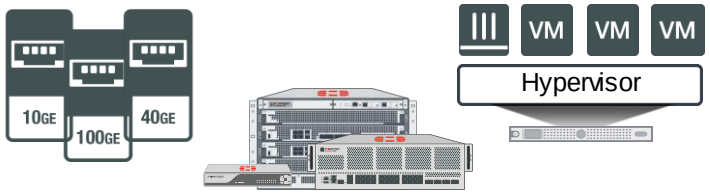
Network Security Reference Architecture

Alex Samonte – Director of Technical Architecture

Network Security Architecture Components

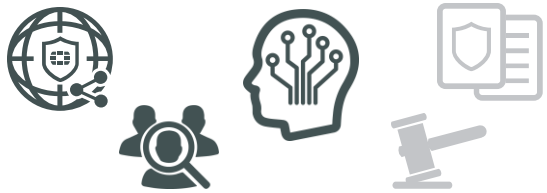
Open Ecosystem

Scalable Multi-Formfactor

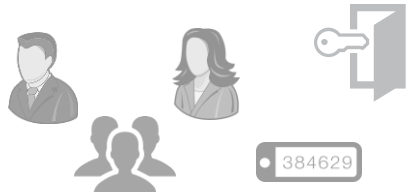


Network & Security Operations & Analytics

Security Intelligence



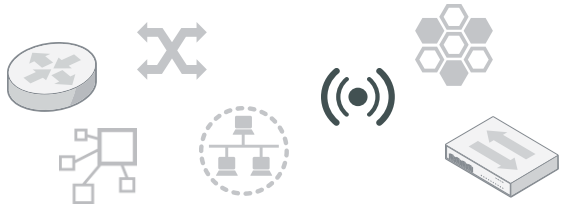
Identity & Access Management



Advanced Response

Automated Broad Integrated

Networking Flexibility



Threat Protection

Antivirus IPS ATP Anti-Spam Anti-Botnet

Content Visibility

SSL Inspection Reputation App Control Content Filter

Network Security Critical Capabilities

- Threat Protection
- Content Visibility
- Identity & Access Management
- Security Intelligence
- Advanced Response (cusomization, automation)
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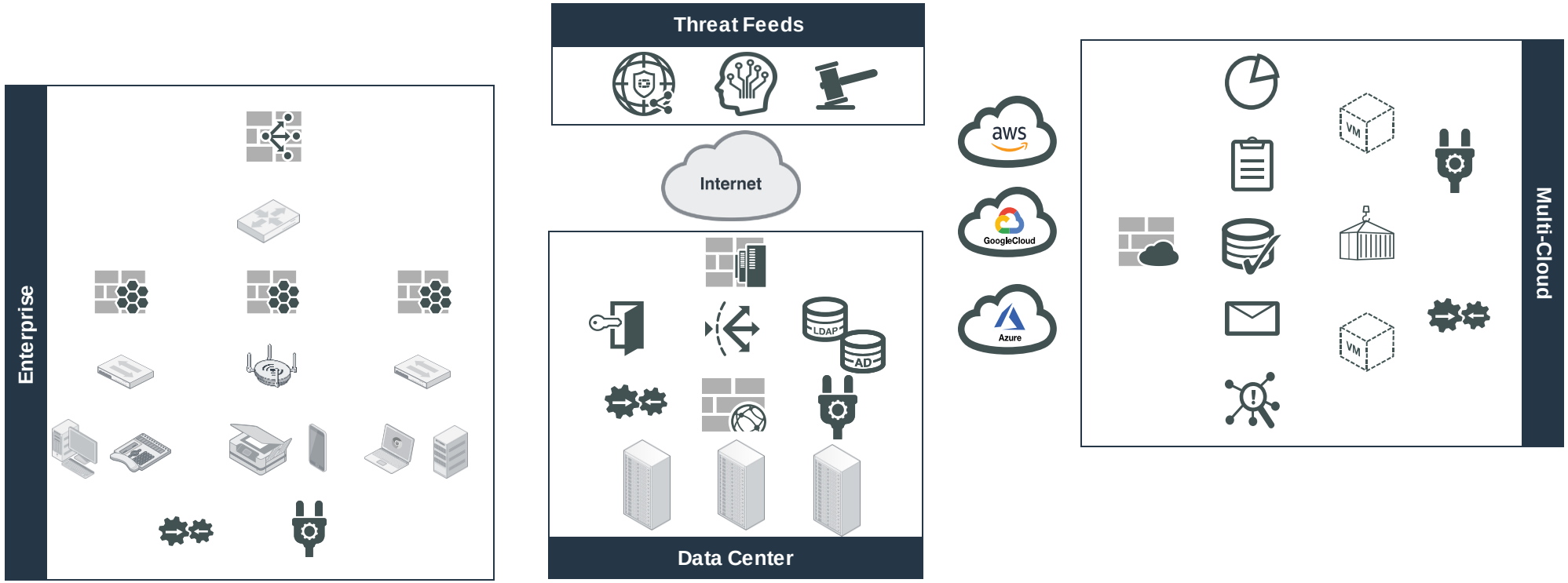
Network Security Reference Architecture



Threat Protection

Antivirus | IPS | ATP | Anti-Spam | Anti-Botnet

Content Visibility

SSL Inspection | Reputation | App Control | Content Filter

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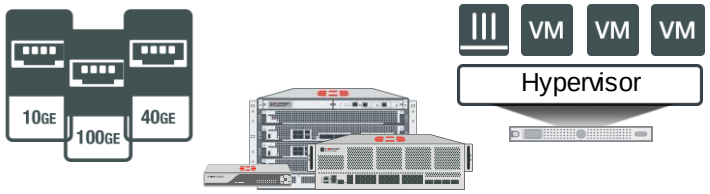
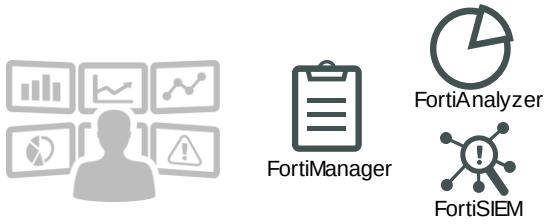
Fortinet Network Security Architecture Components

Open Ecosystem

Scalable Multi-Formfactor



Network & Security Operations & Analytics



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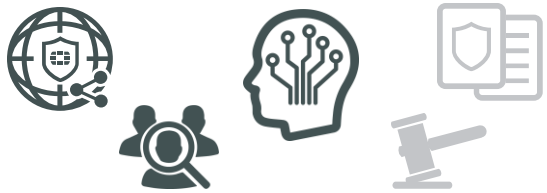

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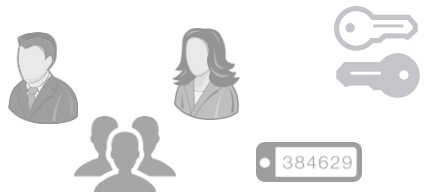

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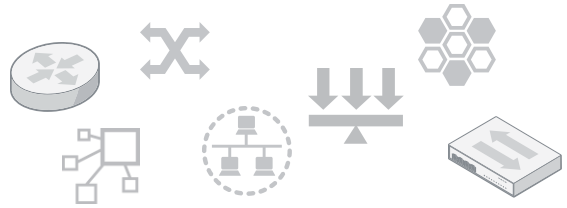
Networking Flexibility



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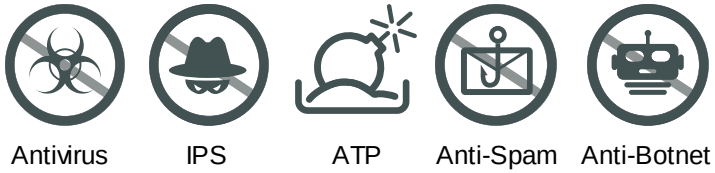

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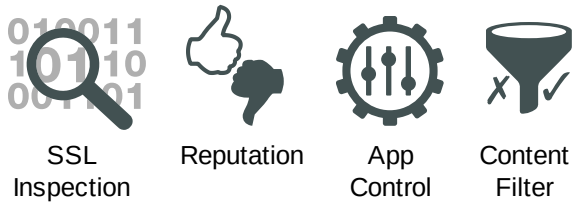

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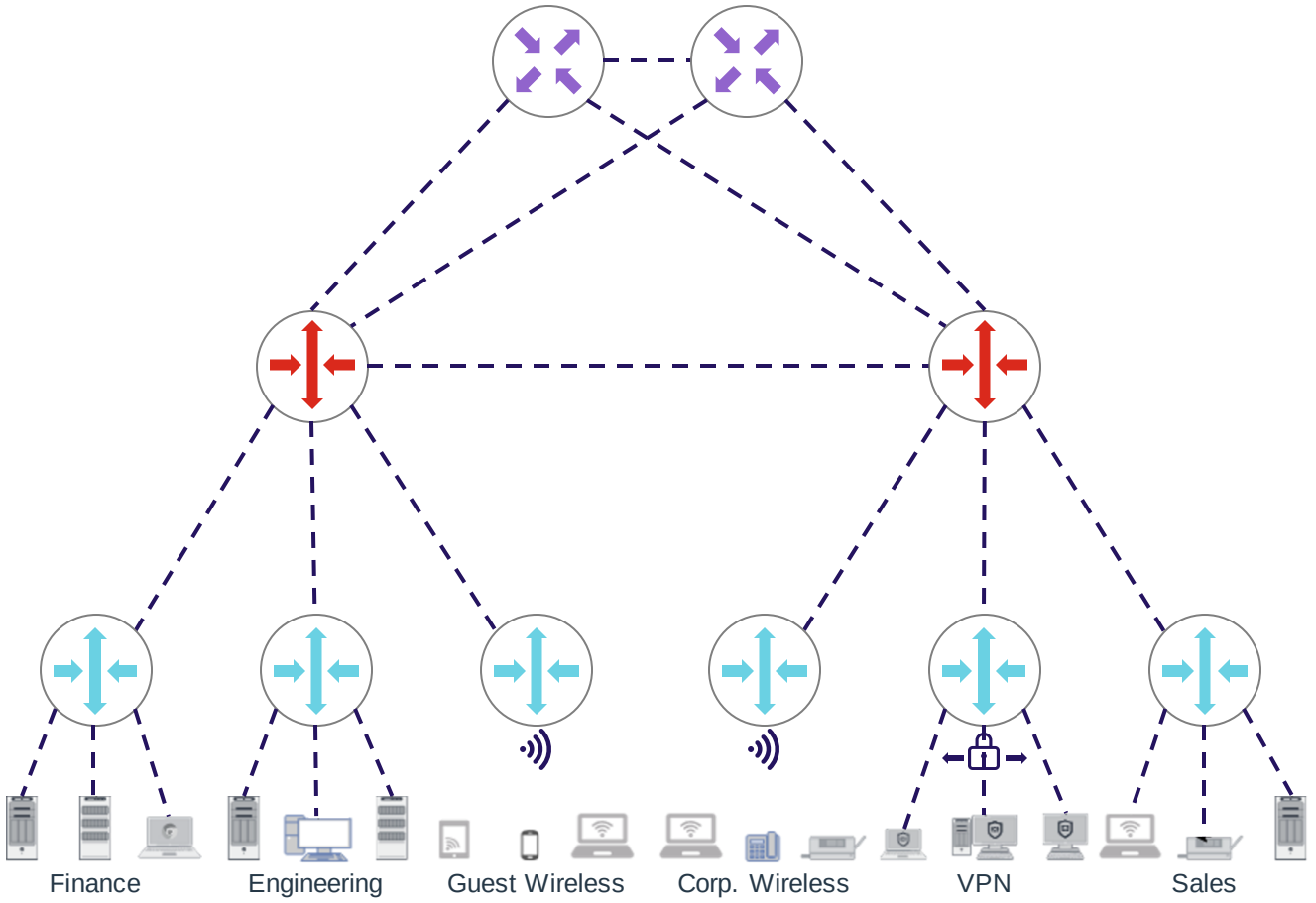
Segmentation Architectures

Use Cases Summary

Segmentation Architectures



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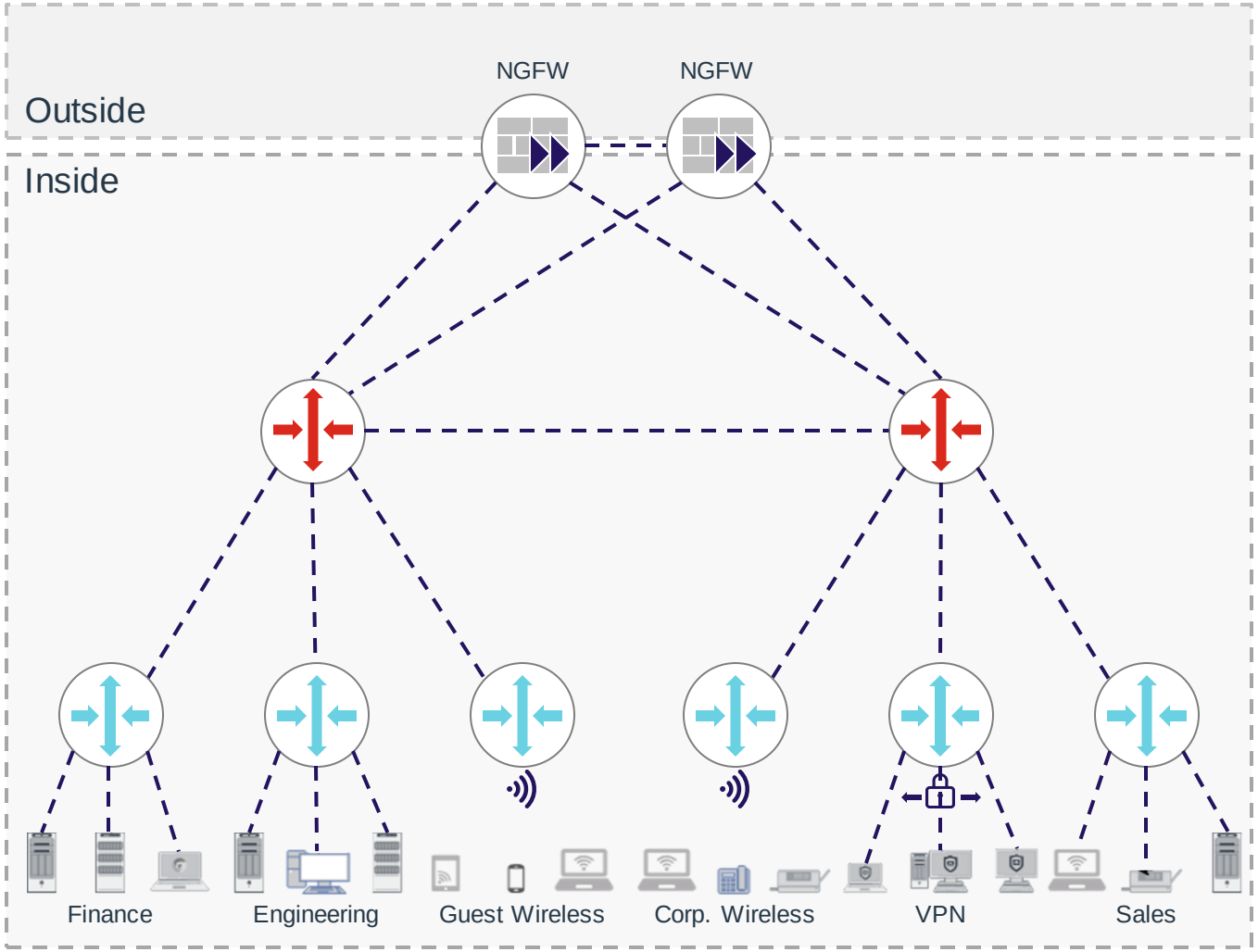
Today – Border Security

Problem

- Protect business from outside threats
- Protect users from the internet
- Keep users productive

Solution

- Apply all security at the internet edge
- ❖ Flat network provides no internal security
- ❖ Visibility into the network severely limited
- ❖ Risk of compromise is very high



Establishing Trust

- **Network Address**
- **User Identity**
- Business Logic
- Fabric Connectors
- **Applications**
- Device Identity

Advanced Security

- SSL Inspection
- **IPS**
- **Antivirus**
- **Application Control**
- **Web Content Filter**
- Data Loss Prevention
- Secure Email Gateway
- Denial of Service Protection
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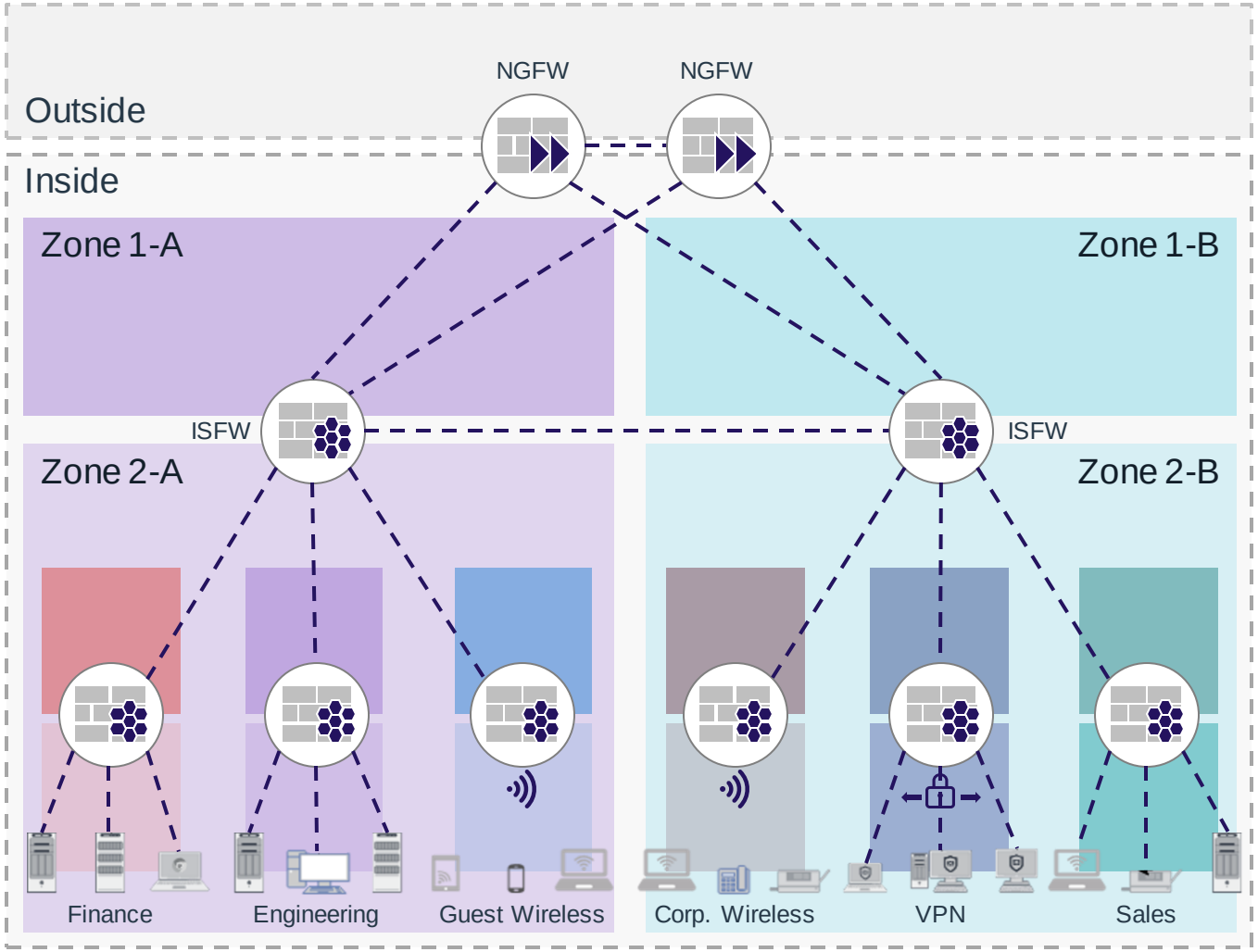
Use Case – Reducing Attack Surface

Problem

- Flat internal network
- No internal visibility
- No internal security

Solution

- Many Enforcement points
- Create containment zones
- Inspect SSL
- Inspect Applications
- Check for zero-day malware
- Protect critical assets



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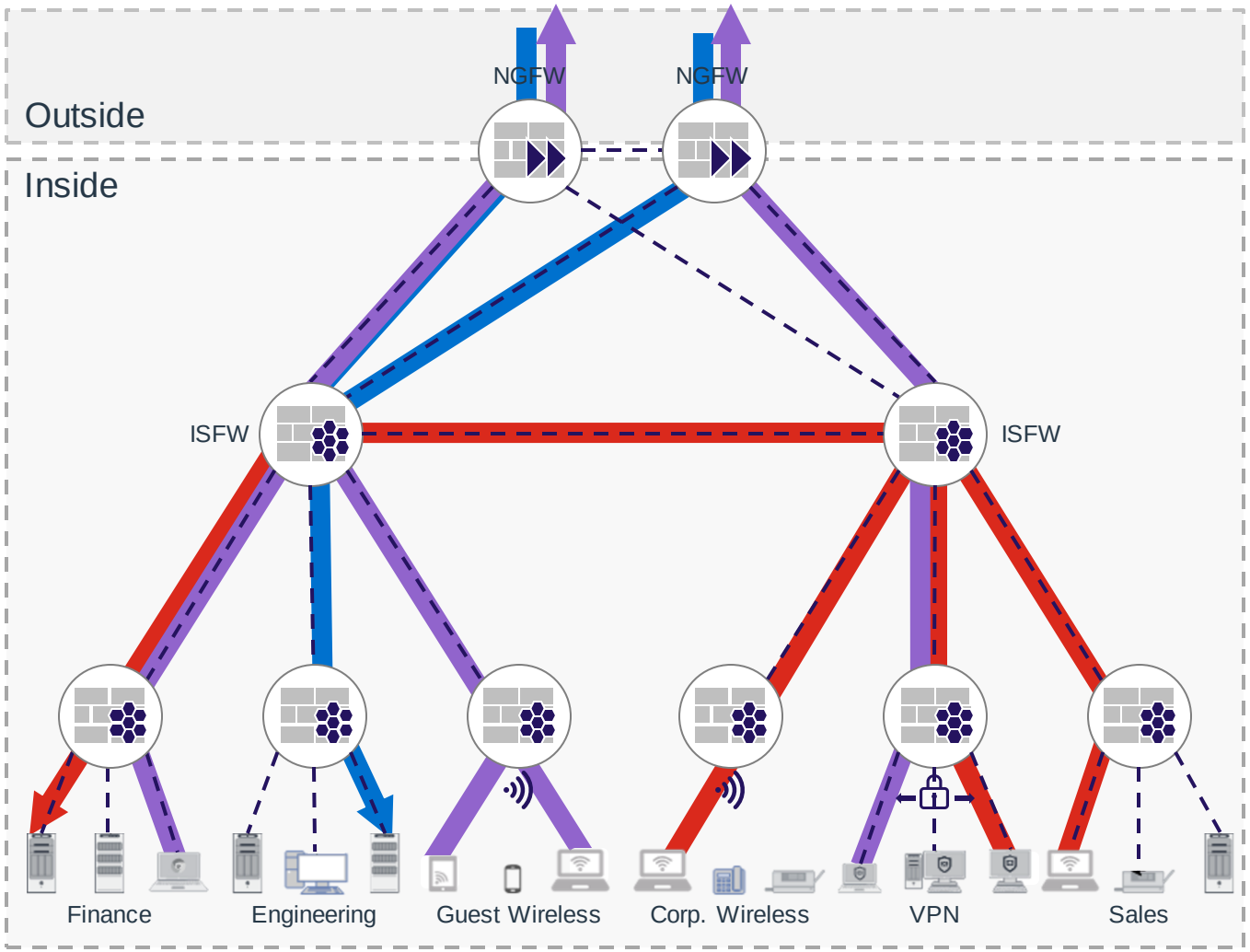
Use Case – Trusted Application Integrity

Problem

- Business critical applications must be secured
- Multiple applications
- Users in many locations

Solution

- Secure applications with solutions that share security intelligence
- Utilize security that will work with mobility and cloud usage
- Inspect SSL to make sure only trusted transactions are taking place
- Establish trust with sources inside and outside the network



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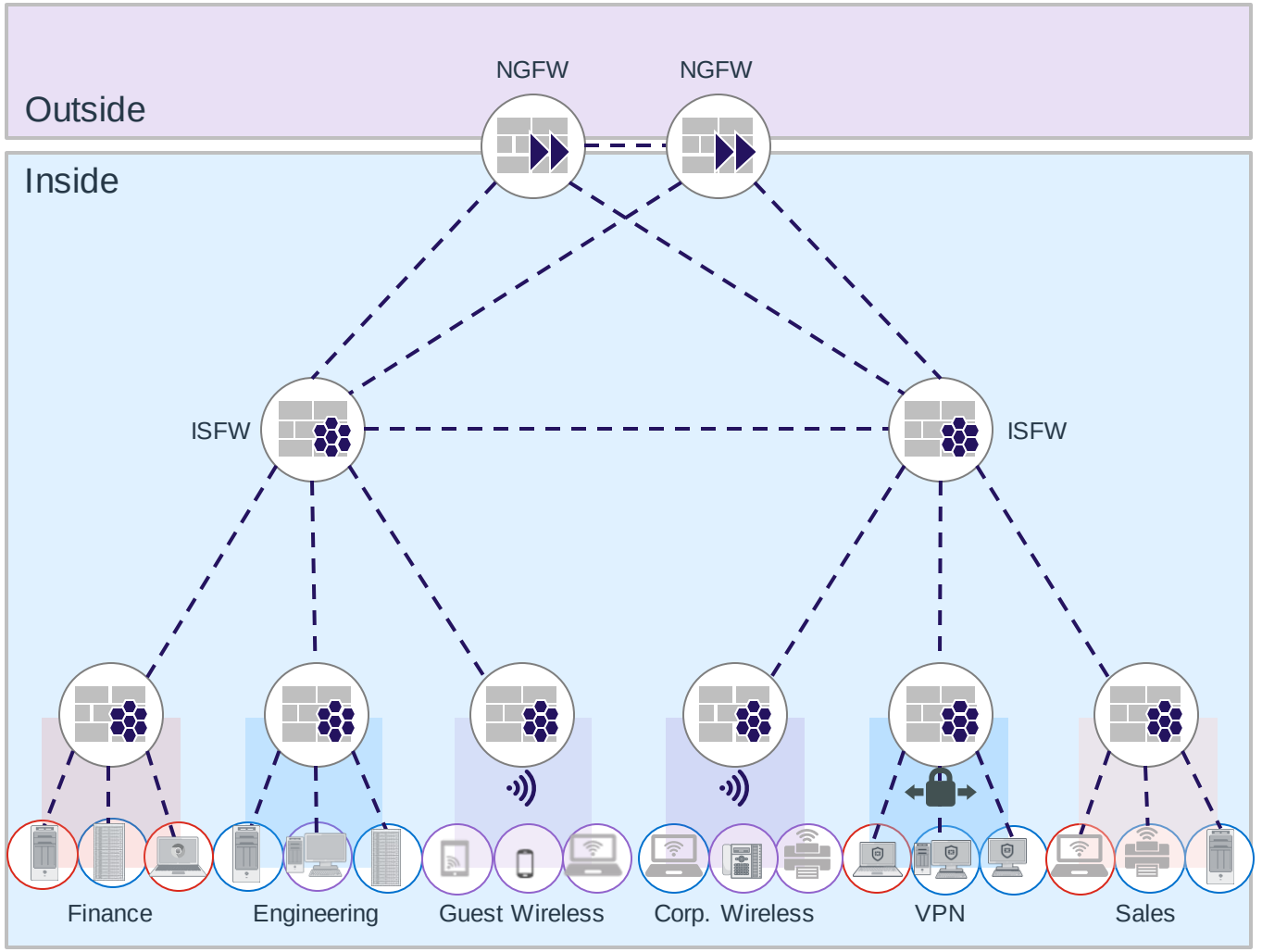
Use Case – Achieving Compliance

Problem

- Enforcing regulated access
- Does not follow standard network boundaries
- Critical compliance policies

Solution

- Multiple enforcement point locations
- Endpoint coverage for specific needs
- Network coverage for IoT
- Visibility for audits
- Keep critical systems running



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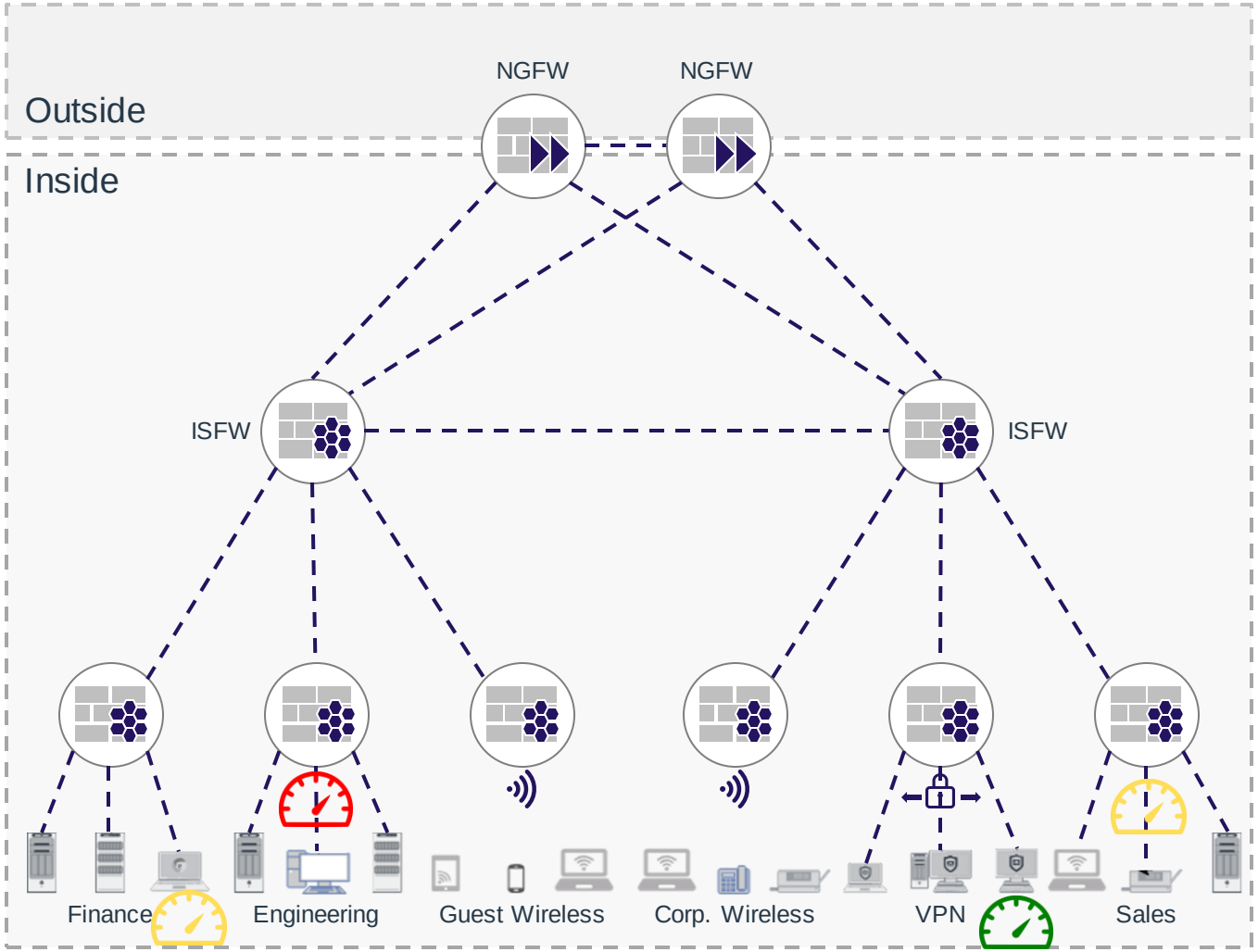
Use Case – Tiered Cloud Access

Problem

- Unexpected cloud costs
- Shadow IT
- No visibility of cloud data

Solution

- Combine cloud usage statistics with local enforcement
- Regulate access to cloud resources from authorized users
- Maintain audit trails of cloud hosted data
- Prevent data exfiltration



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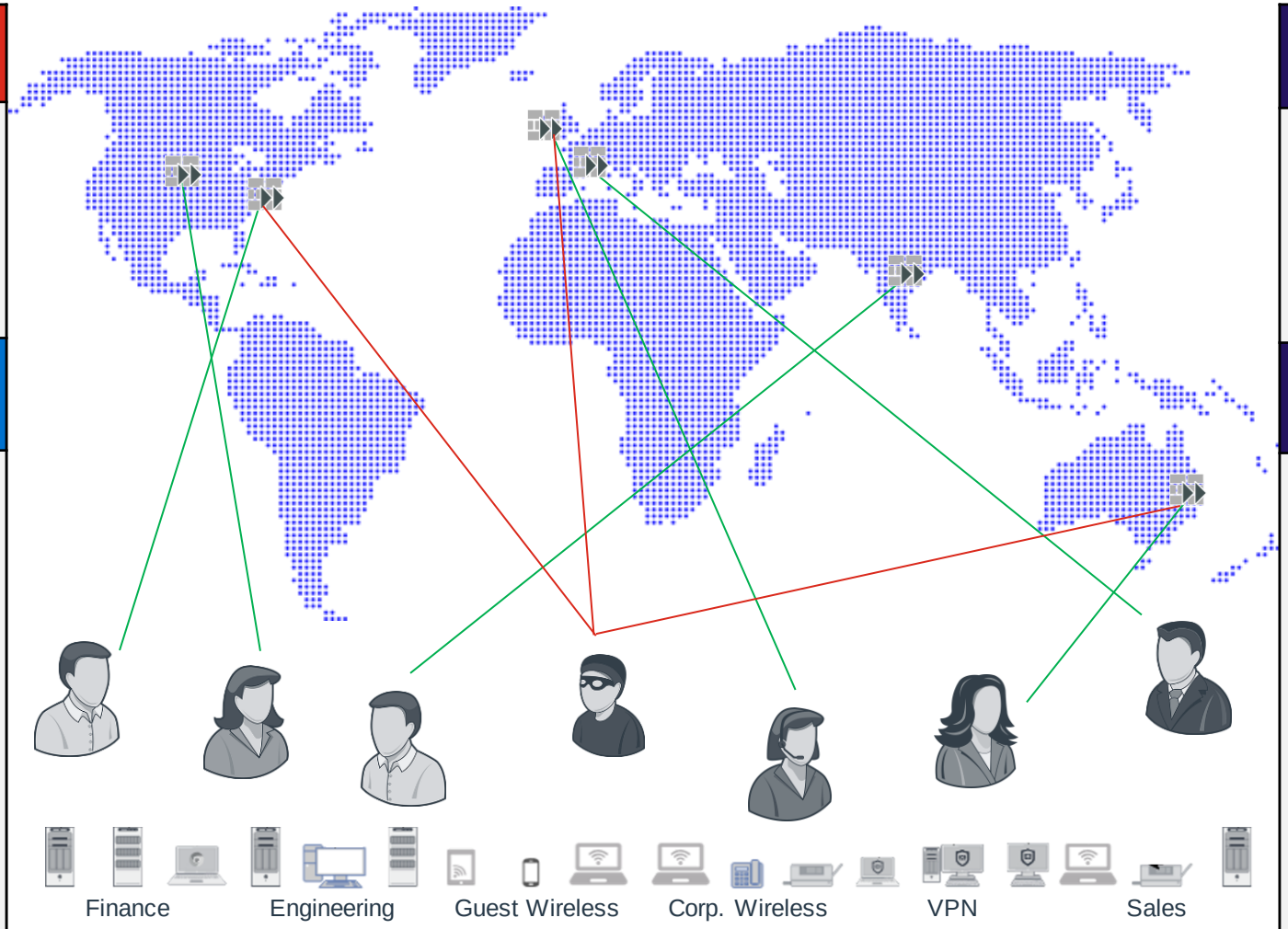
Use Case – Secure Physical Access

Problem

- Securing global employee presence
- Different systems control different aspects of security

Solution

- Integrate different trust sources
- Correlate physical location token information with network login location
- Maintain identity and device interrelationships
- Prevent targeted attacks



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