



comforte Data Security Platform

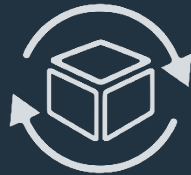
Miguel Faria

XX.XX.2023

comforte Data Security Platform



DISCOVER &
CLASSIFY



INVENTORY



POLICY



PROTECT



INTEGRATE

A complete platform for Data Security & Privacy:

- ✓ Discover all your sensitive data
- ✓ Protect data at all times – at rest, in motion and in use
- ✓ Easy integration with business applications & data flows

comforte Data Protection



DISCOVER &
CLASSIFY



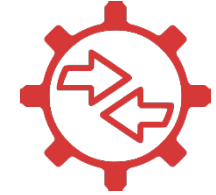
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Data-Centric Security: Classic Encryption vs Tokenization

First	Last	Tax ID	P-ID	PAN	EXP	Phone	DOB
Chandra	Lagharinan	308-848-8163	A726	4950 6997 2371 6503	02/25	982-824-9983	6/27/1997

First	Last	Tax ID	P-ID	PAN	EXP	Phone	DOB
1TMVOHe%Pcx[...]	W1c9MLa9/zm[...]	:joN7dOG2rfyg[...]	GuywuJH[...]	kLtojCtINJGkurBBdwwea3qd[...]	*Jwiow[...]	1TMVOoHePcx[...]	P5avCRZsLbbY[...]



Not format preserving

Requires app & schema changes



Live data exposure in systems

De-protection required for processing. keys must be present at all times.



Complex key management and operation

Backup, re-encryption of data over key change



High cost of operation

must be on every system, always on.

First	Last	Tax ID	P-ID	PAN	EXP	Phone	DOB
Chandra	Lagharinan	308-848-8163	A726	4950 6997 2371 6503	02/25	982-824-9983	6/27/1997

First	Last	Tax ID	P-ID	PAN	EXP	Phone	DOB
Lkoiwey	Wuhrcghow	909-130-2983	P423	4950 69AY HHIW 6503	12/26	622-978-8813	9/1/1965



Format preserving

Replace live data in apps, data stores and files



Reduce data exposure significantly

Operate on tokens while retaining data utility.



Reduce complexity

No key management required



Reduce cost of operation

Tokenize only where data is captured and where live data is interchanged. Everything else operates on tokens.

Tokenization replaces sensitive values



Business Applications



First/Last: **Alan Turing**
Tax ID num: **101-66-7459**
Credit Card: **4321 1234 4568 9012**



Downstream DBs,
Files, Apps



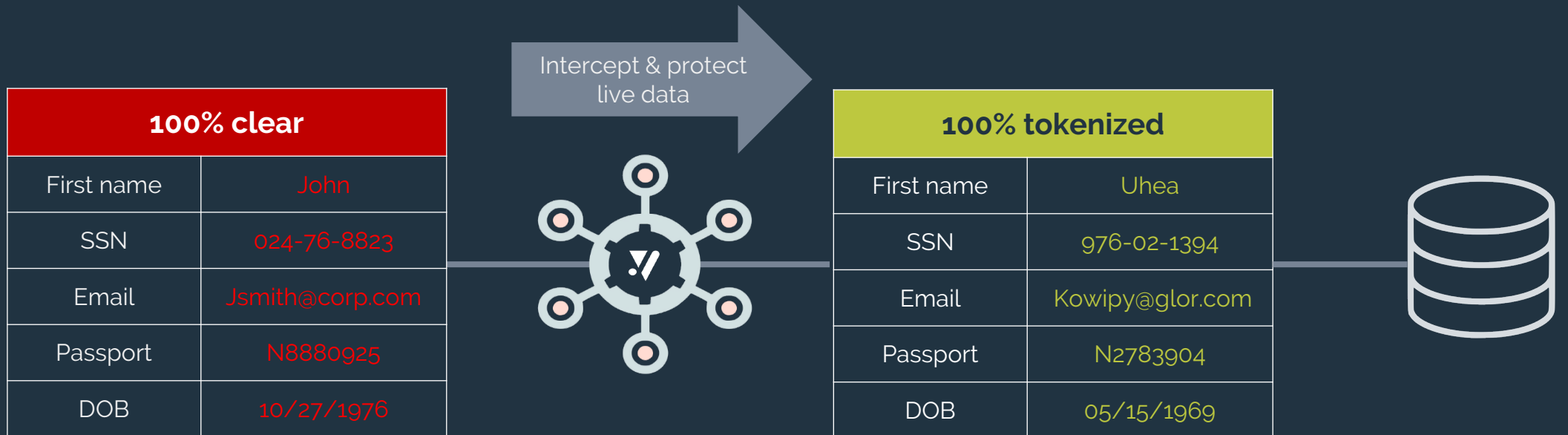
First/last: **Alan Efploqy**
Tax ID num: **FD4-J2-96BG**
Credit Card: **4321 12AD KLDS 9012**

**comforte
Protection
Engine**



Structured and semi-structured elements containing values such as names, DoB, account numbers, SSNs, etc.

Protect Sensitive Data at Capture



Red text = data in clear

Green text = tokenized data

Protect Sensitive Data: Granular Access to Live Data



Operator

75% tokenized	
First name	John
SSN	976-76-1394
Email	Kowipy@glor.com
Passport	N2783904
DOB	05/15/1969



Fraud Analysts

90% clear	
First name	John
SSN	976-02-1394
Email	Jsmith@corp.com
Passport	N8880925
DOB	10/27/1976

Granular authorized access



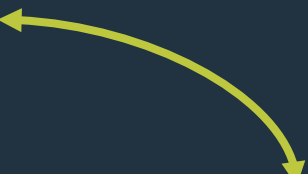
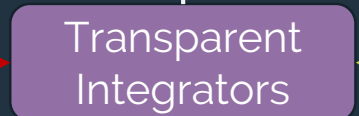
100% tokenized

First name	Uhea
SSN	976-02-1394
Email	Kowipy@glor.com
Passport	N2783904
DOB	05/15/1969



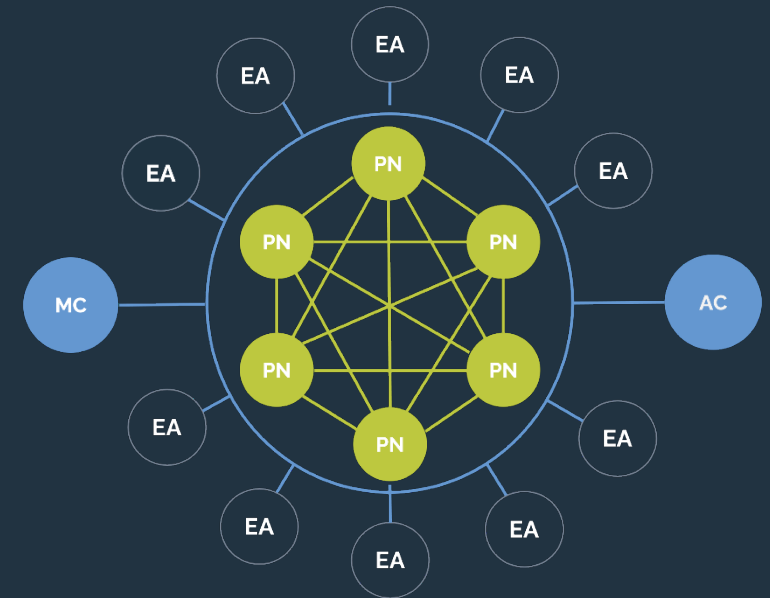
Red text = data in clear
Green text = tokenized data

SecurDPS Protection Cluster Architecture, Integrators



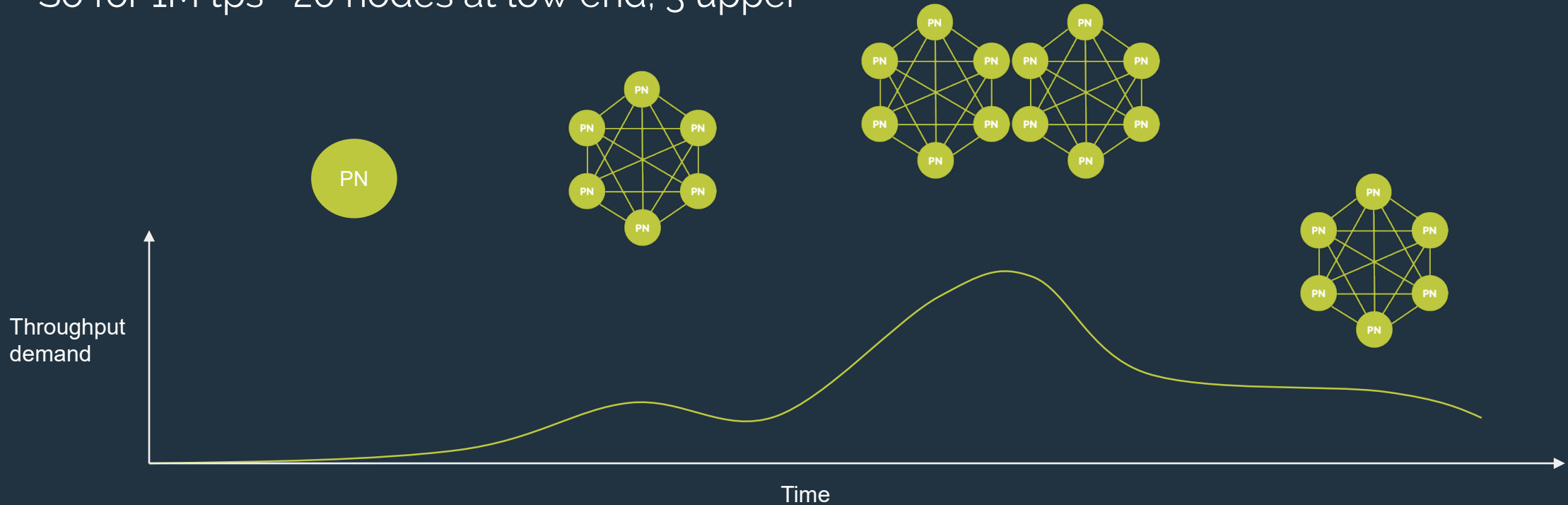
Clear	
First name	John
SSN	024-76-8823
Email	Jsmith@corp.com
Passport	N8880925
DOB	10/27/1976

Tokens	
First name	Uhea
SSN	976-02-1394
Email	Kowipy@glor.com
Passport	N2783904
DOB	05/15/1969

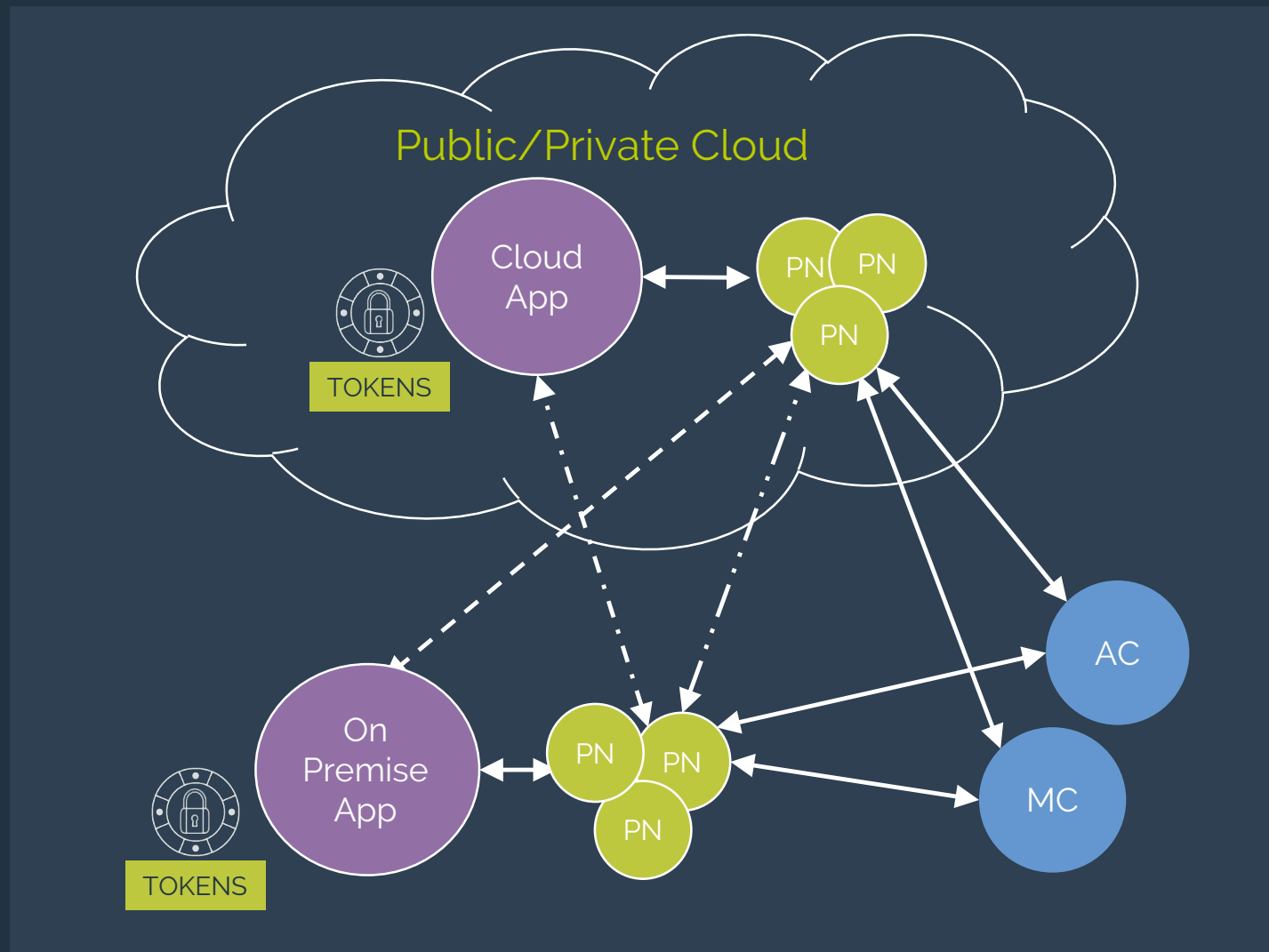


Performance Architecture & Auto-scaling

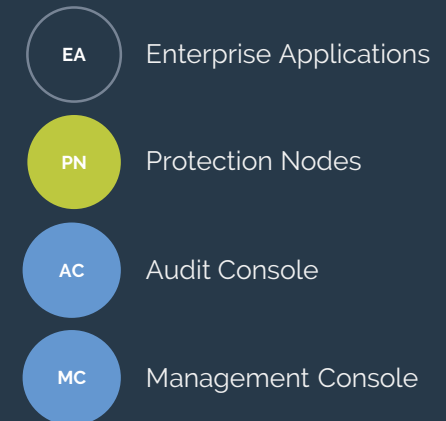
- Auto-scaling using Kubernetes-native integration
- Protection node = 1vCPU, 1G RAM
- Protection Node ~50,000 to ~400,000 tps
- So for 1M tps ~20 nodes at low end, 3 upper




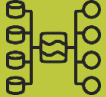





Typical Scaleout – SecurDPS Enterprise Hybrid with On-Prem and Cloud Apps



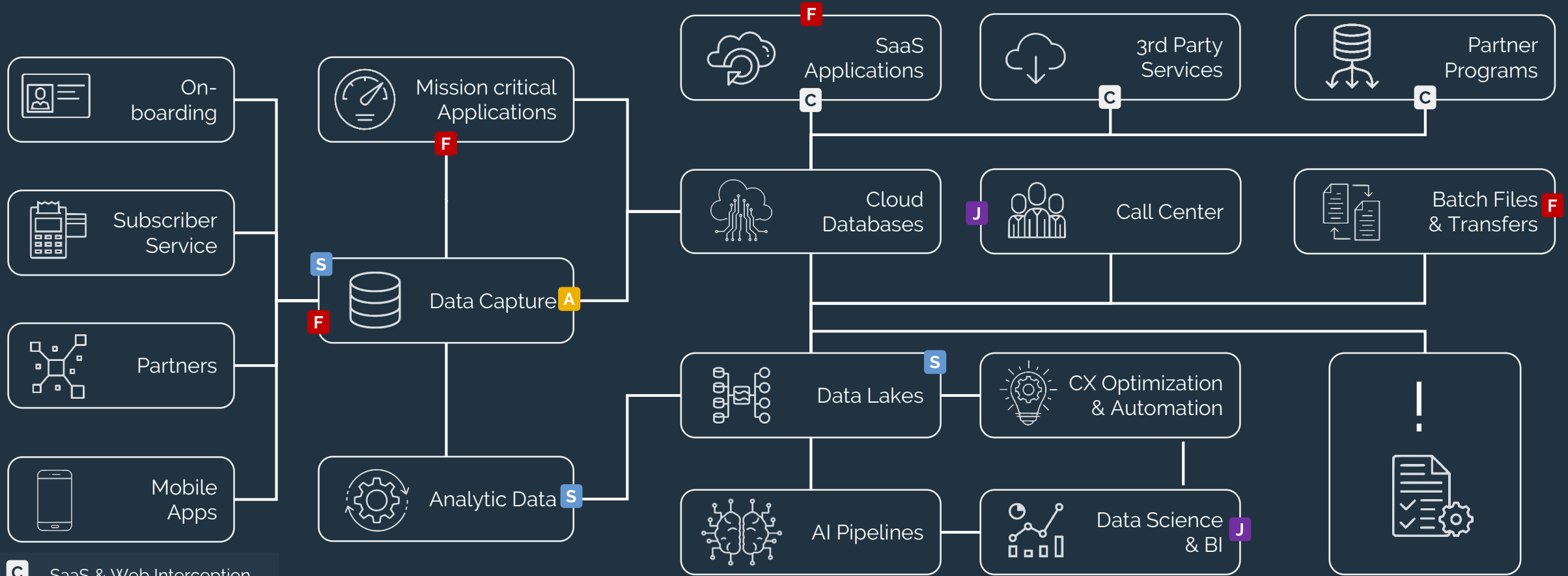
- Data can be protected onsite and sent to the cloud already protected for analytics or can also be protected in the cloud
- PNs can freely be deployed anywhere – on-prem or in cloud environments
- Apps that need to tokenize or de-tokenize can also be deployed anywhere – on-prem or in cloud environments
- Typically, an app would be co-located with a PN or PN cluster but for failover and HA, the app can freely talk to any PN
- Any applications can either talk to a PN running locally or in the cloud as necessary



SecurDPS Smart Interceptors & typical use cases*

Web, Cloud, SaaS Apps		SaaS apps web interface apps.
Data Integrators Protection Proxy		Data Interchange, "on wire protection" Cloud to Cloud/ISO Transactions
JDBC, ODBC, OCI, UDF		Database apps, commercial apps, Apps with no accessible code base
REST Proxy RESP Proxy		In-house Apps, Partner apps, Commercial apps with API's
Streams & Pipes		Cross app, cross process data interchange, data sharing.
Files (CSV, JSON, XML, etc..)		File-based processes, batch, SFTP, inbound/outbound file exchange
API's (Java, C++, C#)		In-house apps, new apps, product data security

Risk Is In The Unknown. Find And Understand All Types Of Data.



- C** SaaS & Web Interception
- J** Database Interception
- S** Streaming Interception
- F** Tokenizing File System
- A** API

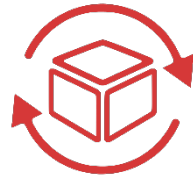
Continuous Development Testing, Operations & Hybrid Elastic IT Delivery



comforte Data Discovery & Classification



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comforte Data Discovery and Classification

1 Monitor Network Traffic

Passively monitor network and identify network elements

2 Identify Sensitive Data

Identify sensitive elements and data at rest repositories to be scanned

3 Scan Repositories

Scan data at rest structured and unstructured repositories

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5 Produce Data Lineage

Produce Master Catalog, Data Lineage and Data Flow

4 Consolidate Data

Consolidate sensitive data to fully understand related risk

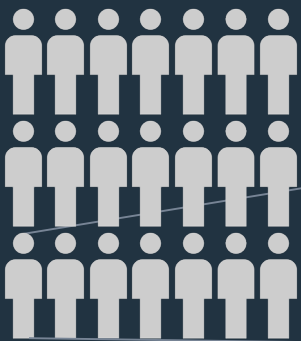


Produce Master Catalog, Data Lineage and Data Flow

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

File Browser

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

What Makes This Platform Different?

**Complete solution
for discovery and
protection**



**Deployable
anywhere**



**Fast & Efficient
Implementation**





SECURE YOUR GROWTH

www.comforte.com