Software Defined Secure Networks

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Trends Impacting Enterprise Security

THREAT SOPHISTICATION

- Zero day attacks
- Advanced, persistent, targeted attacks
- Adaptive malware

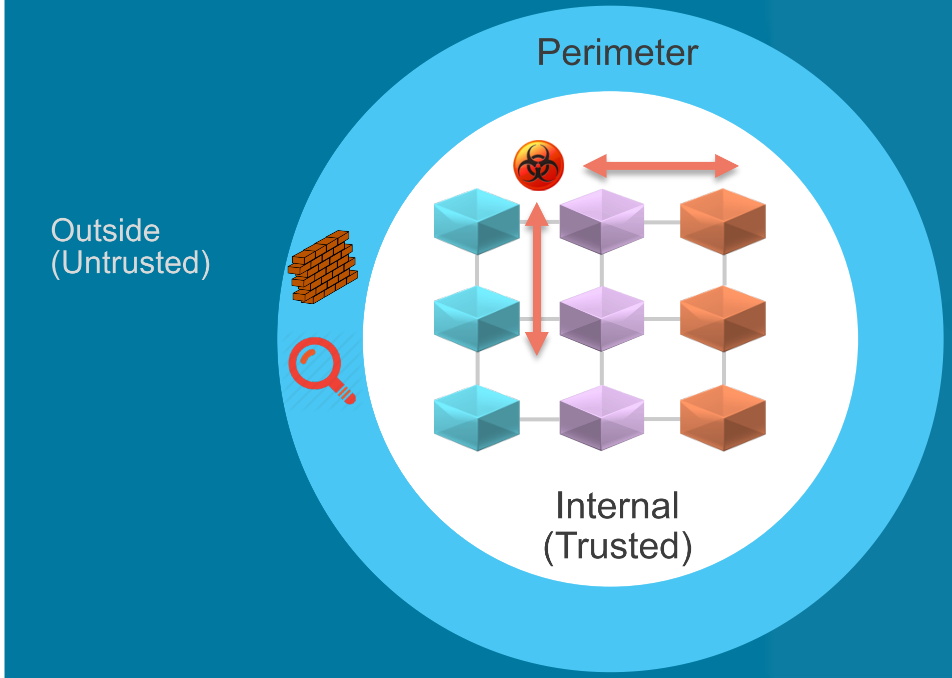
CLOUD

- Virtualization and SDN
- Applications, data, management in the cloud
- Application proliferation

INFRASTRUCTURE

- Hybrid cloud deployments growing
- Device proliferation and BYOD
- IoT and big everywhere

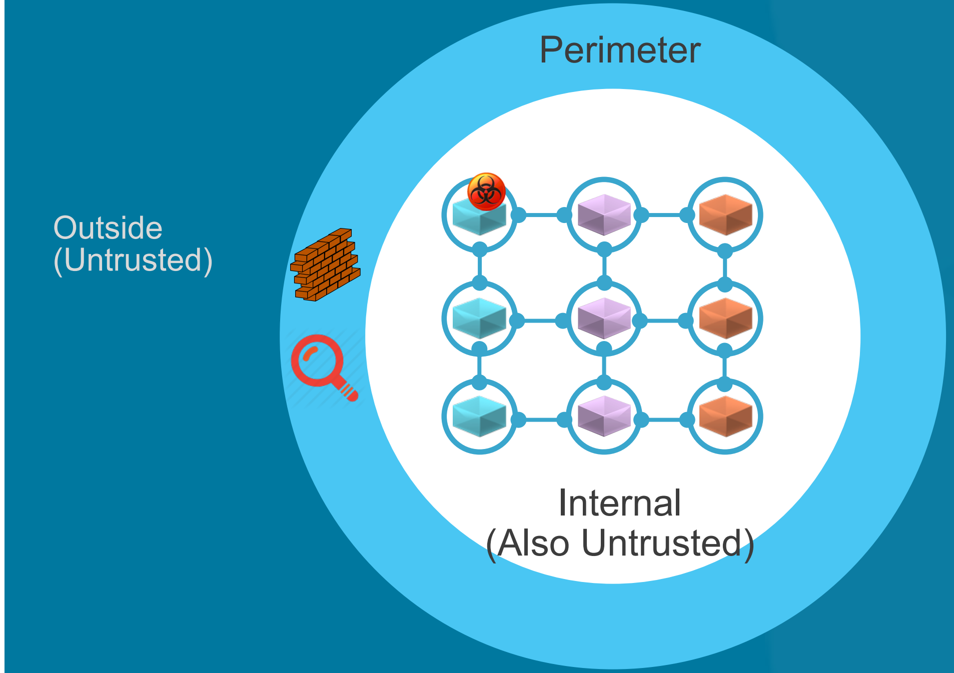
Perimeter Oriented Security



- Hyper-connected Network Security at Perimeter
- Complex Security Policies
- Lateral Threat Propagation
- Limited Visibility

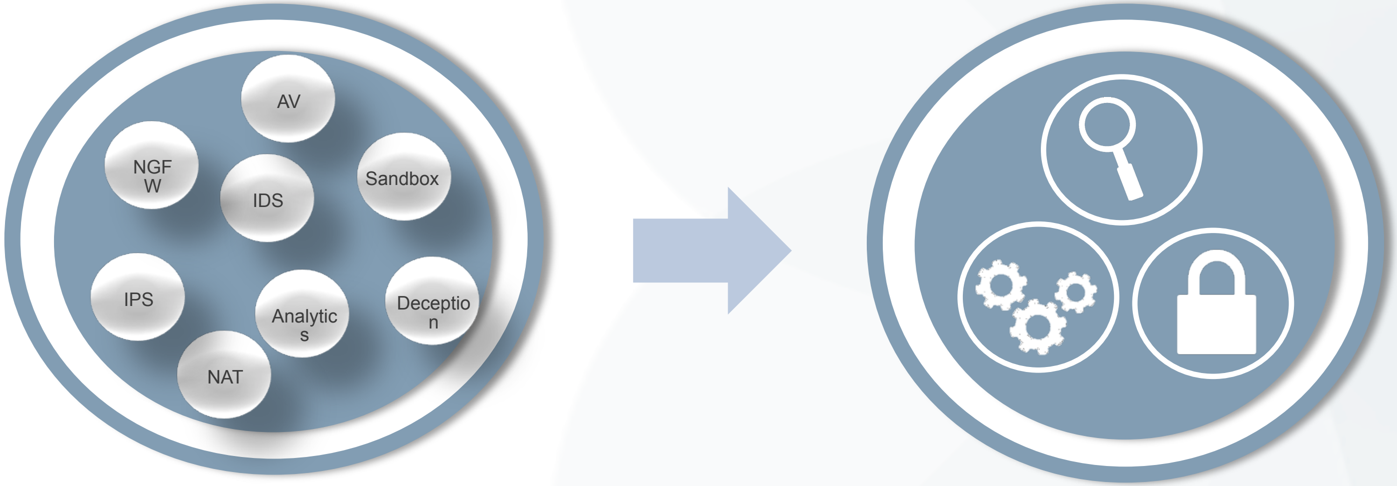
Software Defined Secure Network

Delivers Zero Trust Security Model



- Secure Network
- Simplified Security Policy
- Block Lateral Threat Propagation
- Comprehensive Visibility

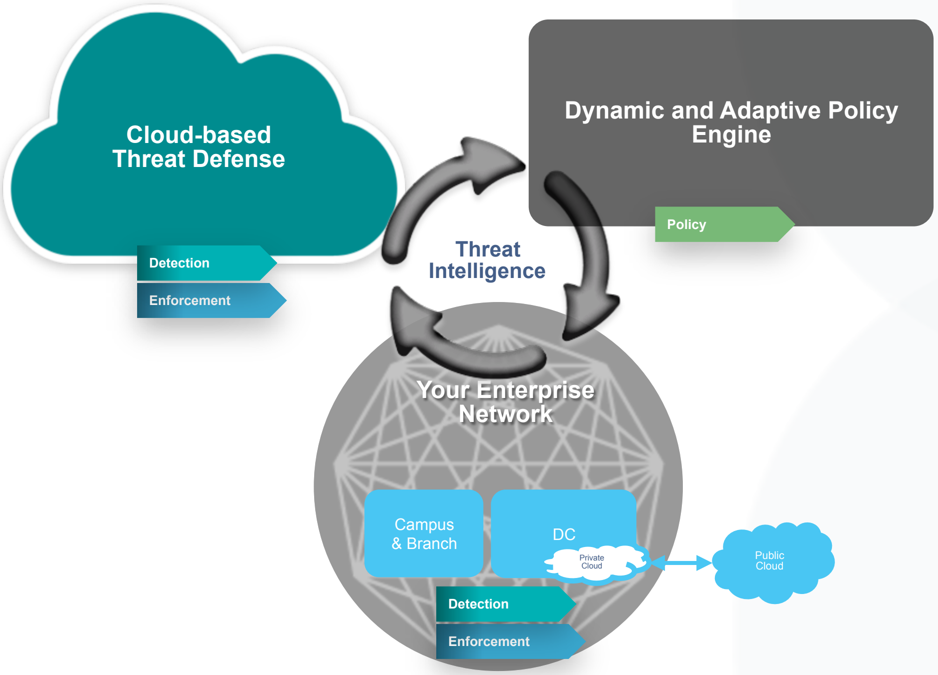
Transformation to Software Defined Secure Networks



Uncoordinated and firewall focused

Orchestrated, holistic system encompassing security + infrastructure

Software Defined Secure Network



Policy

Create and centrally manage security policy through user-intent based system

Detection

Unify and rate threat intelligence from multiple sources

Enforcement

Enforce policy in near real time across the network; ability to adapt to network changes

SDSN Deployment Scenarios

Campus & Branch

- Quarantine infected end points
- BYOD and device profile based access control

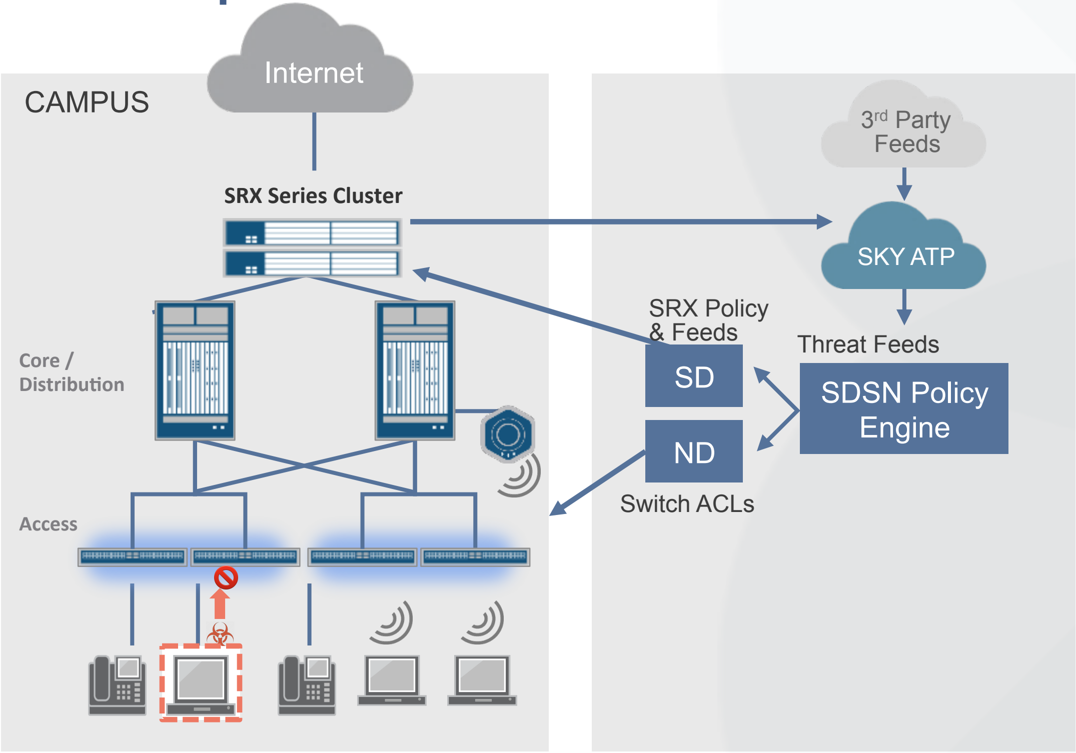
Data Center

- Micro-segmentation
- Consistent security for
  - Private and hybrid-cloud
  - SDN based workloads

Service Provider

- Mobile Edge Gateway
- Gi Firewall

Campus Network: Infected Host Workflow



POLICY

- Policy defined in Policy Engine
  - *"Infected Hosts with Threat Level >8 should be quarantined"*

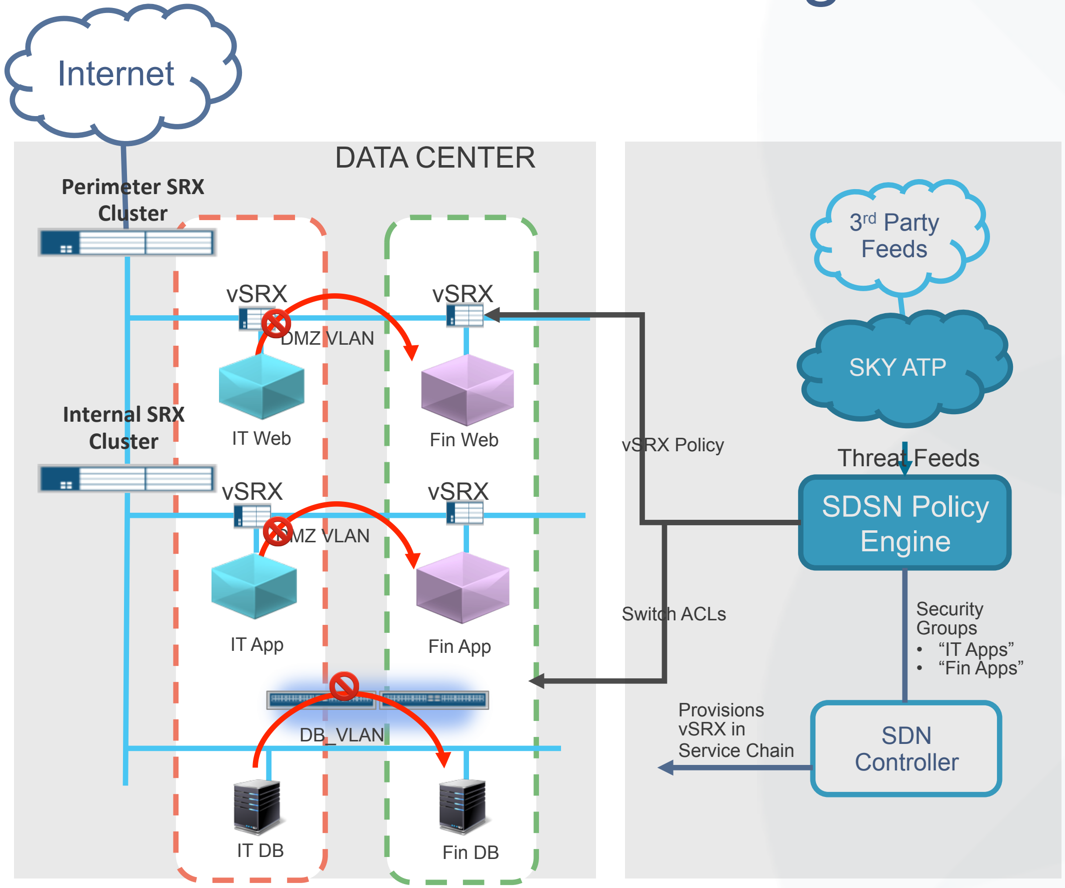
DETECTION

- Sky ATP Threat Feeds
- Custom Feeds (e.g: Attivo, Vectra)

ENFORCEMENT

- Access and aggregation switches quarantine infected host
- SRX policy enforcement

Data Center Micro-segmentation



POLICY

- Policy defined in Policy Engine
  1. *"IT Applications cannot access Finance Applications even if they share same VLAN"*
  2. Traffic in and out of Infected Applications should be logged

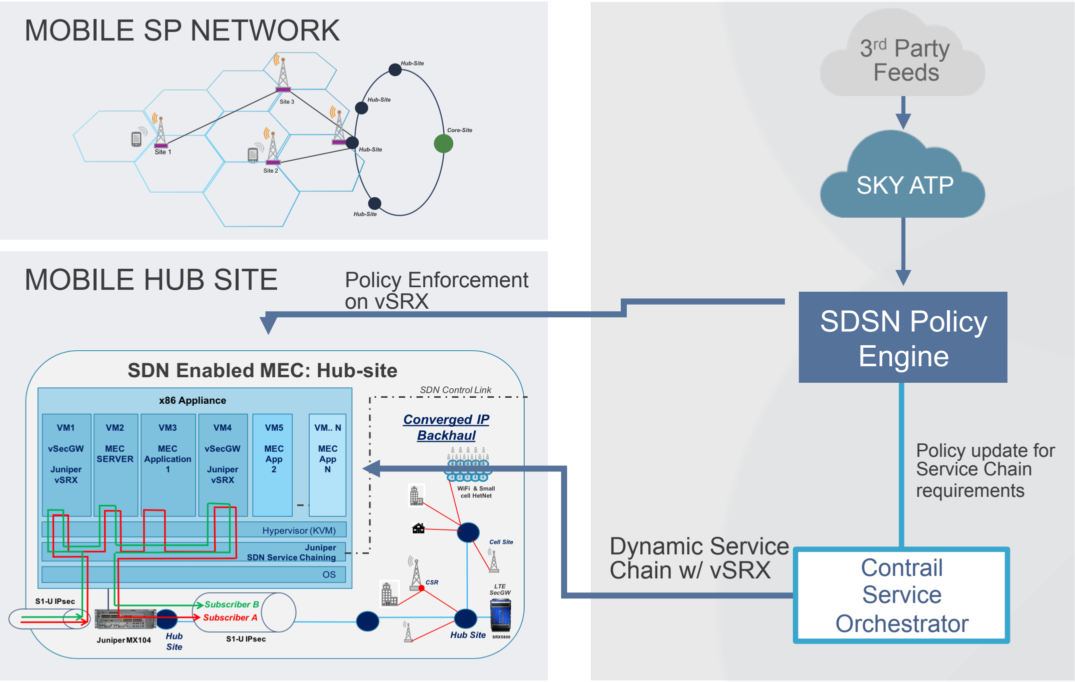
DETECTION

- Sky detection applicable for infected applications scenario (#2 above)

ENFORCEMENT

- VM related traffic controls enforced in vSRX
- Physical to physical traffic controls in access/aggregation switches

Service Provider: Mobile Edge Computing



MOBILE SP NETWORK

MOBILE HUB SITE

Policy Enforcement on vSRX

SDN Enabled MEC: Hub-site

3rd Party Feeds

SKY ATP

SDSN Policy Engine

Policy update for Service Chain requirements

Dynamic Service Chain w/ vSRX

Contrail Service Orchestrator

POLICY

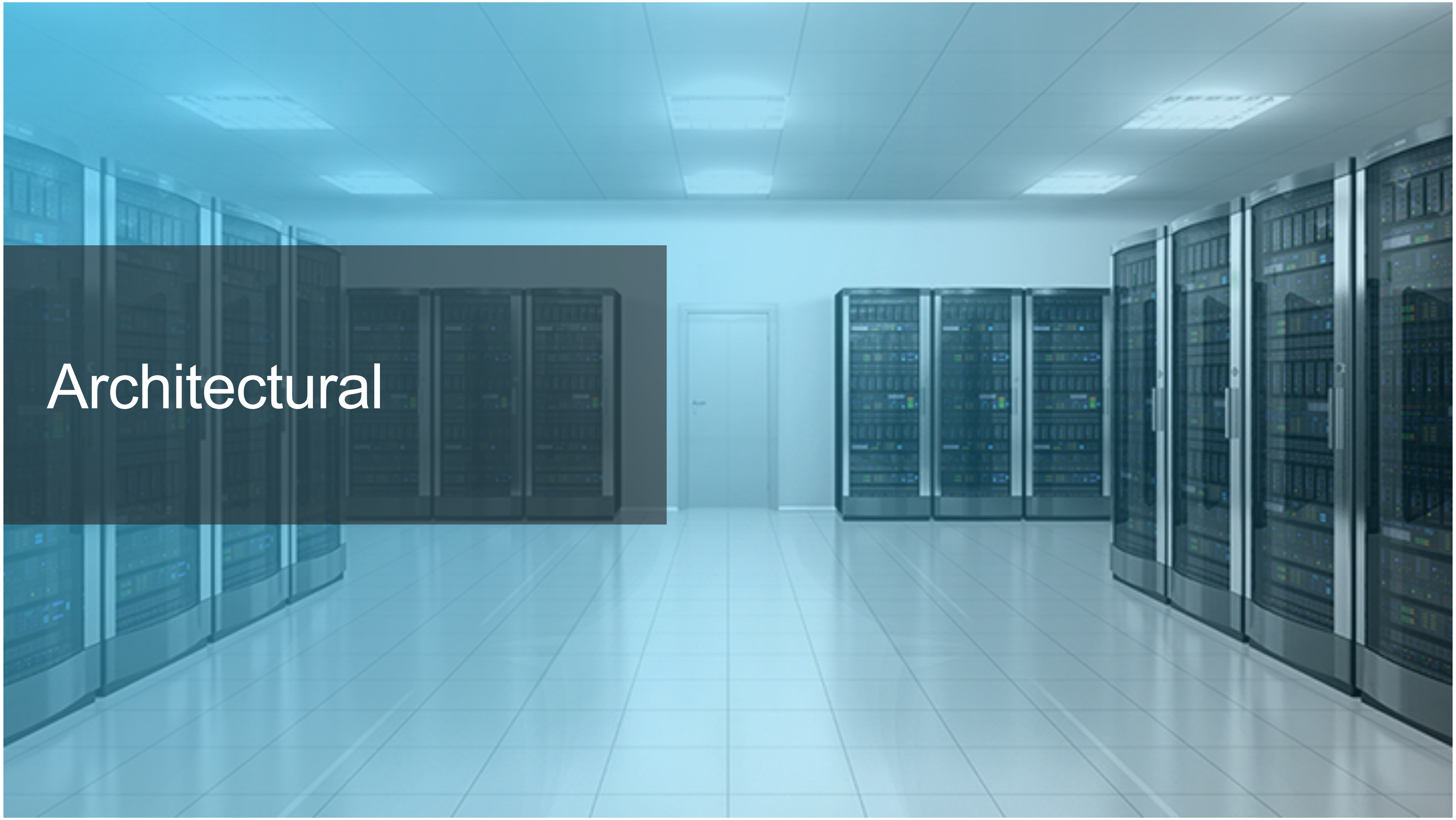
- Policy defined in Policy Engine
  - *"Attacks from infected mobile devices should be blocked in Mobile Hub site"*

DETECTION

- Sky Infected Host feed
  - Using 3rd feeds
  - SRX data to Sky

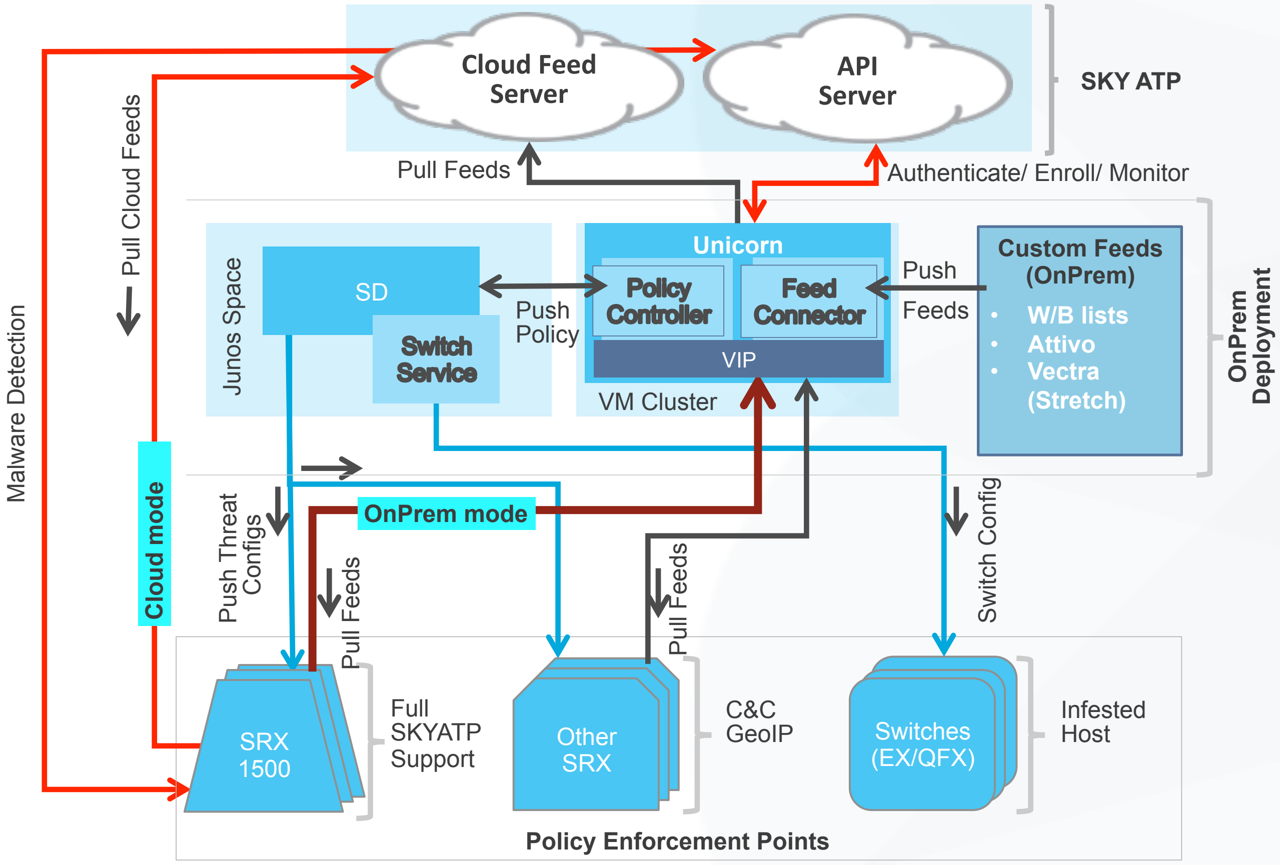
ENFORCEMENT

- Contrail provisions vSRX in Service Chain
- Traffic from infected mobiles dropped by vSRX



Architectural

SDSN Stage 1 – Design/Architecture



- SDSN is both a Policy Controller and/ or Feed Connector, based on License – Unicorn can be both or just Connector
- As Policy Controller – Introduce User intent Policy → Secure Fabric, Policy Enforcement Groups, switch support
- Support for SD+SKYATP or SD +SKTATP+SDSN
- SDSN downloads feeds from Cloud Server and support OnPrem custom feeds (***OnPrem mode***).
- SRX 1500 configured to download feeds from SKY ATP or Unicorn Connector (***OnPrem mode***)
- Other SRX (No SKYATP Support) configured to download feeds from SDSN **OnPrem mode)** – only support for C&C, GeoIP
- In **SD+SKYATP+UNICORN** –
  - Switch uService in SD manages switch filter configurations
  - Push Infested Host policy to switch, find endpoint, map IP-MAC

Manage Your Migration and Upgrade - Juniper Professional Services

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Resources

Domain expertise

Experience deploying NGFW

Juniper Professional Services

Reduce Risk

Reduce Time to implementation

QuickStart Services:

- SRX Series QuickStart Service
- Junos Space Security Director QuickStart Service
- JSA Security Analytics QuickStart Service
- SKY-ATP Jumpstart Offer

Firewall Conversion Service

Thank you