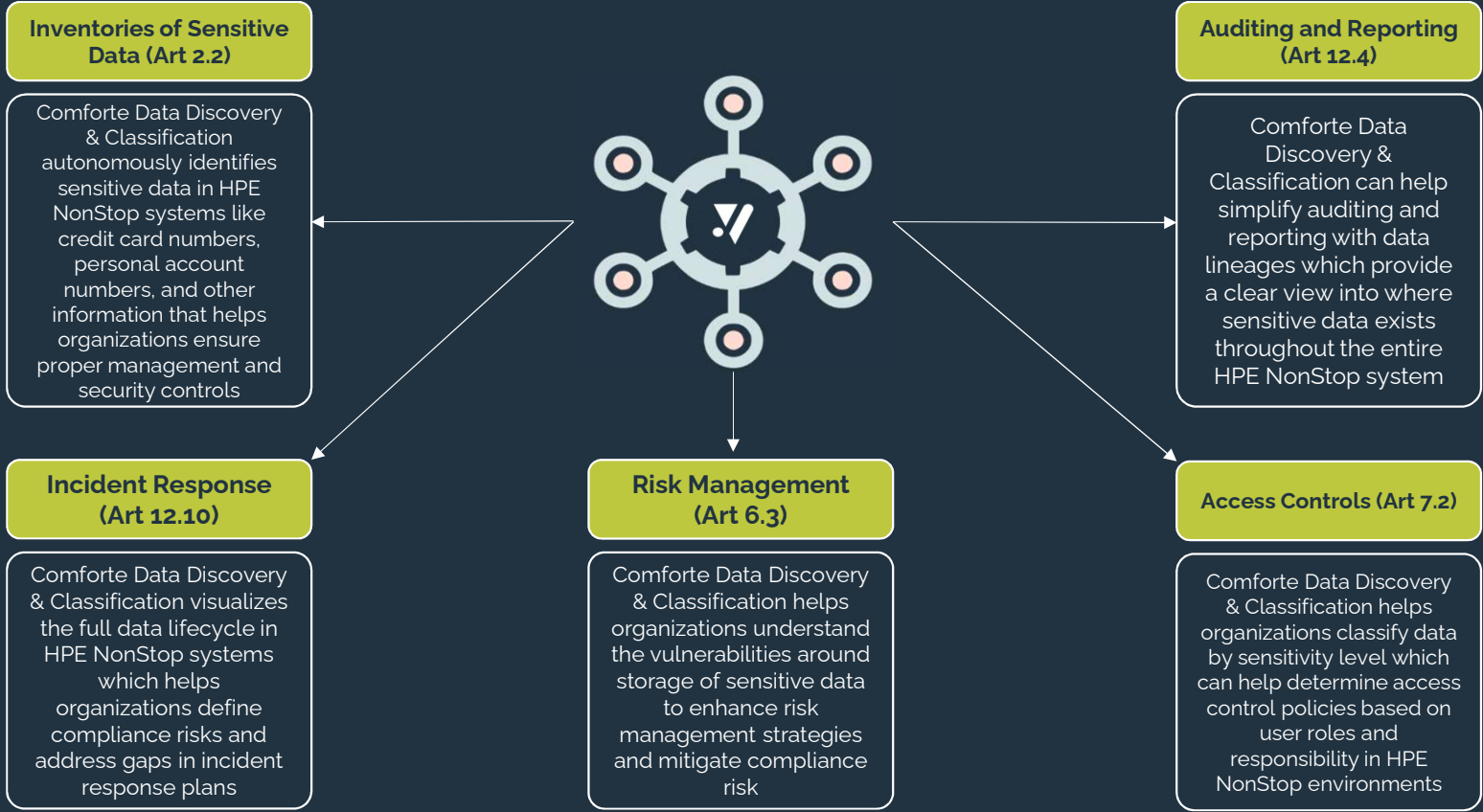- GLBA
- Other

🔒 Sensitive Data Insights

Note you have **1,179 data sources** containing sensitive data which are not monitored. Consider activating monitoring and protection policy on them

Note you have **805 data sources** containing sensitive data which are unknown to GDP - please revisit the list and activate the protection
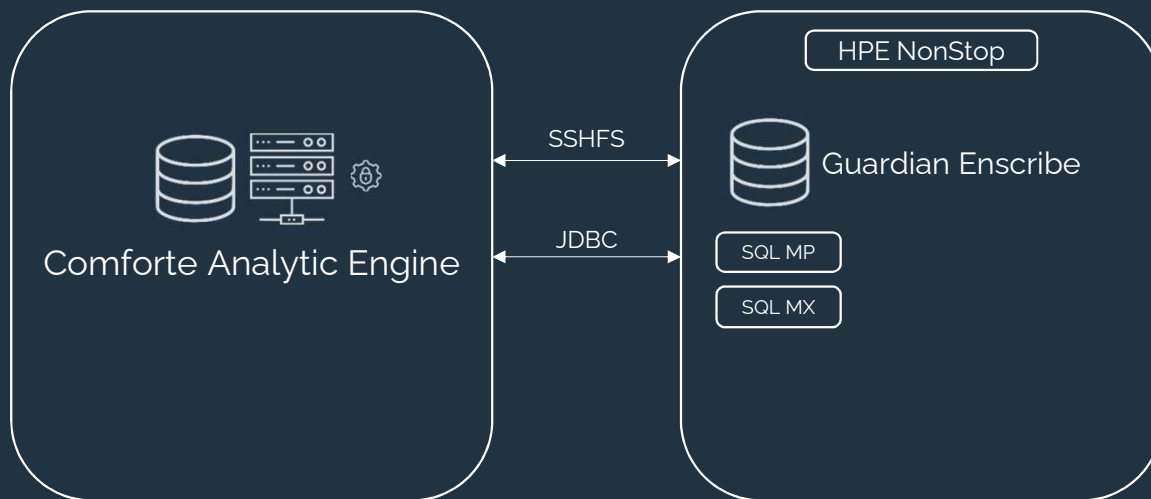
Please note you have **812 data sources** not classified. Please go to Data Source Catalog to configure the classification

Looks like you have a personal data and may be a subject to the Privacy Regulation. We recommend to activate the Master Catalog for those data sources containing personal information

Key PCI DSS v4 Pain Points that D&C Solves

Inventories of Sensitive Data (Art 2.2)

Comforte Data Discovery & Classification autonomously identifies sensitive data in HPE NonStop systems like credit card numbers, personal account numbers, and other information that helps organizations ensure proper management and security controls

Auditing and Reporting (Art 12.4)

Comforte Data Discovery & Classification can help simplify auditing and reporting with data lineages which provide a clear view into where sensitive data exists throughout the entire HPE NonStop system

Incident Response (Art 12.10)

Comforte Data Discovery & Classification visualizes the full data lifecycle in HPE NonStop systems which helps organizations define compliance risks and address gaps in incident response plans

Risk Management (Art 6.3)

Comforte Data Discovery & Classification helps organizations understand the vulnerabilities around storage of sensitive data to enhance risk management strategies and mitigate compliance risk

Access Controls (Art 7.2)

Comforte Data Discovery & Classification helps organizations classify data by sensitivity level which can help determine access control policies based on user roles and responsibility in HPE NonStop environments

How comforte Data Discovery and Classification integrates with HPE NonStop

Comforte Analytic Engine

SSHFS

JDBC

HPE NonStop

Guardian Enscribe

SQL MP

SQL MX

SSHFS mount can be configured to mount all files from a Guardian system like specific volumes, sub volumes, and even individual files, by providing the hostname/IP of the NonStop and the file path that you want t map.

For example, $QASD.DCTEST path would be /G/qasd/dctest. This would provide access to all files on that vol/subvol given the correct guardian user access.

By shortening the mount path, you get access to more vol/subvols. A path of /G would get access to all guardian volumes on the system.

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How comforte Data Discovery and Classification integrates with HPE NonStop

Comforte Analytic Engine
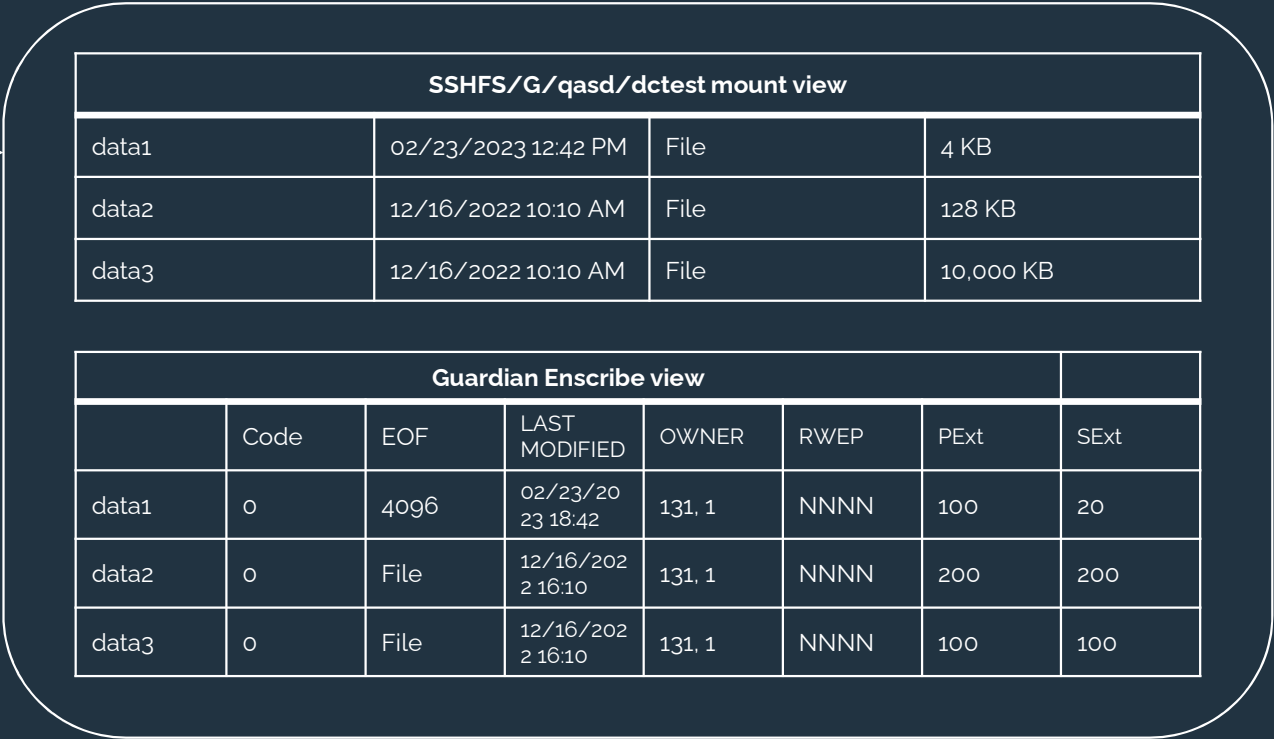
SSHFS

The analytic engine uses the SSHFS mount to pull and scan enscribe files on the NonStop. All scanning is performed on the analytic engine. The only processing overhead for the NonStop is the initial SSH stream used to transfer the file from the NonStop.

SSHFS/G/qasd/dctest mount view			
data1	02/23/2023 12:42 PM	File	4 KB
data2	12/16/2022 10:10 AM	File	128 KB
data3	12/16/2022 10:10 AM	File	10,000 KB

Guardian Enscribe view							
	Code	EOF	LAST MODIFIED	OWNER	RWEP	PExt	SExt
data1	0	4096	02/23/2023 18:42	131, 1	NNNN	100	20
data2	0	File	12/16/2022 16:10	131, 1	NNNN	200	200
data3	0	File	12/16/2022 16:10	131, 1	NNNN	100	100

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Proof

- Major Oil Company PCI Compliance Case Study
  - https://salesweb.comforte.cloud/fileadmin/Media/documents/Case_Studies/SS_Major_Oil_Company_PCI_Compliance.pdf
- City Fresko PCI Compliance Case Study
  - https://salesweb.comforte.cloud/fileadmin/Media/documents/Case_Studies/SS_City_Fresko_FINAL.pdf
- Thailand Government Savings Bank PCI Compliance Case Study
  - https://salesweb.comforte.cloud/fileadmin/Media/documents/Case_Studies/SS_GSB_Implements_PCI_Compliant_Protection.pdf
- Global Payment Service Provider PCI Compliance Case Study
  - https://salesweb.comforte.cloud/fileadmin/Media/documents/Case_Studies/SS_Global_Payment_Service_Provider.pdf
- Leading Canadian Bank PCI Compliance Case Study
  - https://salesweb.comforte.cloud/fileadmin/Media/documents/Case_Studies/SS_Leading_Canadian_bank_achieves.pdf

THE KEY TAKEWAY

Lobby for a discover and classify solution which includes the NonStop, so you can use the Enterprise solution to manage risk and compliance.

SecurDPS Protection Cluster Architecture, Integrators
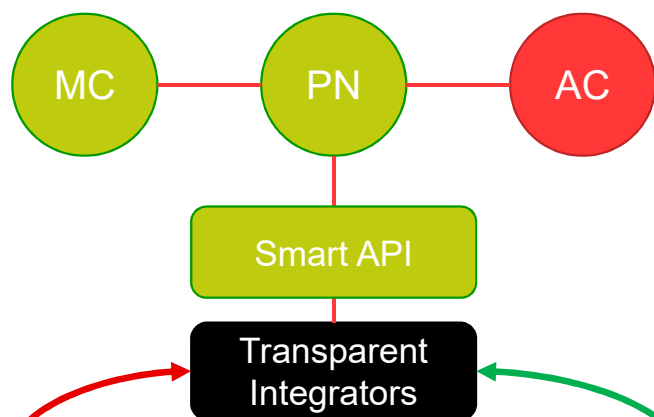
First	Last	Tax ID	Account Number	Phone	DOB
Chandra	Ng	308-848-8163	0249 8238 2203	982-824-9983	6/27/1997
Aignan	Guillét	023-776-3224	2988 2478 7832	203-209-0244	2/28/1984

First	Last	Tax ID	Account Number	Phone	DOB
Lkoiwey	Erwpokc	909-13-2983	7923 9823 0033	622-978-8813	9/1/1945
Qjoisf	Quilweu	083-29-9238	4528 9944 9824	703-992-7837	5/15/1977
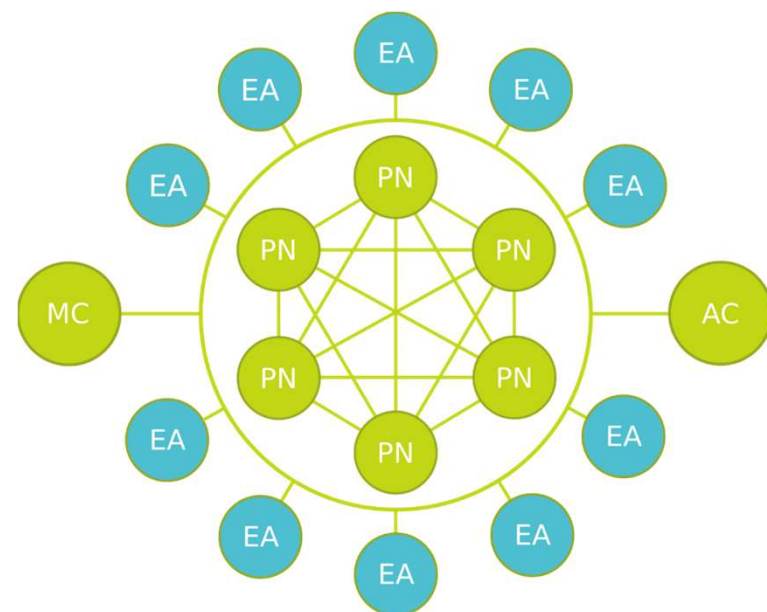
Examples of data protection, access via integrator layers

Name: John Smith
Address: 934 Eastland Street, Chicago, IL, 60007
SSN: 024-76-8823
Email: jroseman@corp.com
Passport: N88880925
DOB: 27-10-1976

Name: Uhea Pmwun
Address: 580 Qeugbnjw Xowrt, Lwidlew, UP, 82423
SSN: 976-02-1394
Email: kowippyr@gliwotweor.com
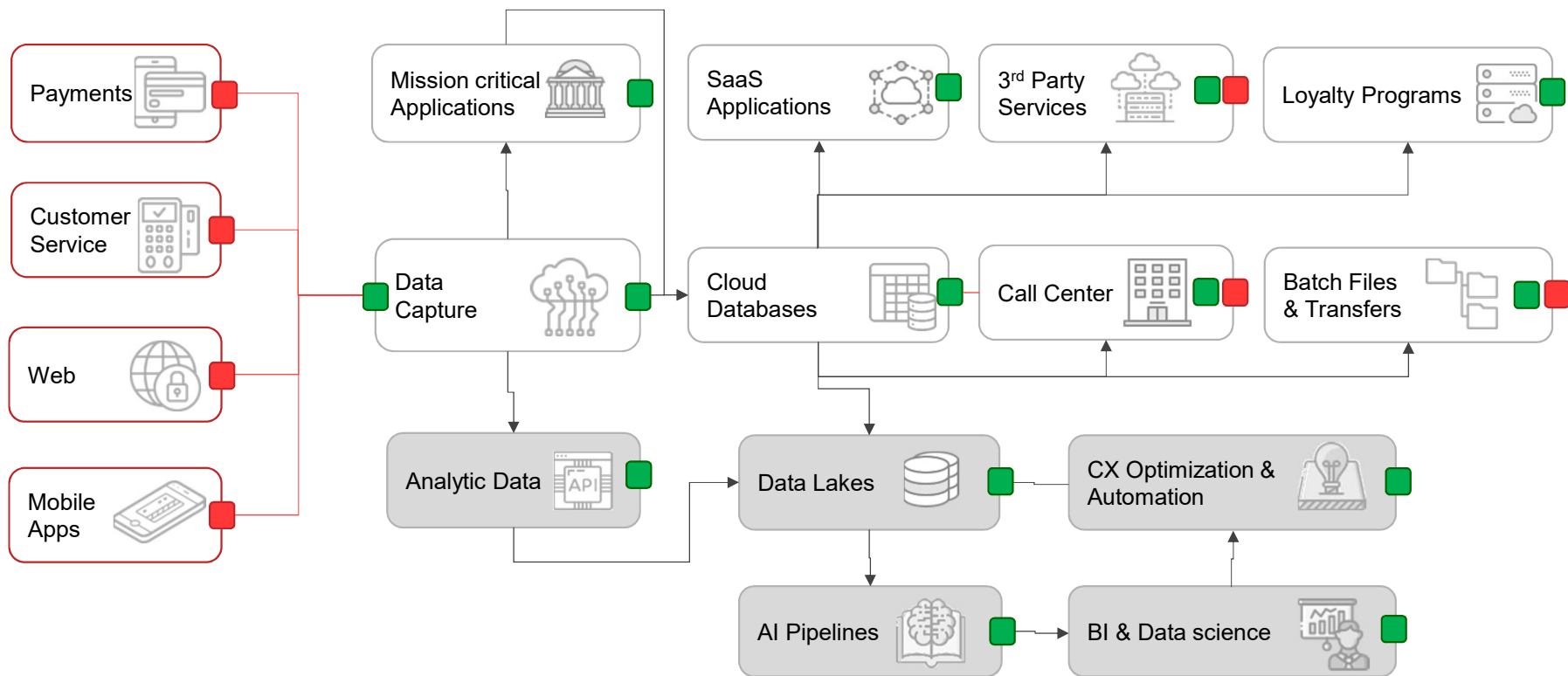Passport: N2783904
DOB: 15-05-1969

Live data converted to
secured form – data
stays protected

Name: John Smith
Address: 934 Eastland Street, Chicago, IL, 60007
SSN: XXX-XX-8823
Email: jroseman@corp.com
Passport: N2783904
DOB: 27-10-1976

Dynamic access and masking,
or partial access for permitted
users.

Goal – reduce data exposure risk – hybrid IT