Net++ TECHNOLOGY

N E V E R U J N I K O M E 2 0 2 3

Zero Trust Network Access

Zero Trust is a Fundamental Shift in Security Approach
Never Trust, Always Verify

Dubravko Hlede

Compromised Credentials

Over **80%** of breaches within hacking involve brute force or the use of lost or stolen credentials.

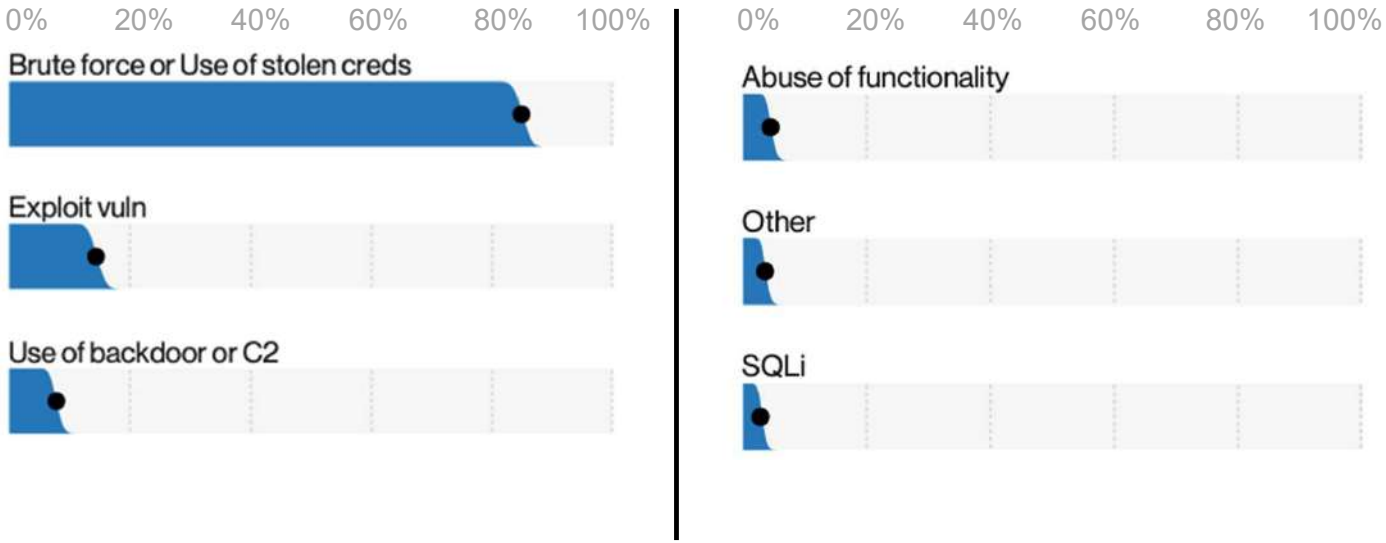

Figure20. Top Hacking varieties in breaches (n = 868)

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Compromised Devices

40% of breaches involved compromised web application servers.

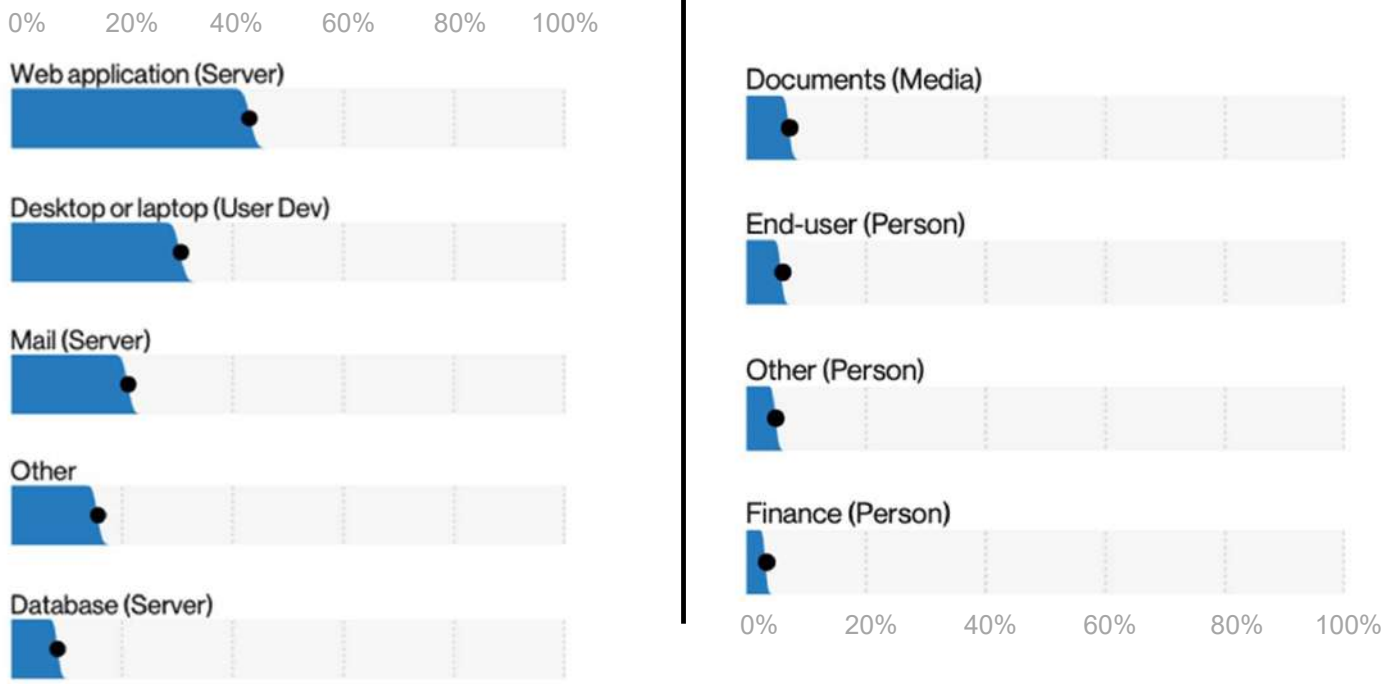

Figure 34. Top Asset varieties in breaches (n=2,667)

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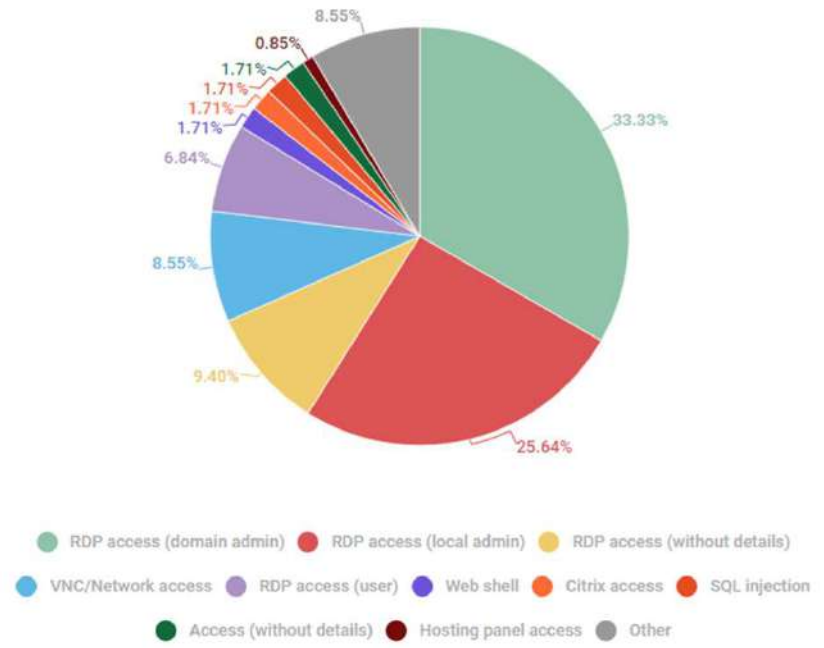
RDP Access compromises are hitting new heights

- Environments in the public cloud are mostly accessed directly through the internet
- 4,901,966 RDP servers publicly accessible (by Shodan.io)
- 23,158,423 SSH servers publicly accessible (by Shodan.io)
- Attackers get brute force access to those servers and sell the credentials to cyber criminals

If analyzed in terms of access type, most posts offer RDP access or a VPN + RDP bundle (75.21% of lots). In the diagram below both of these options belong to the categories "RDP access (without details)", "RDP access (local admin)", "RDP access (domain admin)" and "RDP access (user)".



https://securelist.com/initial-access-data-price-on-the-dark-web/106740/

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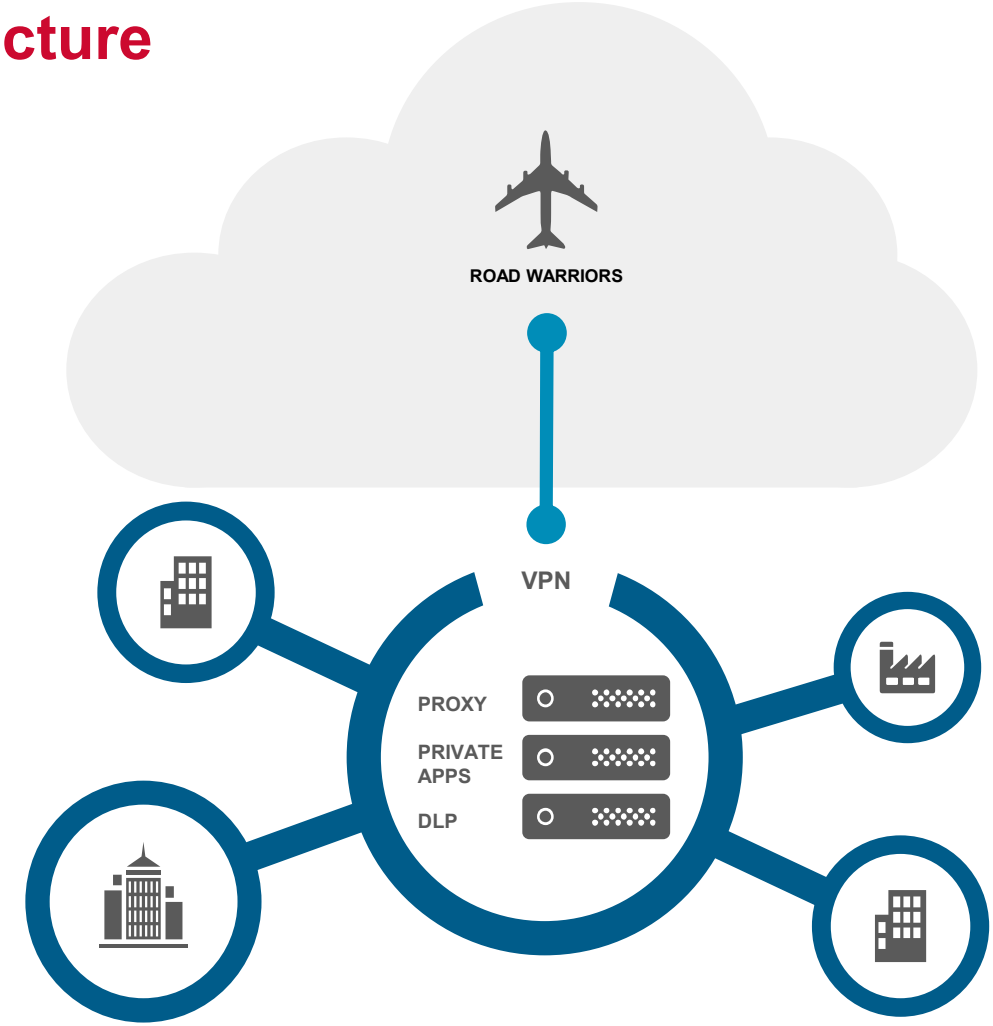
Legacy Architecture



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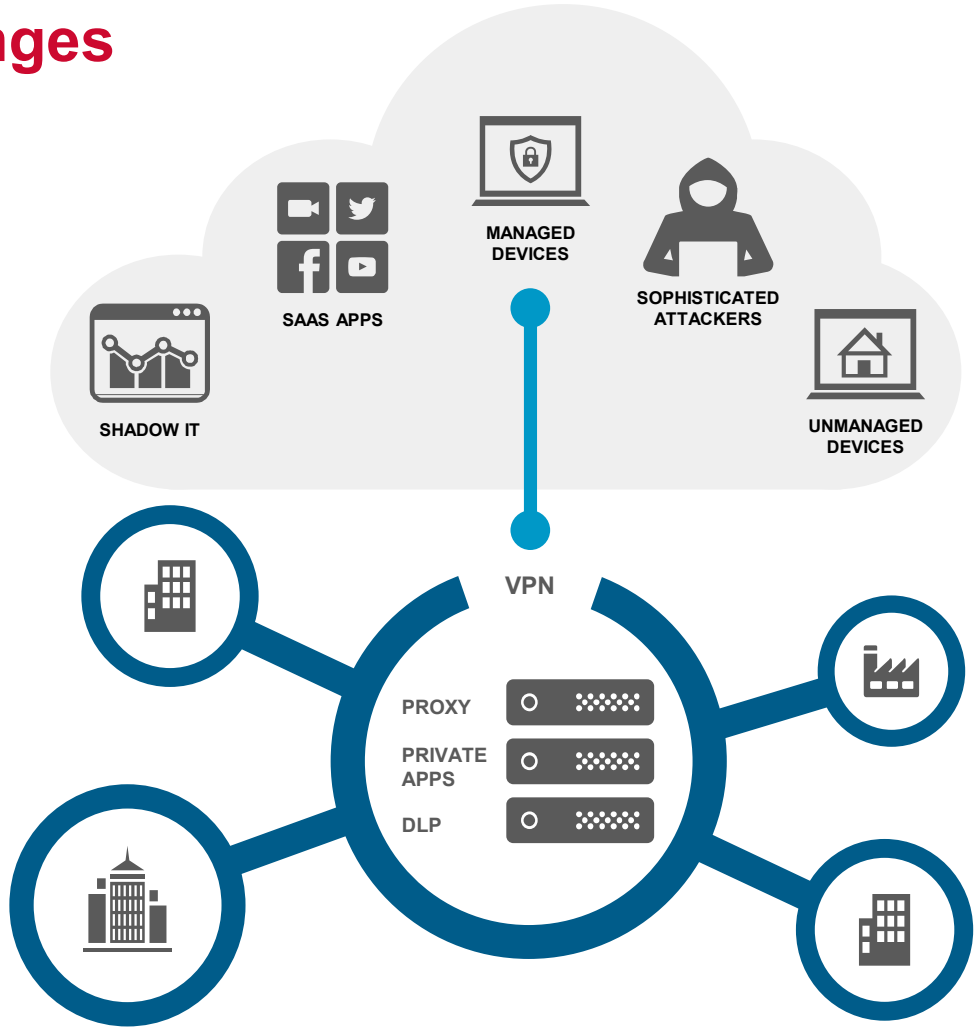
Modern Challenges



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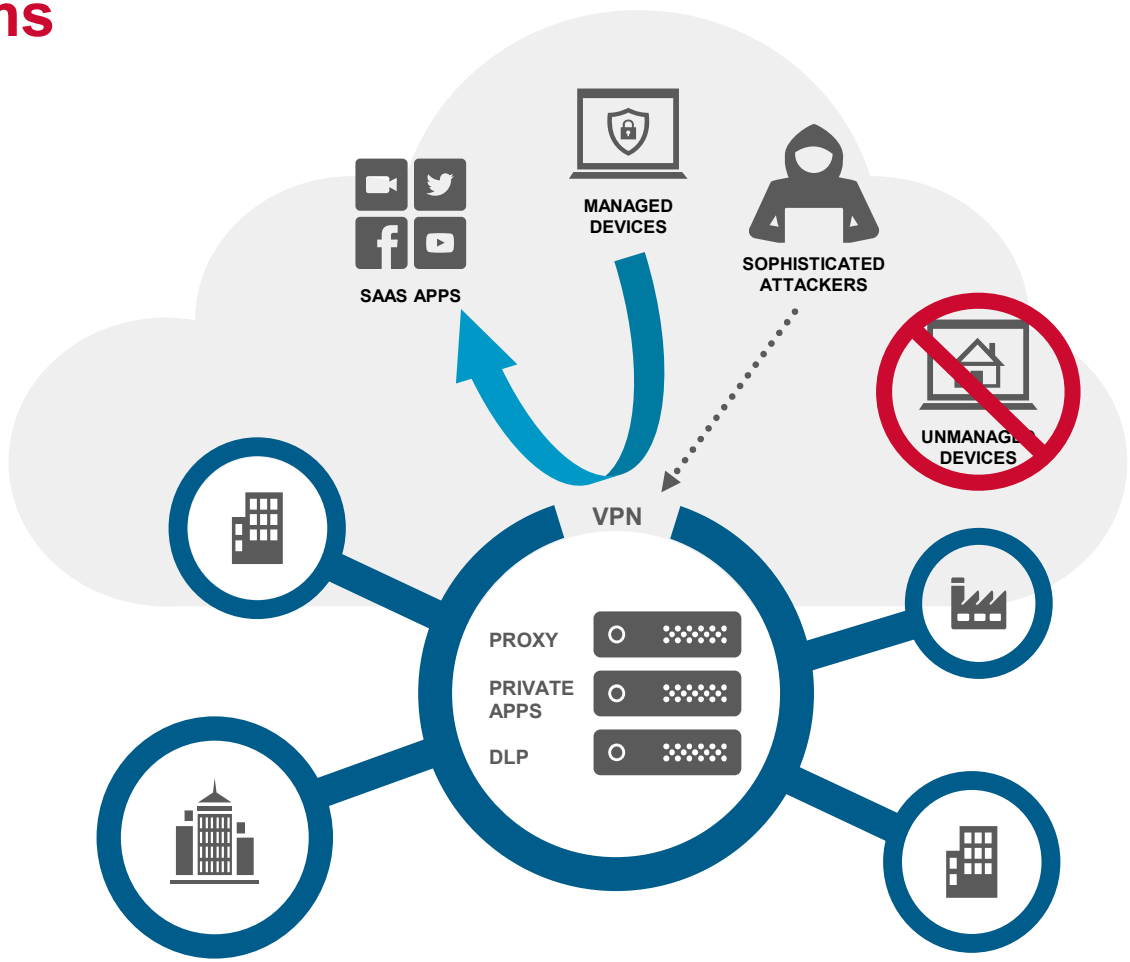
Corporate VPN Problems

- Inefficient Traffic “Hairpin”
- Full Network Access
- Scalability
- Managed Devices Only
- Operational Cost



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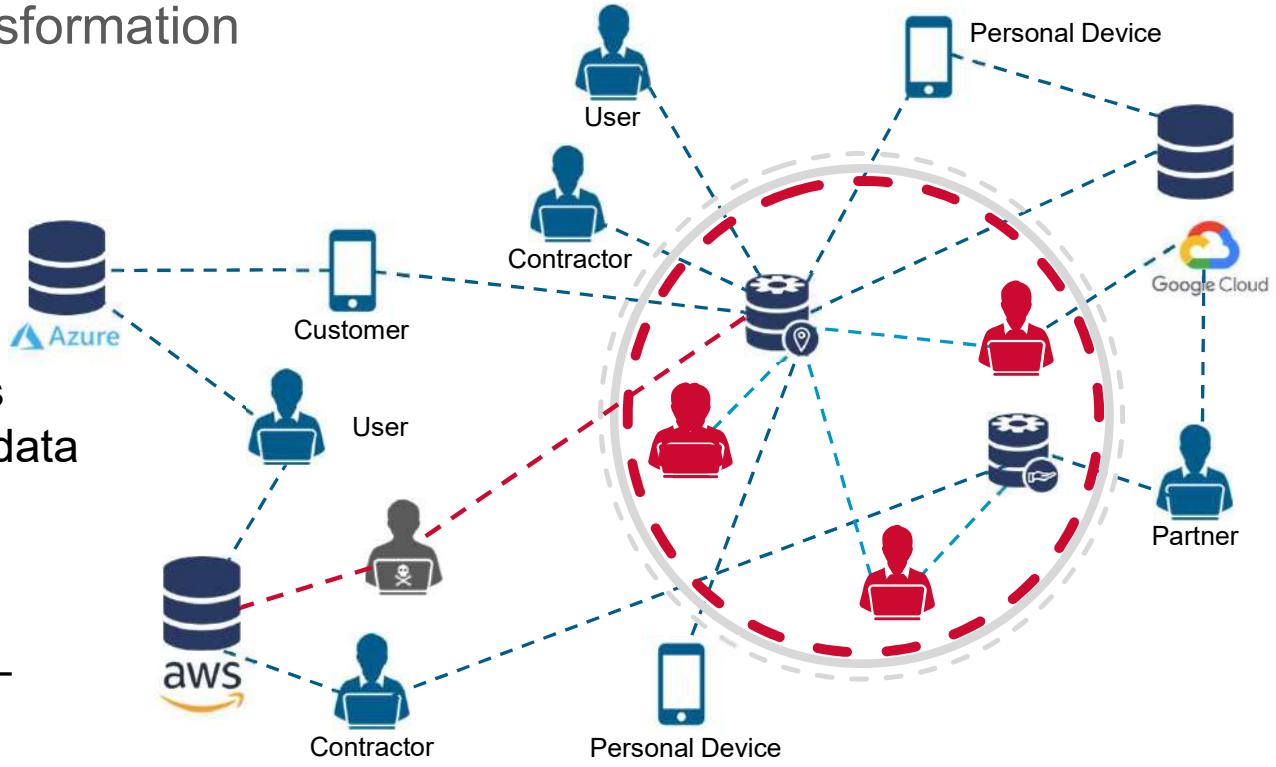
Modern IT Network—Application Centric

The Challenges of Digital Transformation

- Apps, data and employees have moved outside of the traditional network—there is no perimeter to defend
- Partners, contractors and others need access to corp. Apps and data
- Access needs to be limited/ restricted
- Device types have proliferated—including BYOD



Applications left the walled garden….

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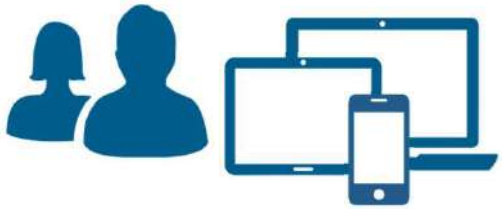
Zero Trust is a Fundamental Shift in Security Approach

Based on “Never Trust, Always Verify” Principle



Verify Every User / Device

Enforce Least Privilege

Assume Breach

Zero Trust is a data-centric security model centered on the belief that organizations should not automatically trust anything inside or outside its perimeters and must assume they will be breached. Organization must verify and validate every user, app, and device before granting access and enforce least privileged access to minimize exposure.

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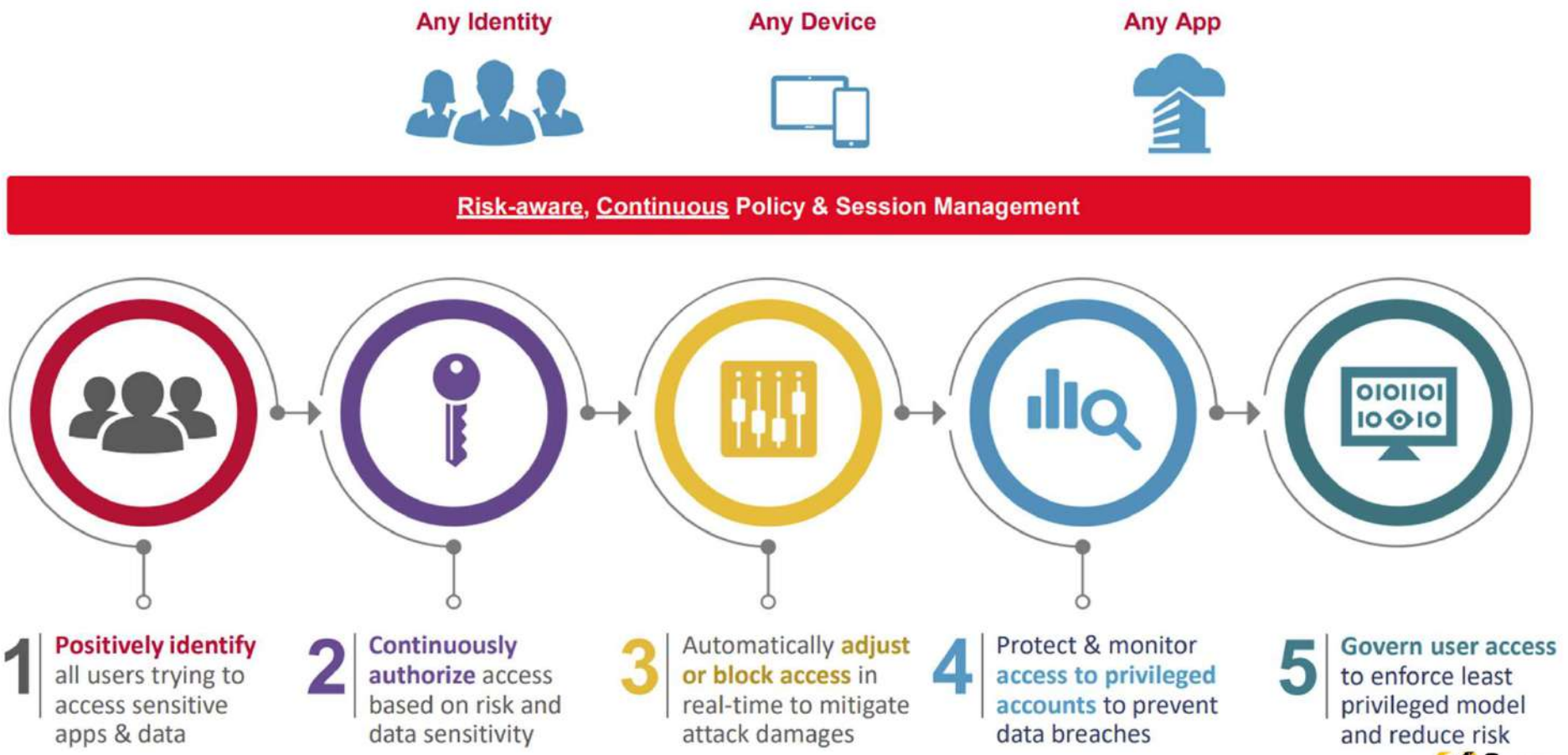
The role of Security in ZT - Fundamental Shift in Identity Security Approach



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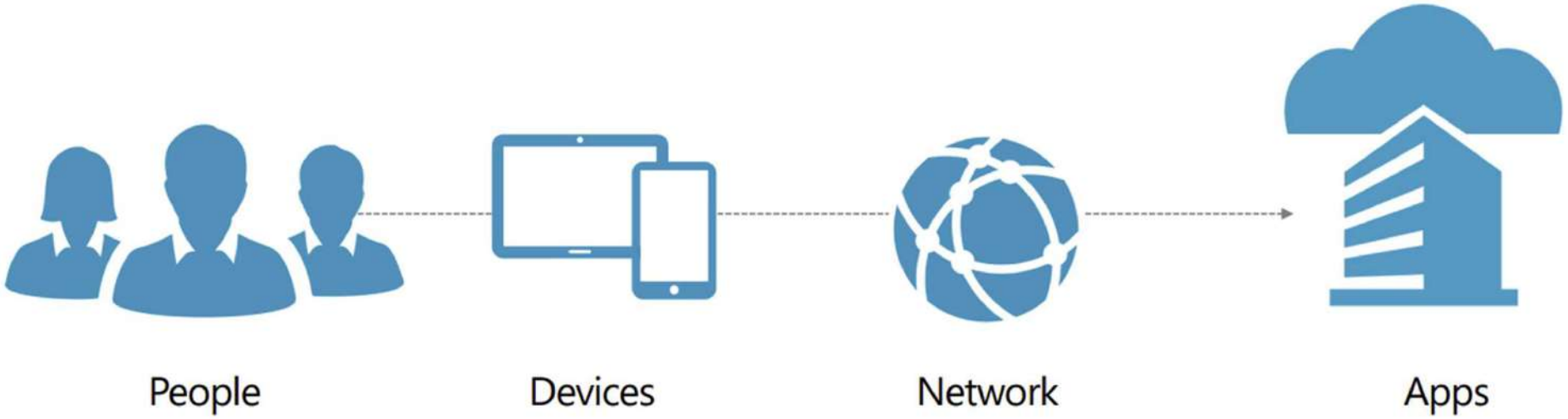
Zero Trust



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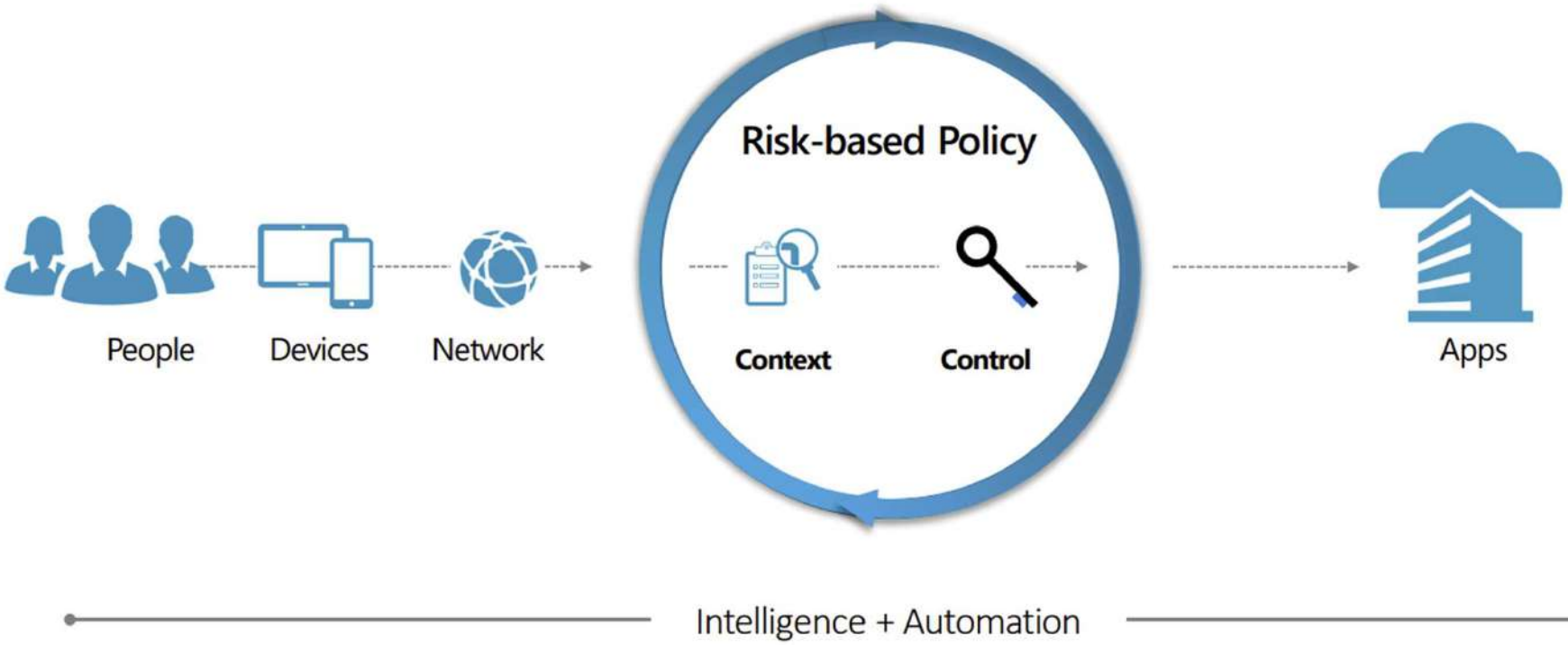
Zero Trust



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Zero Trust

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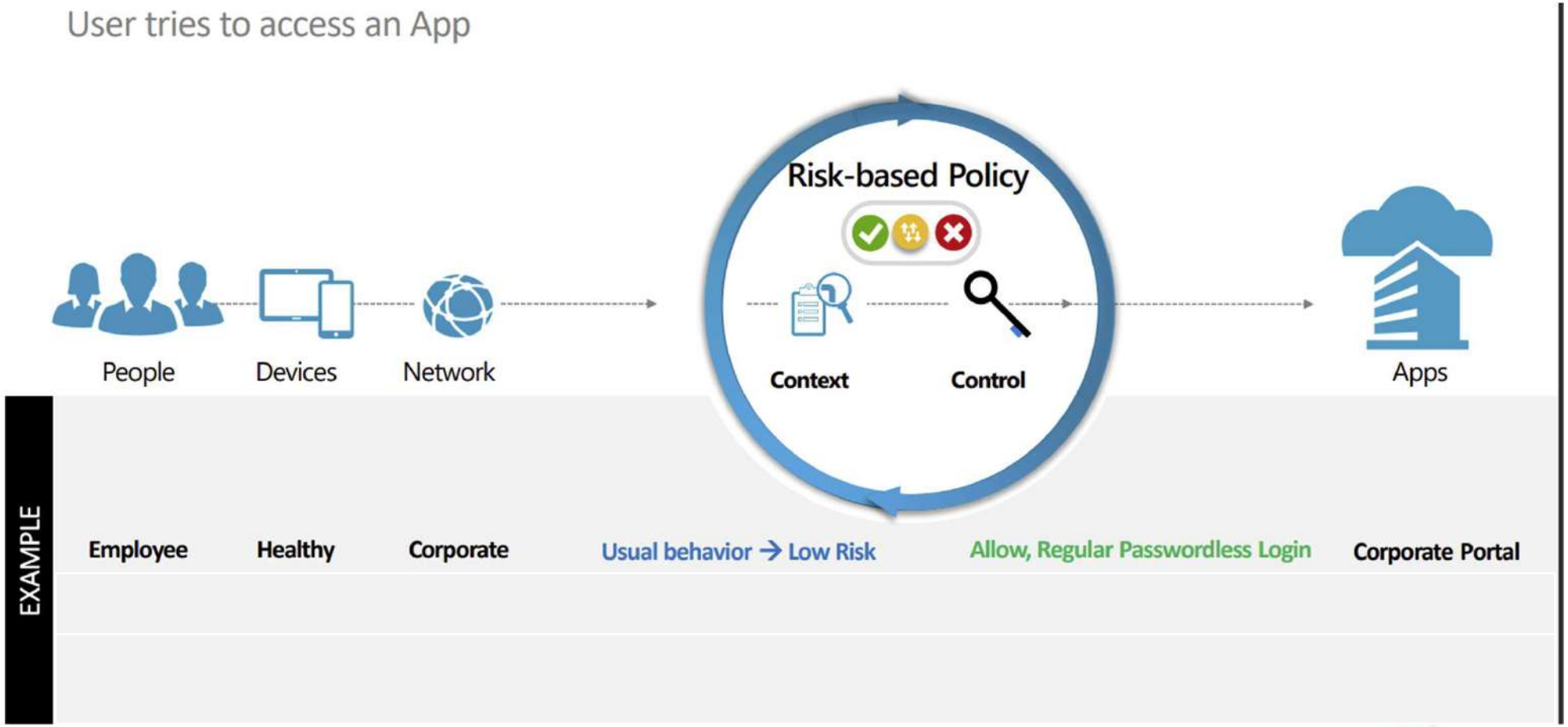
Zero Trust



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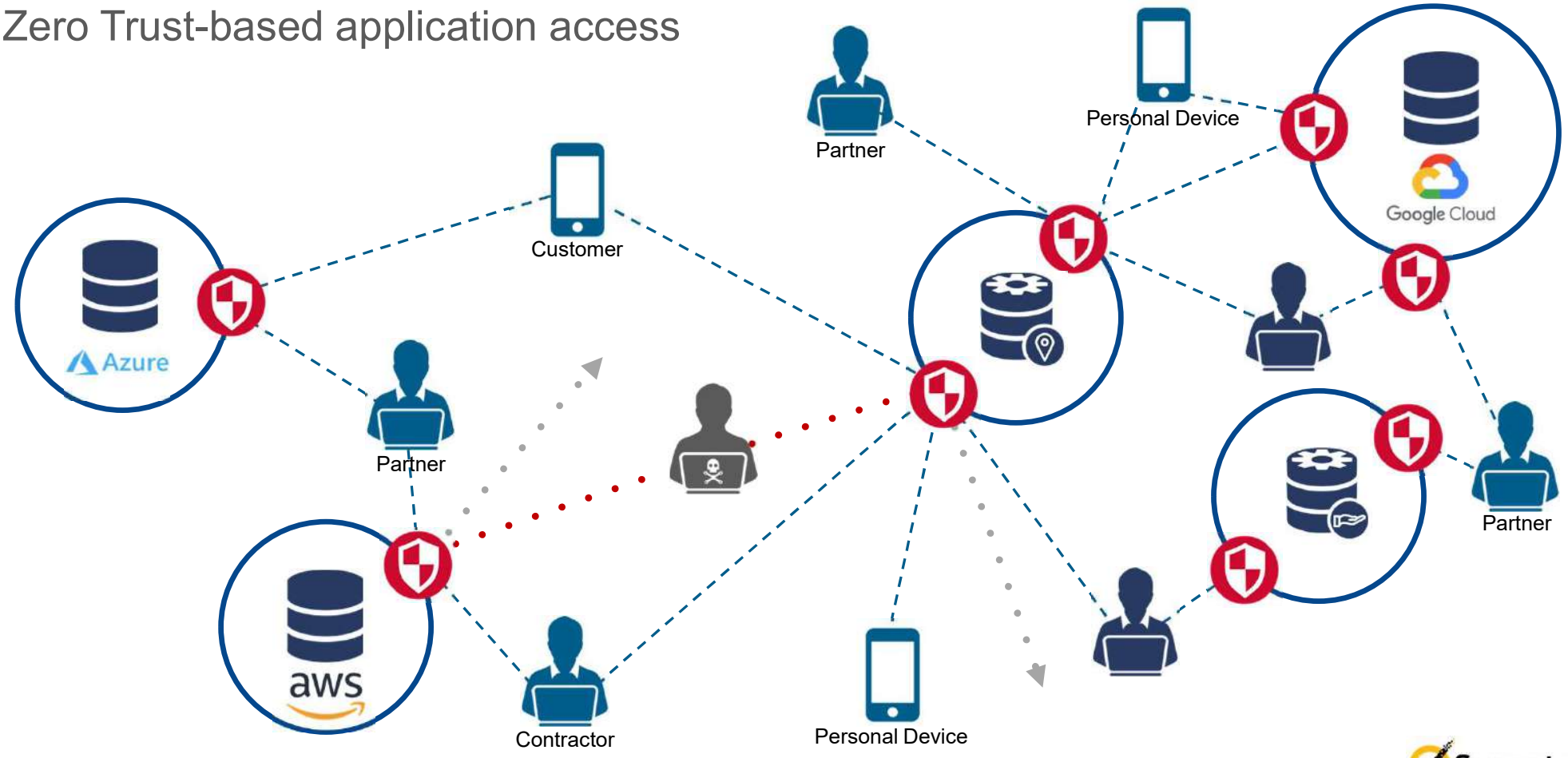
ZTNA Approach – Application-centric Security

Zero Trust-based application access



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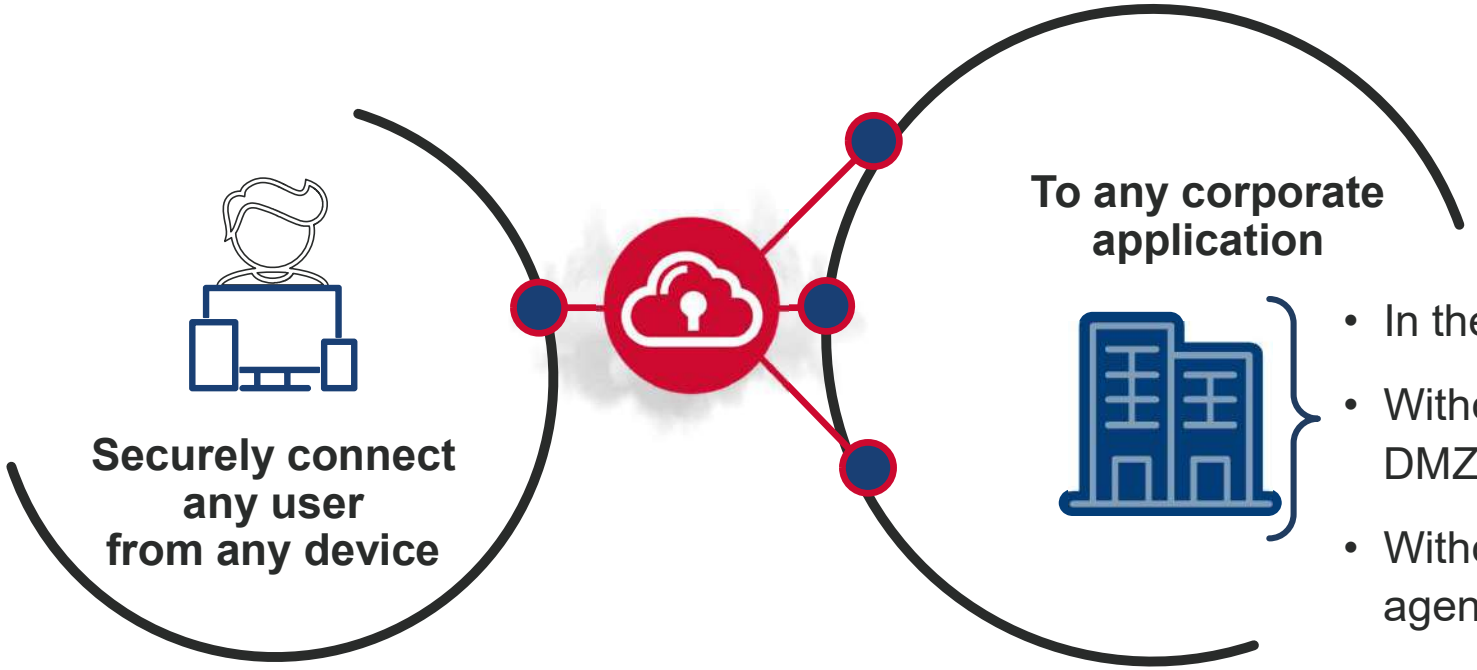
Zero Trust Network Access

Secure Access Cloud



- In the cloud / on-premises
- Without provisioning VPN, DMZ
- Without managing endpoint agents

Zero Trust access: Trust is continuously verified, access is limited
Security category – Software Defined Perimeter (SDP)

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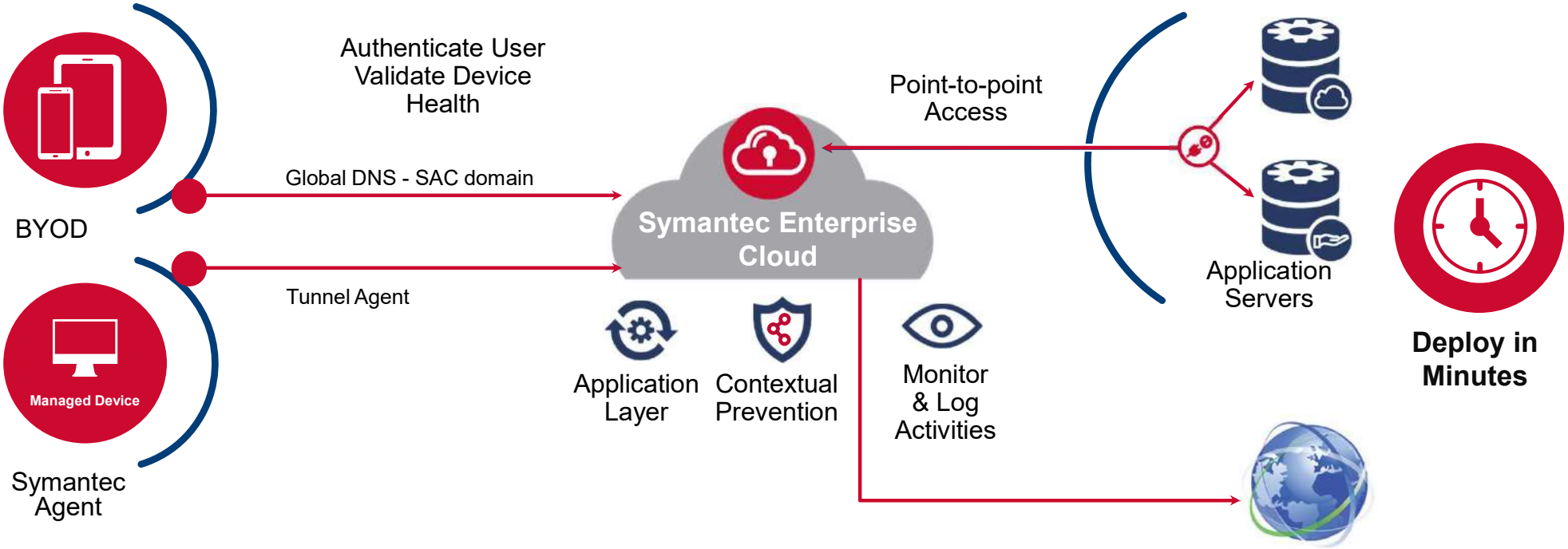
How it works

Zero Trust-based application access



Anyone to anywhere – simple and secure app access

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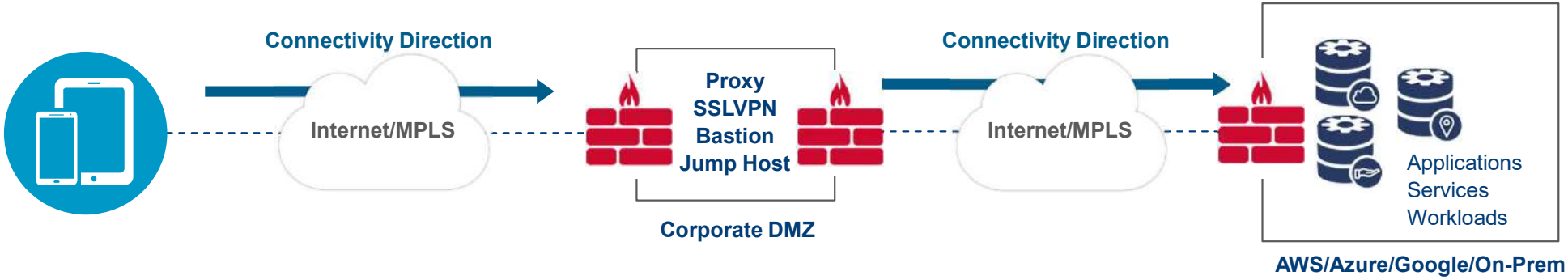
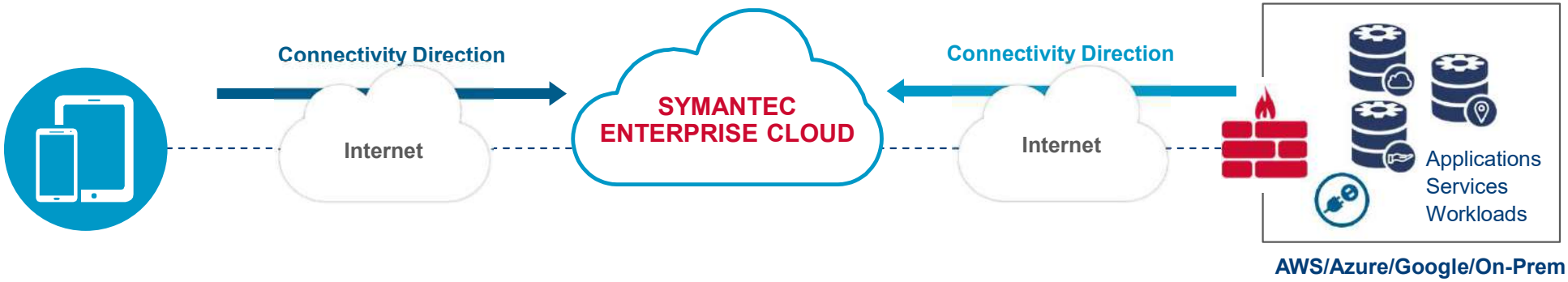
Cloud Alternative to Traditional Access Methods

Traditional DMZ—Connected via the Network



Symantec Secure Access Cloud—SDP-based Cloud Native Connectivity



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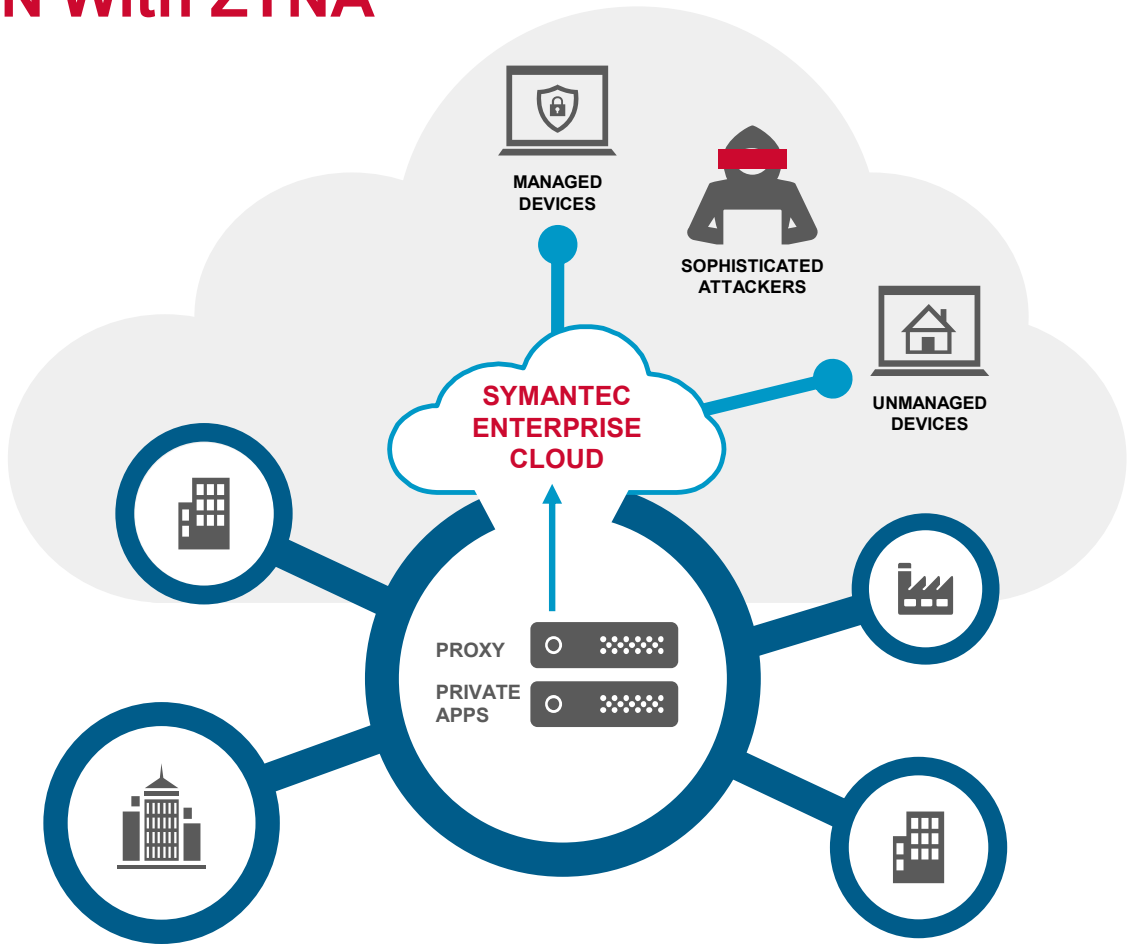
Start Phasing Out Your VPN With ZTNA

- Agentless Access for Unmanaged Devices
- No Lateral Movement
- Full Audit
- Native DevOps access (SSH, RDP, TCP)
- Multi-cloud Capable



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Why do companies adopt Zero Trust Network Access?

- Replace unsecure VPN network access with application-based access with conditional user and device validation and continuous monitoring.
  - Improves security, reducing risk
  - Lowers cost and complexity
- Secure access to public and private cloud environments, including automation where ZTNA access is part of the CICD pipeline.
  - Less time to provision (cloud) environments
- Enable users to use their private devices (BYOD) to securely access corporate applications.
  - Lowers cost
  - Faster onboarding for users

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ZTNA Onboarding Challenges

Business impact

1 Cross-teams Heavy Lifting

Consolidating the network policies which has been by managed on application side by application owners takes effort and time - users are used to having access to all applications on the network and application owners deciding who is provisioned - ZTNA changes this paradigm

2 User's impact

Users love to have the best experience as possible: lowest latency regardless of the user location, minimal number of client tools, keep the domain space consistent

3 SecOps impact

When it comes to the product maintenance, teams are struggling to handle a lot of daily operations related to the provisioning/deprovisioning for the resources or access privileges

4 Compatibility impact

Replacing VPN with ZTNA solution might introduce the compatibility challenge, conflicting with different agents for traffic steering and device compliance solutions

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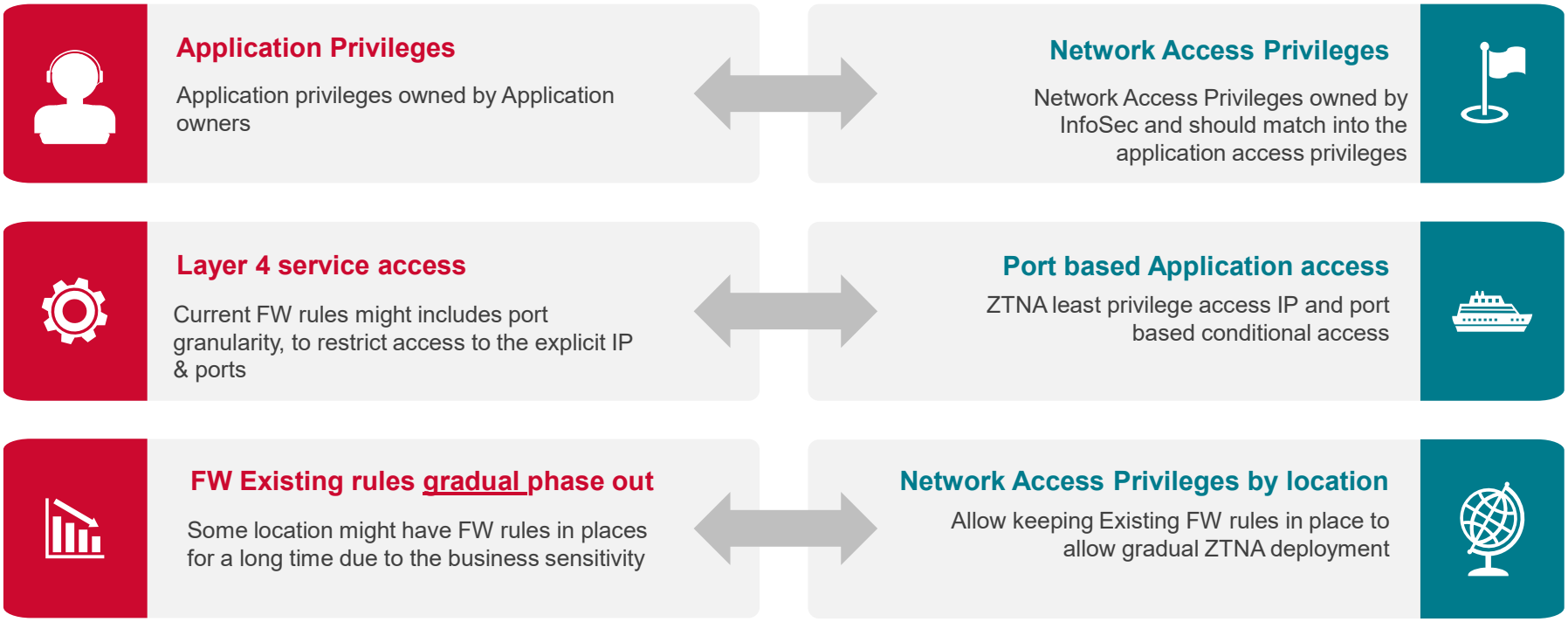
Network Onboarding challenges



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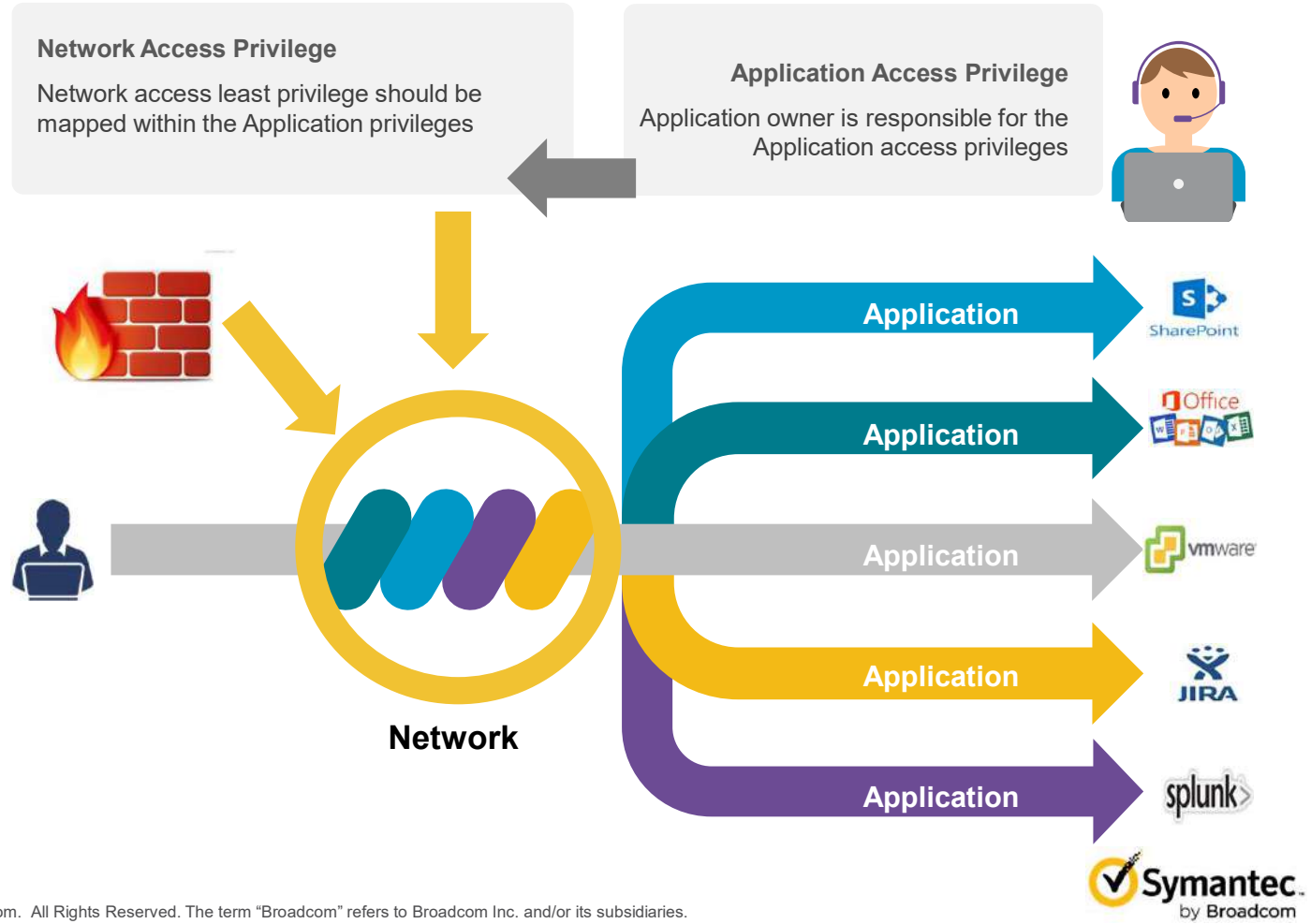
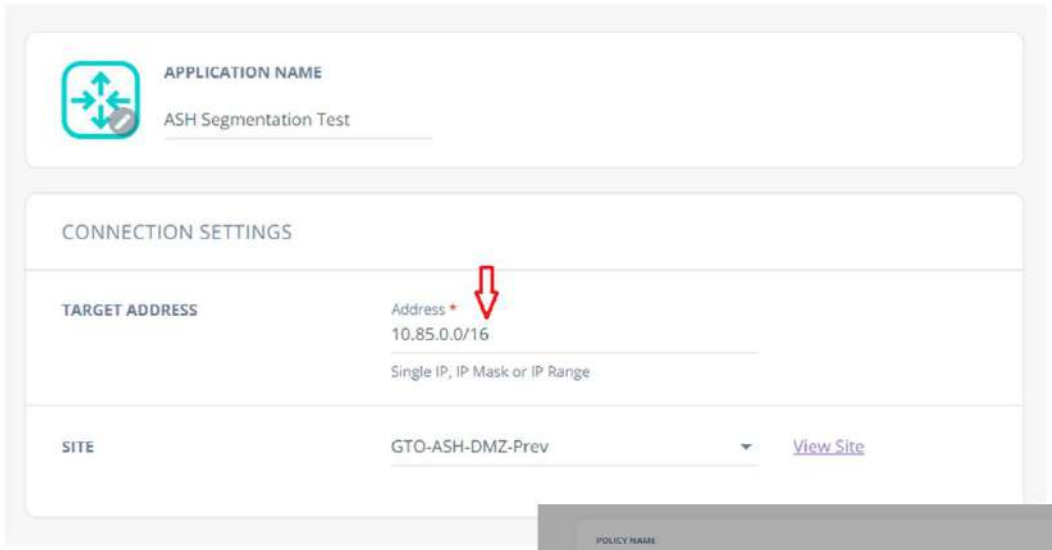
Heavy Lifting Onboarding (visualizing)

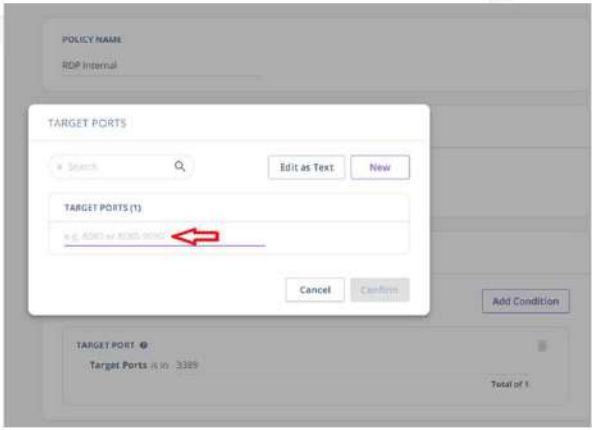
- Big effort
- Long project lead times
- High cost (pay twice)



How we solve it

- We take it all ! - All network provisioned at once with few app and single policy
- Apply network policies gradually at any time without relying on the network team.
- No user impact
- Coexist with agentless access (due to the alternative data path)





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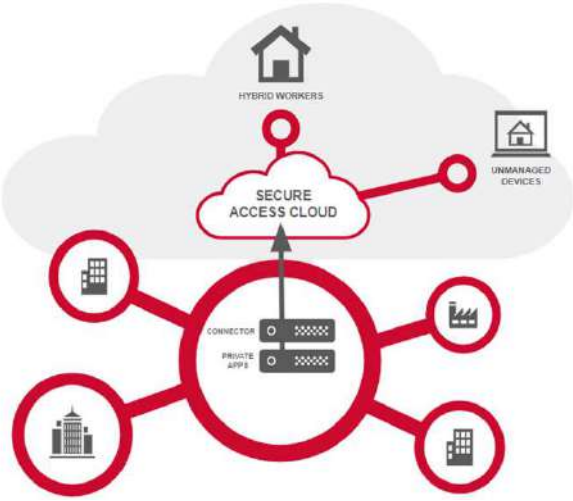
Have Symantec Agent? You're done!



1 **Zero Touch Provisioning (ZTP)**

Migration process from the legacy solution to SAC requires **no** IP or domain name changes and can be accomplished in a hours

2 **Side by Side Coexistence**

Symantec solution live side by side with the VPN, to avoid business impact through the migration process

3 **Network Policy Construction with no Business Impact**

Conditional access for explicit applications has no business impact or application changes

4 **Keep Your User Experience the Same**

Following Symantec agent deployment on user's machine, user keep his UX with no changes

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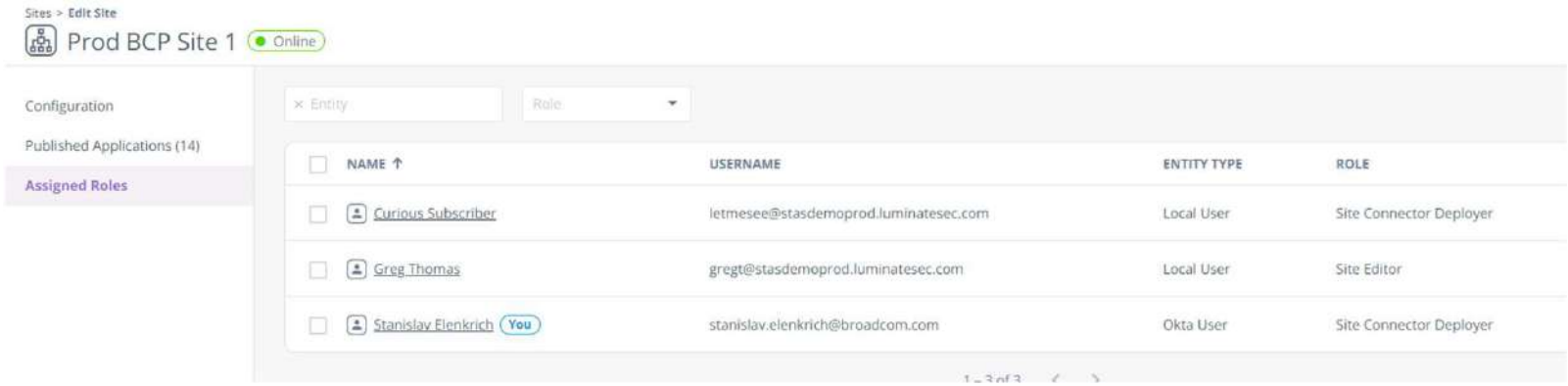
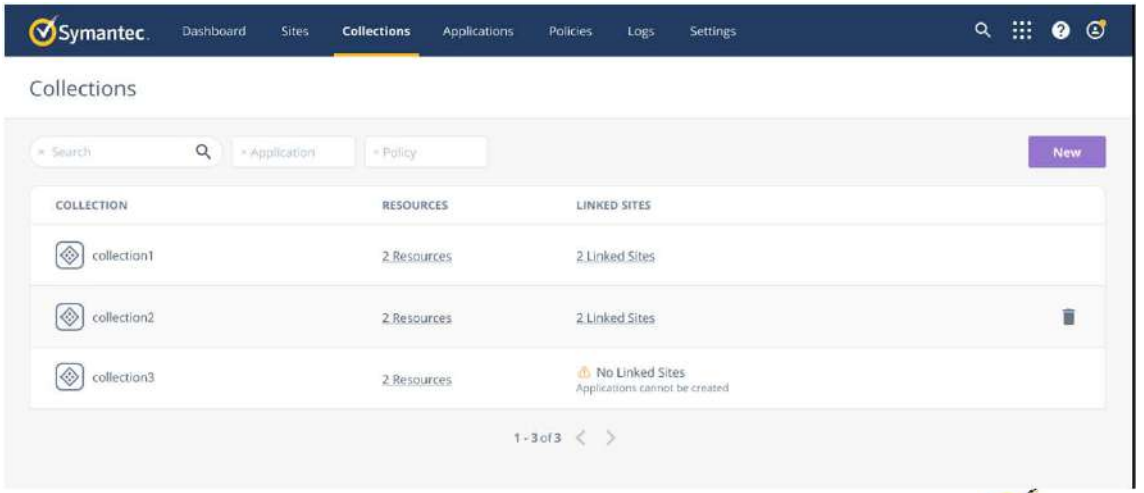
SecOps Impact - RBAC





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SecOps Challenges - Automation

Automate everything !

Full API control

Terraform Support

Slack Integration

RBAC

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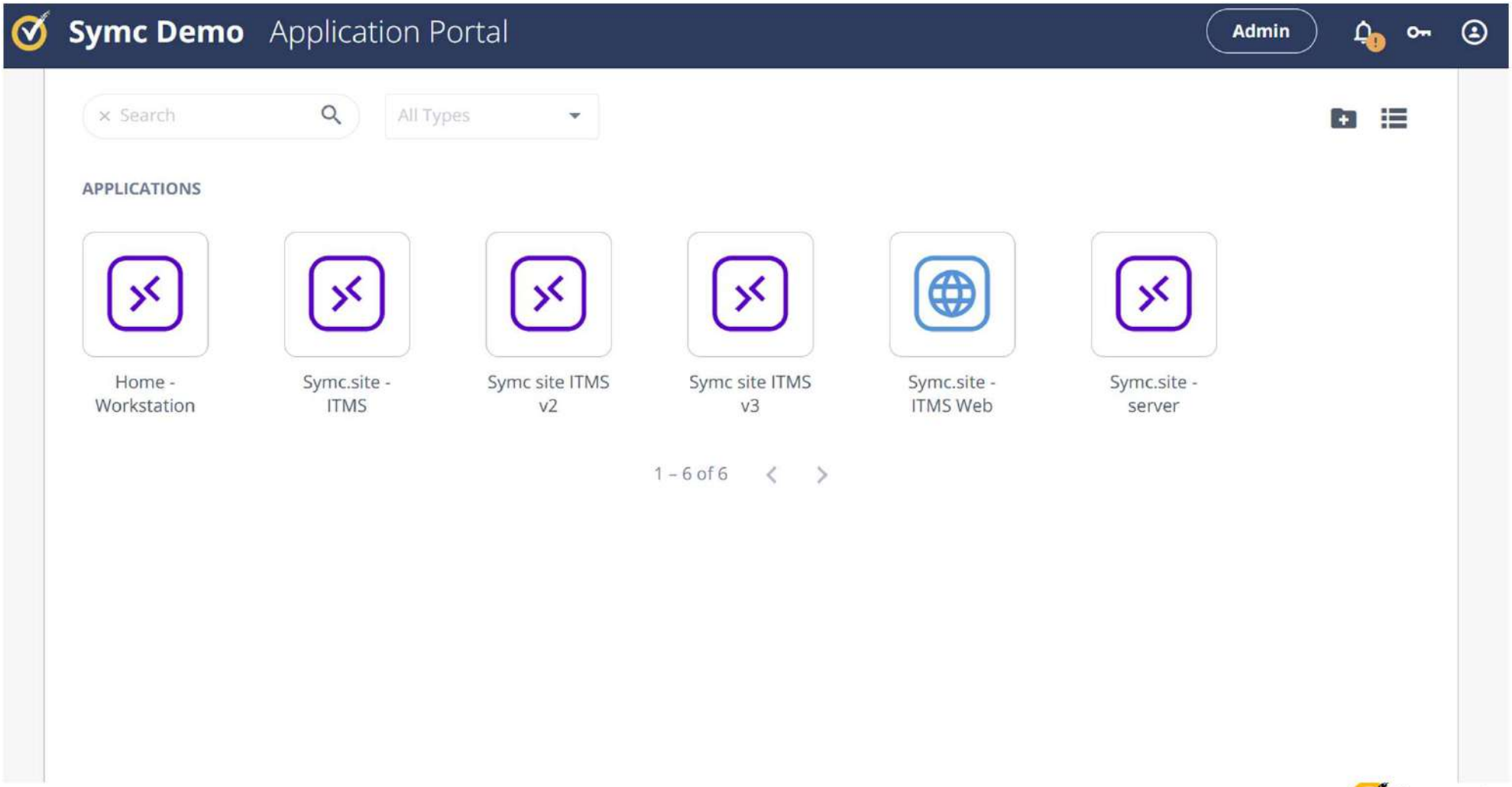

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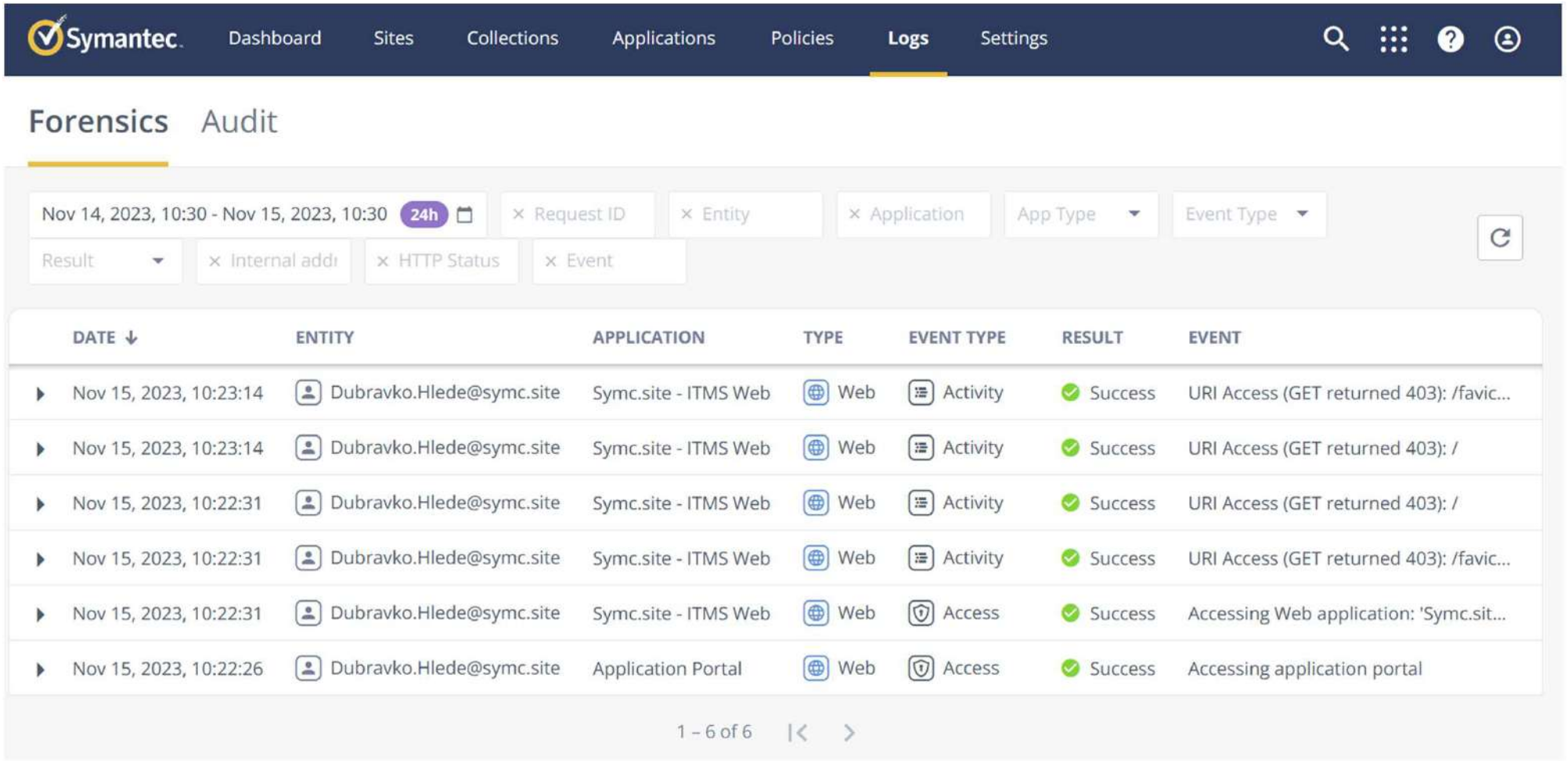

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