
Software-Defined Secure Networks

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Security Trends Today

Network security landscape has changed.
CISOs “Treading Water”



Pouring money into security, yet not any more secure
- Average of 4000 nodes with 5 security vendors



Risks posed by threats versus risks to business outcomes



Metrics of success: total number of attacks stopped vs
reduction of risk



Attackers are always gaining, staying ahead

Threats are Everywhere

Perimeter security isn't enough.
Malware walks in with your employee!
Stop Threats. Faster.



Increasing sophistication



Increasing variability



Threats are already inside



Keeping data secure throughout your network is key!

Most network security strategies focus on security at the perimeter only— outside in.

Is securing the perimeter *really* enough?

Today's Enterprise: Perimeter security model

Security layered on top of network

Trust model: trust what's inside the network

Visibility relies mostly on perimeter firewalls

Evolving threats requires adaptability



Inline
Intrusion
Prevention



Unified Threat
Management



Inline
Anti-Malware



Application
Security



Data Loss
Prevention



A Change in Mindset

**Stop talking about Network Security.
Start talking about Secure Networks.**



Realize threats are everywhere. They are already inside.
They walked in your front door



Recognize perimeter security isn't enough



Detection and Enforcement should be enabled anywhere



Acknowledge security is everyone's problem – horizontal
and vertical

Everything on Your Network is a Potential Threat



Normal and Abnormal Behavior

Normal operation: call home beacons, energy utilization

Aberrant behavior: bursting traffic, abnormal high data download rate

Is this normal? How to mitigate risk?

The Software Defined Secure Network

Operate network as single enforcement domain, every element becomes a policy enforcement point

Policy



Create and centrally manage policy in natural language

Detection



Gather and distribute threat intelligence, from multiple sources



Leverage cloud economics for real time analysis

Enforcement

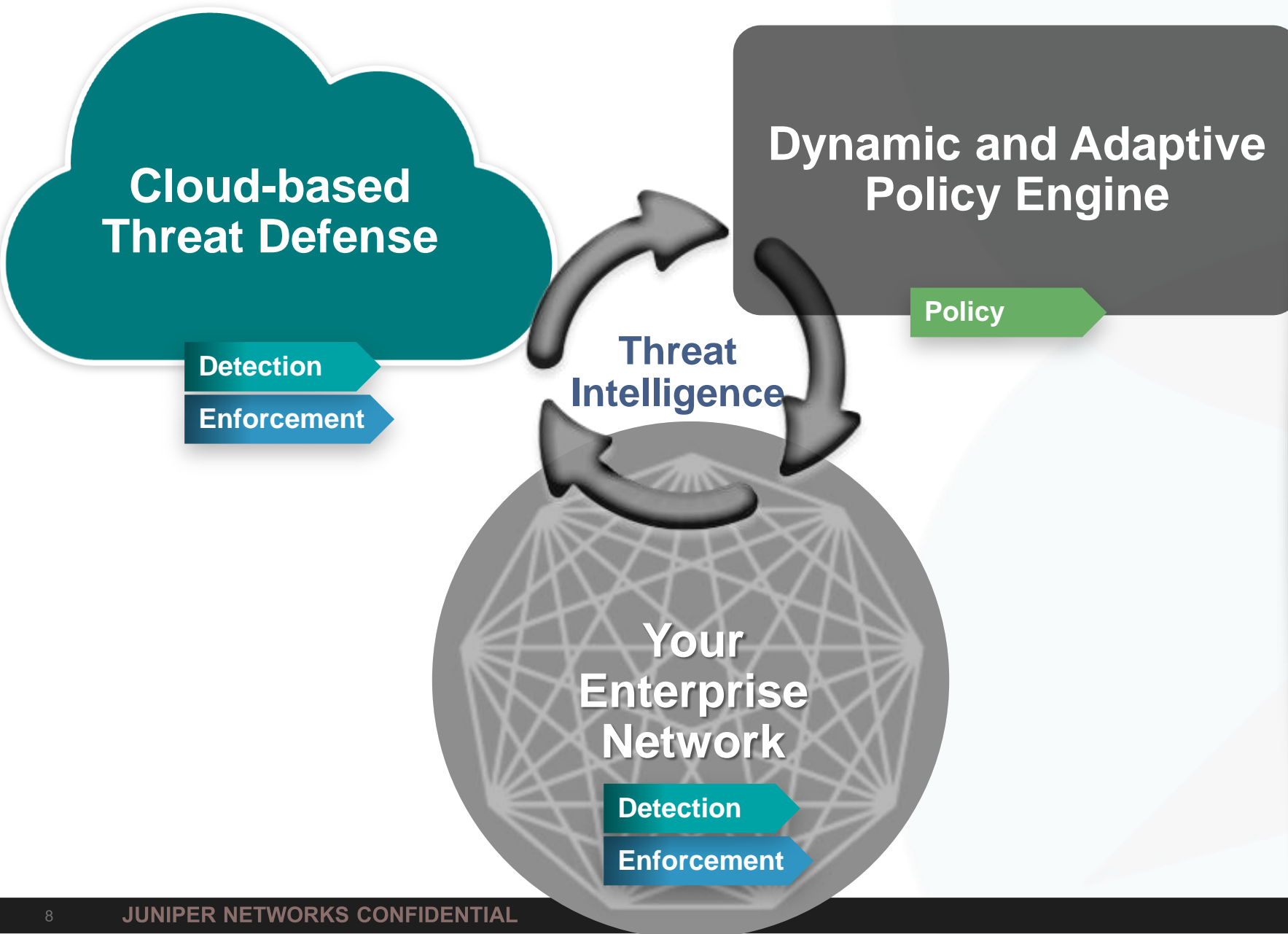


Adapt and enforce policy to the threat feed information, real time across the network.



Software-Defined Secure Network

Policy, Detection & Enforcement



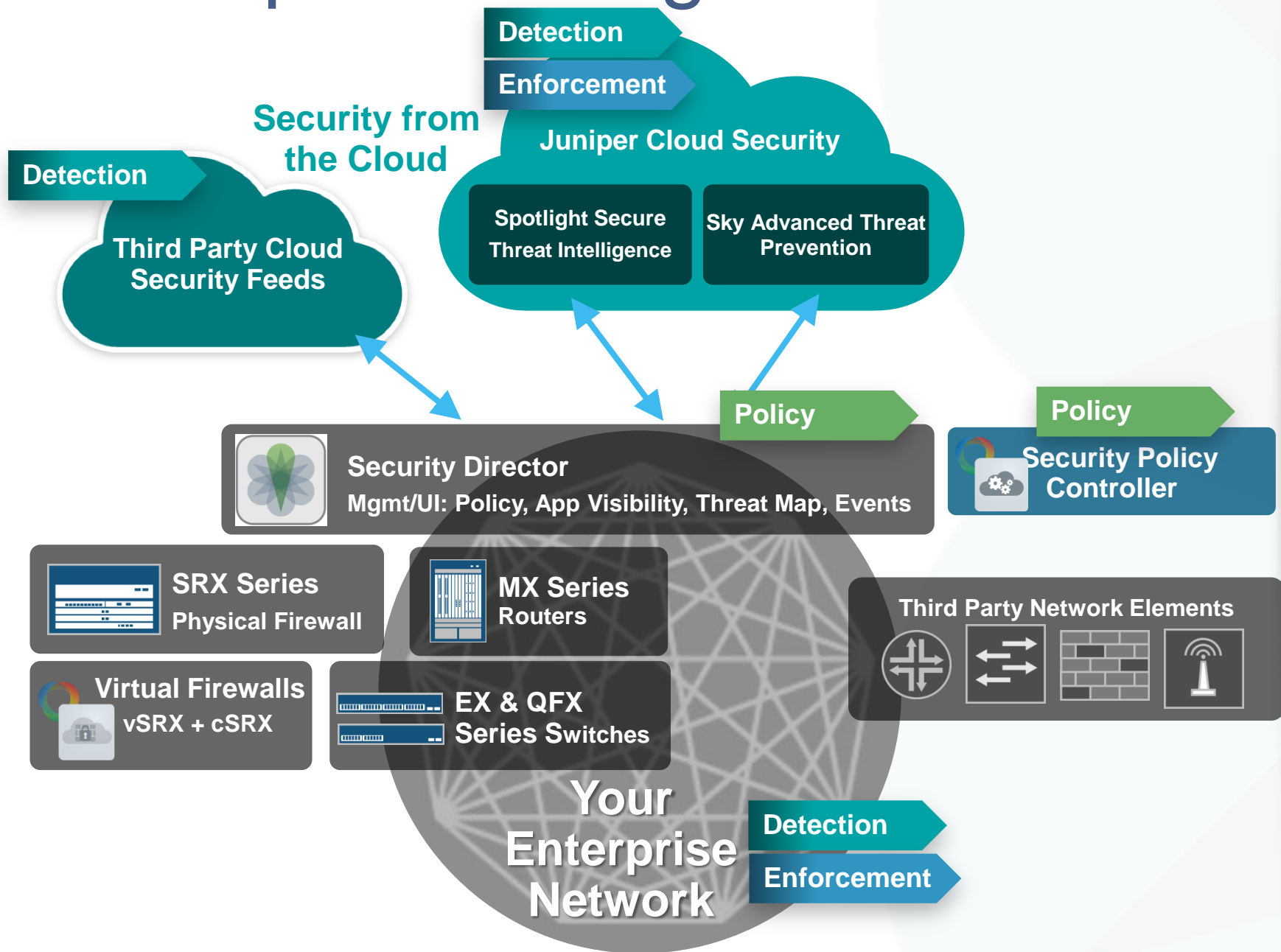
Bottoms Up and Top Down Approach –

Leverage **entire network and ecosystem** for threat intelligence and detection

Utilize **any point** of the network as a **point of enforcement**

Dynamically execute policy across all network elements including third party devices

Software-Defined Secure Network Juniper Building Blocks



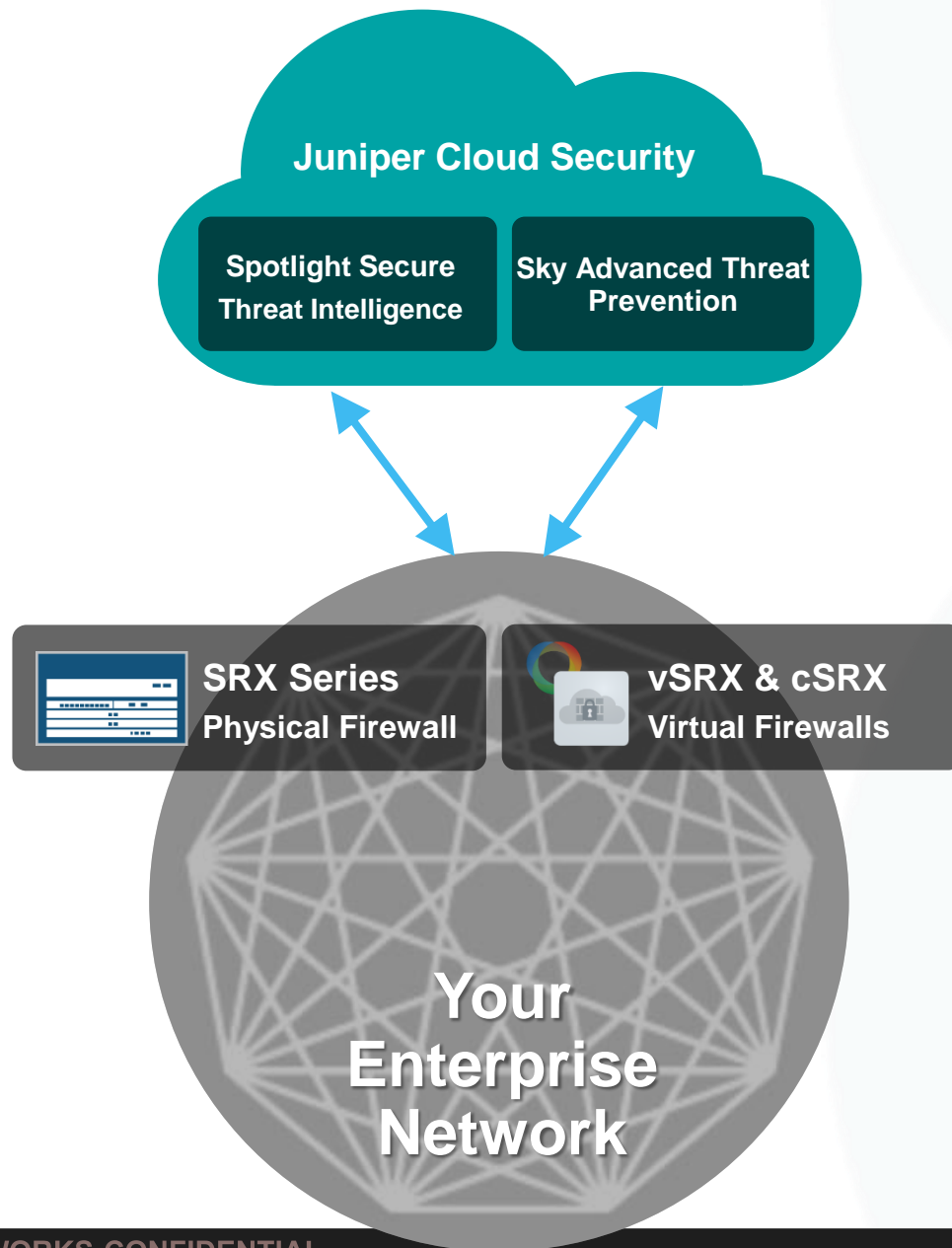
Comprehensive suite of products: **Centralize and automate security**

Instant threat intelligence and detection

Dynamically adapting policy, deployed in real-time

Consistent firewall capabilities – physical and virtual

Where to Start – Modernize Your Perimeter

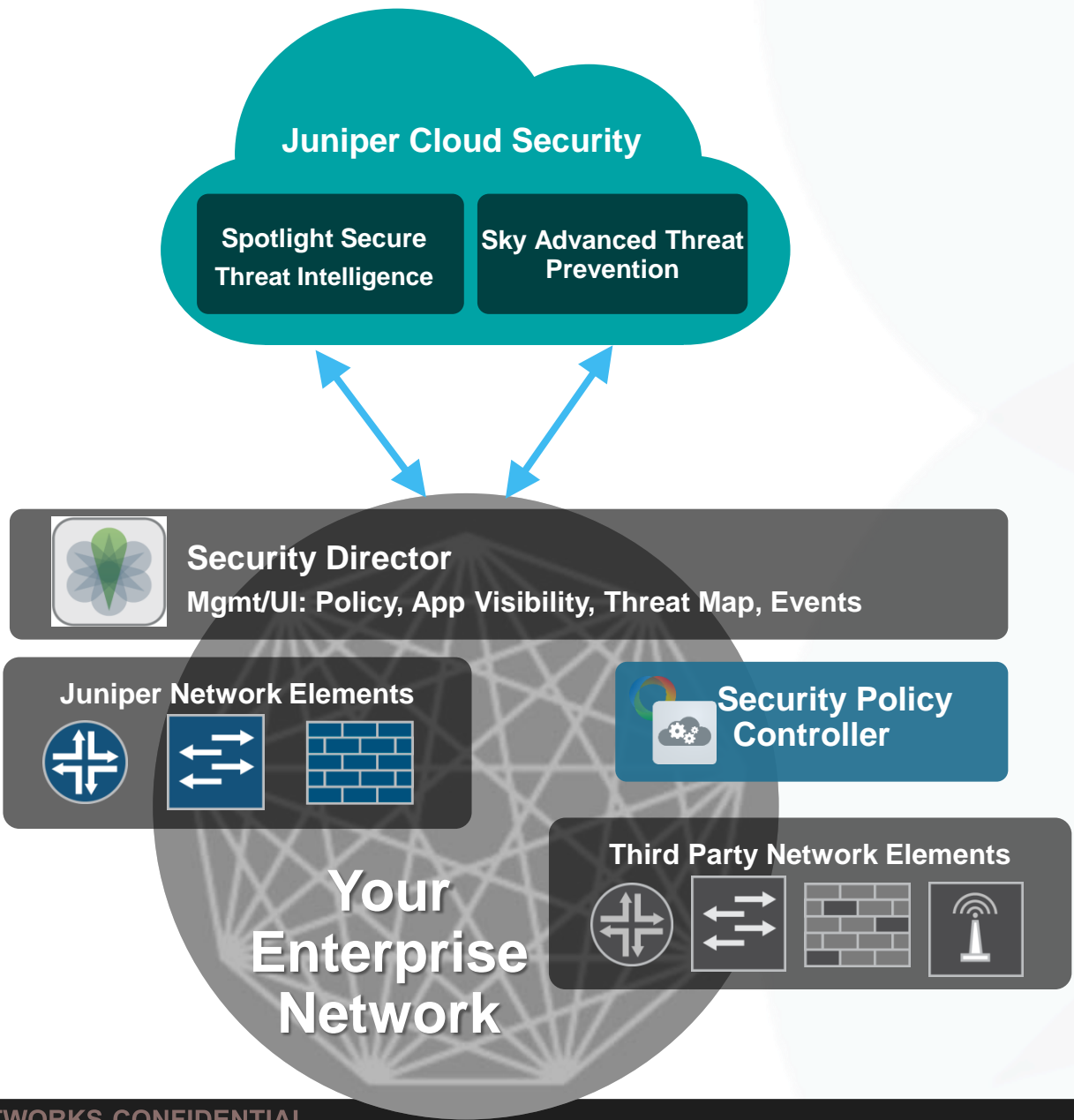


Upgrade your perimeter to make it adaptable

Next Generation Firewall is Current Generation Firewall – simplify and remove niche security appliances

Utilize Cloud Economics for Instant Intelligence that Leads to More Effective Detection

Converse With Your Network



Deploy Policy Engine that Communicates with Your Network

Analytics Capability Based on Network Data

Customizable UI Provides Data Correlation

Utilize All Network Elements as Detection & Enforcement Points

Future: Intent Based Policy Engine to Communicate Across Any Network Element

The Right Policy for the Right Job

Software Defined Secure Network
(SDSN)
Policy Engine + Controller

Shut down
light bulb



Example 1

Or

Kill
illegitimate
tunnel



Example 2

Different threat levels
need **different policies**

Aberrant lightbulb: quarantine and
create new policy for correct behavior

Compromised core switch? The right
policy for the right level of threat

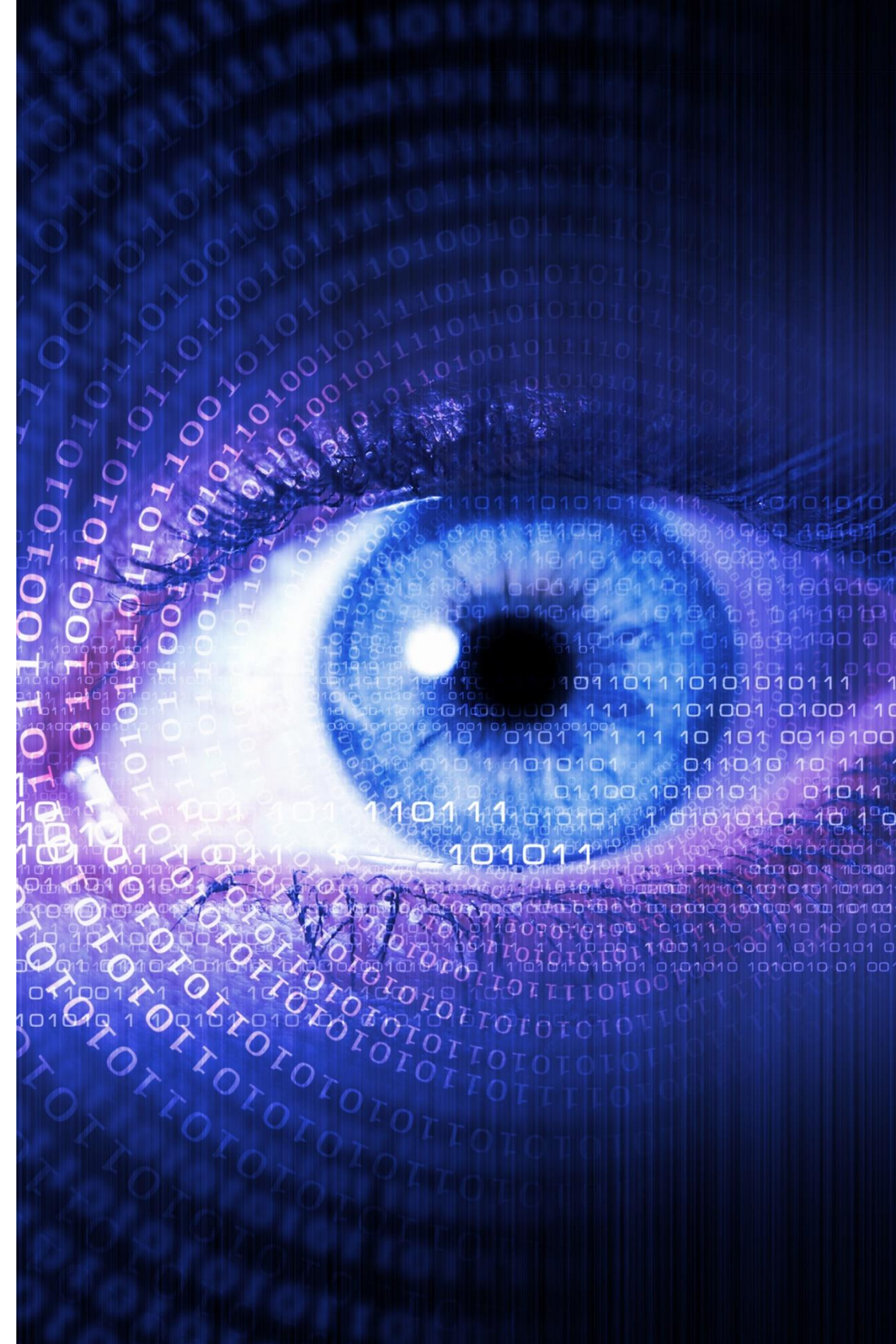
Juniper's Security Vision

From Network Security to Secure Networks

Only one in the industry with building blocks for tomorrow's Software-Defined Secure Network

- **Simplified Policy and Management** across all network elements
- **Adaptable Security Solution** based on real time threat intelligence information
- **Cost Effective Detection and Enforcement** utilizing the entire network to protect you

The Juniper Software-Defined Secure Network dynamically adapts to changing threat landscape...so you don't have to!



Thank you
