Cloud is good for business! Are you sure (i.e. secure)?

Darko Simic, dsimic@netskope.com

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Yesterday

IT managed where data was created and stored

Technology and data lived in silos

Remote use required justification

Threats stopped at network and endpoint

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Today

Business leads where data gets created and stored

Cloud and web are open and connected

Remote use is expected

More complex threats that include cloud

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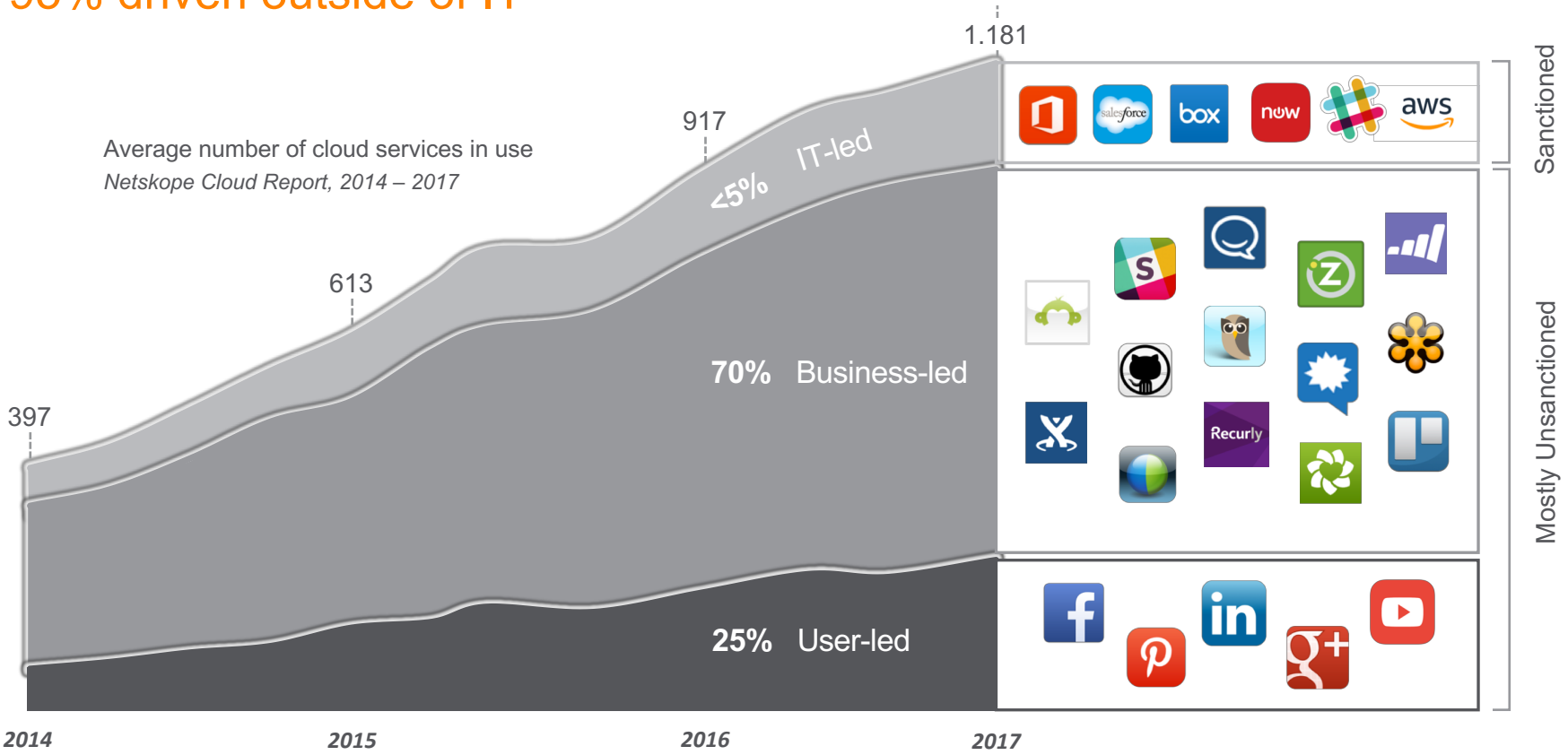
Growth in Enterprise Cloud Services

95% driven outside of IT



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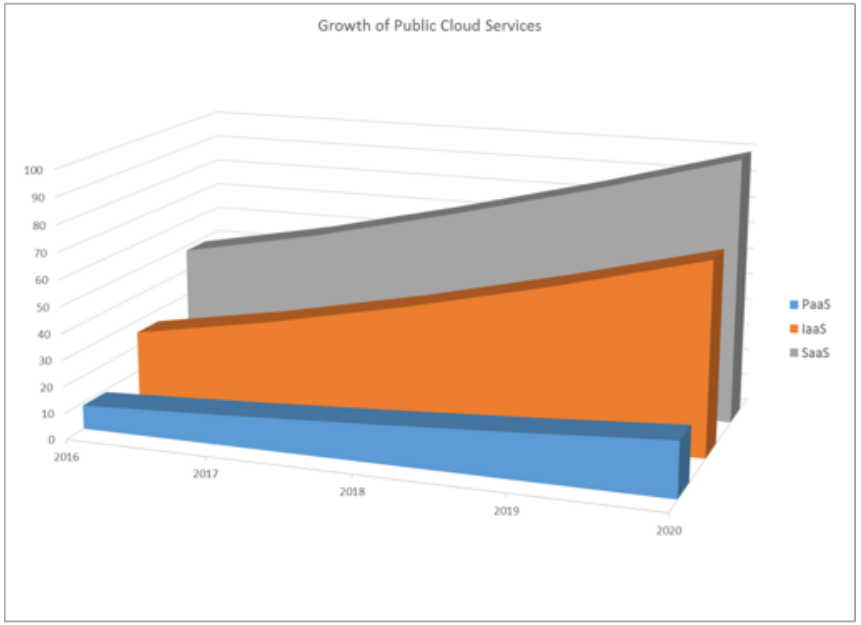
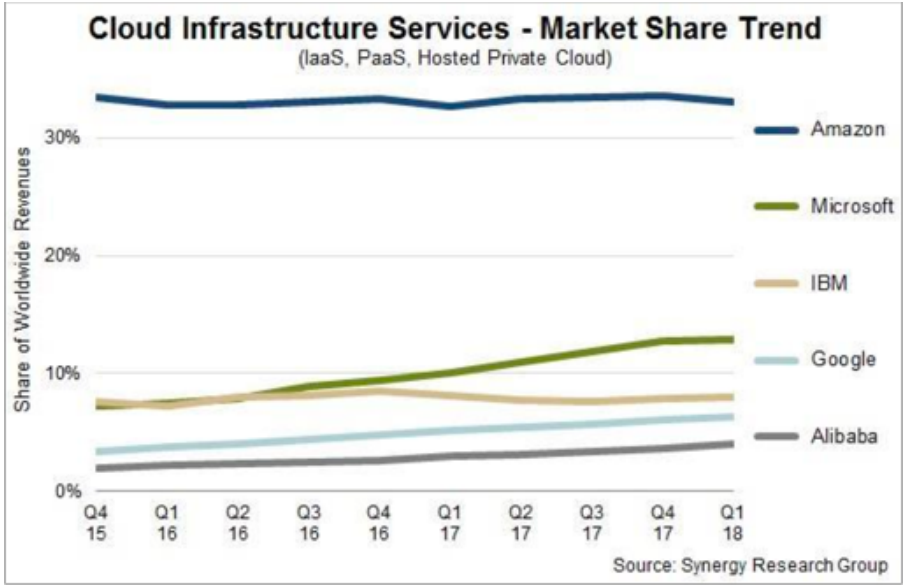
Growth in public cloud services





Global IaaS Market

- 2017Q1: $11.5B
- 2018Q1: $16.9B

➢ Growth: 46.8%

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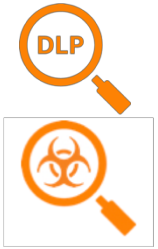
Our Mission: Deliver a cloud native unified security platform, covering SaaS, IaaS & Web

What We Do

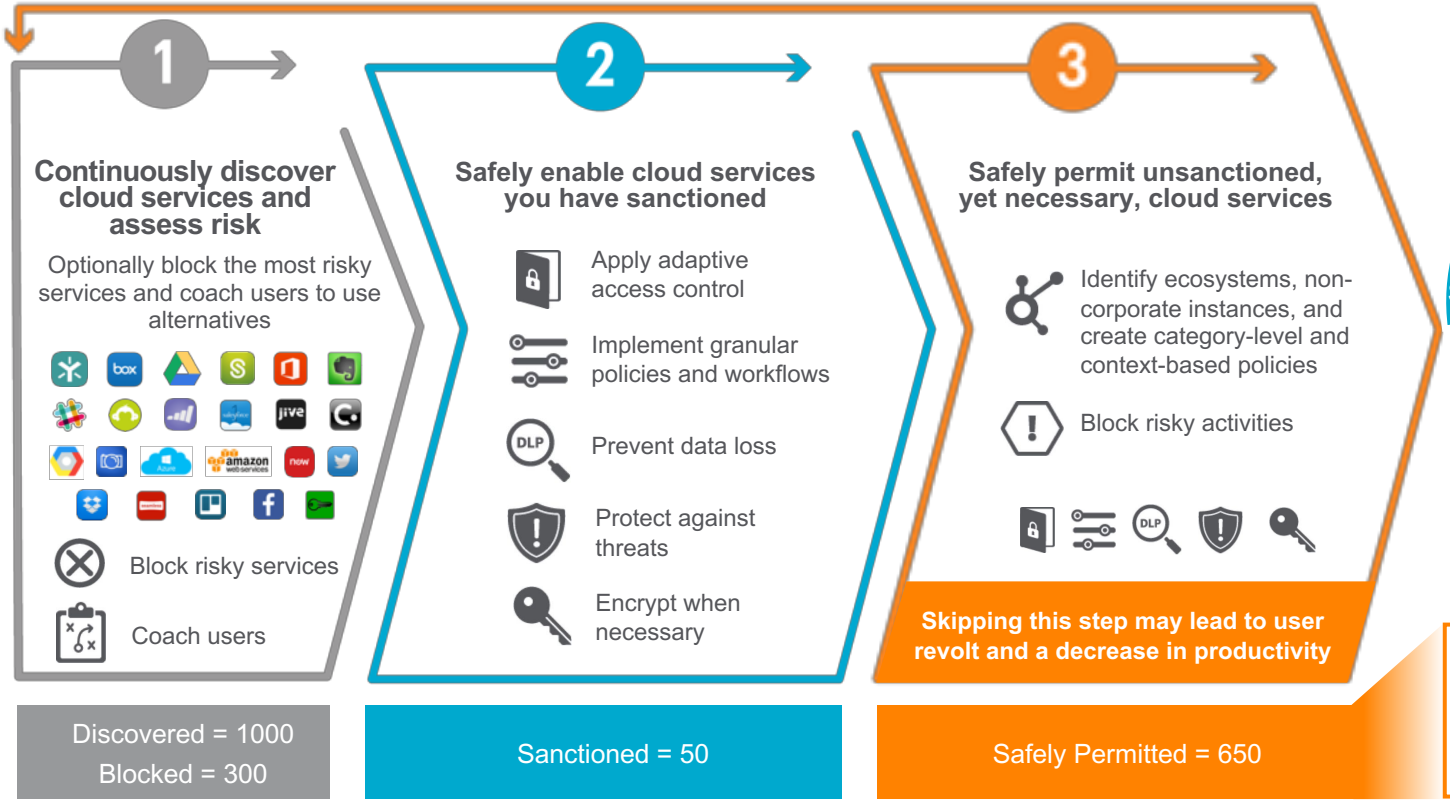
- Discover apps & assess risk
- Safely enable sanctioned SaaS & IaaS
- Govern all unsanctioned apps & data
- Govern web usage



Team

- 600 employees globally – NA/EMEA/APAC
- Early architects/executives from well known networking & security companies
- 50+ patent claims granted

The Cloud Security Journey in Phases



Discovered = 1000
Blocked = 300

Sanctioned = 50

Safely Permitted = 650

Use of Granular Control	
Protect against threats	450
Prevent data loss	300
Block risky activities	200
Govern access	150

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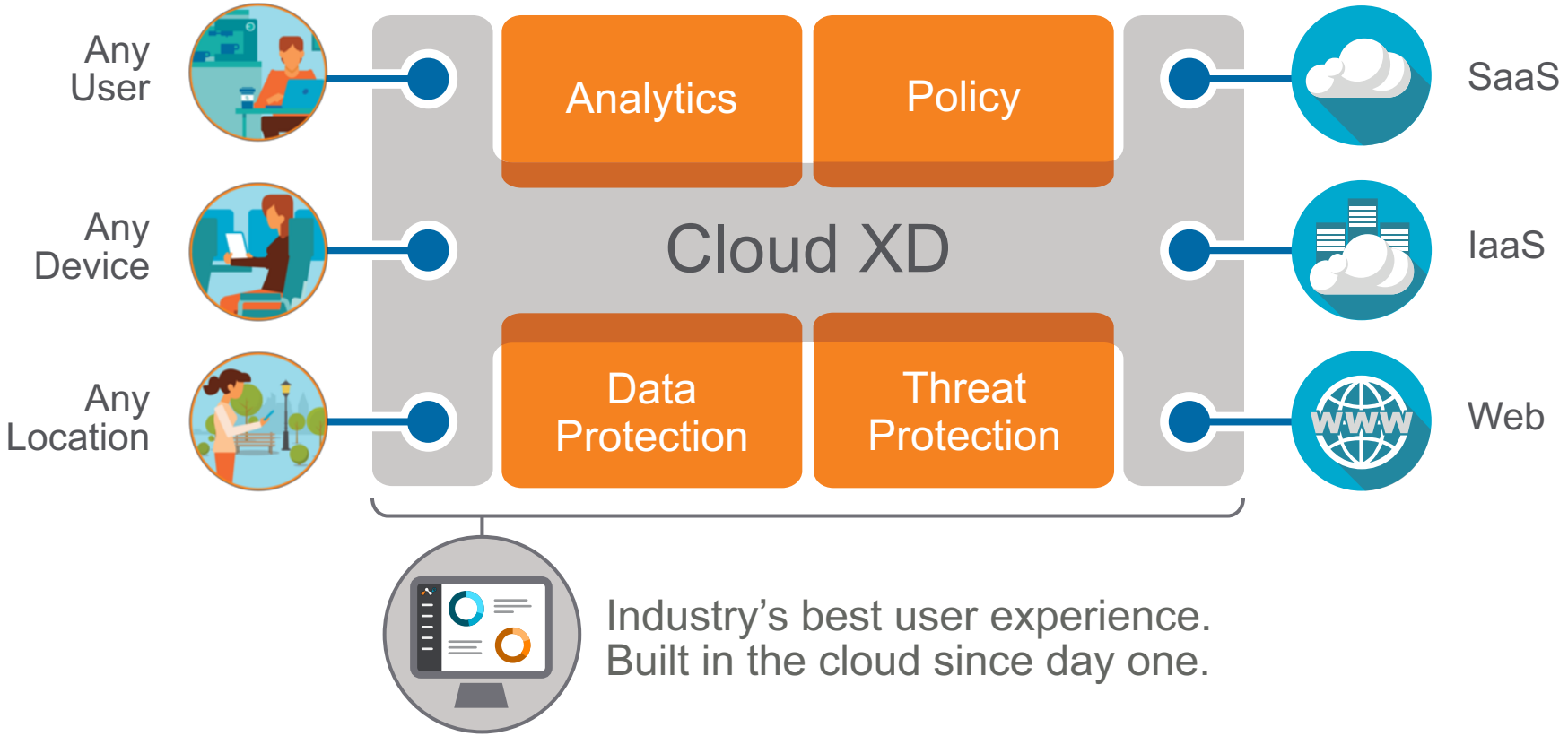
Netskope Cloud Security Platform



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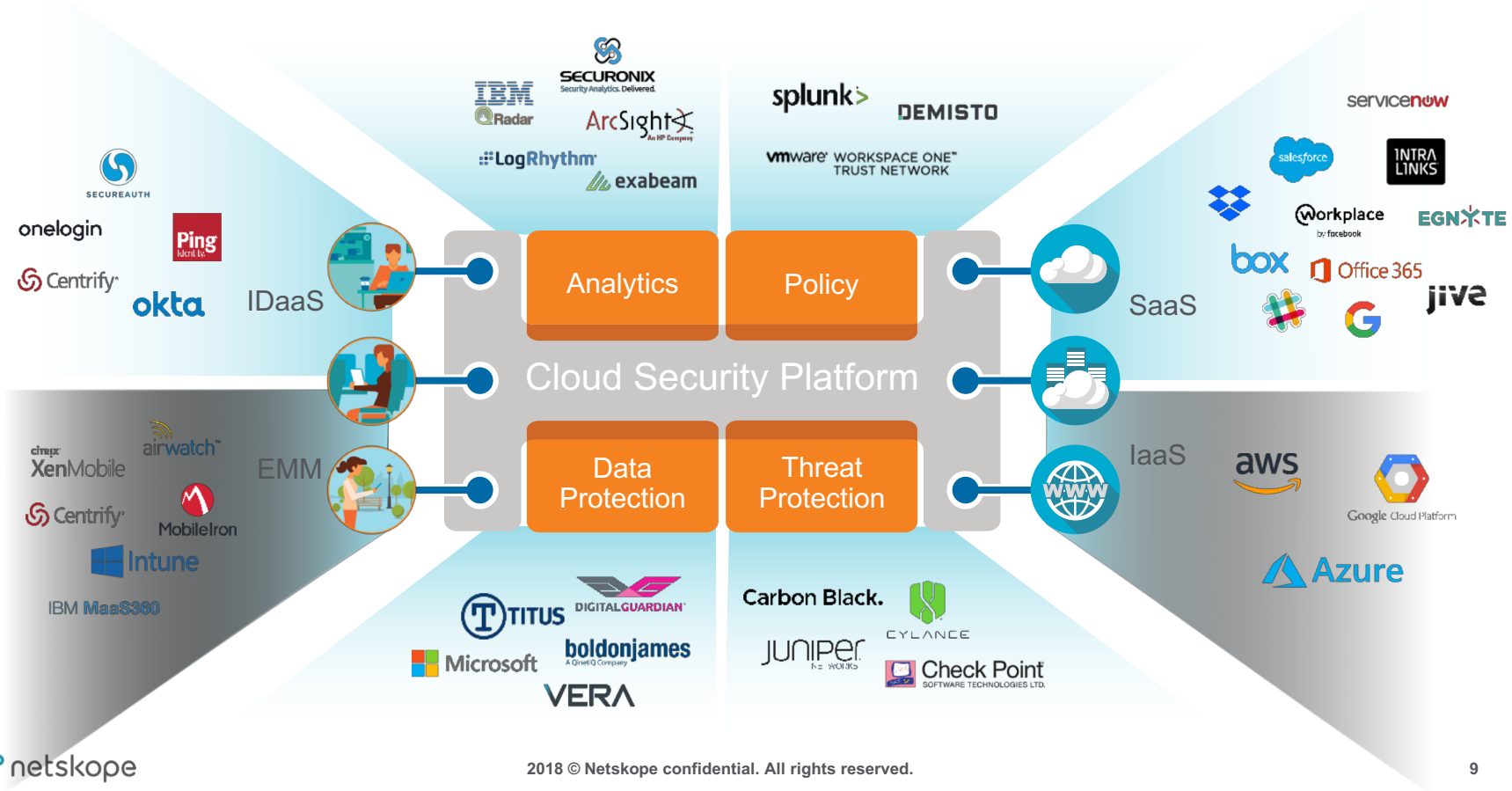
Netskope Cloud Security Platform – Alliance Ecosystem



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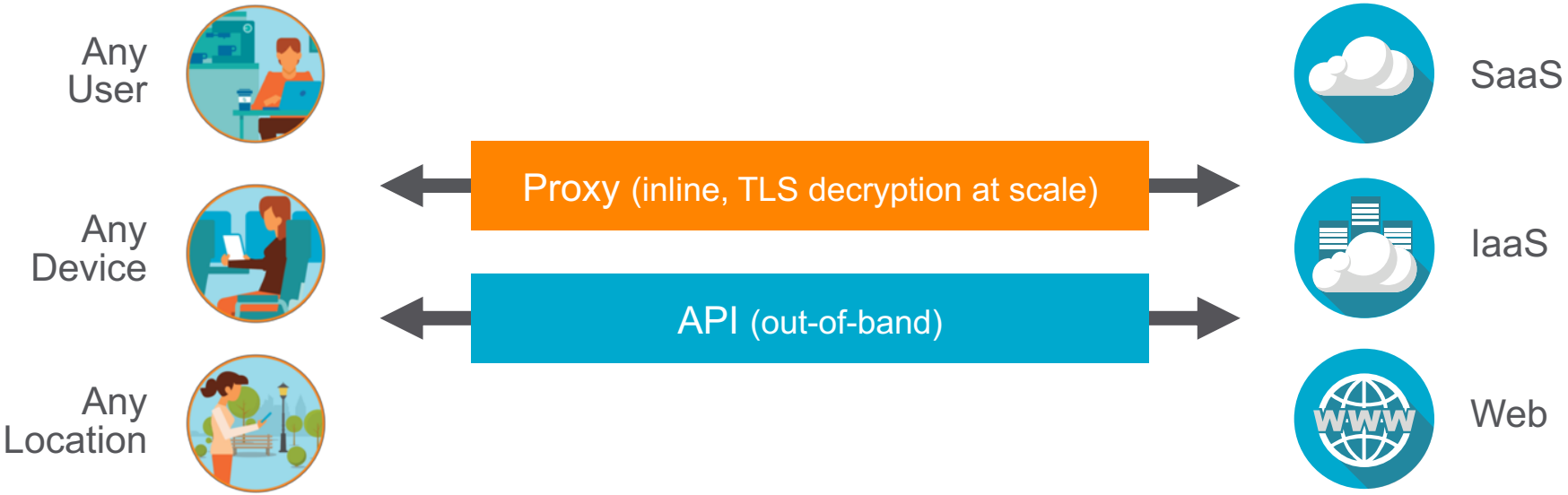
How Netskope is Deployed



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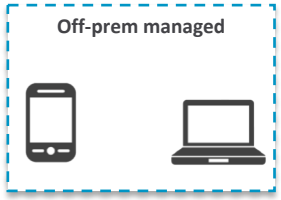
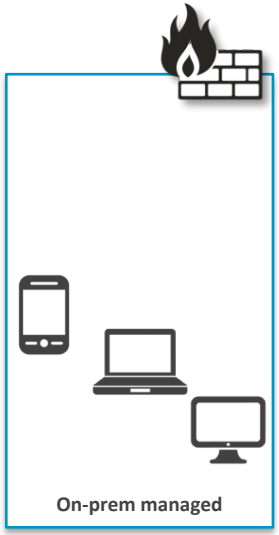
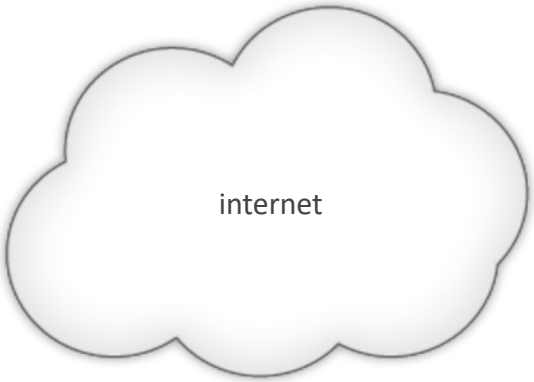
Deployment Modes – starting point







Unsanctioned

Sanctioned

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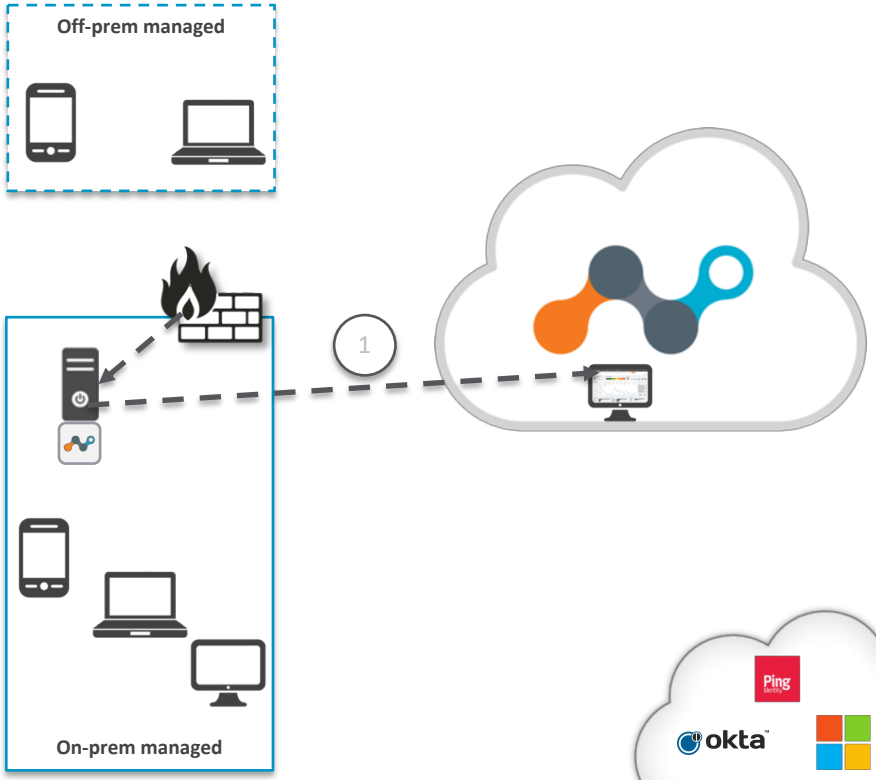
Deployment Modes – Risks Insight



Unsanctioned

Sanctioned

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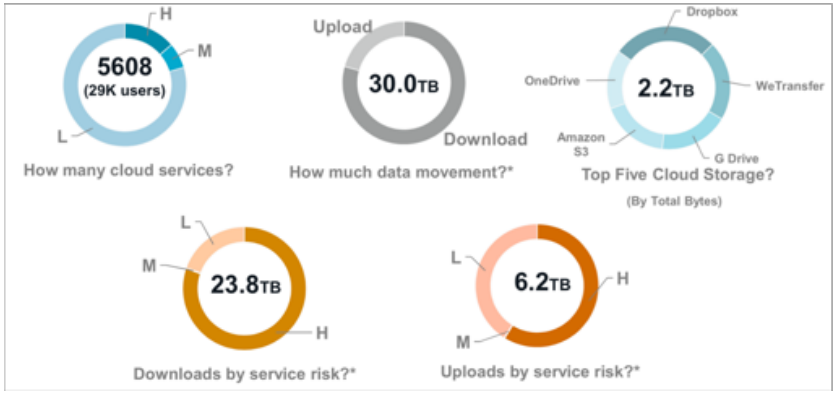
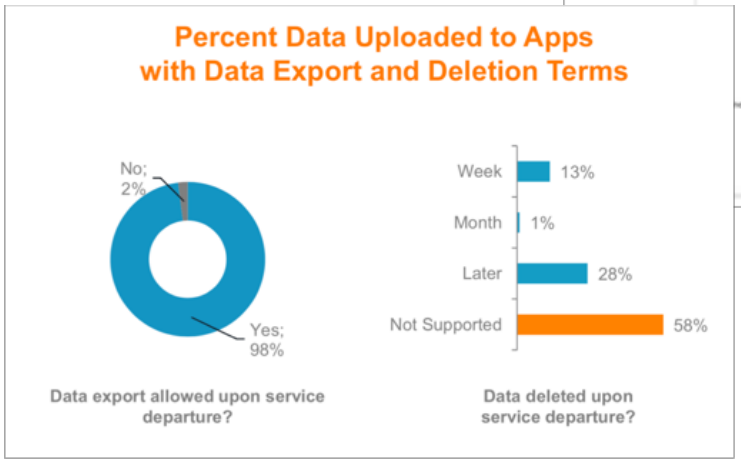
Phase 1 – Risk Insights

Cloud Usage Overview

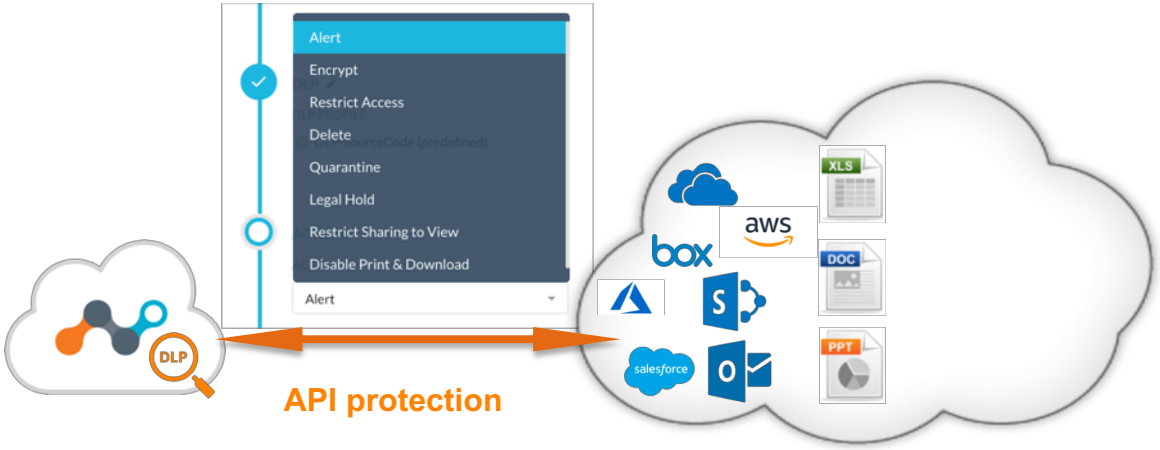


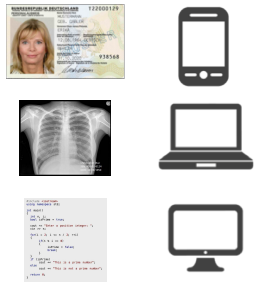
Cloud Storage - Data Leakage

Percent Data Uploaded to Apps with Data Export and Deletion Terms



Control Sensitive Data in Sanctioned Apps

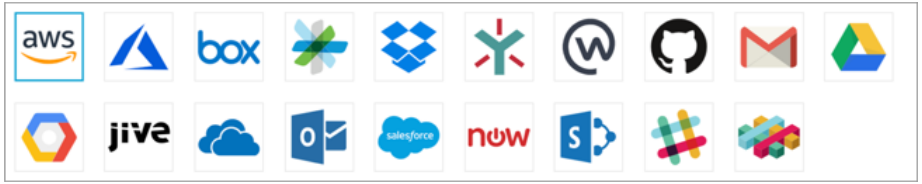




Established API connection between a sanctioned app instance and Netskope

- Scan data at rest
- Discover activity (upload, download, share, copy, move …) by users
- Take appropriate action

- **Non-invasive**
- **Out-of-band**
- **Almost real-time**
- **16 SaaS & 3 IaaS**



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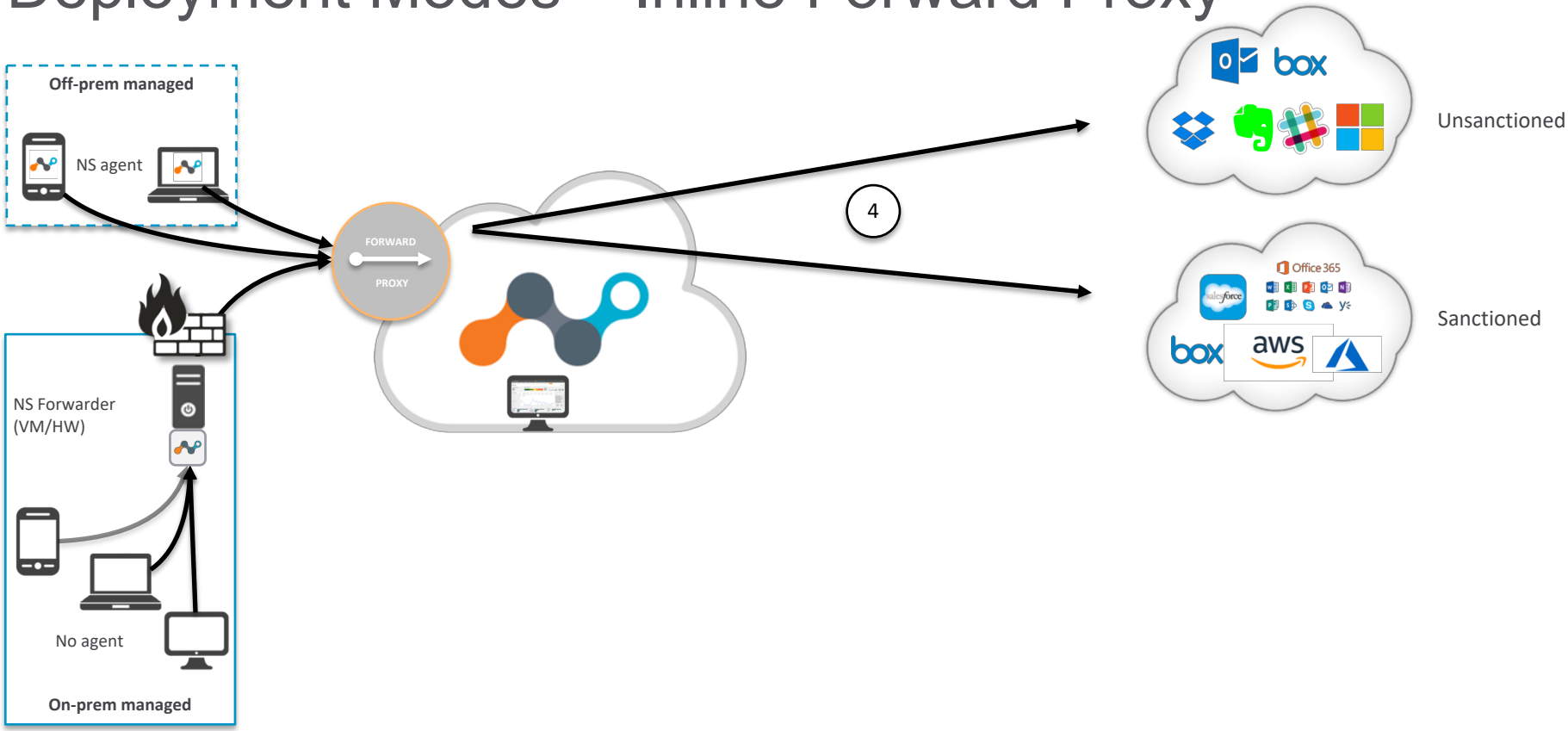
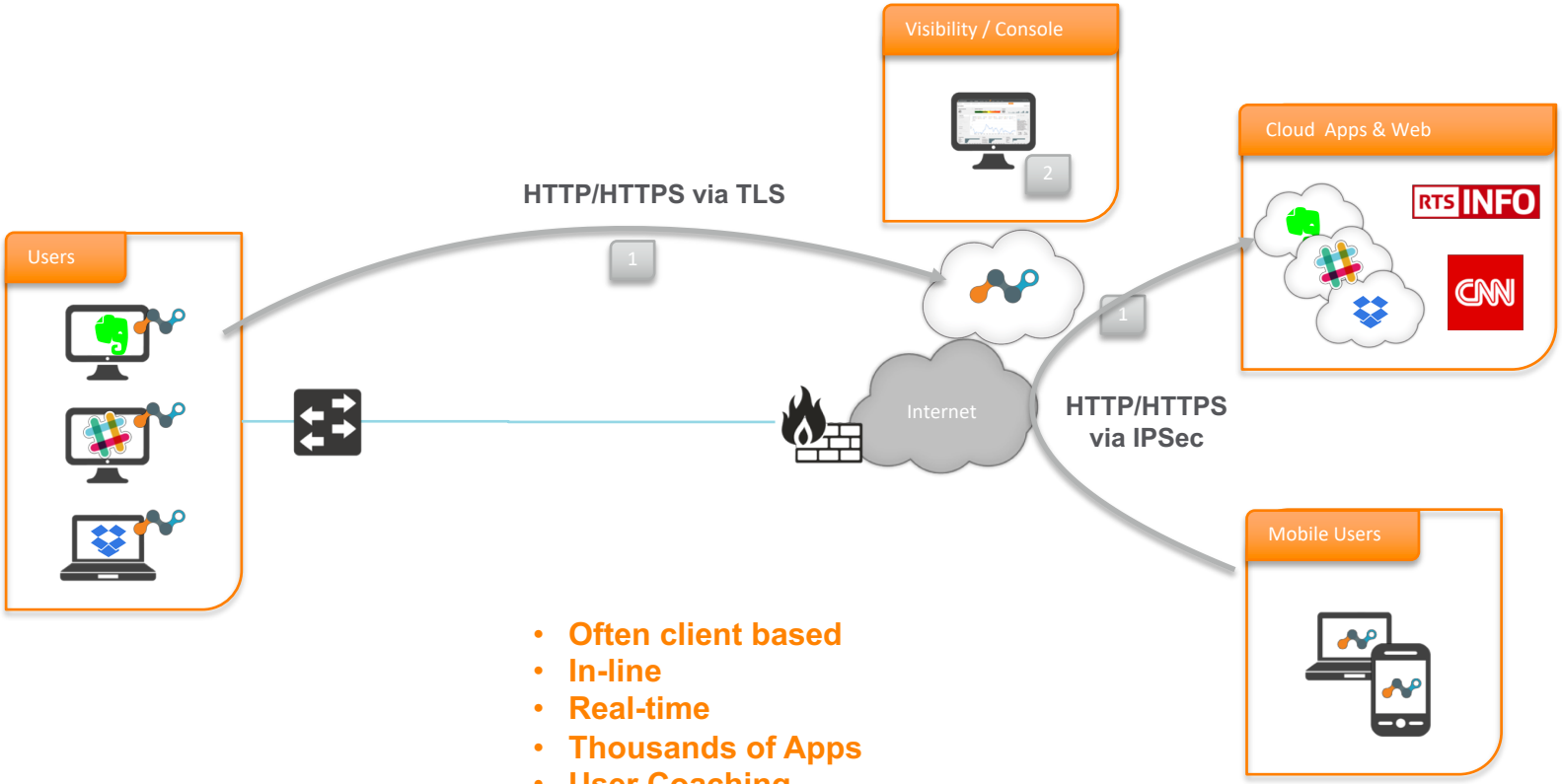
Deployment Modes – Inline Forward Proxy



Granular control of unsanctioned apps



- **Often client based**
- **In-line**
- **Real-time**
- **Thousands of Apps**
- **User Coaching**

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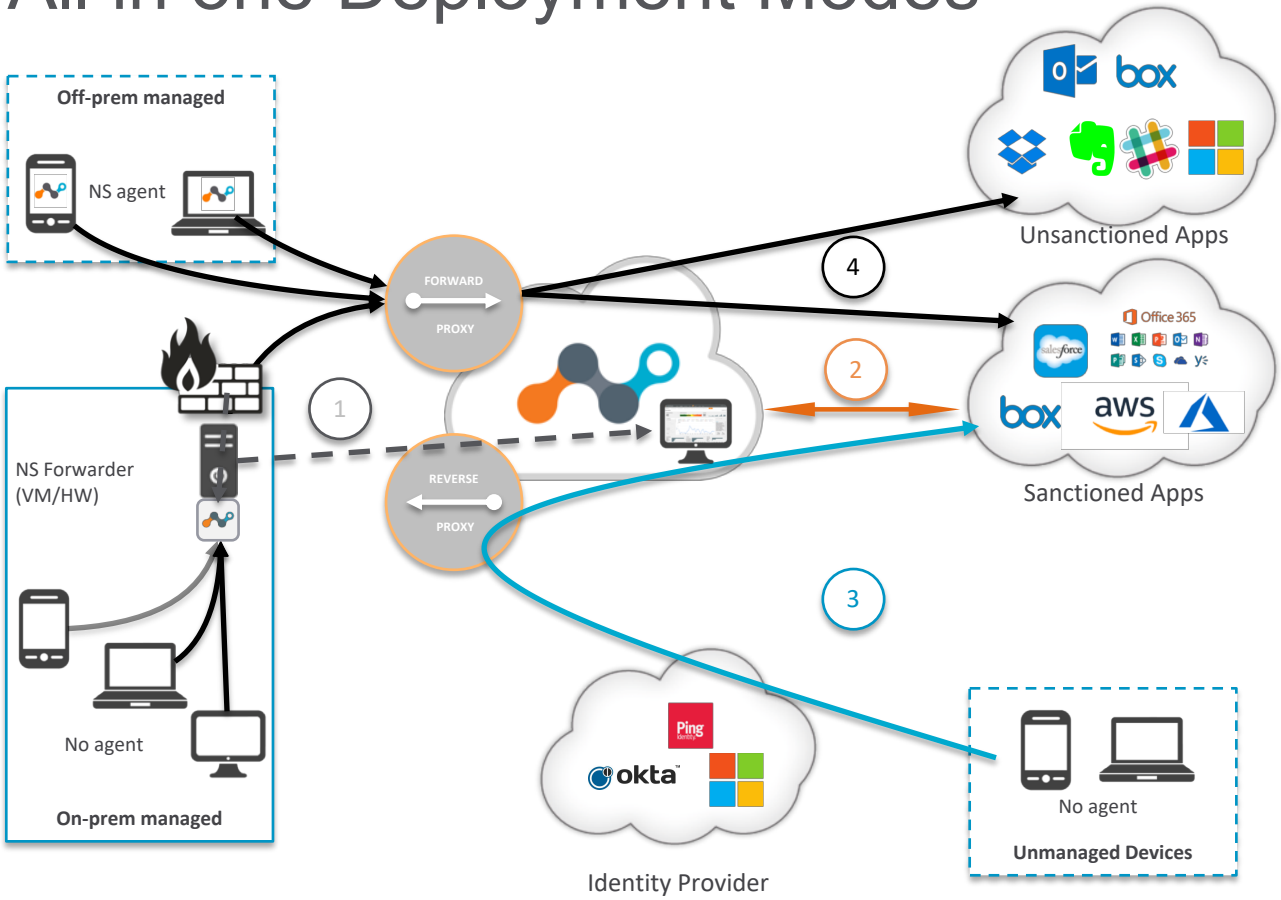
All in one Deployment Modes



1 - Discovery

Discover app usage of sanctioned and unsanctioned apps using real-time or historical log analyis

2 – API protection

Control sanctioned app usage via out-of-band API integration in quasi real-time

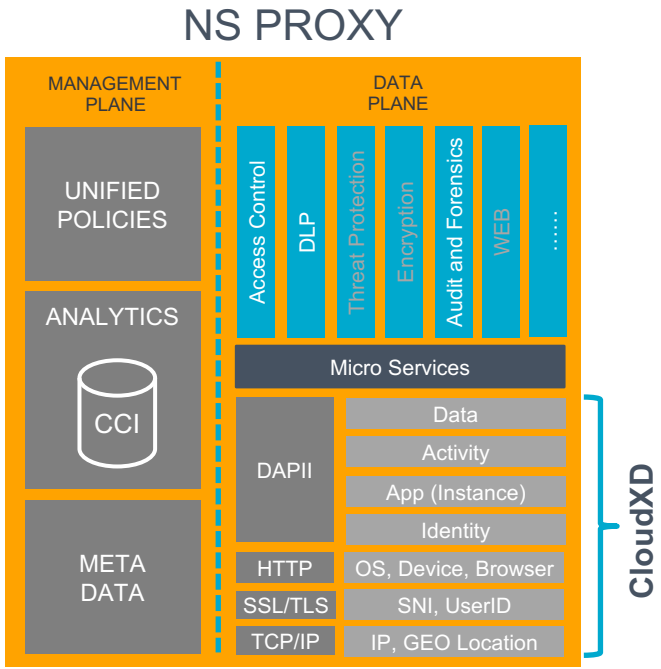
3 – Reverse Proxy

Control sanctioned apps for unmanaged devices inline and in real-time via integration of SSO and traffic steering to the Netskope Security Cloud

4- Forward Proxy

Multiple deployment modes (Client, Secure Forwared, Proxy Chaining) for inline and real-time control of sanctioned and unsanctioned apps, including the possibility of user coaching

Cloud XD Architecture



Cloud Confidence Index

App Connector
- App-specific auto translation
- 50+ activities
- 500+ apps and growing
- Architected to easily add new connectors

Universal Connector
- Heuristics-based auto-translation
- Login-upload, download, etc.
- +4500 apps
- Support for custom apps

Discovery only
- +10’000 apps

Under research
- 13’000 apps

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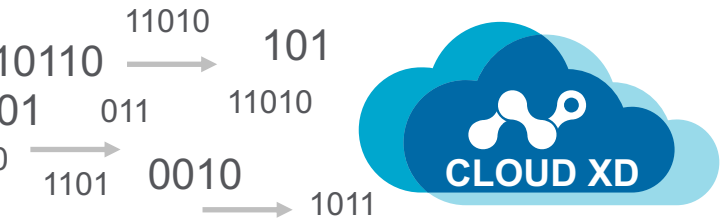
Netskope Cloud XD™

- Understand all inputs (Logs, SaaS, IaaS, Web) in extreme definition (XD)
- Perform big data analytics to eliminate blind spots
- Make policy enforcement simple across all cloud services and the web



Pat from accounting	at the airport	on her mobile	on Power BI	to upload	financials
User, Group, OU	Location	Device (managed or unmanaged)	All Cloud service (including instance) or web destination	Activity (e.g., share, upload, etc.)	Content / Class-ification

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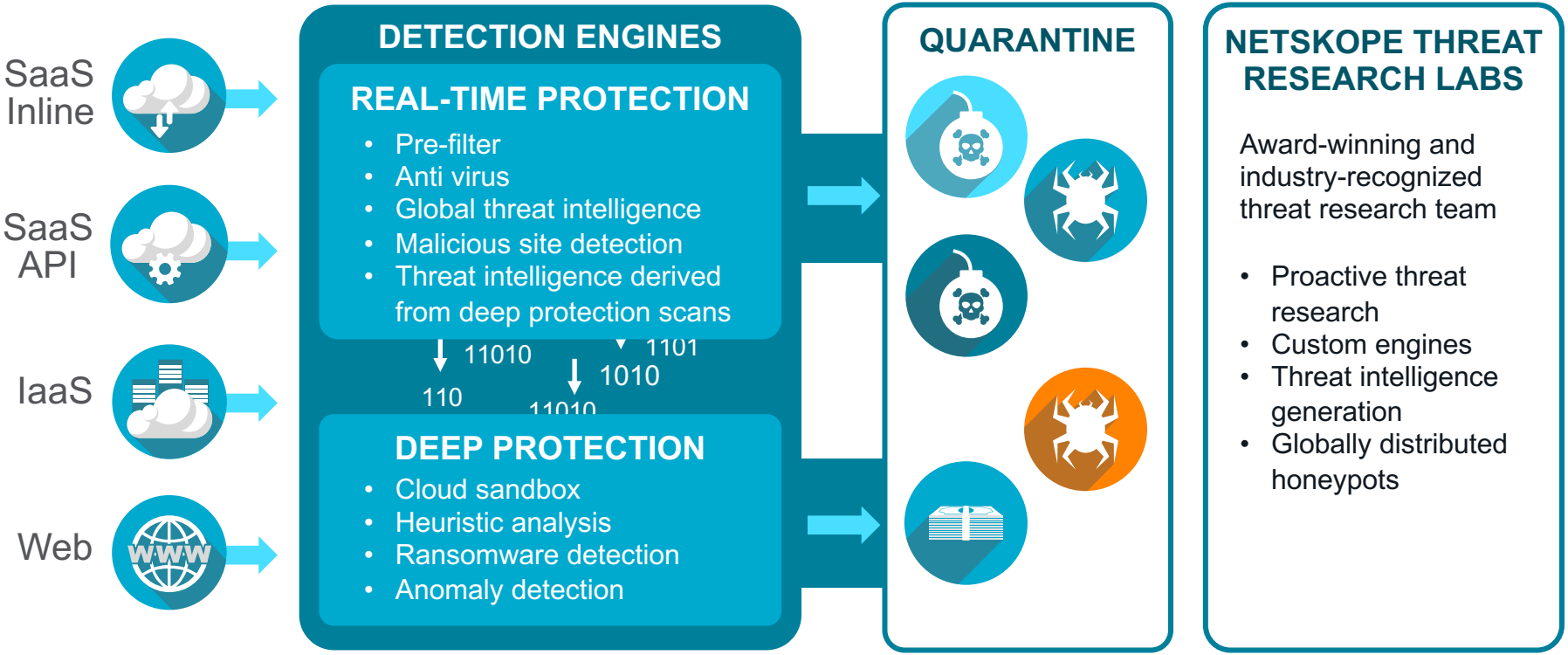
Advanced, Comprehensive Threat Protection



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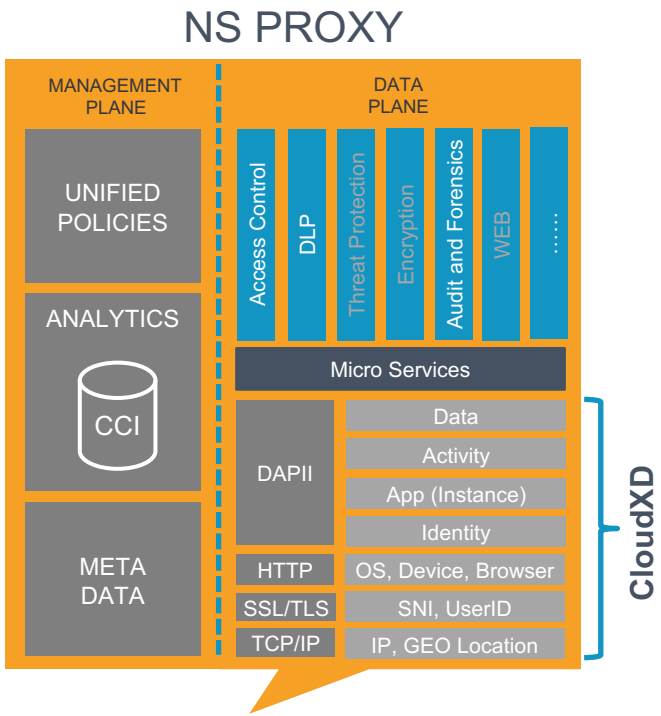

App Connector
- App-specific auto translation
- 50+ activities
- 500+ apps and growing
- Architected to easily add new connectors

Universal Connector
- Heuristics-based auto-translation
- Login-upload, download, etc.
- +4000 apps
- Support for custom apps

Discovery only
- +10’000

Under research
- 13’000

Usrs

- Housed in Equinix data centers globally
- Direct peering with all major carriers
- Computing is built to scale elastically
- Data segregated on a per tenant basis
- Certified SOC-1, Type II; SOC-2, Type I; SOC-2 Type II by independent auditors
- ISO 27001,27018
- Member of CSA STAR
- Privacy Shield certified
- Global Traffic Management

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6 Concerns – 6 Solutions

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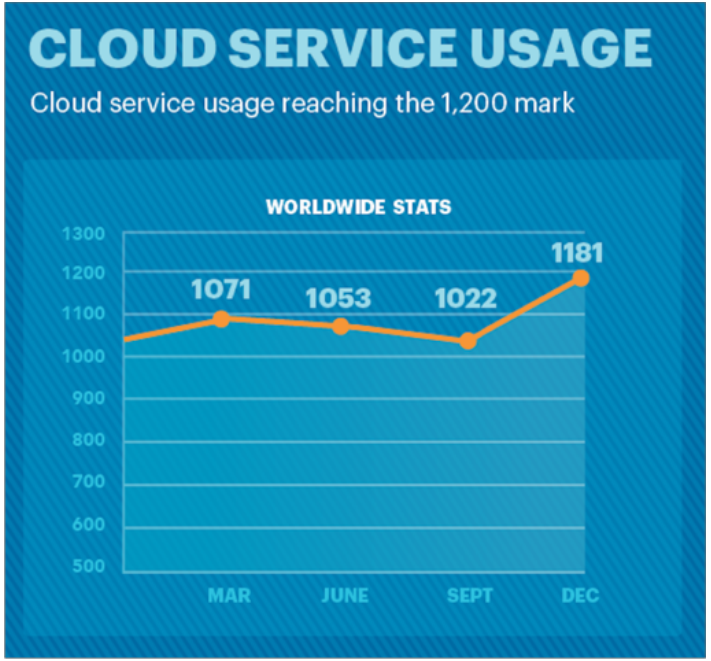
1. I have no visibility of what cloud applications are being used in my organisation.



CLOUD SERVICE USAGE BY CATEGORY

CATEGORY	# PER ENTERPRISE	NOT ENTERPRISE-READY
HR	**139**	**95%**
Marketing	121	97%
Collaboration	95	81%
Finance/Accounting	63	94%
CRM	62	94%
Social	24	89%
Cloud Storage	24	66%
IT Service/Application Management	22	97%

Source: Netskope Cloud Report – Winter 2018

European Commission | GDPR

box UPLOADED **237GB**

UPLOADED **143MB**

Does the app adhere to recognised data centre standards?
Does the app encrypt data-at-rest?
Does the app support multi-factor authentication?
Does the app vendor take ownership of uploaded data?

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1. I have no visibility of what cloud applications are being used in my organisation.

Web Proxy

LOG DATA

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Application	Uploaded Data	Enterprise Readiness
Salesforce	950GB	High
PDF Converter	450MB	Poor
Microsoft Office 365	300MB	High
LinkedIn	200MB	Medium
Facebook	20MB	Low

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2. I have data that should not be stored in my cloud applications. The data that *is* stored in my cloud applications might be exposed publicly.

PCI Security Standards Council

European Commission

Share | Copy link | Downloa

Box, Dropbox, Google Drive, Microsoft Office 365 OneDrive

DOC
Ransomware
Trojan
Crypto-miner

XLS
Visa 4900044320043113 06/18 123
Amex 3758111111111153 12/18 1234
Visa 5404000487763271 04/18 123

DOC
Marie Johnson 05/06/2010 London
Robert Kent 11/07/2014 Oslo
Kristina Lee 09/01/2015 Madrid

PPT
Company Confidential
Patent Pending #00992543-1
Project 'Skyhook' Briefing
Shared

https://company.share.com/r4cd/file/m42jf00s

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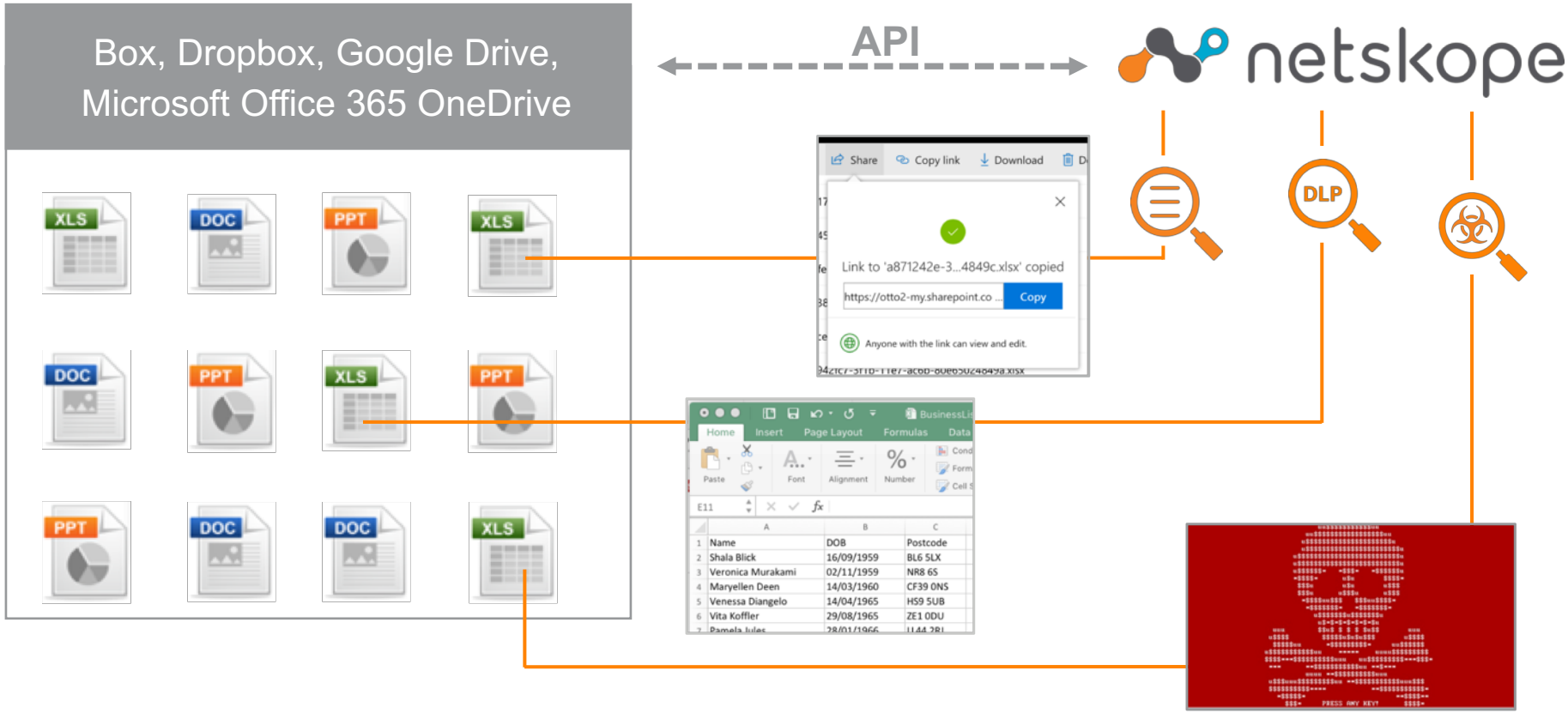
2. I have data that should not be stored in my cloud applications. The data that *is* okay to store in my cloud applications might be exposed publicly.



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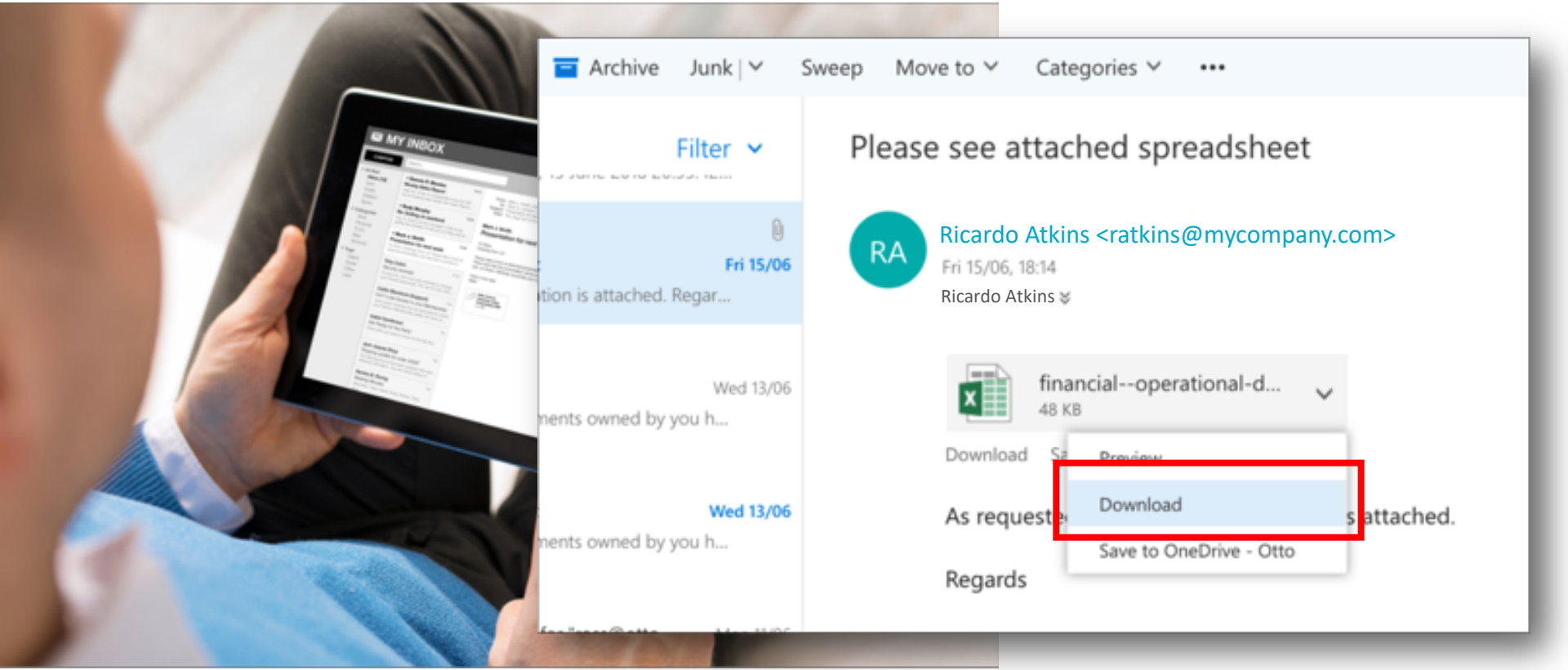
3. My users can download data from my cloud applications to their personal devices.



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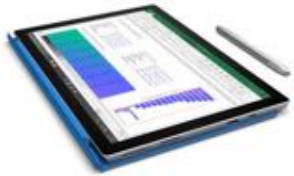

DLP ✓ Uploads
✓ Downloads

✓ Uploads
✗ Downloads

✓ Uploads
DLP ✓ Downloads

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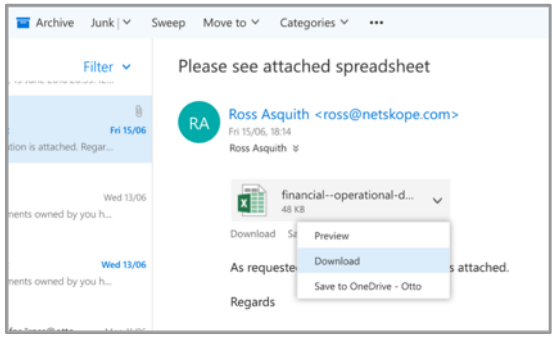

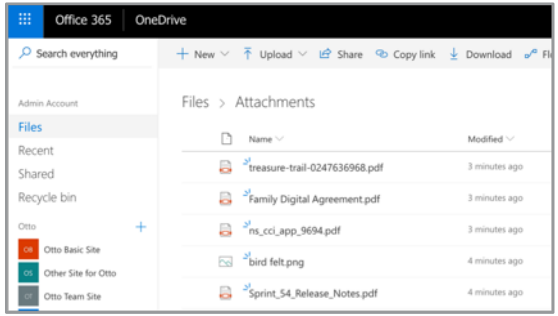

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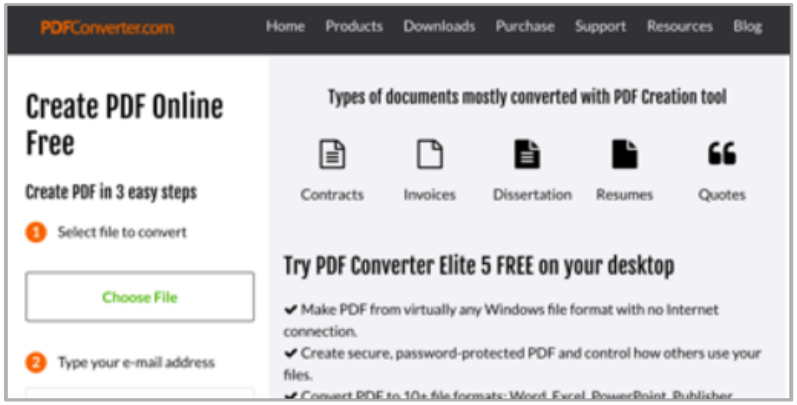
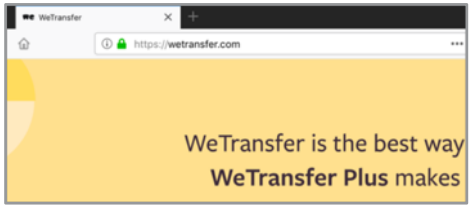
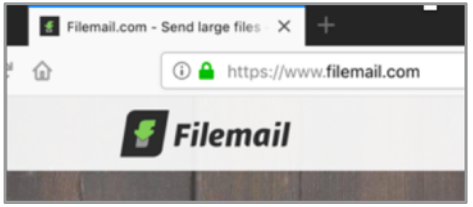
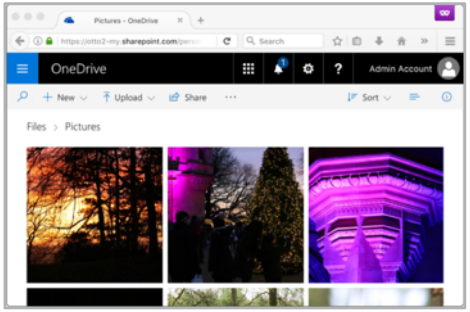
4. My users can upload data to unsanctioned cloud applications.









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4. My users can upload data to unsanctioned cloud applications.

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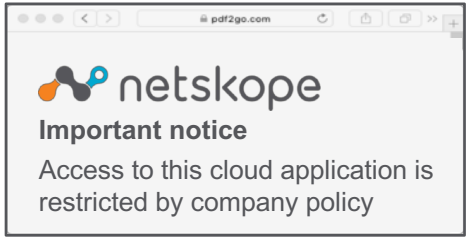
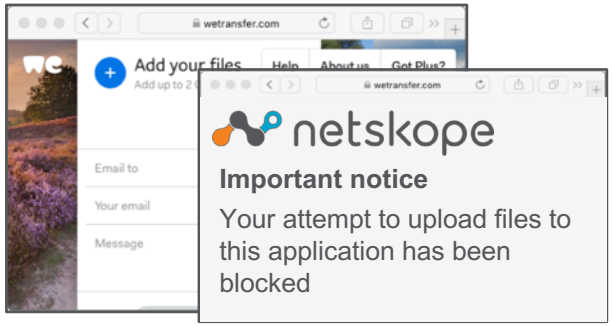
PDF2GO.com
Enterprise Readiness
POOR



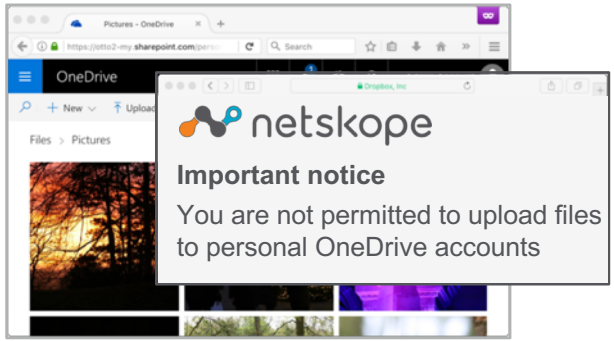
Downloads
Uploads

wetransfer



Downloads
Uploads

OneDrive
Unsanctioned Account



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5. My Public Cloud infrastructure is vulnerable due to misconfiguration. Data that *is* stored in my Public Cloud infrastructure might be exposed publicly.

Time Warner Cable

Kromtech Security Center found two AWS S3 buckets exposed on the Internet […] included internal development information like SQL database dumps, code with access credentials, and access logs. One text file contained more than four million records with information like user names, Mac accesses, serial numbers, account numbers, and transaction IDs.

Accenture

The Cyber Risk Team at UpGuard recently discovered that Accenture left at least four AWS S3 storage buckets unsecured and publicly available for download. Accenture's slip-up exposed authentication credentials, secret API data, digital certificates, decryption keys, customer information, and other data that could be leveraged to target both Accenture and its clients.

https://www.darkreading.com/cloud/10-major-cloud-storage-security-slip-ups-(so-far)-this-year/d/d-id/1330122?image_number=1

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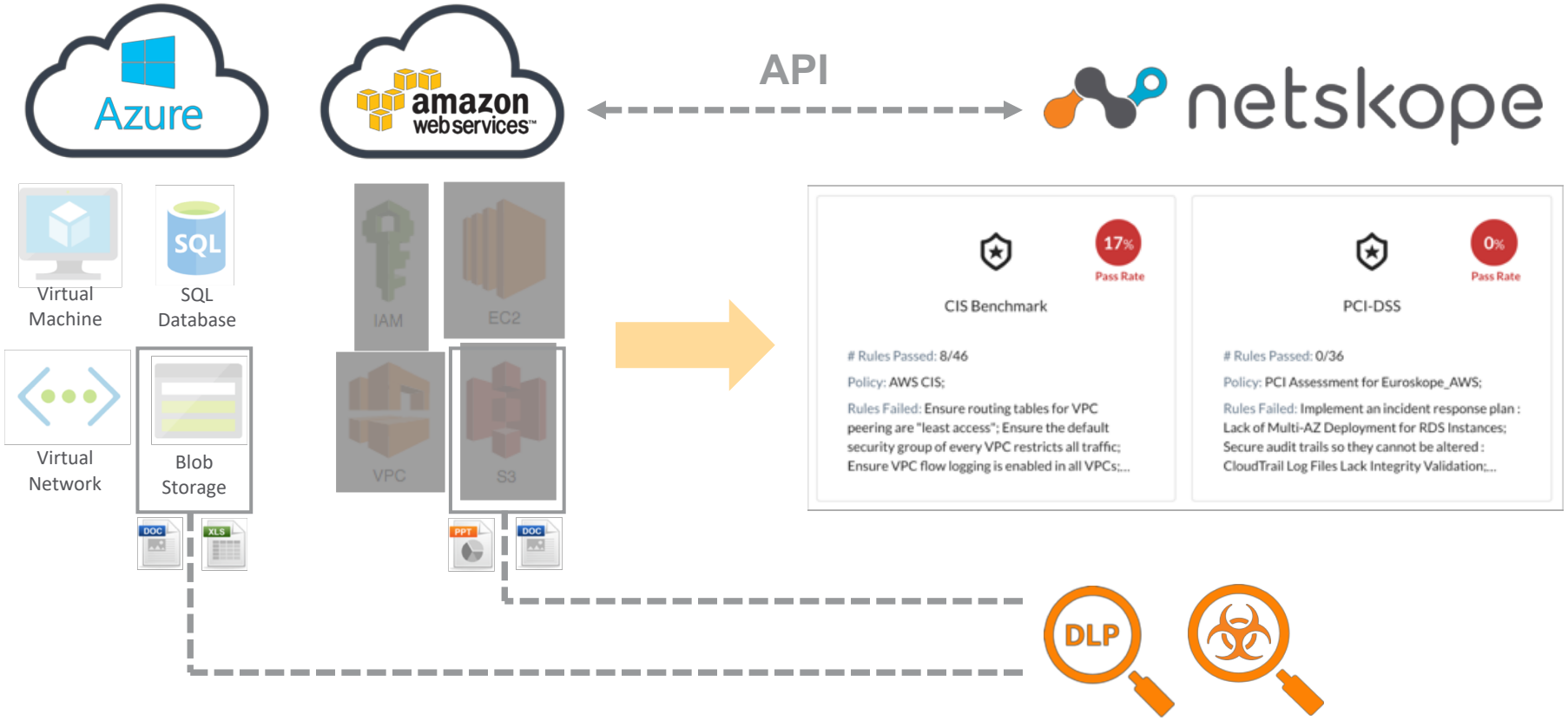
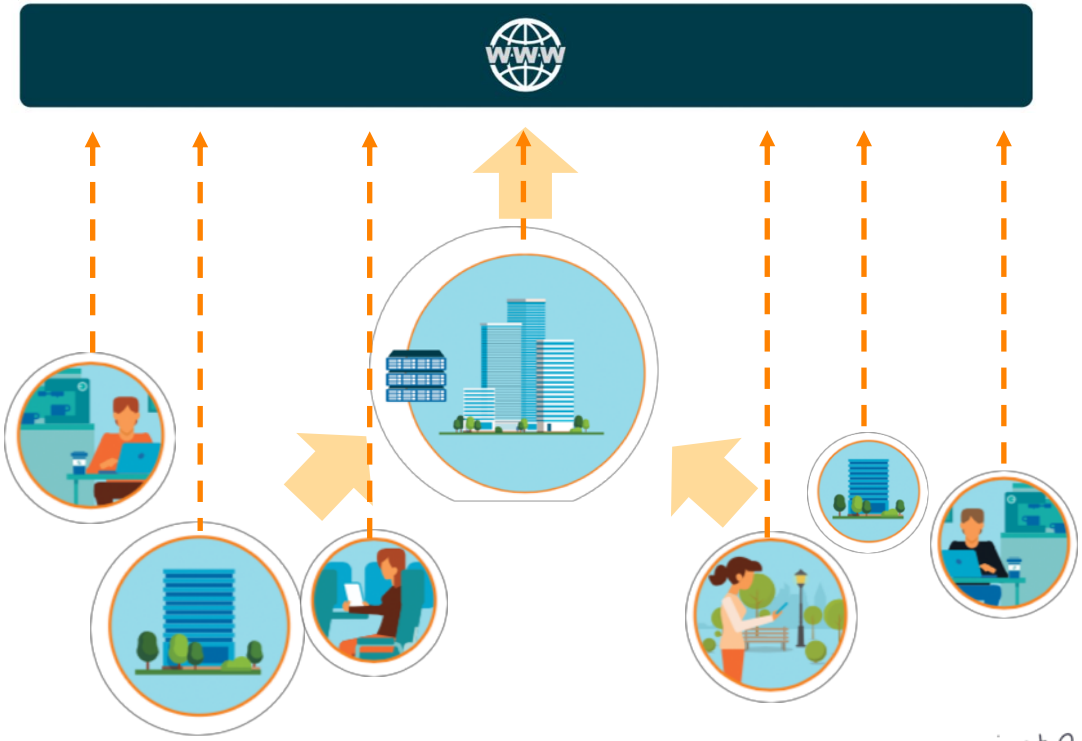
5. My Public Cloud infrastructure is vulnerable due to misconfiguration. Data that *is* stored in my Public Cloud infrastructure might be exposed publicly.



6. My secure web gateway infrastructure needs simplification and needs to provide protection for employees going direct-to-internet.



my SWG wishlist

- SSL scanning at scale for all users
- Advanced threat and data protection
- Real-time web usage analytics
- Web classification and content filtering

...integration with my CASB solution?!

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6. My secure web gateway infrastructure needs simplification and needs to provide protection for employees going direct-to-internet.

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.com

www.playboy.com

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Access to this website is restricted by company policy

http://paypal.co.uk.79u7.pw
http://205.1.45.2/te32.exe

paypal.co.uk

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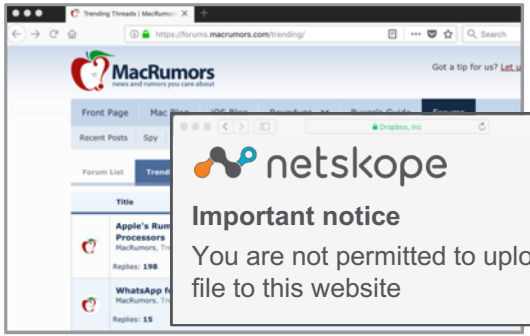
Security notice

Access to this website is restricted by threat protection

Downloads

Uploads DLP



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Summary

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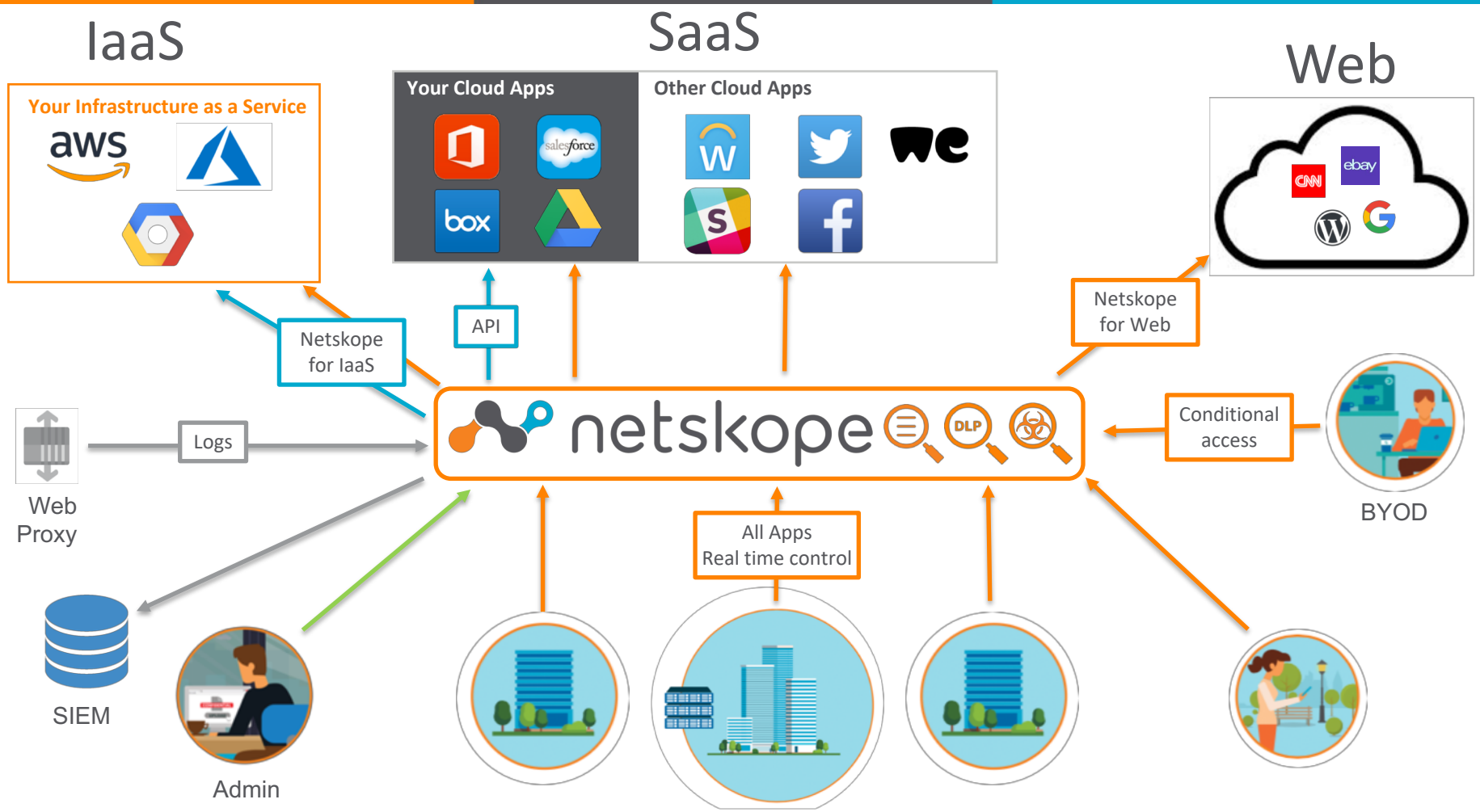

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Netskope One Management

Context-driven security from the leader in cloud security

Smarter Decisions

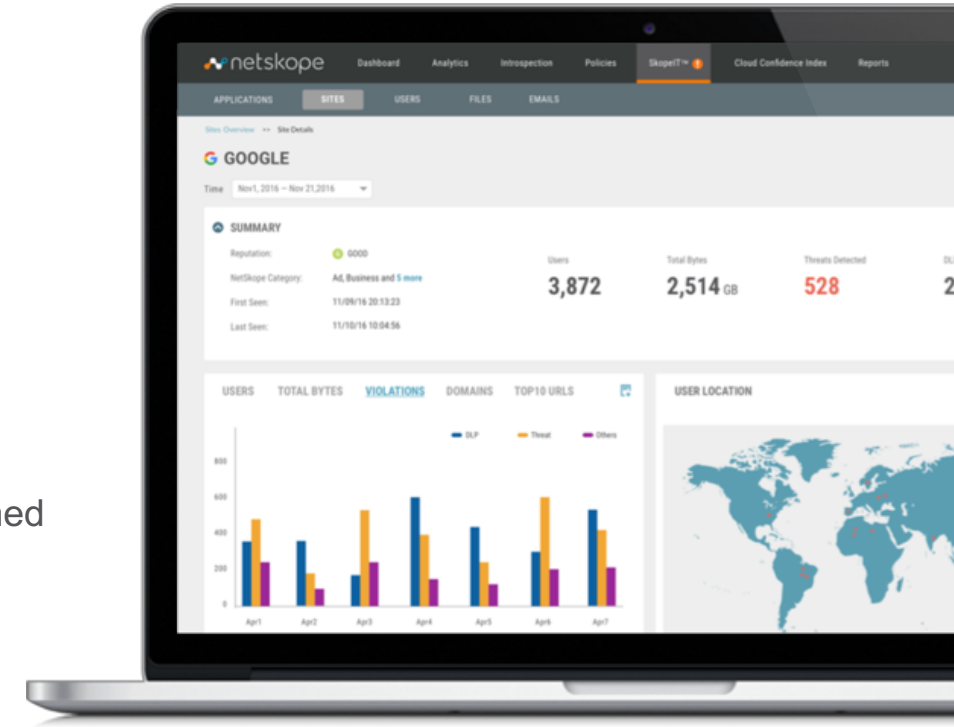
Act fast, with complete context of activities and content

Unified by Design

Deep visibility, control, and protection for SaaS, IaaS and web in one platform

Cloud-native

Protect remote, mobile, and TLS-encrypted traffic with a platform designed for the perimeterless enterprise



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Thank You!

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