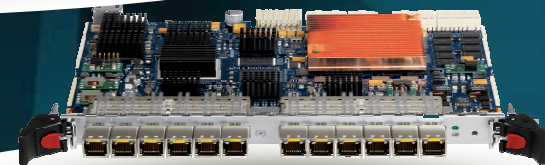
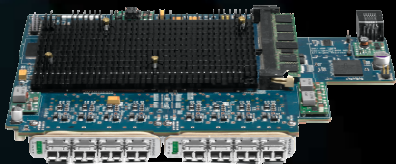


# Nokia Security Solutions



**Janne Sipilä**  
**Account Manager**  
**Finland and Baltic States**



An overhead photograph of two men in business suits standing on a dark, textured floor. The man on the left is older with grey hair, wearing a dark suit and tie, looking down at his hands. The man on the right is younger, balding, wearing a light-colored suit, looking up at the older man. They appear to be in a professional conversation.

# Agenda

- Security Solutions Portfolio
- How to protect your investment?
- Product Update
  - New platforms
  - ADP Service Modules
  - New IPSO version
  - Nokia Horizon Manager
- Nokia Intrusion Prevention
- Nokia Intellisync Device Management

# Nokia's Unique Security Solutions

## Network Security

- Nokia IPSO operating system
- Nokia IP Security Firewalls/VPN
- Nokia IP Security Firewalls/VPN/UTM
- Nokia Intrusion Prevention
- Nokia Security Management Tools



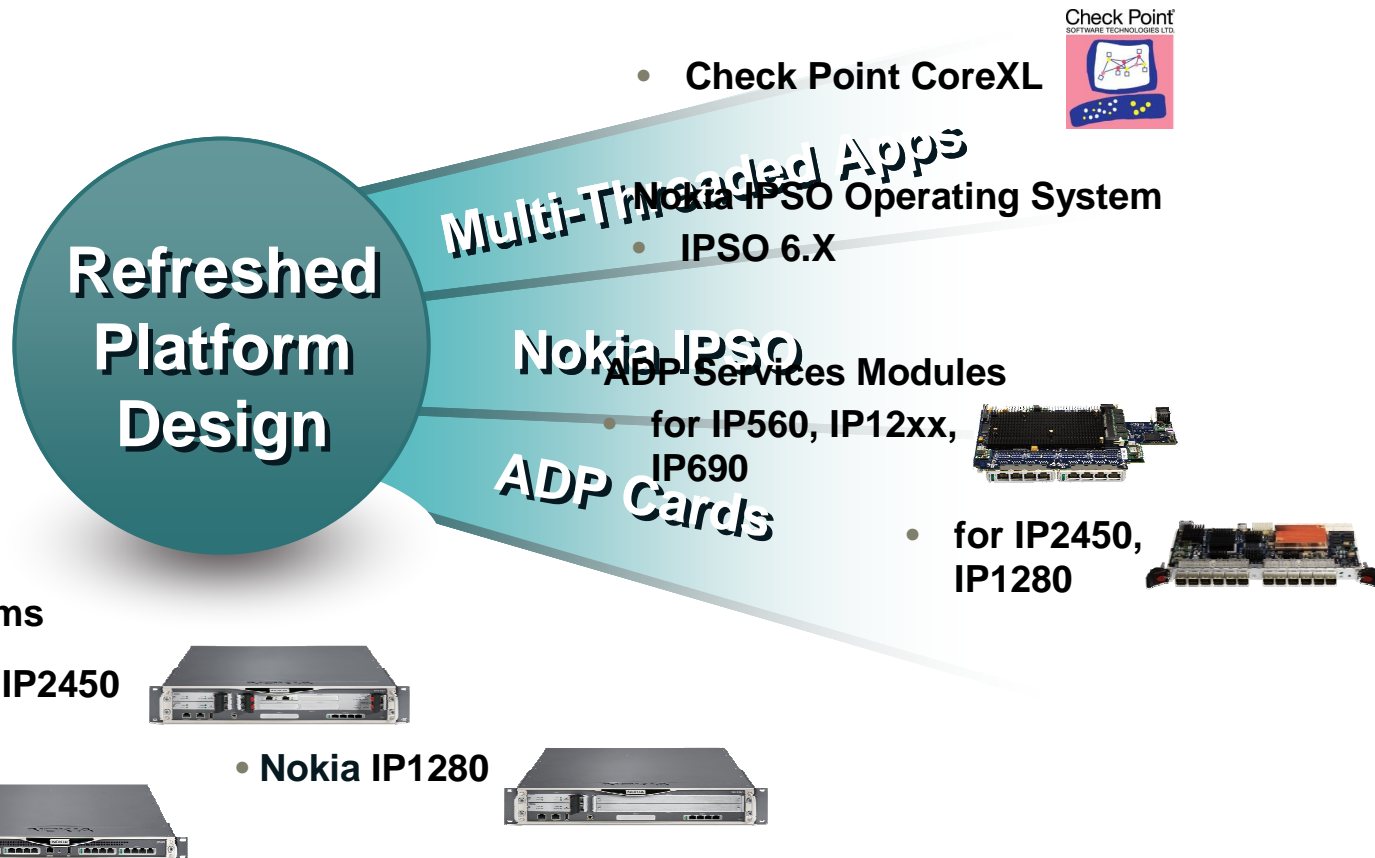
## Mobile Security

- Intellisync Device Management
- Nokia Mobile VPN
- Device security applications
  - F-Secure & Symantec anti-virus
  - Check Point/pointsec data encryption
- Device security architectures
  - E Series device security



# Nokia “Power Boost” Options

*Boost performance when and where you need it*





# Investment Protection

- Our support policy guarantees **product support 5 years after end-of-sale** is announced
- **New ADP technology on legacy HW**: Last year we unveiled ADP interface cards for our **IP560, IP1220/1260** and IP690 platforms
  - Nokia is the *ONLY* hardware vendor that has ADP technology
  - **The IP1260 originally shipped in 2003. Nokia added value to a platform that was 5 years old**
- Our goal is to minimize forklift upgrades in customer environments and provide a clear path for upgrades in performance and feature sets
- **Field replaceable parts available after end of sale**
- **Interfaces interchangeable**

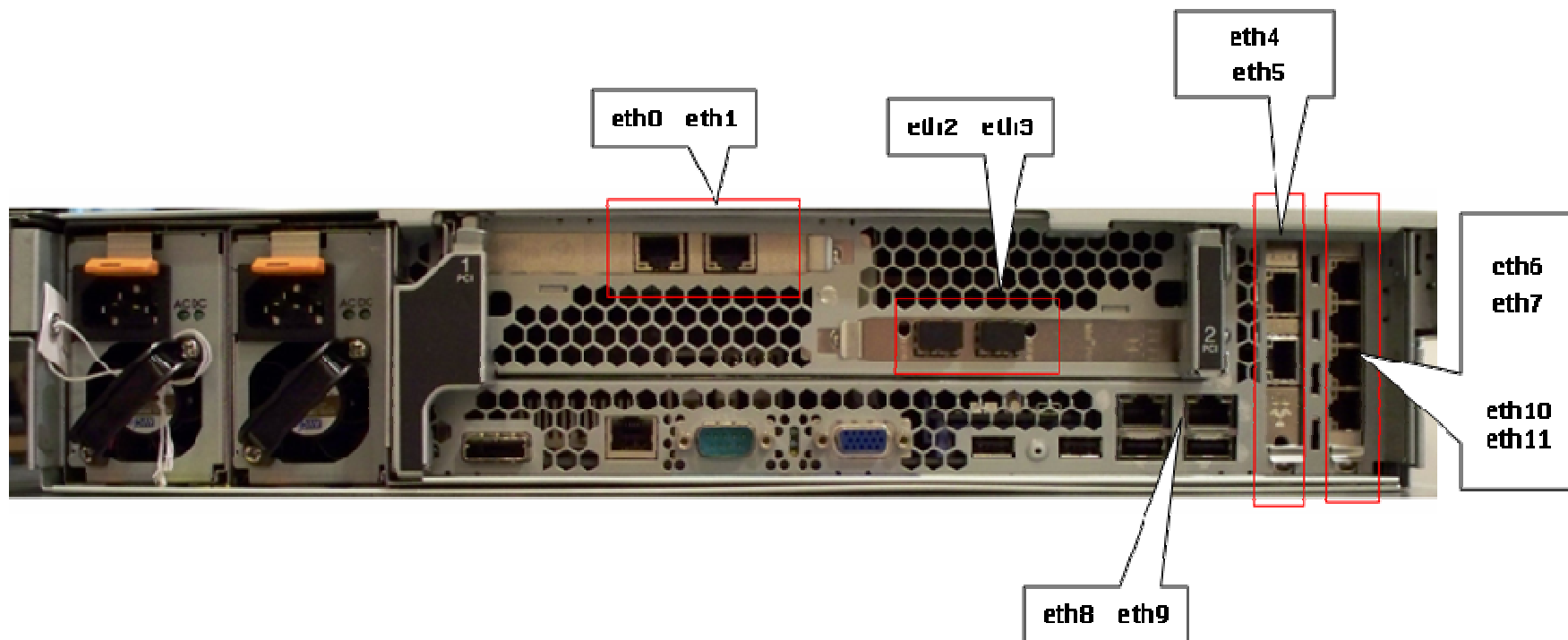
# Nokia appliances are purpose built from Day 1

- Nokia hardware engineers **custom design** each and every security platform with **speed, reliability** and rock-solid enterprise **durability** in mind
  - Nokia appliances typically offer a **slide-out tray** and simple screws to open up the unit
- Close work relationship with every component vendor to ensure the performance, reliability, scalability and *availability* of each and every hardware item installed in a Nokia Platform
- Extremely **focused on performance, uptime and future growth**



# Purpose built from Day 1?

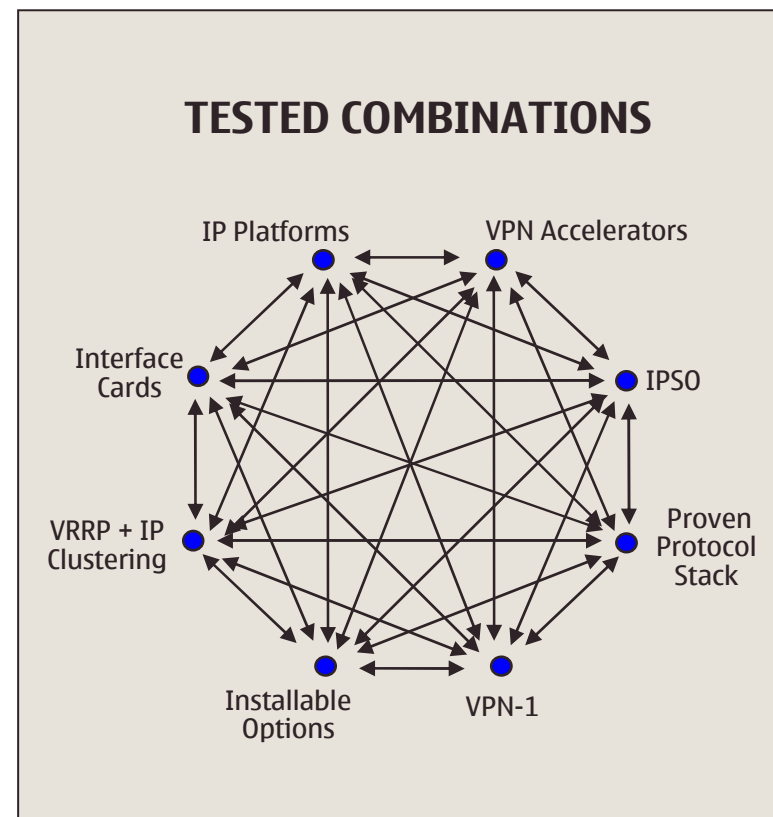
- Ifconfig doesn't indicate speed, duplex or link status
- Interfaces are in the back
- Difficult to tell which interfaces are present and active
- Not ideal for datacenter environments



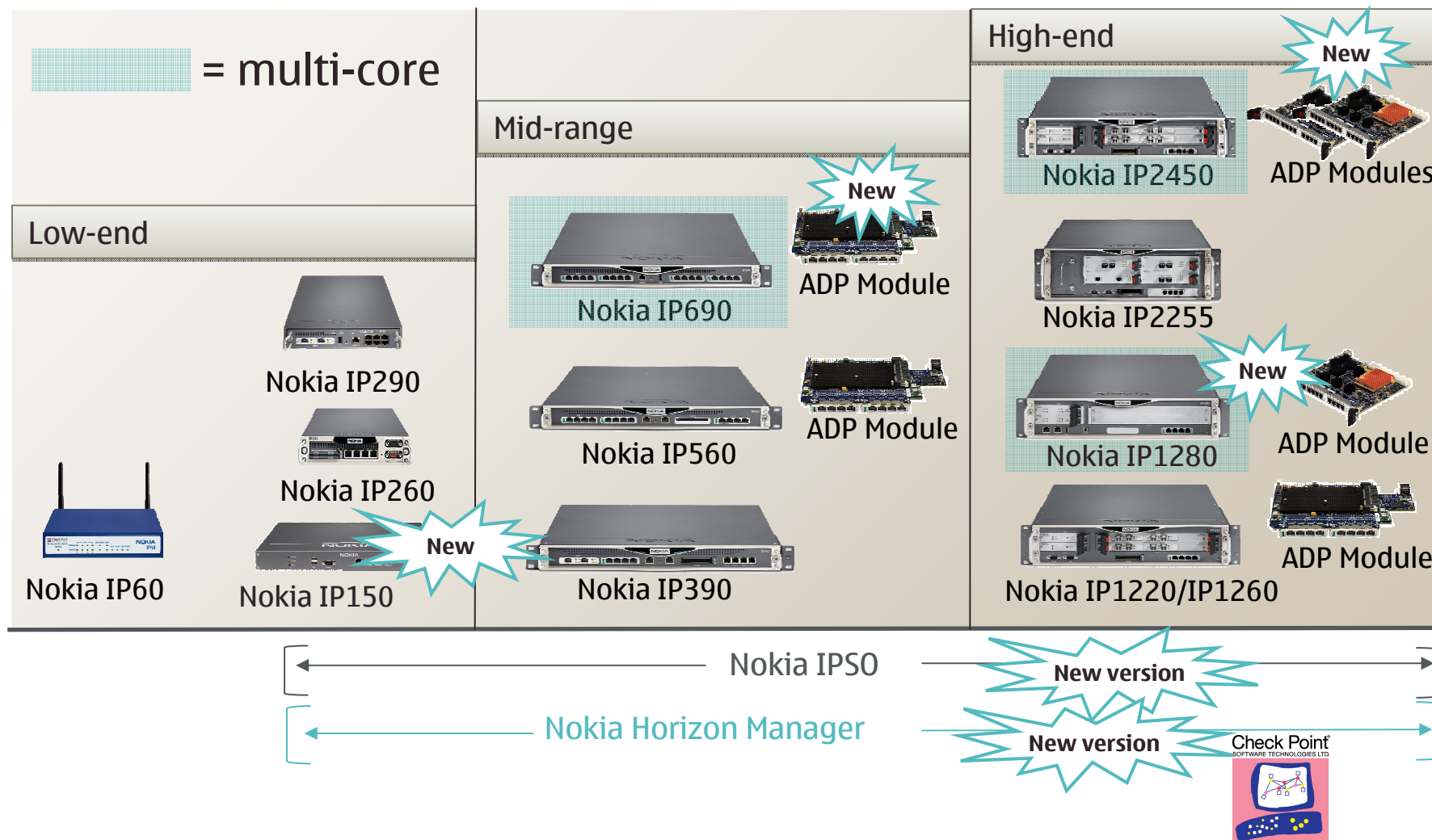


# Nokia Actually QA's the Entire Product

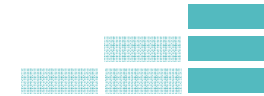
- Nokia tests EVERYTHING:
  - 13 IP platforms with,
    - ...~50 installable options with
    - ...5 major versions of IPSO with
    - ....6 versions of VPN-1 with
    - ...4 VPN accelerator cards with
    - ....~10 routing protocols with
    - ...VRRP and IP Clustering.....
- Investment Protection - Nokia QAs new software on EOS hardware
- Quality without compromise - Nokia has held release of FW-1/VPN-1 on Nokia until QA issues are resolved
- Nokia IPSO/Check Point/Hardware compatibility is clearly defined and a known entity.
- Nokia IP Appliances are introduced with the ability to support older versions of Check Point.



# Nokia IP Security Platform Portfolio



# Nokia IP1280 Firewall/VPN



Options: ADP Modules,  
Wide range of Nokia  
PMC cards and  
accessories



Partners:



Release:

New in 2Q 2008  
(shipping in April)

- High performance, **attractively priced multi-core solution** for Check Point existing & new applications
- Upgrade option for Nokia IP1260 & IP2255 platforms
  - ~ 2x performance of Nokia IP1260
  - ~ equivalent to performance of Nokia IP2255
- **High availability** 2RU network security appliance designed to provide a minimum of 5 years **investment protection**
  - Accelerated Data Path modules boost performance when you need it
  - 4 CPU cores accommodates Nokia IPSO 6 and Check Point Multi-core technology when you need it
  - AC and DC power supply available in HDD and FLASH versions
- Legendary Nokia hardware and software **configuration management** reduces OPEX and network interoperability concerns



# Basic Differences between IP1280 and IP2450

## IP1280

- 4 Cores (1 Quad-core)
- Supported with IPSO 4.2 with IPSO 6.X
- Base configuration does not include PMC carrier cards (need to be ordered)
- Supports VPN-1 NGX R62, R65 and later Check Point releases with CoreXL when available
- Supports maximum of 1 ADP
- Max. aggregated FW Tput with ADP card, IPSO 6.X and CoreXL **14 Gbps**
- Maximum number of GigE ports: **28**

## IP2450

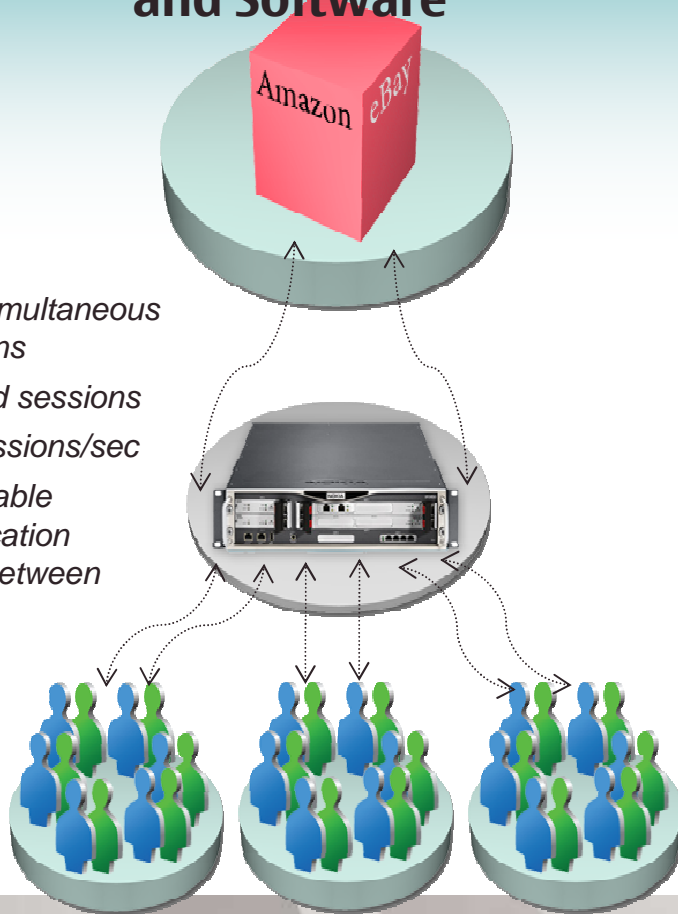
- 8 Cores (2 Quad-core)
- Supported with IPSO 4.2 and IPSO 6.X
- Base configuration includes 2 6U PMC carrier cards with cover plates
- Supports legacy releases of Check Point VPN-1 (R55P, R60, R61, R62) and NGX R65 and later Check Point releases with Check Point CoreXL when available
- Supports maximum of 2 ADPs
- Max. aggregated FW Tput with two ADP cards, IPSO 6.X and CoreXL **24 Gbps**
- Maximum number of GigE ports: **32**

# Evolving Networks Need Evolving Solutions

## Transaction Oriented Environment

**Solution: Multi-Core Hardware and Software**

- Large # simultaneous connections
- Short-lived sessions
- High # sessions/sec
- Unpredictable communication patterns between hosts



## Connection Oriented Environment

**Solution: Offload and Accelerate with SecureXL & Nokia ADP**

- Few simultaneous connections
- Long-lived sessions
- Low # sessions/sec
- Predictable communication patterns between hosts



# No Reason to Compromise With Nokia Today

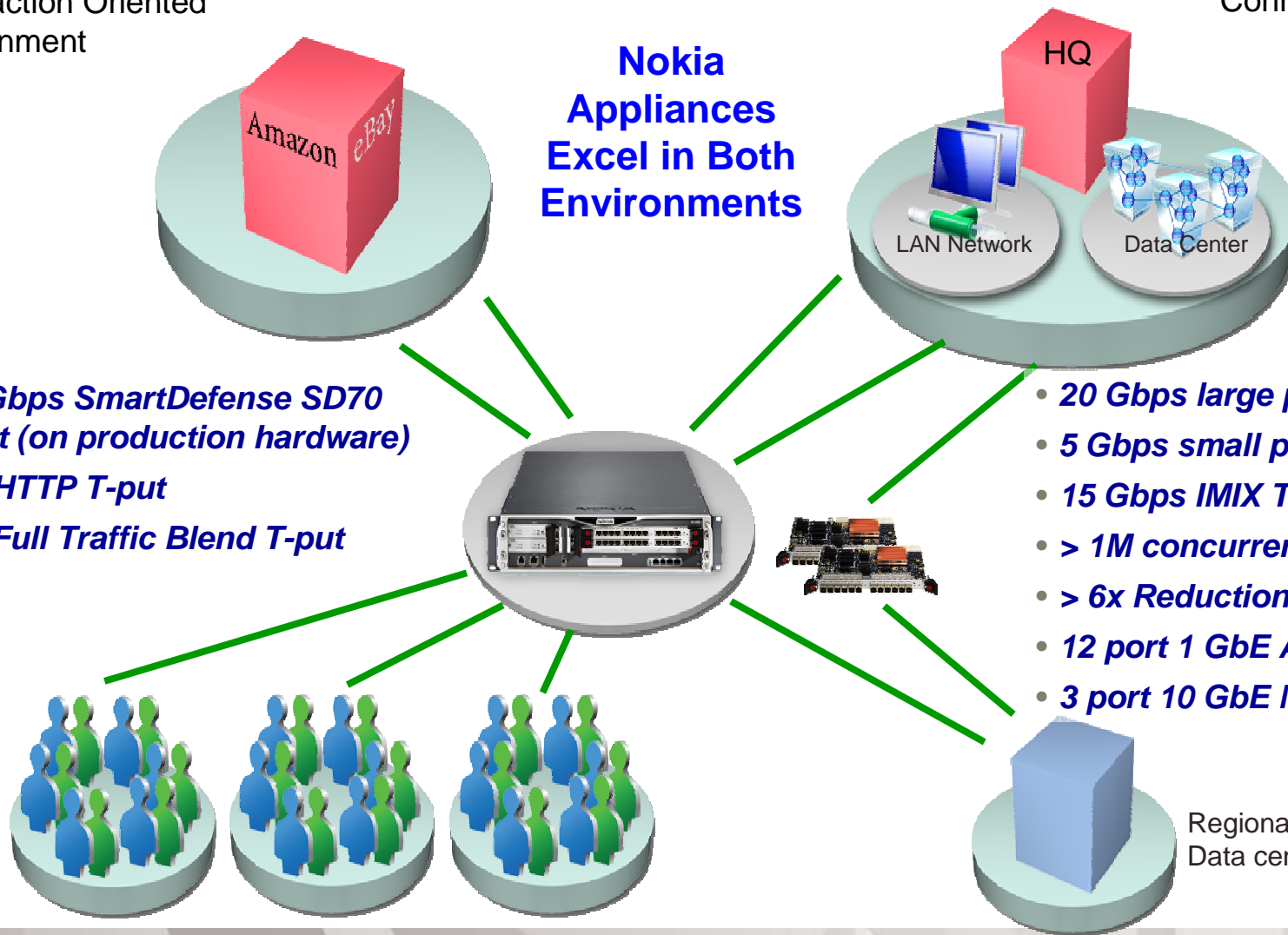
Transaction Oriented Environment

Connection Oriented Environment

**Nokia  
Appliances  
Excel in Both  
Environments**

- **1.3 Gbps SmartDefense SD70 T-put (on production hardware)**
- **>6x HTTP T-put**
- **>5x Full Traffic Blend T-put**

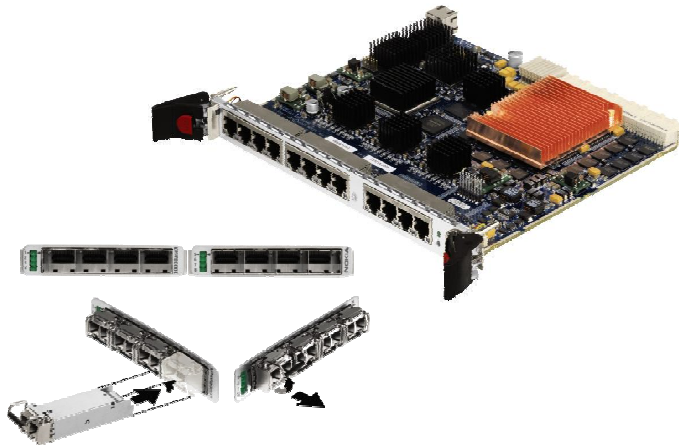
- **20 Gbps large packet T-put**
- **5 Gbps small packet T-put**
- **15 Gbps IMIX T-put**
- **> 1M concurrent connections**
- **> 6x Reduction in Latency**
- **12 port 1 GbE ADP Module**
- **3 port 10 GbE Module**





# Nokia ADP Services Modules

*“An appliance within an appliance”*



## Benefits

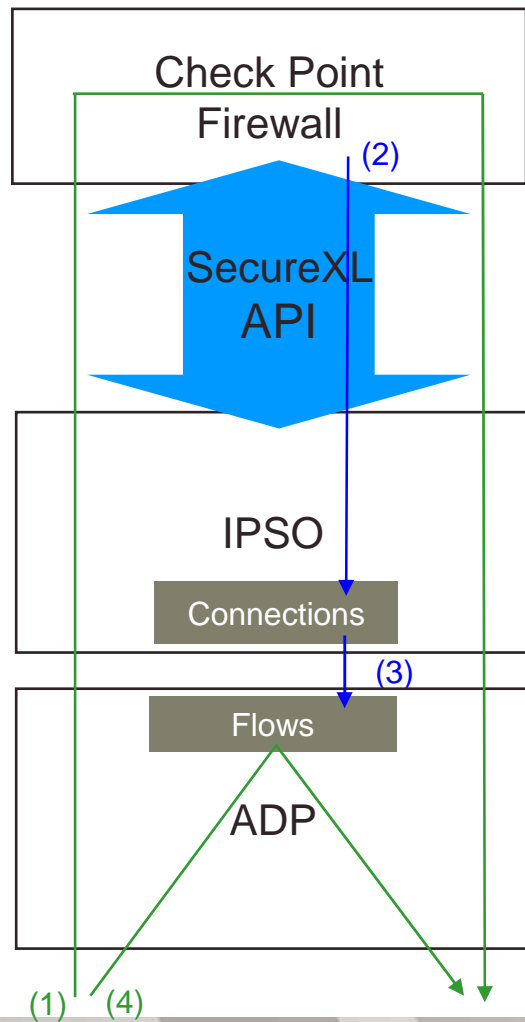
- Up to 3X small packet performance improvement\*
- Up to 2X latency improvement \*
- Up to 5X IMIX traffic improvement
- CPU utilization rates decrease to 49%\*
- Flexibility to combine many connectivity options
- Installs with minimal effort

*(ADP priced separately, support required)*

- Nokia Accelerated Data Path (ADP) services modules **accelerate firewall and VPN performance** through an add-on module
- A market-unique choice for **optimizing Check Point performance**
- ADP **off-loads CPU processing** of SecureXL traffic, for security efficiency and targeted network traffic processing
- Offers investment protection by **extending the life** of Nokia platforms, without the time & expense of platform recertification

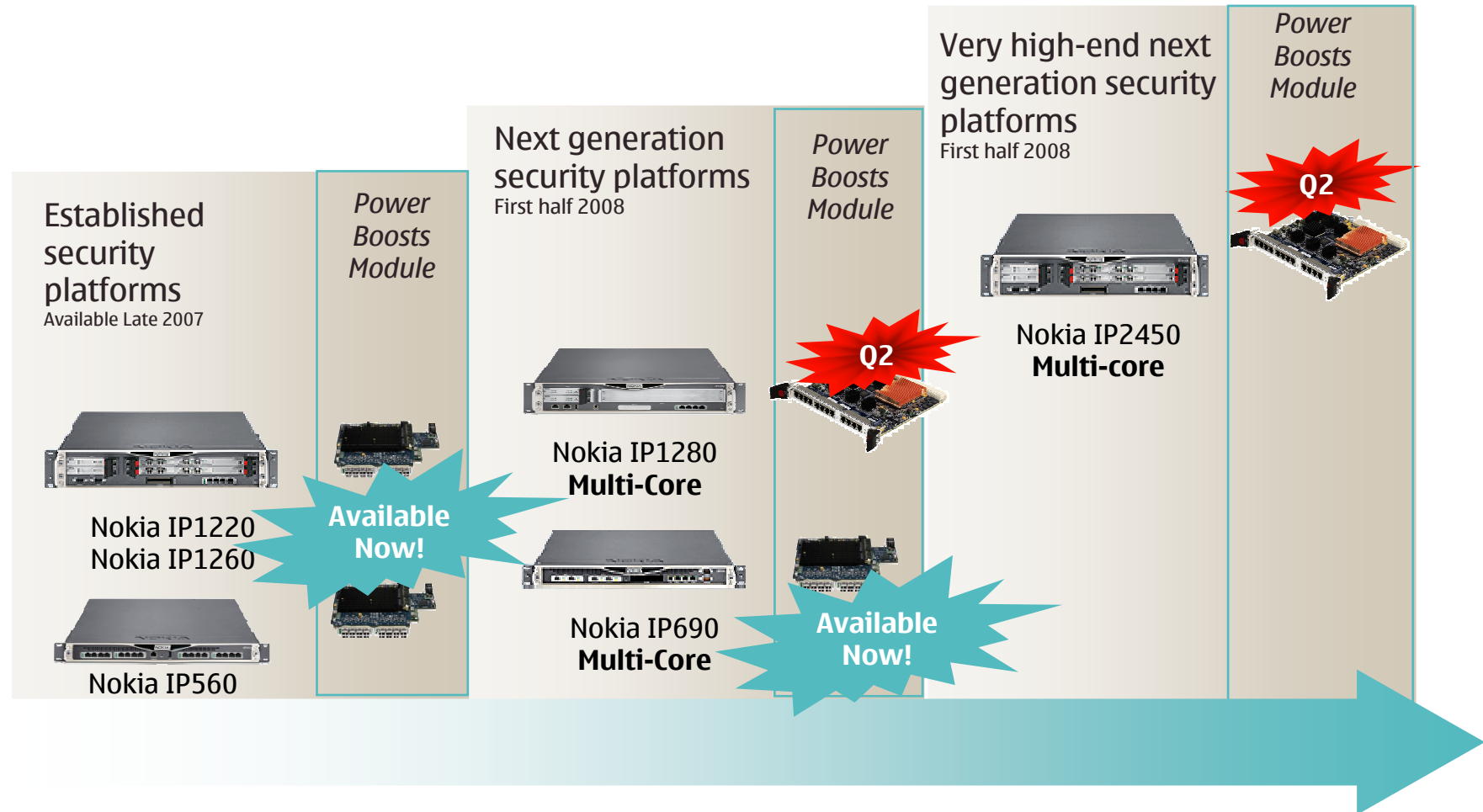
IPS04.2 and SecureXL needed!

# Throughput Acceleration



1. Firewall validates first packet in connection
2. Firewall tells platform (IPSO) to handle future packets in same connection
3. IPSO tells ADP to create bi-directional flow for connection
4. Future packets processed by ADP (If no ADP, IPSO handles future packets)

# Nokia ADP Services Module Rollout Phases





# CoreXL Solution – leveraging multi-core platforms

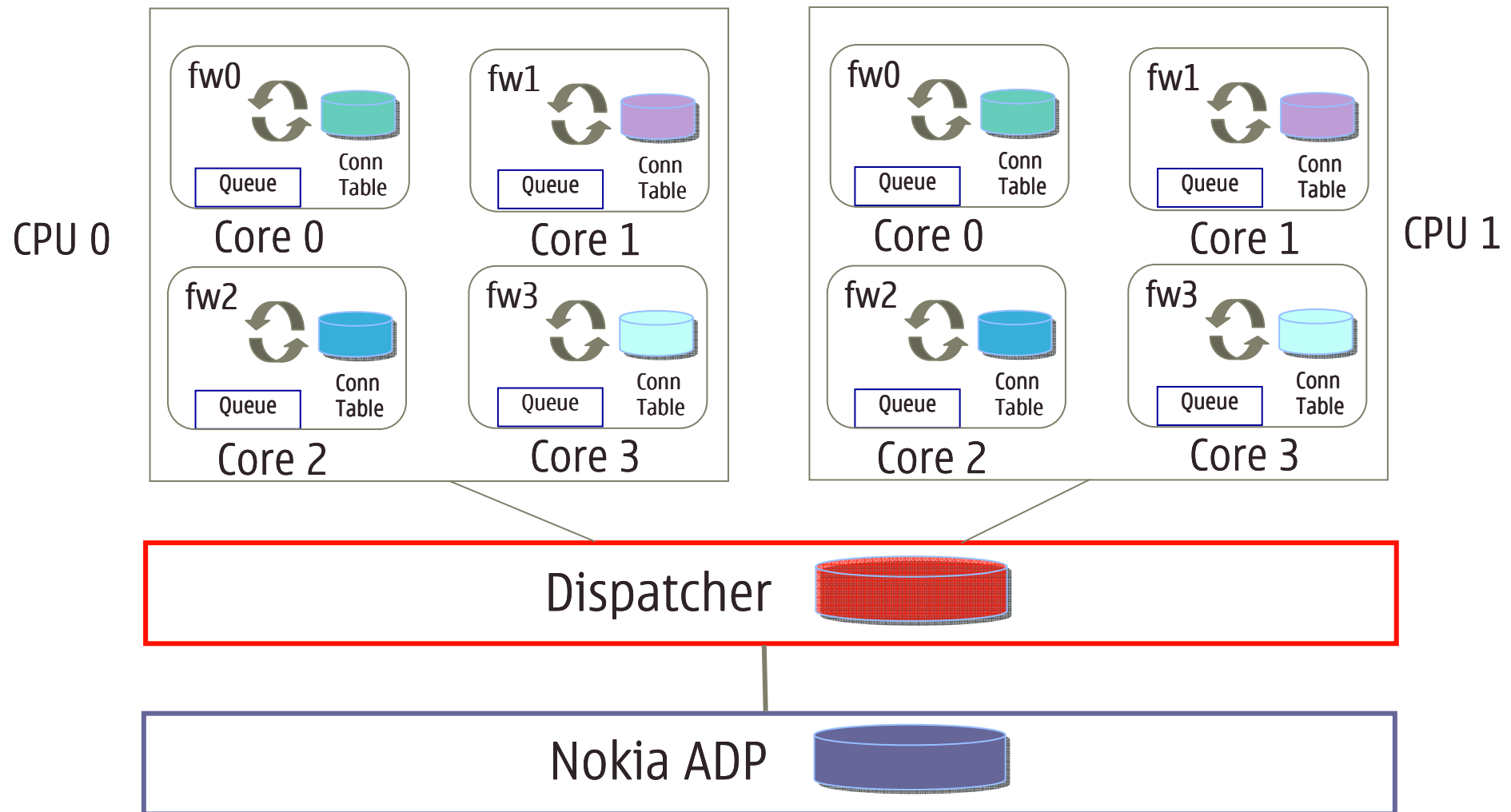
- Firewall kernel Replication

- Firewall kernel is replicated multiple times. Each replicated instance runs on one processing core.
- Each instance is a complete and independent FW-1 kernel.
- Instances can run concurrently – don't share a global lock.

- Dispatcher

- New component introduced in CoreXL.
- Receives packets and forwards them to the kernel instances.
- Acts as a load balancer.

# CoreXL and ADP Architecture for IP2450



# Nokia IPSO 6.0 Technical Highlights

## Next-Gen Application Support

- Multi-core support
- Nokia Multi-Threaded implementation of Check Point SecureXL API
- Symmetrical Multi-Processing (SMP) support
- More Efficient Memory Allocator

## New Development Tools

- Tools for performance optimization on multi-cores
- Interface drivers now kernel loadable modules
- New SDK to re-compile apps to run on IPSO 6

## Open Source Leverage

- Runs native Linux application binaries in user space

## More Technology, Compliance & Platform Support

- JVM (Java Virtual Machine) support
- Feature set equivalent with IPSO 4.1
- POSIX support

# Nokia IP150 Firewall/VPN/UTM



Options – VPN Accelerator

Partners:



Release:

New in 2Q 2008  
(shipping in June)

- **Optimal UTM Solution for Small Sites & Service Providers**
  - Upgrade option for Nokia IP130 & other platforms
  - Ease of deployment & simplified management reduce complexity
  - Flexible, cost-effective deployment extends proven, integrated security to remote offices
  - Low TCO for large, distributed deployments
- **Excellent Price Performance**
  - 550 MB performance for \$1,995 (hardware only)
  - Includes industrial grade 24x7 HDD for local logging
  - Built specifically for running security applications: firewall, VPN, IPS, anti virus and web filtering
  - Optional VPN accelerator for additional VPN performance
- **Reliability and Simplified Management**
  - Nokia Horizon Manager and Check Point Management simplify administration
  - Supports Nokia IP Clustering and VRRP configurations for business continuity
  - Single-vendor support and problem resolution



# Nokia Horizon Manager 1.7

## Functional Overview

Devices - 12 Viewed												
View: Default												
	Device	IP	Launch	Model	OS Versions	Packages	CPU	Memory	Disk	Last Action		
	172.19.159.2	SSH	IP330		✓ IPSO-4.1-BUILD015	none	✓	0.8%	26%	51%	Warning: Verify	
	172.19.159.6	SSH	IP330		✓ IPSO-3.9-BUILD005	Check Point C-Printo	✓	0.3%	23%	38%	Warning: Verify	
	172.19.159.7	SSH	IP330		✓ IPSO-3.9-BUILD035	Check Point C-Printo	✓	20.6%	44%	40%	Warning: Verify	
	172.19.159.55	SSH	CAESAR-PL		✓ IPSO-3.7-BUILD027	none	✓	0.6%	22%	37%	Warning: Verify	
	172.19.159.55	SSH	IP130		✓ IPSO-4.1-BUILD015	Check Point C-Printo	✓	[1] Low mem.	7.3%	95%	50%	Warning: Verify
	172.19.184.140	SSH	IP130		✓ IPSO-4.2-BUILD031	Check Point C-Printo	✓	1.3%	49%	36%	Warning: Verify	
	172.19.184.139	SSH	IP130		✓ IPSO-4.2-BETA020	Check Point C-Printo	✓	2.5%	32%	34%	Warning: Verify	
	172.19.159.46	SSH	IP260		✓ IPSO-4.2-BUILD025	Check Point C-Printo	✓	0.4%	16%	18%	Warning: Verify	
	172.19.159.41	SSH	IP260		✓ IPSO-4.2-BUILD025	Check Point C-Printo	✓	10.9%	9%	18%	Succeeded: Verify	
	172.19.159.41	SSH	IP130		✓ IPSO-4.1-BUILD015	none	✓	0.8%	26%	33%	Succeeded: Verify	
	172.19.159.41	SSH	IP130		✓ IPSO-4.0.1-BETA000	Check Point C-Printo	✓	0.6%	29%	16%	Succeeded: Verify	
	172.19.159.41	SSH	IP130		✓ IPSO-3.9-BUILD041	Check Point C-Printo	✓	0.7%	23%	31%	Succeeded: Verify	

### New Monitoring and Alerts for

- CPU
- Memory usage
- Disk space usage
- Sensor temperatures
- Fan speeds
- Logical and physical packet throughput
- Logical and physical byte throughput
- Logical and physical multicast throughput
- Logical broadcast throughput

### Adds Support for:

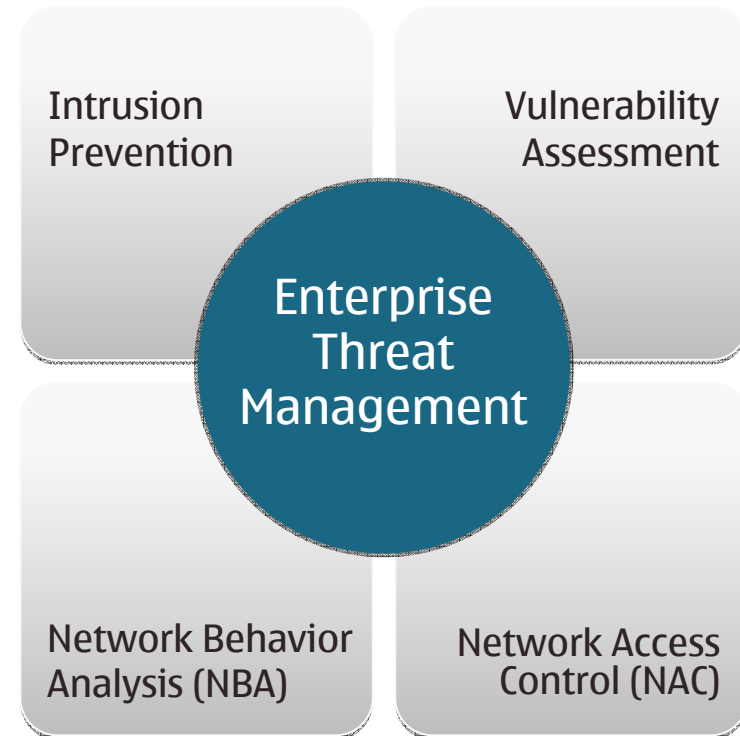
- Multi-Core Platforms with Nokia IPSO 6.0
  - For Nokia IP690 and Nokia IP2450 platforms
  - Nokia IP690 ADP Services Module
- Appliance monitoring
- Alerts
- Nokia IPSO 4.2
  - Nokia IP150 and Nokia IP1280
- Nokia IP1220, Nokia IP1260 and Nokia IP560 ADP
- Support for Check Point Provider-1
- Improved data export functionality
- Improved Constraints information
- Clearly identifies supported platforms and packages
- Improved Data Migration Utility (DMU)
- Upgraded JRE used by Nokia Horizon Manager to Java 6

**License for 5 platforms free-of-charge!**

# Nokia Intrusion Prevention with Sourcefire

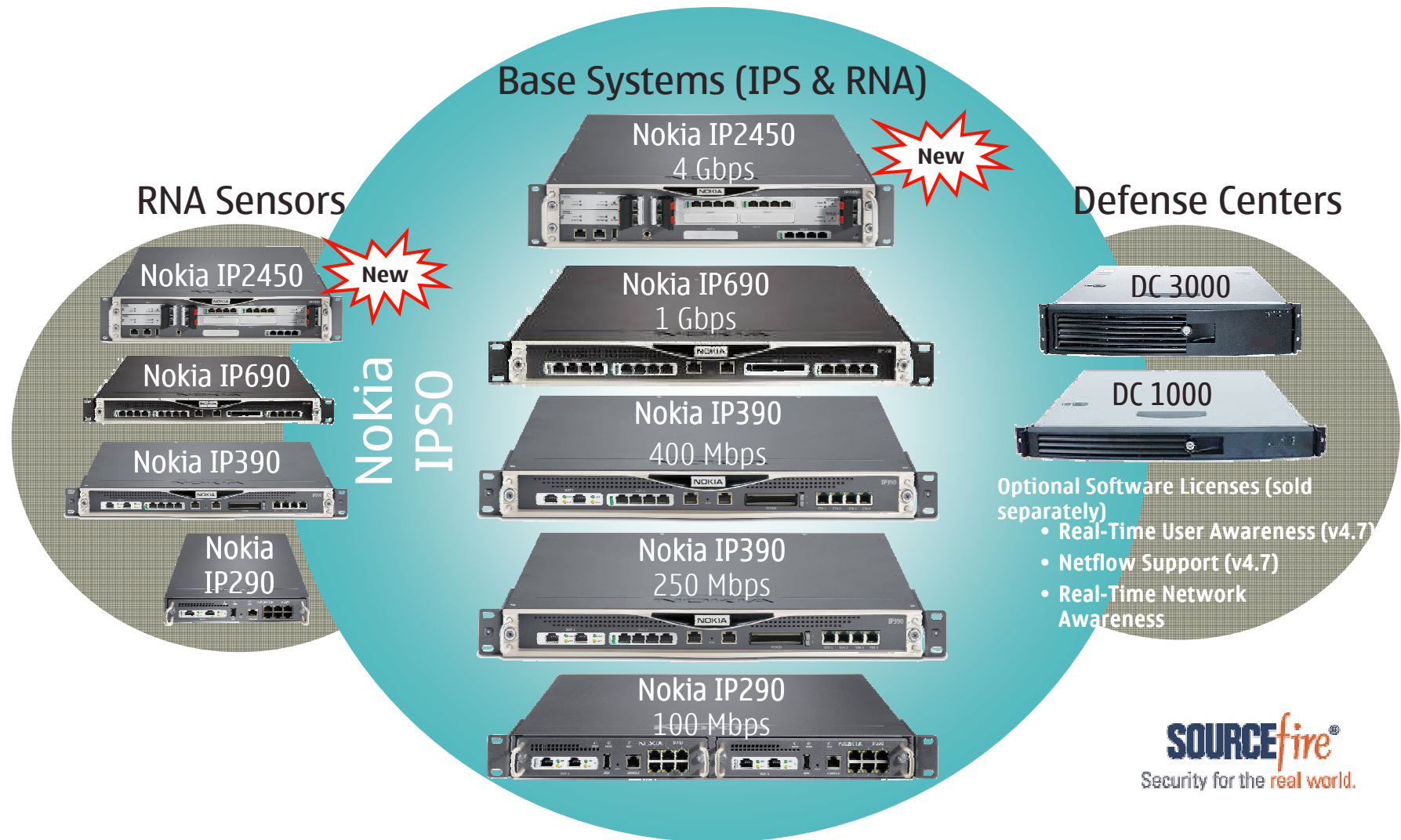


- Increased intelligence over traditional IPS solutions
  - Combines threat and vulnerability analysis with network behavior analysis
  - Results in fewer false positives and negatives, and lower management overhead
- Purpose-built security appliance
  - Runs on hardened Nokia IPSO™ OS
  - High port-density with multiple detection engines
  - Rigorous testing for large enterprise deployments
- Worldwide 24x7 support
  - First call final resolution
  - Over 10 years experience serving the world's most demanding customers



**SOURCEfire®**  
Security for the real world.

# Nokia Intrusion Prevention Product Portfolio



# Nokia Intellisync Device Management Overview

- Based on Open Mobile Alliance (OMA) standardized device management technology implemented by member companies across the industry
  - OMA CP (Client Provisioning) for initial settings configuration
  - OMA DM (Device Management) for continuous management
- Built-in device management
  - OMA DM standards-base technology built-in the S60 and Series 80 platforms (Nokia Eseries, Nokia Series 80, Nokia Nseries, other Nokia S60 devices)
- **Advanced Device Management**, first introduced with Nokia Eseries, extends OMA standards
  - Allows administrators to manage **settings, security** and **applications** with trust administration model
  - Ensures the desired settings are protected and employees know who is managing them
- Nokia Intellisync Device Management OMA DM Edition provides **industry's first device management server** to support Advanced Device Management



# Why Device Management e.g. for Voice?

Without DM, **end-users** need to...

1. Make sure you are setup for the Enterprise Voice service
2. Find the Enterprise Voice client on your Intranet or receive via email
3. Download Enterprise Voice client to your device
4. Learn about acronyms that you don't understand or care about
5. Configure Enterprise Voice client
  - GPRS IAP
  - WLAN IAP
  - SIP/VoIP settings
  - Client application settings
6. Call help-desk because something went wrong

With Device Management...

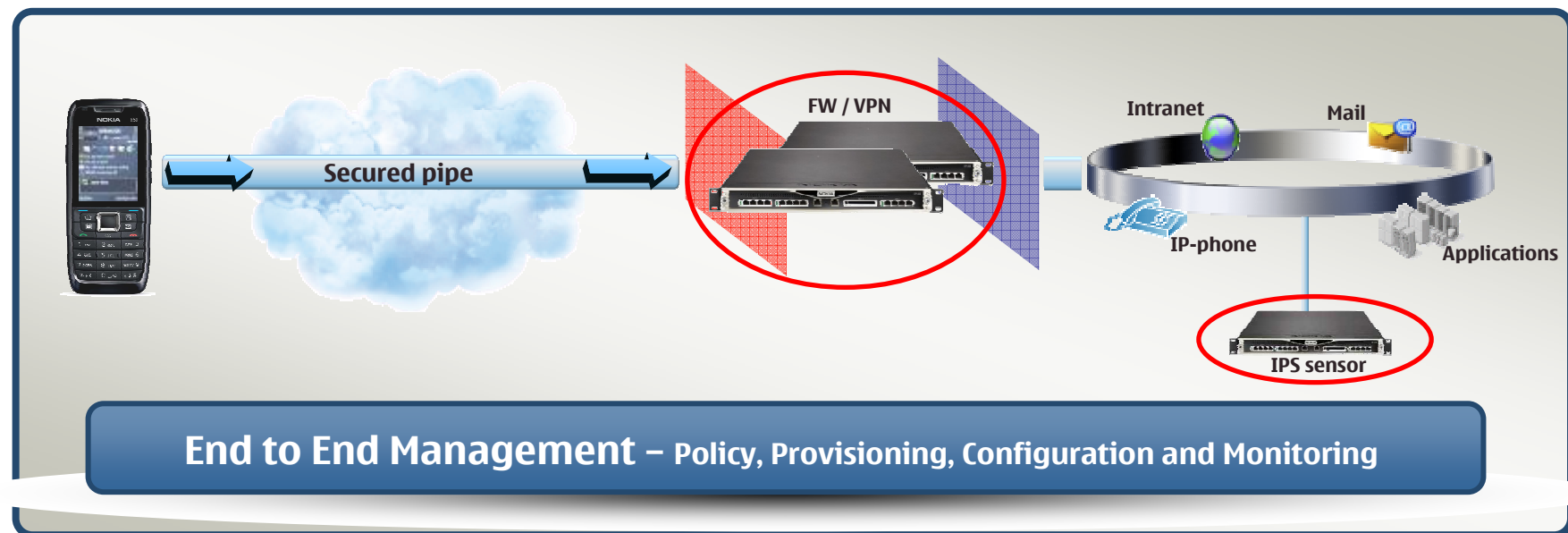
1. End user self-registers
2. End user accepts connection from server

***Ease of deployment, using Device Management, makes the solution a SOLUTION!***



# Nokia Mobile VPN Client Solution

- **Nokia Mobile VPN enables users to access corporate intranet services securely from mobile devices**
  - Seamless connectivity for any mobile application
  - Over-the-air provisioning and management of VPN settings and policies
  - Integrates with IT-backend VPN infrastructure and authentication servers
  - Nokia Mobile VPN Client Solution consists of Nokia Mobile VPN Client and VPN client management solutions



# Summary

- Nokia can provide complete security portfolio for you!
- Grow with your needs!
  - New multicore platforms
  - ADP service modules
  - Core XL
- Nokia Intrusion Prevention with Sourcefire
- More solutions to address customer concerns





Questions?

Thank You!