

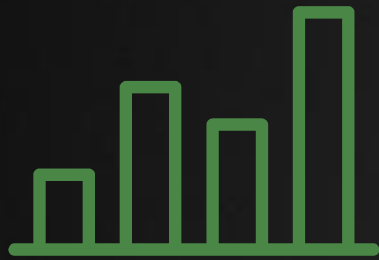
FASTER NETWORK & PROACTIVE SECURITY

April 2015

박달수 부장 (brianpark@juniper.net)

Juniper Korea





INDUSTRY TRENDS



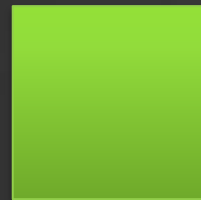
(NFV/SDN)



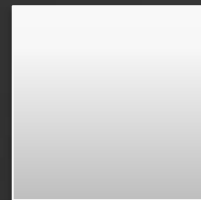
Automation & Orchestration Integration



Native Cloud Services & Offload



Big Data / Security Analytics



API Driven



CUSTOMER TRENDS



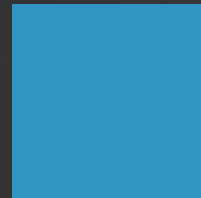
/ Thin Client



BYOD (Bring your own everything)



(The internet of things)



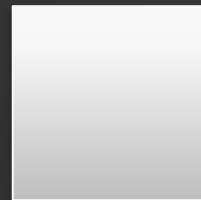
Resilience, recovery and incident response



Platforms and DevOps



THREAT TRENDS



Platform (Heartbleed, Shellshock, POODLE)

Cloud – as a platform for innovation & exploitation

Target Attack

Adaptive Malware

&

사이버 범죄의 발생

60%

최초의 위협에 걸리는
시간이 1분 미만

43%

지난 한해 동안 데이터 유출을
경험한 고객

\$12m

데이터 유출을 통한 평균
피해액

...

-
-
-
-
-

점점 더 어려워 지는 보안....왜?

위협 대상 증가

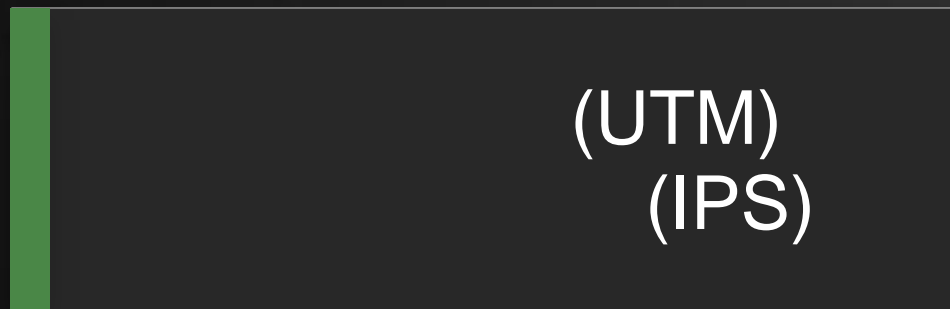
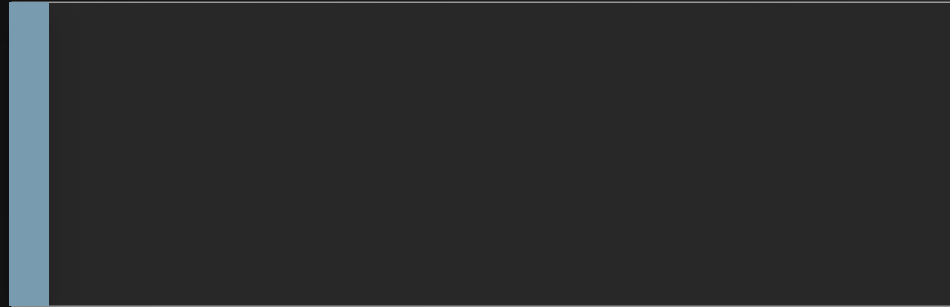
- ✓ Virtualized
- ✓ BYOD
- ✓ IOT (Internet of everything)

보안 기술 적용의 난해함

- ✓
- ✓
- ✓ Sea of alerts: signal to noise

Beyond Traditional Firewall....

Advanced Security의 필요성 부각



어플리케이션 가시성 제공 그리고 통제

App

- Understand security risks
- Address new user behaviors

App

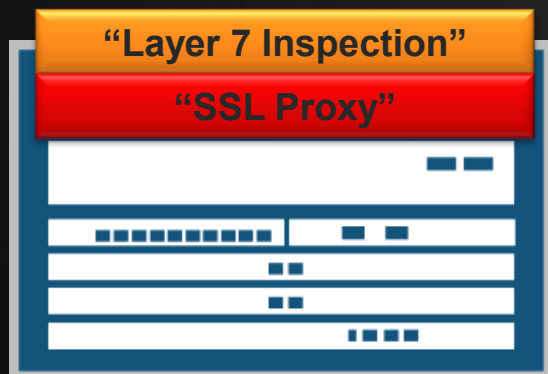
- Block access to risky apps
- Allows user tailored policies

App QoS

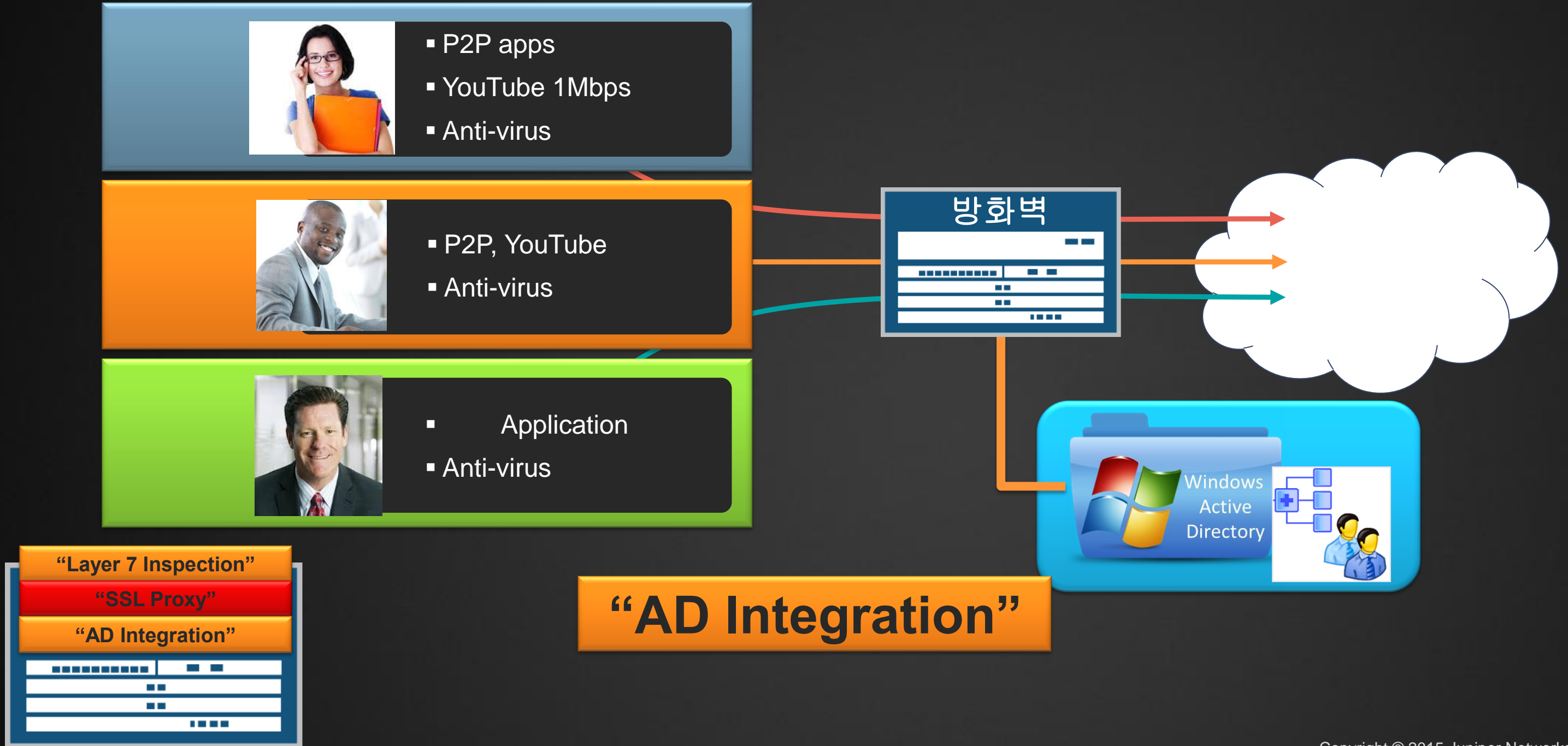
- Prioritize important apps
- Rate limit less important apps

SSL

- SSL packet inspection



사용자 / 사용자 그룹 기반 통제



통합 위협 관리(UTM) 서비스



안티 바이러스

- Protection from top-tier AV partner
- Reputation-enhanced capabilities

안티 스팸

- Multilayered spam protection from security experts
- Protection against APTs

컨텐츠 필터링

- Filter out extraneous or malicious content
- Maintain bandwidth for essential traffic

웹 필터링

- Block malicious URLs
- Prevent lost productivity

“Layer 7 Inspection”

“SSL Proxy”

“AD Integration”

“TCP Proxy”

“L7 Inspection”

“HTTP Redirection”

“TCP Proxy”

“L7 Inspection”

“HTTP Redirection”

Advanced Security ...in reality...

Advanced Security

Can do Plug-and-Play in network??? (연결만 하면 바로 동작???)



User방화벽
APP방화벽
SSL-Proxy
Web-Filtering
Anti-Spam
Anti-Virus
IPS



- ✓ Advanced Security는 Legacy 방화벽에 비해 훨씬더 세밀한 운영자의 개입이 필요
- ✓ Operational Complexity로 인한 Business 효율 저하 및 Risk 증가
: Operation Cost

How to decrease operation cost?



Advanced Security

심화된 Security Processing을 뒷받침할 H/W , S/W Platform 기반 없이는 ...

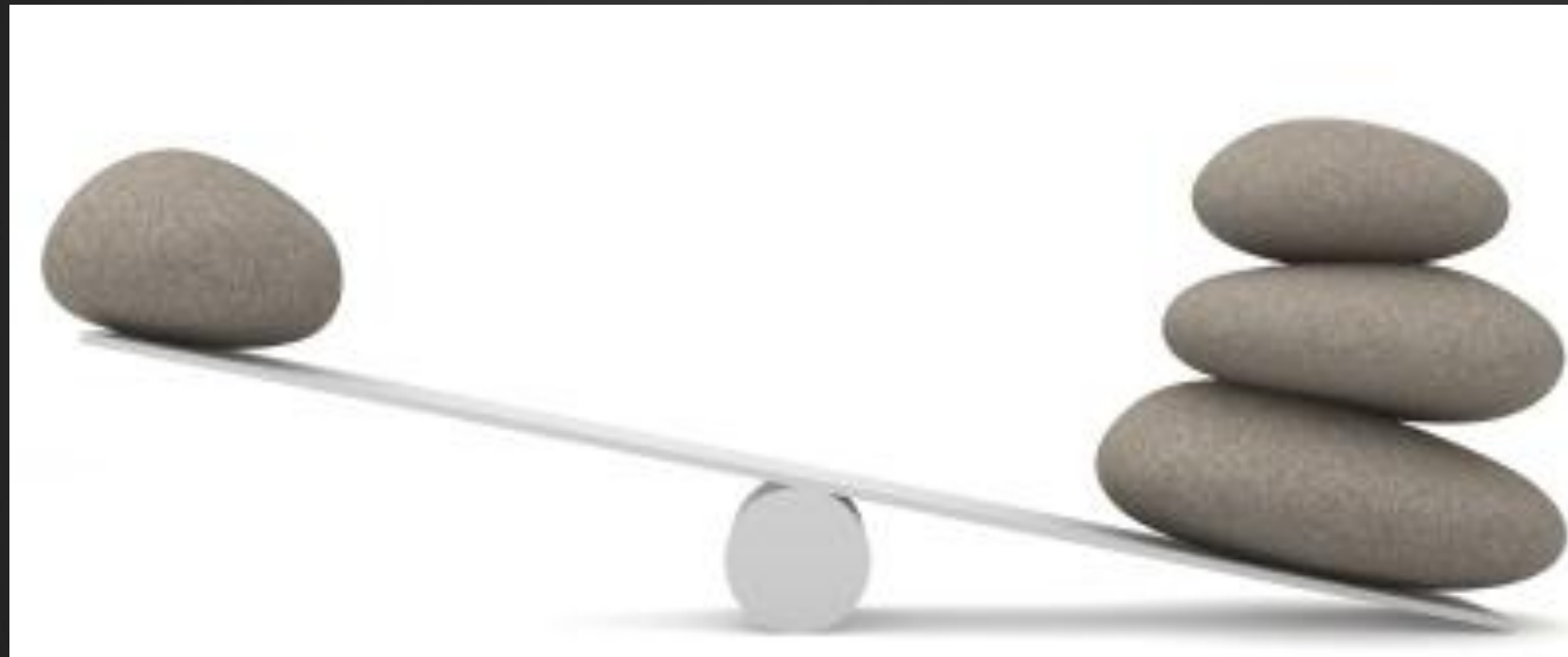


- ✓ 네트워크 속도 저하(Bottle neck) / 서비스 단절
- ✓ Low Reliability
- ✓ Service Quality Issue
- ✓ Business Reputation에 영향

Dilemma?

네트워크 속도
네트워크 안정성

Advanced
Security



Return to Basic !!



Tri-Level Security

“가급적 낮은 Level 에서의 차단이 네트워크 최적화 차원에서 가장 이상적”



More Resource



APP-FW User-FW IPS UTM

Advanced Security

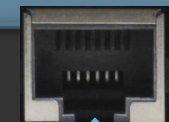


Lookup Policy NAT ALG

Stateful Inspection



Firewall Filter **Stateless Inspection** Screen



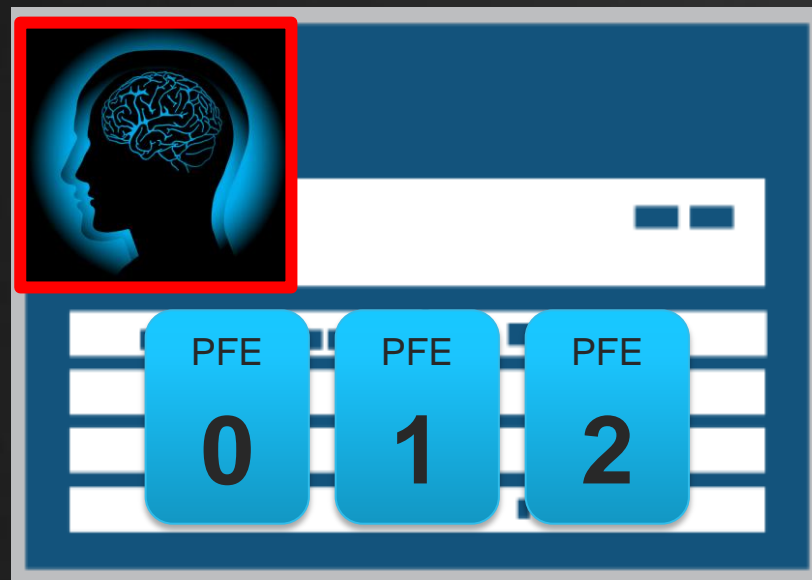
Network Traffic

Non STOP Network Service

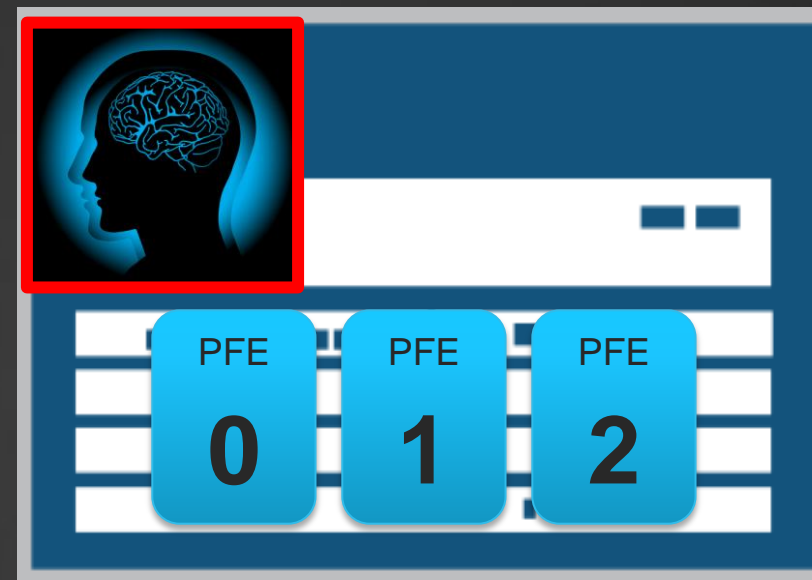


High Availability

node0

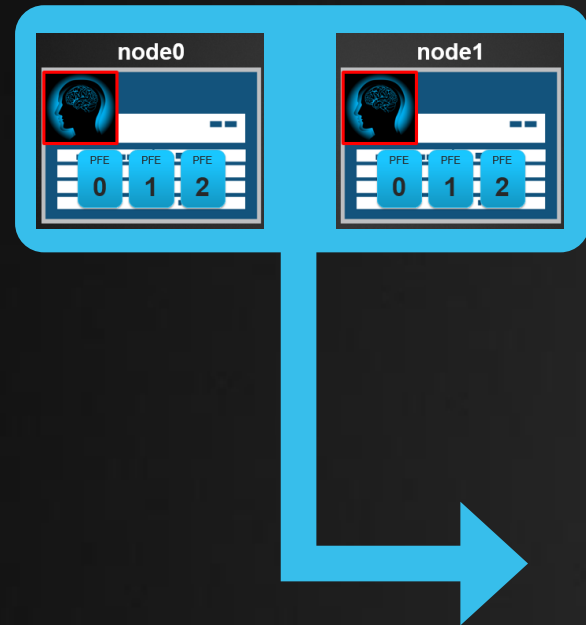


node1

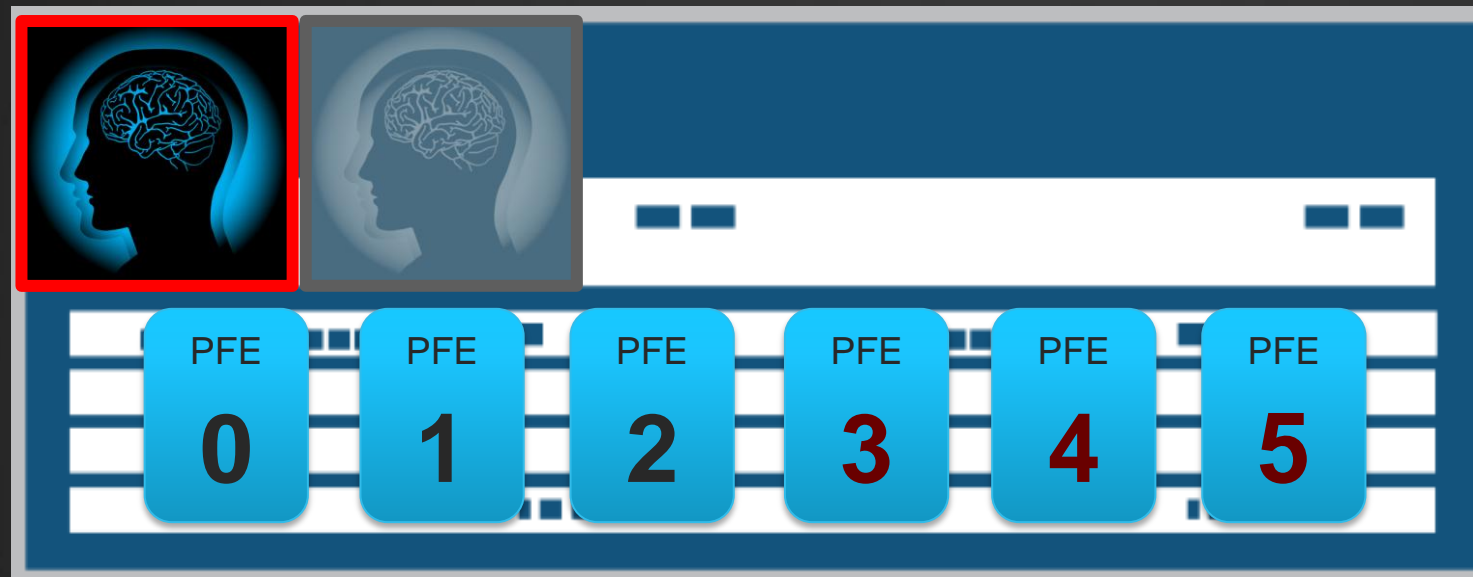


High Availability with Chassis Clustering

VIP를 이용한 단순 Redundancy를 넘어선 유일한 Chassis Clustering 형태의 방화벽



One clustered Chassis



Customer

On-Demand 성능 / 확장성

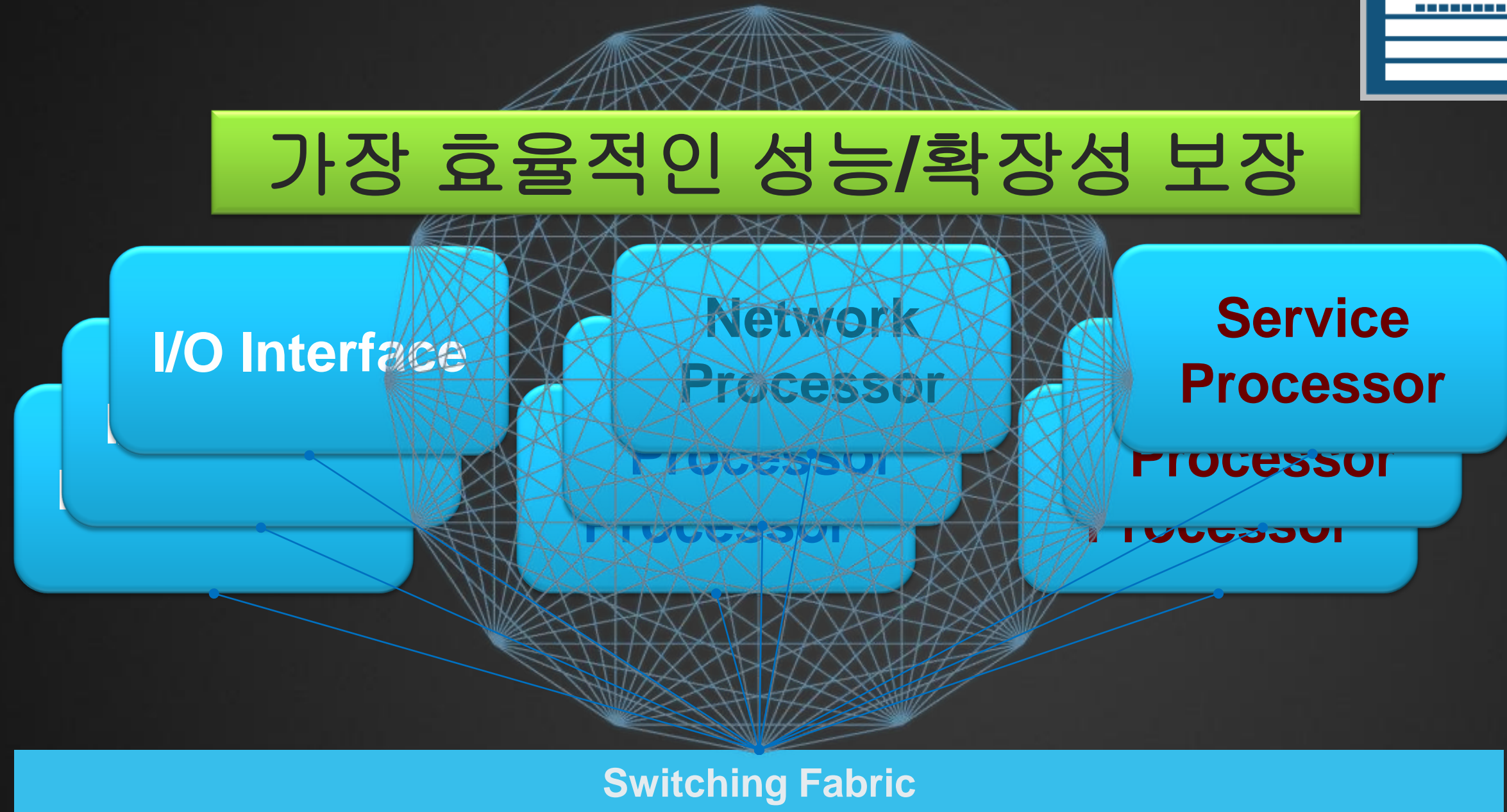


Separation of function in HW

기능별 하드웨어 분리 그리고 스위칭 패브릭을 통한 완벽한 연결



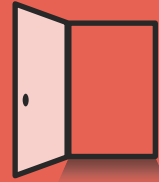
가장 효율적인 성능/확장성 보장



Operation 효율성 / 간소화

Strength from a common DNA

Across security, switching and routing



Intelligence
and analytics

- Intelligence sharing
- Logging & reporting



Network Service
Automation

- Programmable
- Open APIs



Management

- Single operating environment



Architecture

- Silicon, systems and hardware

JUNOS Automation

Can automate everything you want to do...



네트워크 속도
네트워크 안정성

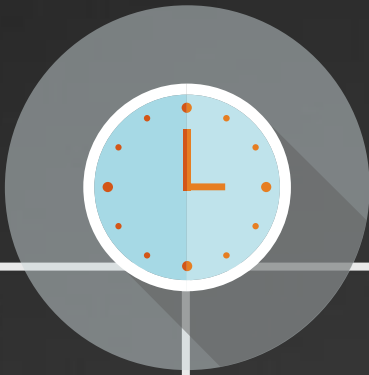
Advanced
Security



It's All About Time...

=

+



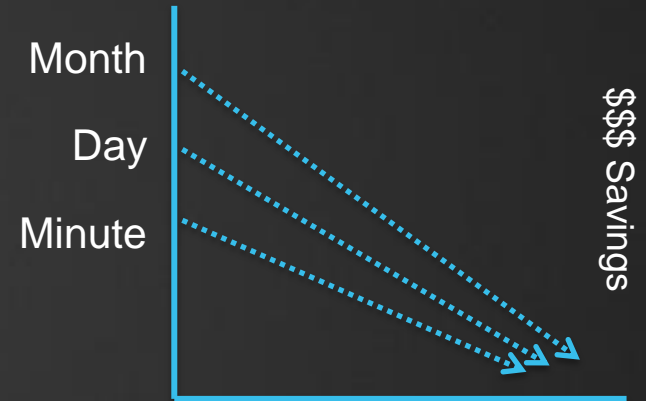
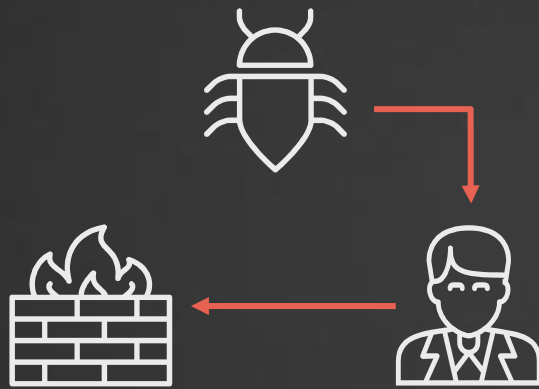
Equipment

Threat Response

Grow/Scale/Change



100 GbE
1 Tb/s
20 sec/yr > 99.9999%



1

2

3

High Performance Firewall

Threat Intelligence

Automation

THANKS