Using SDN and NFV to Realize a Scalable and Resilient Omni-Present Firewall"

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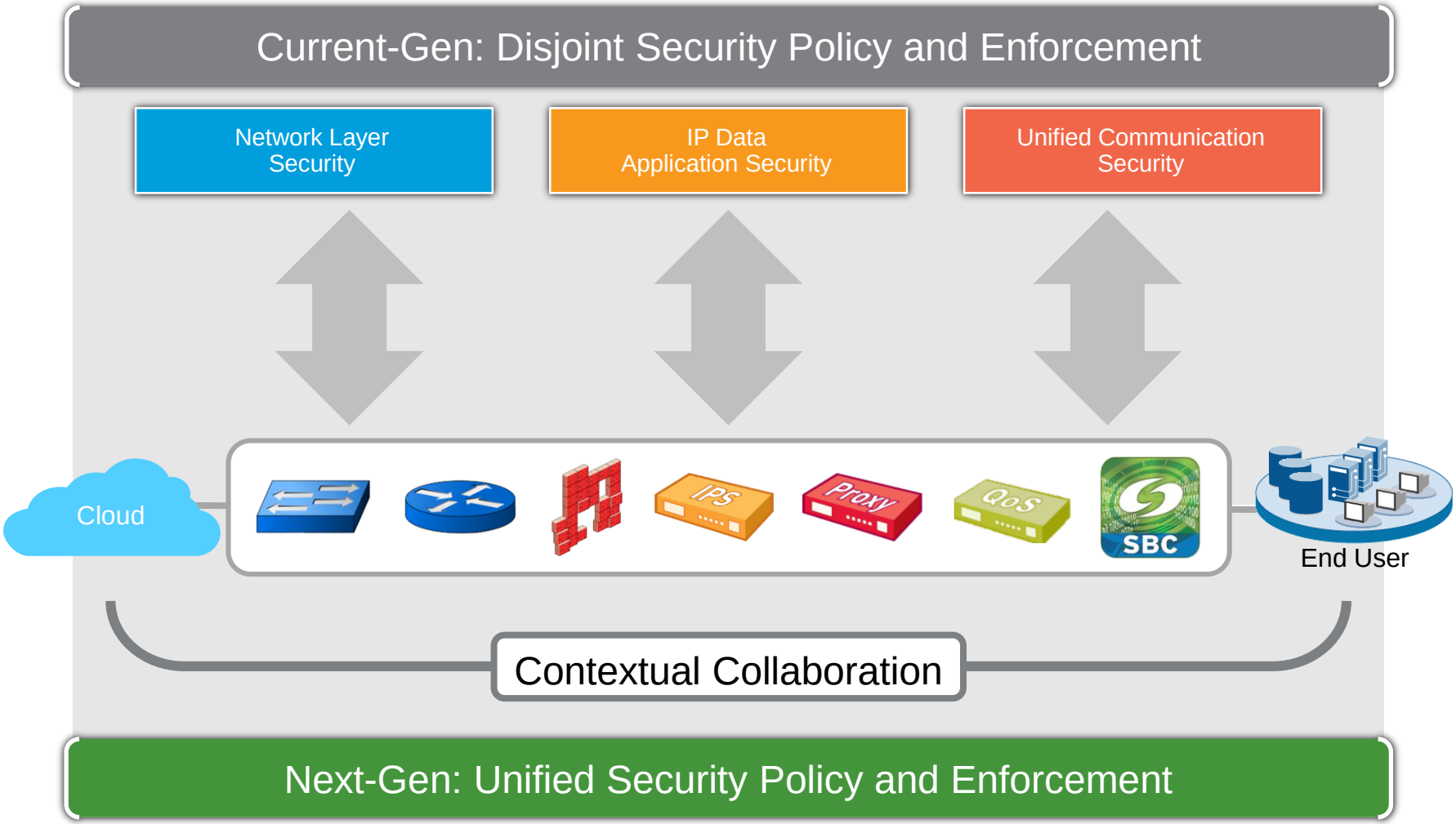
Unifying the Security Stack



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Collaboration – Threat Intelligence Sharing

SBC

Key DNA
- Deep protocol knowledge
- Real-time, transactional policy

Strength: Real-Time UC Security
- SIP attacks
- SIP service theft
- Media attacks and policing

IP Data FW

Key DNA
- Line-rate DPI engine
- IP and application signature DB

Strength: IP Data & Application Access
- Malware attacks
- Exploit file seeing
- Application use policy

Better Together

Collaboration Leverages the Additive Strengths of Each Application

The Trust Level of UC is Raised

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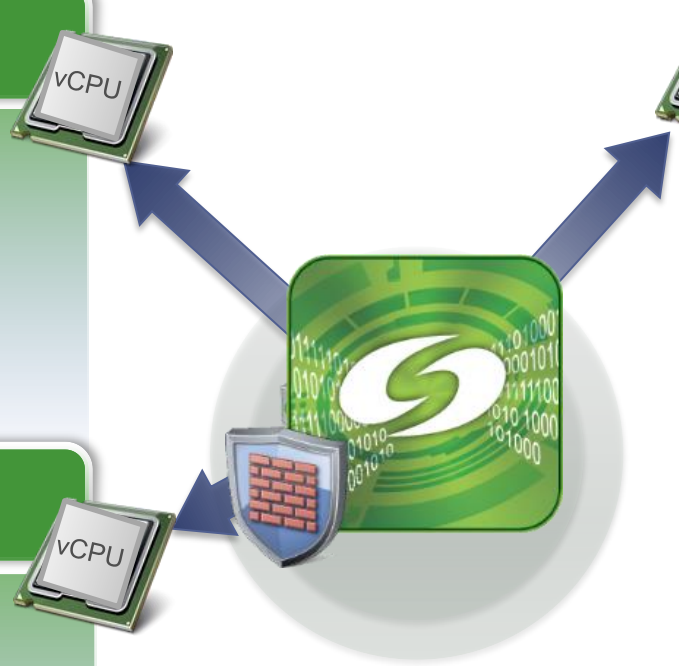
Sonus SBC - Functionality

General Computing

- Call Control
- Policy management
- Message manipulation
- Signaling Interworking

Security Enforcement

- Dynamic Blacklisting
- Encrypt/Decrypt
- (IPSec, SRTP)
- TDoS, DDoS
- Incident Response



Media Services & Transcoding

- DTMF, LRBT and Media interworking
- Reduced Latency for higher QoE
- Codec Normalization / Standardization (HD Voice)

The ability to scale

User defined scale from 25 10s of 1000's of sessions per instance

Separate individual Services

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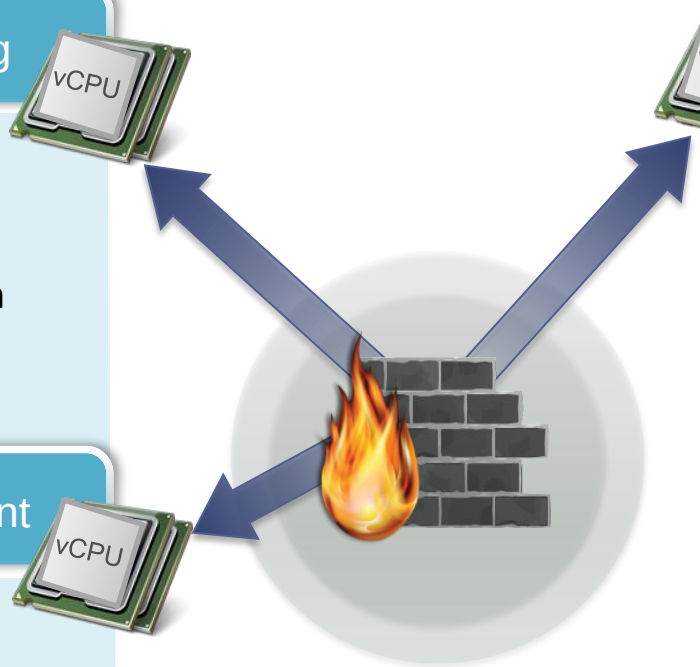
Next Gen Firewall - Functionality

General Computing

- Application Control
- Filtering - Policy
- Message manipulation

Network Processing

- IPv4/IPv6 Networking
- DoS /DDoS protection
- Encryption (IPSec, SRTP)



Security Enforcement

- Encryption
- Deep Packet Inspection
- Threat Intelligence matching
- Incident Response

The ability to scale

User defined scale from 25 to 1000's of sessions per instance

Separate out individual firewall services

Virtualization ≠ Cloud Native

Virtualized

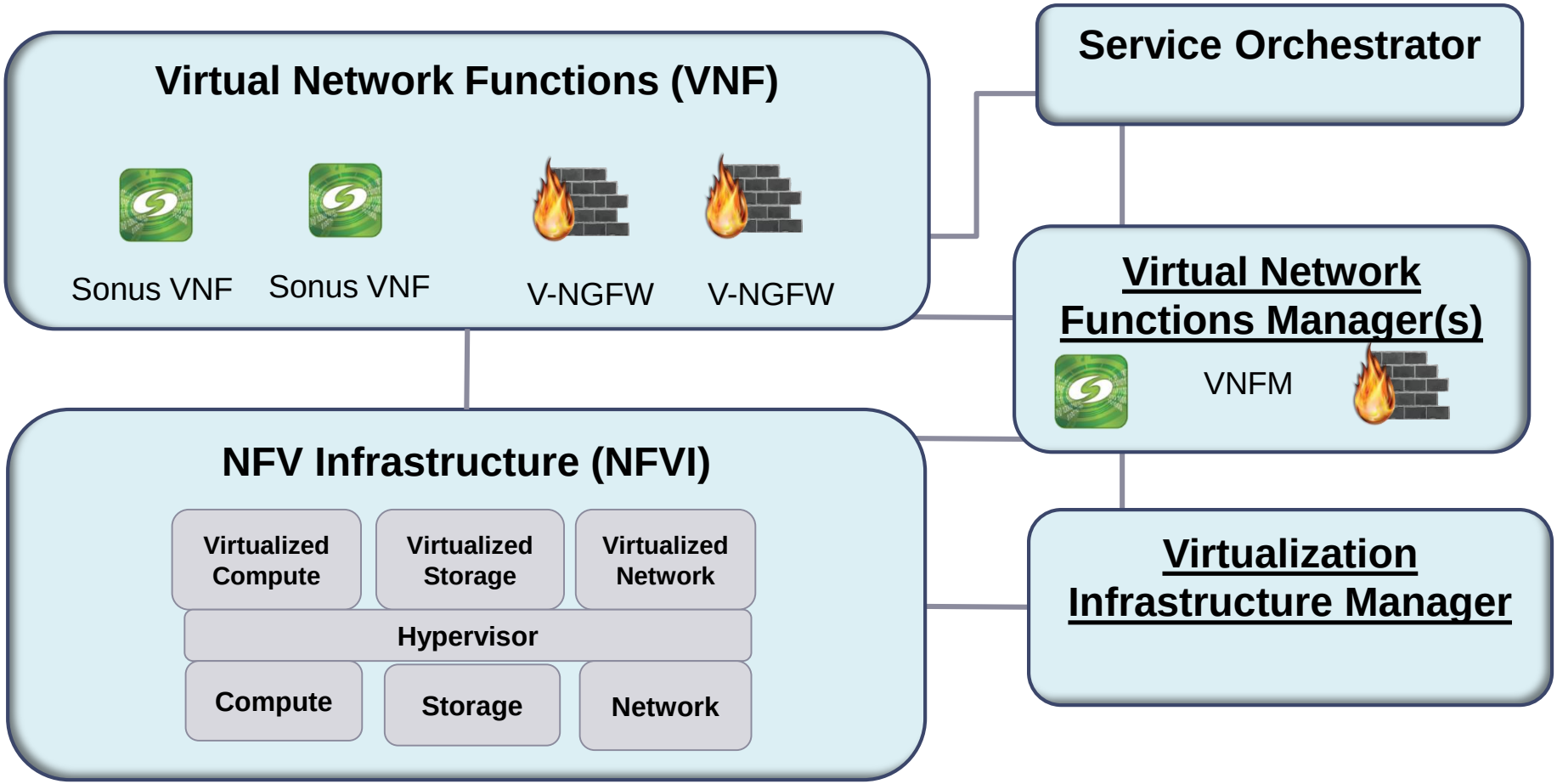
- Runs on bare metal
- Manually created in a software-only configuration
- Horizontally scales by adding another entire application

Runs in a virtual machine (e.g. VM, KVM) environment

- Designed and defined as a Virtual Network Function
- Runs in an OpenStack or public cloud (e.g. AWS) environment
- Auto-instantiated based on orchestration rules
- Horizontally scalable by adding VNFs to a cluster (a managed group of VNFs)

Cloud-Native

Orchestration Ecosystem



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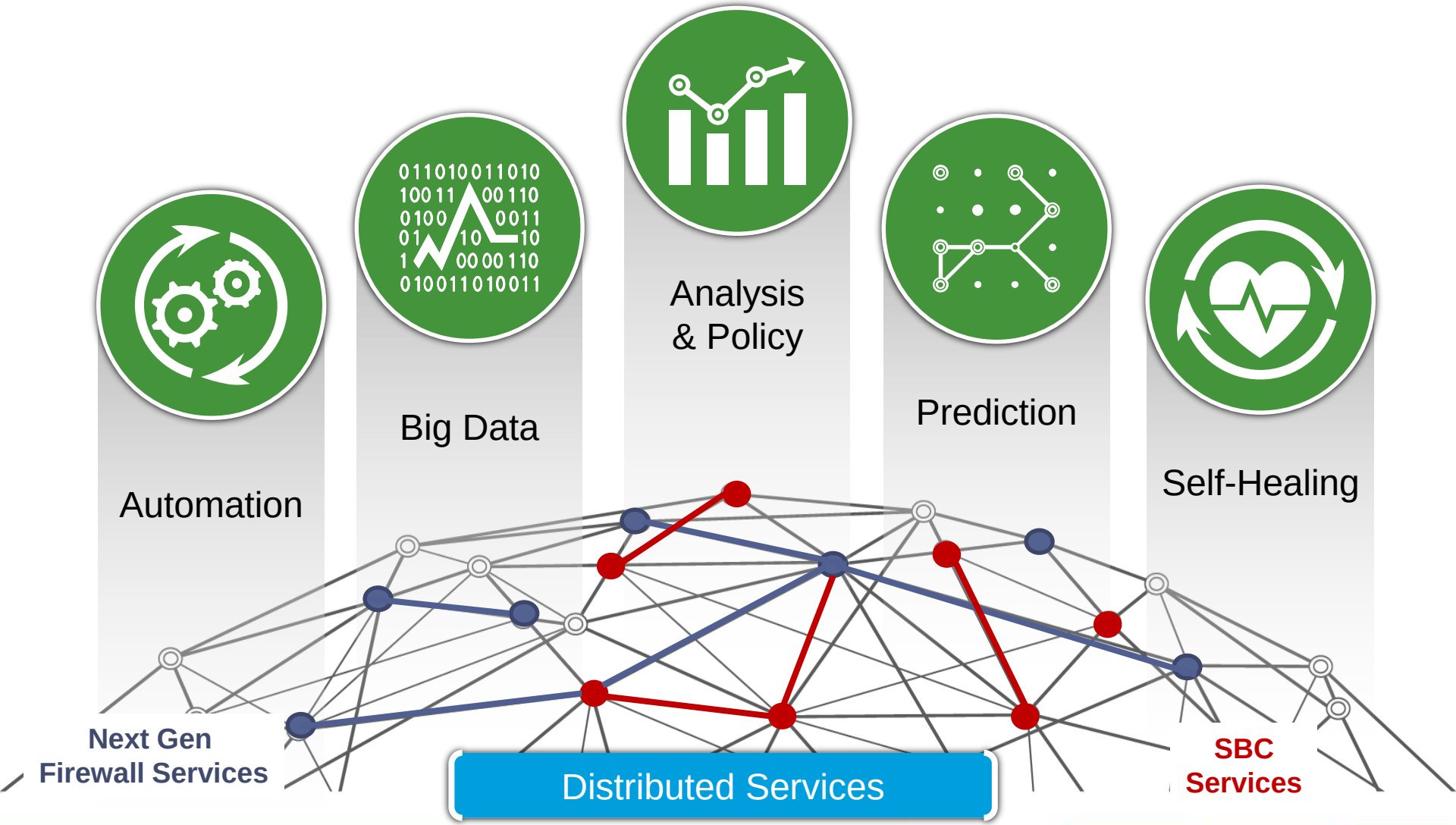
The DNA of the Re-Architected Security Stack



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NFV/Cloud Benefits

Elasticity for on-demand scaling to match dynamic traffic profiles

Cost-effective deployment models of on-demand Services

Much faster time to market and geographic expansion

Reduced management costs leveraging orchestration to automate turn-up (and down) of virtual resources

Summary

- **NVF architectures allows you to achieve economies of scale on demand for all types of communications**
- **Software based delivery allows you to re-invent how services are delivered, achieving faster time to market**
- **Flexibly begin the Service migration to a virtualized Cloud environment at multiple starting points**
- **Reduce the delivery costs of real-time communications through automated Service turn-up automation and simplified management**
- **Independently scale and manage Services to optimize network investment**

Thank you

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