

Establishing your Cybersecurity Strategy

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Top Technology Trends



Internet of Things



Integrated Devices & Ecosystems



Cloud Computing



Strategic Big Data



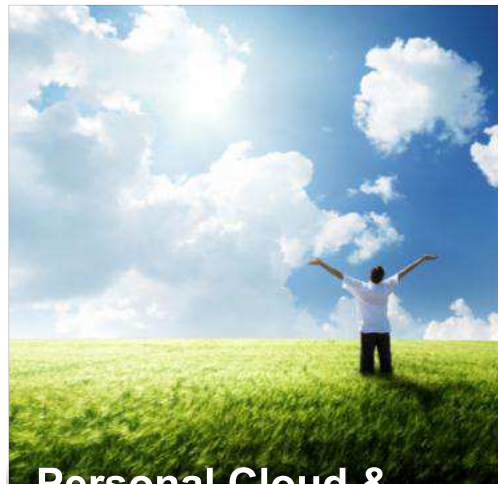
In-Memory Compute Actionable Analytics



Enterprise Risk Mgt. & Cybersecurity



Enterprise App Stores & HTML5 Growth



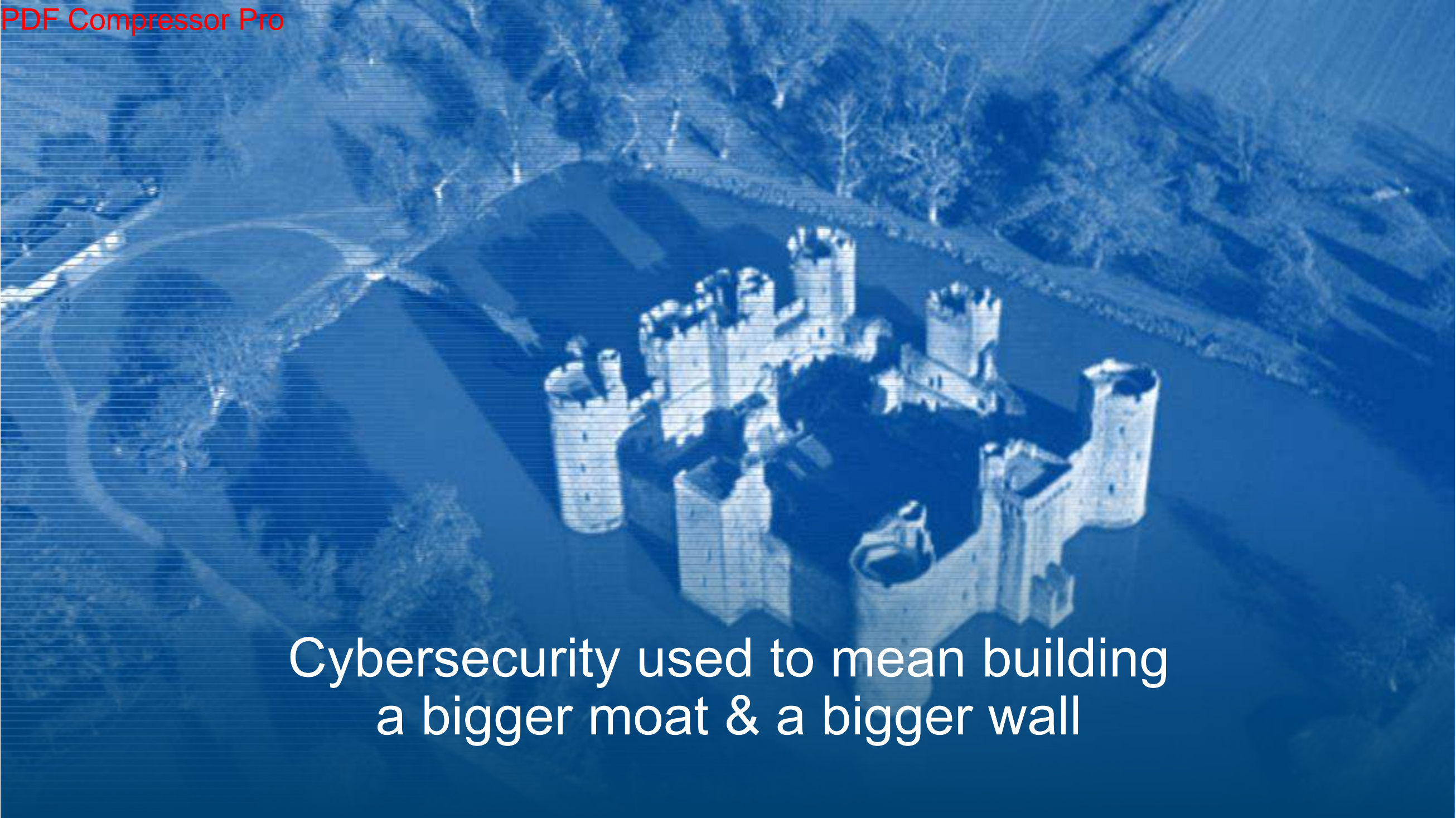
Personal Cloud & Seamless Device Exp.



Business & Niche Social Computing



Wearable Technology & Natural U.I.



Cybersecurity used to mean building
a bigger moat & a bigger wall



How do you build a moat or wall to protect a cloud? (You can't.)

Complex Challenges

Driving need for new security approach

\$1 Trillion

Global cost of computer crime

Malicious software



Exponential Growth of IDs

250% rise in **Mobile Malware**



Widespread **legacy technology**

Targeted attacks



More sophisticated **attacks**

5x more **compromised records**

Data theft & insider leaks



77 Million **user accounts stolen**



200,000 **credit card accounts stolen**

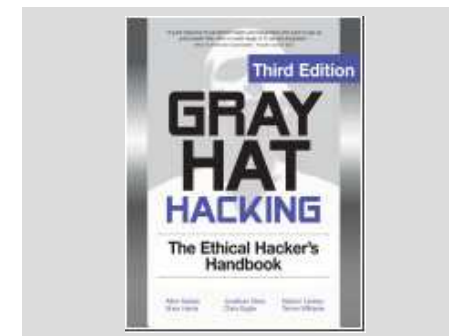
Cyber terrorism & hacktivism

90,000 **email addresses stolen** from US military contractor

24,000 **files stolen** from Pentagon

Threats & Actors: Moving from Fun to Cash

- Cyber-crime
- Cyber-espionage
- Cyber-terrorism
- Cyber-war



There are 3 Categories of organizations,
Those who have been attacked, know & reported
Those who have been attacked, know & did not report
Those who don't know yet!



How Microsoft can help

Identity Security

Cloud is the “new normal”

Growing use of cloud services requires a smart Security & Identity foundation.



**Assess your
cloud Security &
Identity readiness**

**Define and deploy
your cloud
identity**

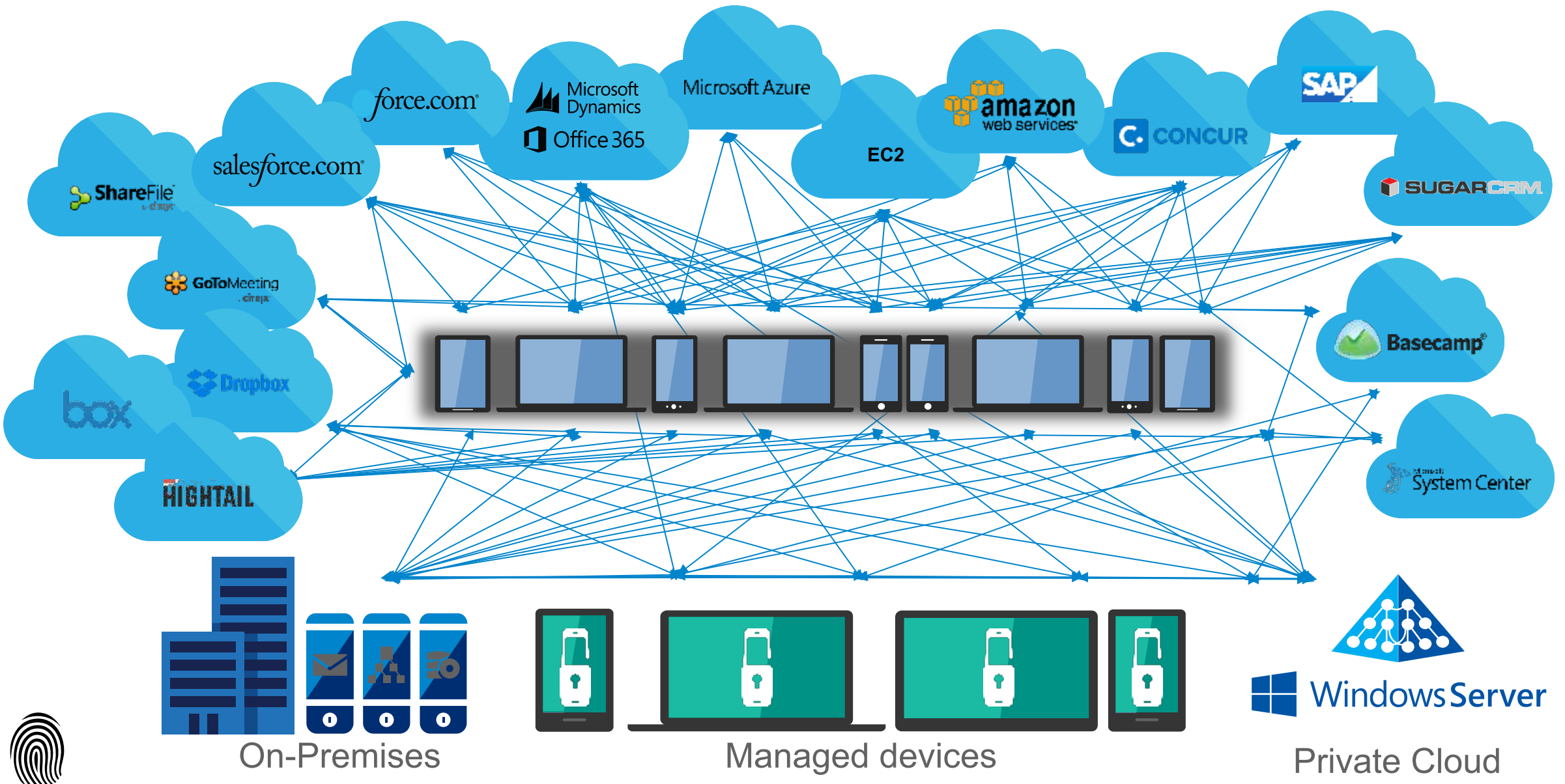
**Implement the
cloud security
measures that fit
your organization**

**Update your
policies
and
administration
model**

**Help provide
security for
your cloud
administrators**

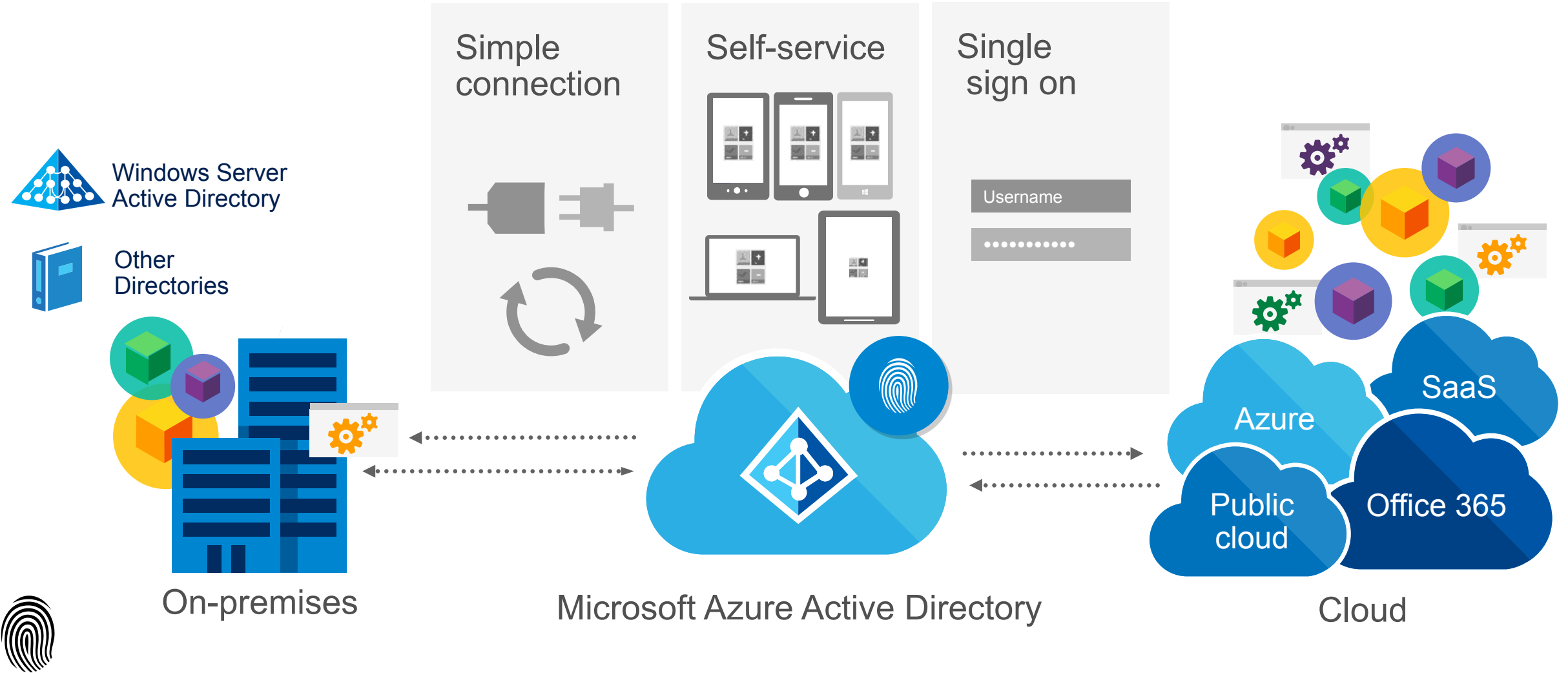
**Build added
security
into your cloud
workloads**

The current identity reality...



Integrated Identity as the control plane

One common identity



Identity Driven Security

Intelligent cloud

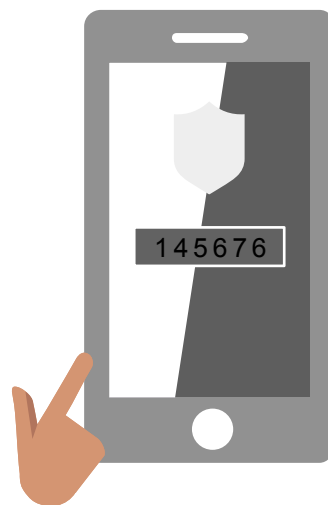


Machine learning

Security reports

Privileged Identity Management

App security

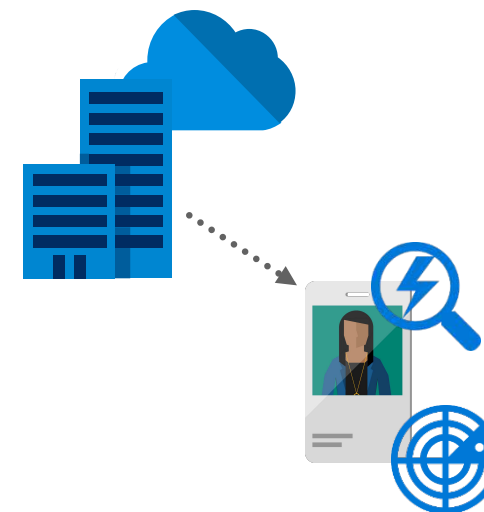


Conditional access

Multi-factor authentication

Cloud App Discovery

Detect threats



User behavioral analysis

Simple attack timeline



How Microsoft Advanced Threat Analytics works



Security issues and risks

- Broken trust
- Weak protocols
- Known protocol vulnerabilities



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Thursday
March 26, 2015

Computers' Broken Trust Relationship
The trust relationship between CLIENT1 and the domain is broken.

- Group policy is not applied (security violation)
- Users cannot log into the computers.

Note Email Export to Excel Open



Malicious attacks

- Pass-the-Ticket (PtT)
- Pass-the-Hash (PtH)
- Overpass-the-Hash
- Forged PAC (MS14-068)
- Golden Ticket
- Skeleton key malware
- Reconnaissance
- BruteForce



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March 26, 2015

Identity Theft Using Pass-the-Hash Attack

CLIENT2's hash was stolen from CLIENT2 and used from CLIENT1.

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Abnormal Behavior

- Anomalous logins
- Remote execution
- Suspicious activity
- Unknown threats
- Password sharing
- Lateral movement



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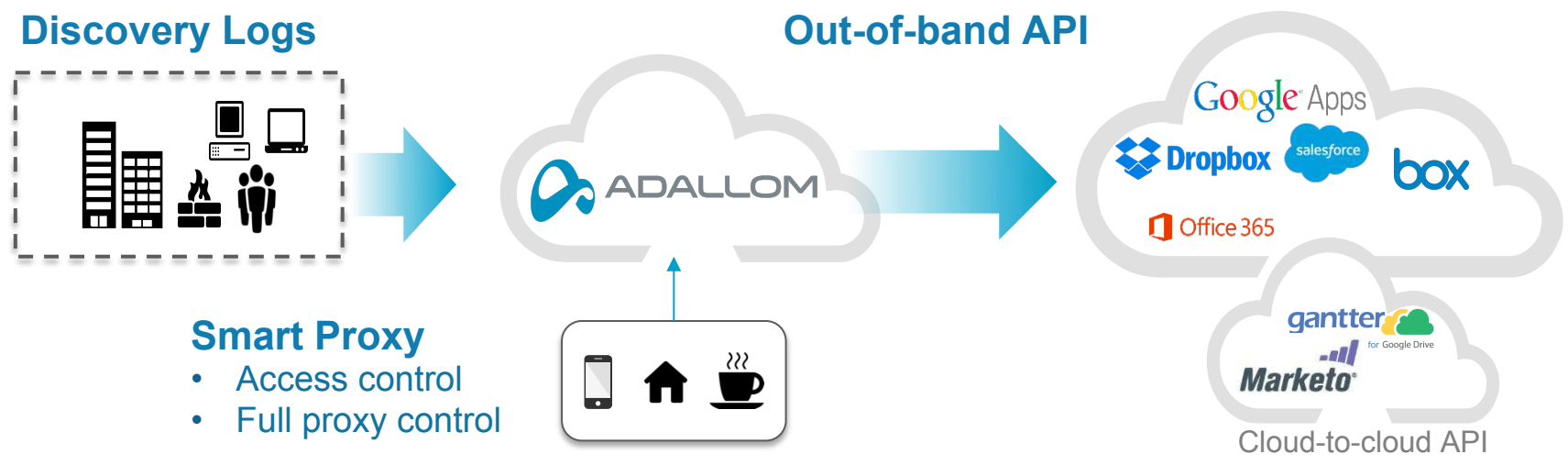
Suspicion of Identity Theft Based on Abnormal Authentication or Resource Access Behavior

Wayne Hatton exhibited abnormal behavior based on the following activities:

- Performed interactive login from 4 abnormal workstations.
- Requested access to 4 abnormal resources.
- Exceeded the normal amount of working hours.

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Deployment Overview



Phase 0: Discovery

Discovery of unsanctioned cloud apps

Phase 1: Governance & Security

Out-of-band governance and security

Phase 2: Access Control

In-line access controls
"Allow based on device (managed/unmanaged), IP, location, user, role, posture"

Phase 3: Session Controls

In-line session controls
"Allow Sales to download Box documents on unmanaged devices, but encrypt/IRM"

Mobility Solutions

Mobility is a game changer

In order for modern IT to provide controlled access to the right services while minimizing the risk of leakage, the very foundations of your identity and security systems must be adapted to mobile devices through innovative supplemental capabilities



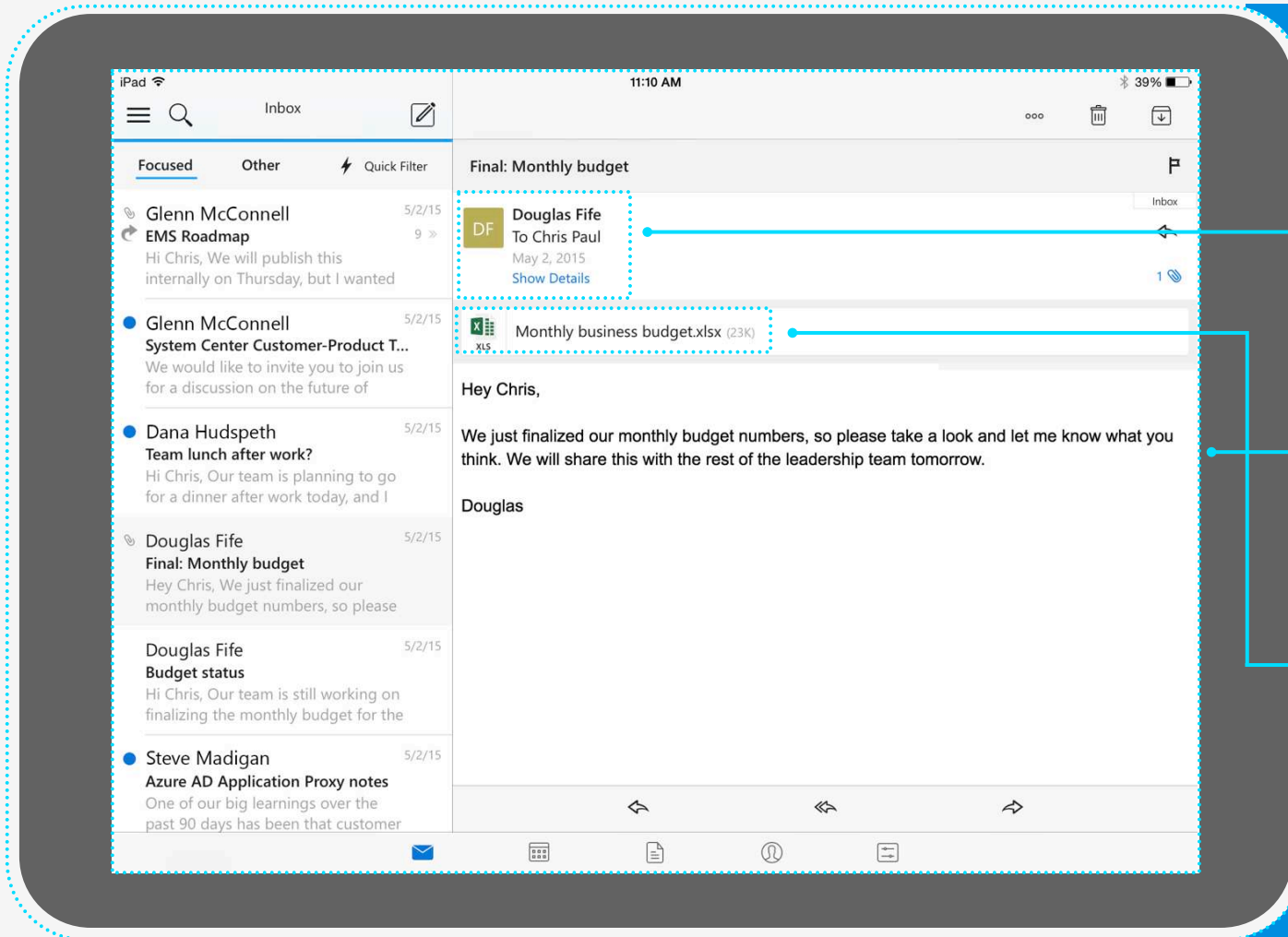
**Define and deploy
your mobile identity**

**Help secure your data
that is in transit or is
stored on devices**

**Deploy
More secure devices**

**Manage your devices
life cycle**

Managed email and productivity



Identity

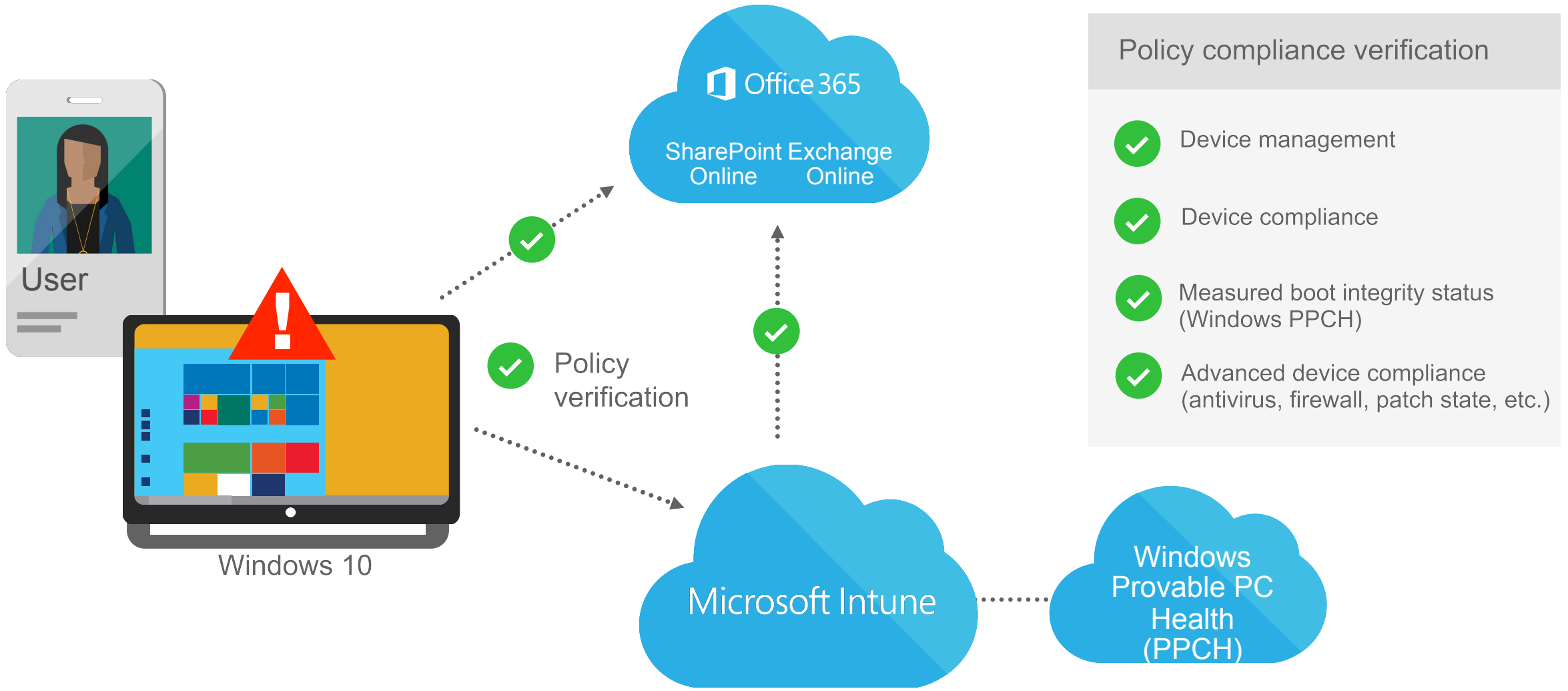
Device

Application

Data



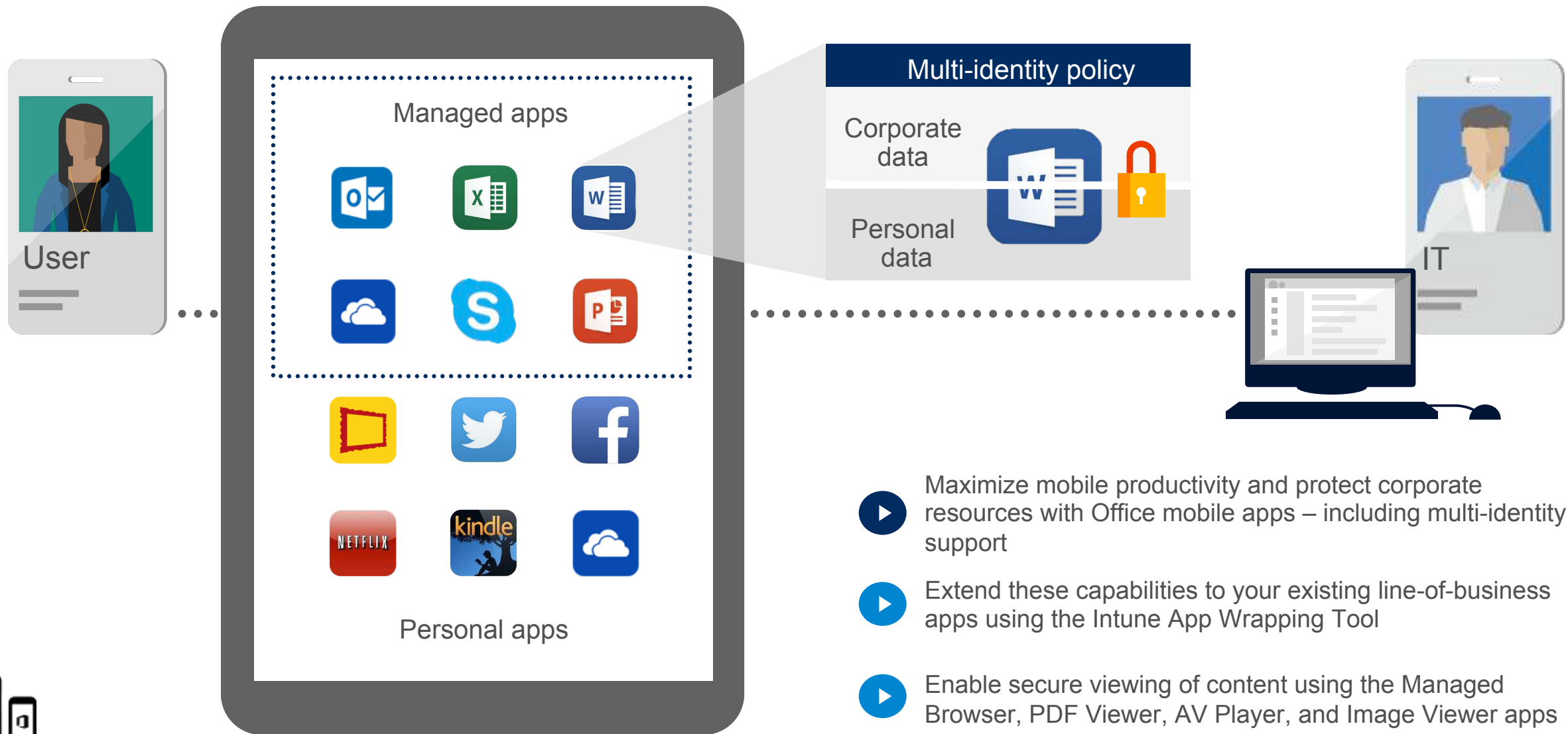
Conditional access



Policy compliance verification

- ✓ Device management
- ✓ Device compliance
- ✓ Measured boot integrity status (Windows PPCH)
- ✓ Advanced device compliance (antivirus, firewall, patch state, etc.)

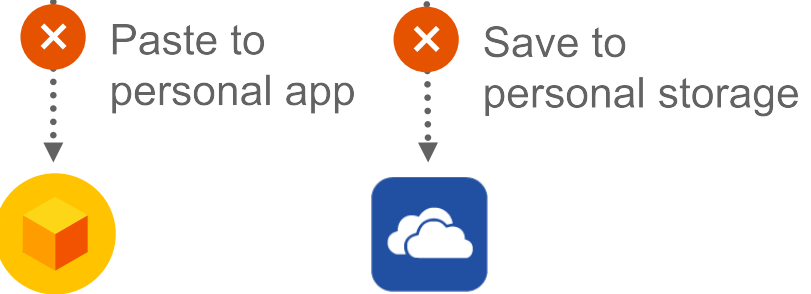
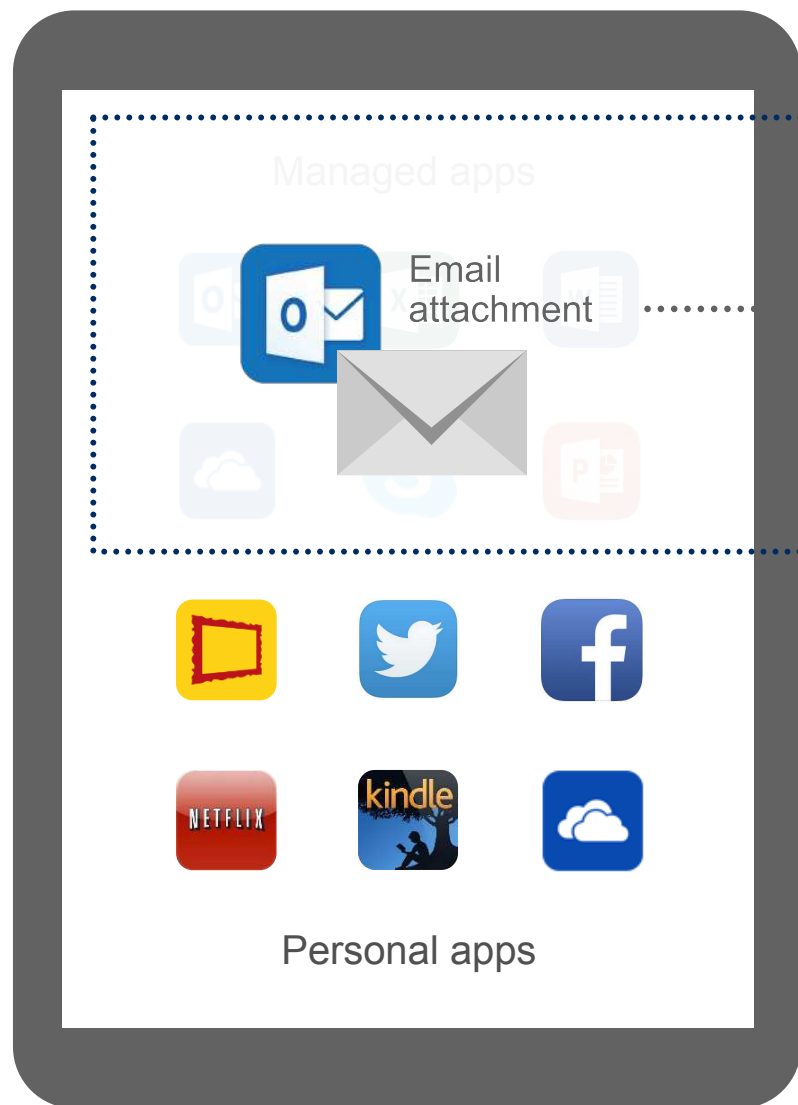
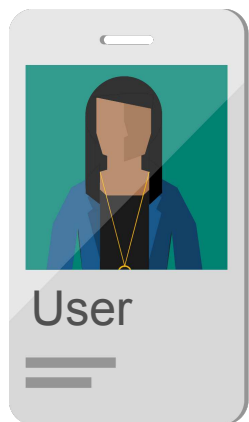
Mobile application management



- ▶ Maximize mobile productivity and protect corporate resources with Office mobile apps – including multi-identity support
- ▶ Extend these capabilities to your existing line-of-business apps using the Intune App Wrapping Tool
- ▶ Enable secure viewing of content using the Managed Browser, PDF Viewer, AV Player, and Image Viewer apps



Mobile application management



▶ Maximize productivity while preventing leakage of company data by restricting actions such as copy, cut, paste, and save as between Intune-managed apps and unmanaged apps



Information Protection

Information protection is at the nexus of the transformation

It is the solution to the diametrically opposed challenges of protecting intellectual property from rising threats and making it available from almost anywhere on any device.

Assess your critical data

Help **protect data** that is hosted on your infrastructure by using tailored solutions

Deploy secure devices for people who are processing data

Define and apply security policies to your data in motion



Concerns...

My existing DLP protection is too reactive.
Can data be 'born encrypted'?

IT must 'reason over data' to stay compliant,
yet we need our sensitive data to be encrypted.

How do I prepare for a
fading perimeter?

We want small steps to protect
data now! We don't want to slowly
implement the 'perfect grand solution'.

Data privacy is
mandated!

Peer-to-peer federation is not
practical or scalable.
How do we establish 'trust'?



Azure Rights Management



Encryption



Access control



Policy enforcement



Document tracking



Document revocation



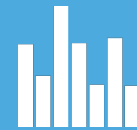
Classification and labeling



Email



Files



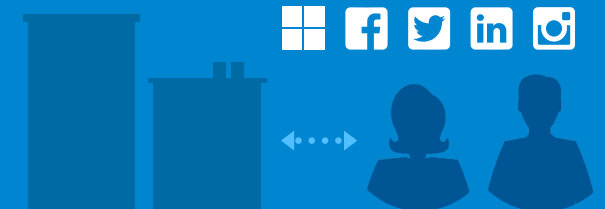
LOB apps



Share internally

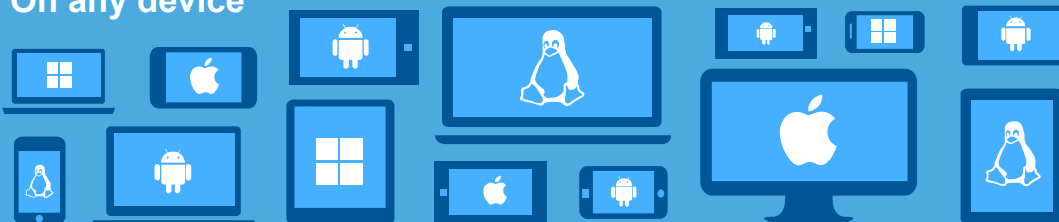


Share externally (B2B)



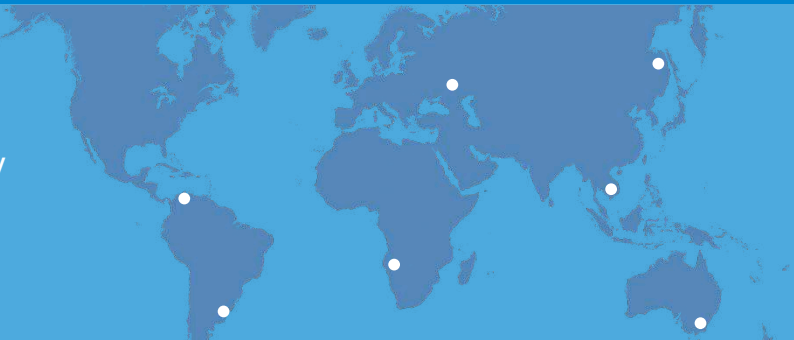
Share externally (B2C)

On any device



In any part of the world

- US
- EU
- APAC
- China
- Germany



Encrypt files and data

- ▶ Protect ANY File
- ▶ Share with ANY Person

- ▶ View on ANY Device
- ▶ Track & Manage from the cloud

