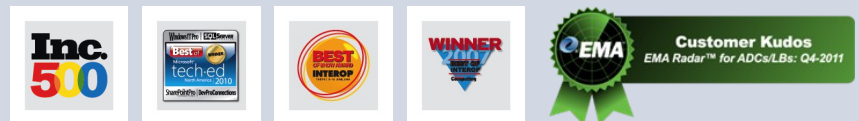


IPv6 Solutions

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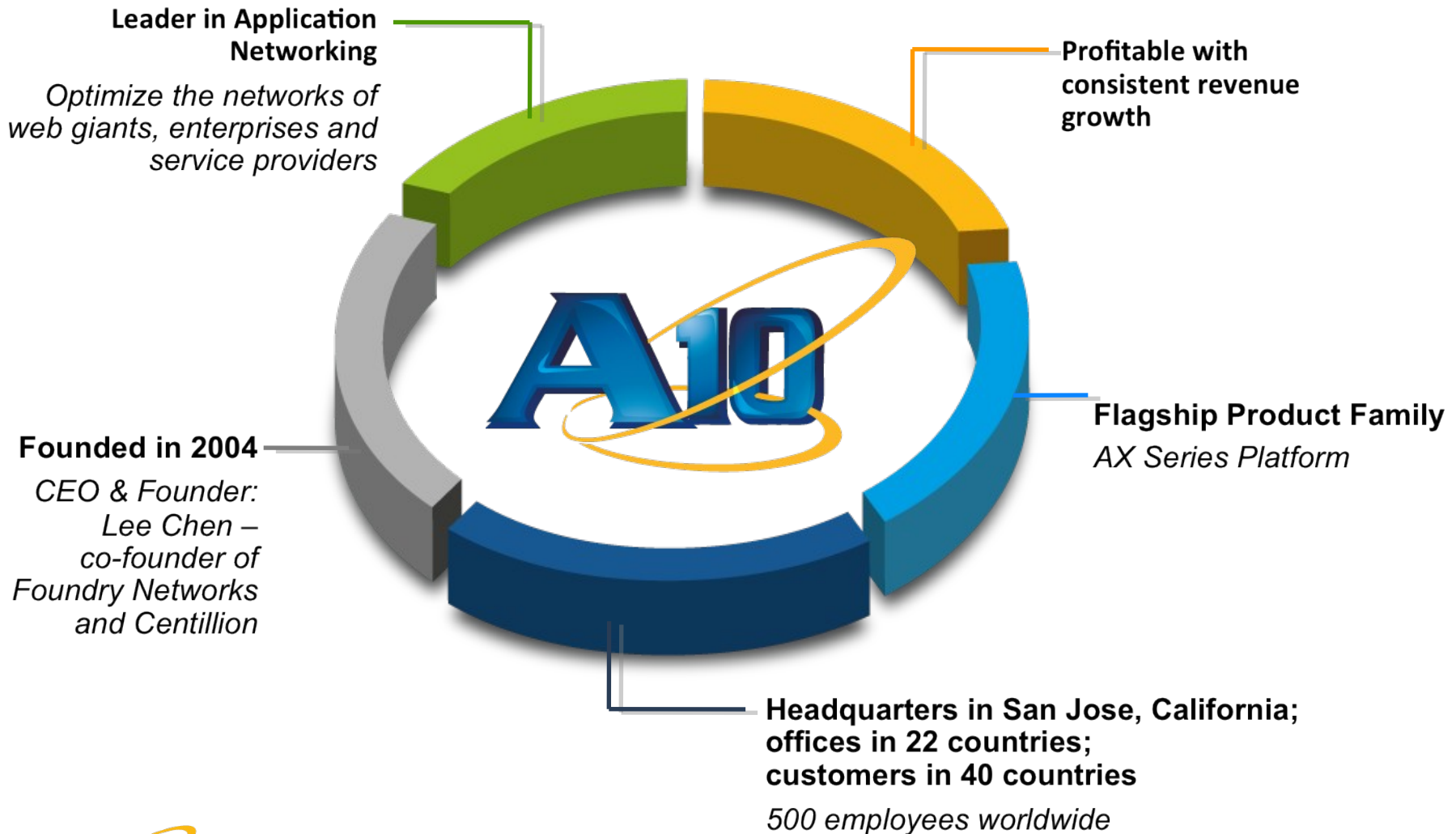
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Agenda

- **A10 Networks in a Nutshell!**
- **Why is A10 Networks different?**
- **How can we assist you with the IPv6 migration?**

A10 Networks Company Overview



A10 Markets and Competitors

Competitors:

- F5
- Citrix

Competitors:

- Cisco
- Juniper
- Alcatel

Competitors:

- Citrix
- F5

Application Delivery

Advanced Application Delivery Controller (ADC)

Server Load Balancing

Application Acceleration

IPv6 Migration

Dual-Stack

Encapsulation

Translation

IPv4 Preservation

Cloud Computing & Virtualization

Virtual Appliance

Multi-tenancy

Virtual Chassis

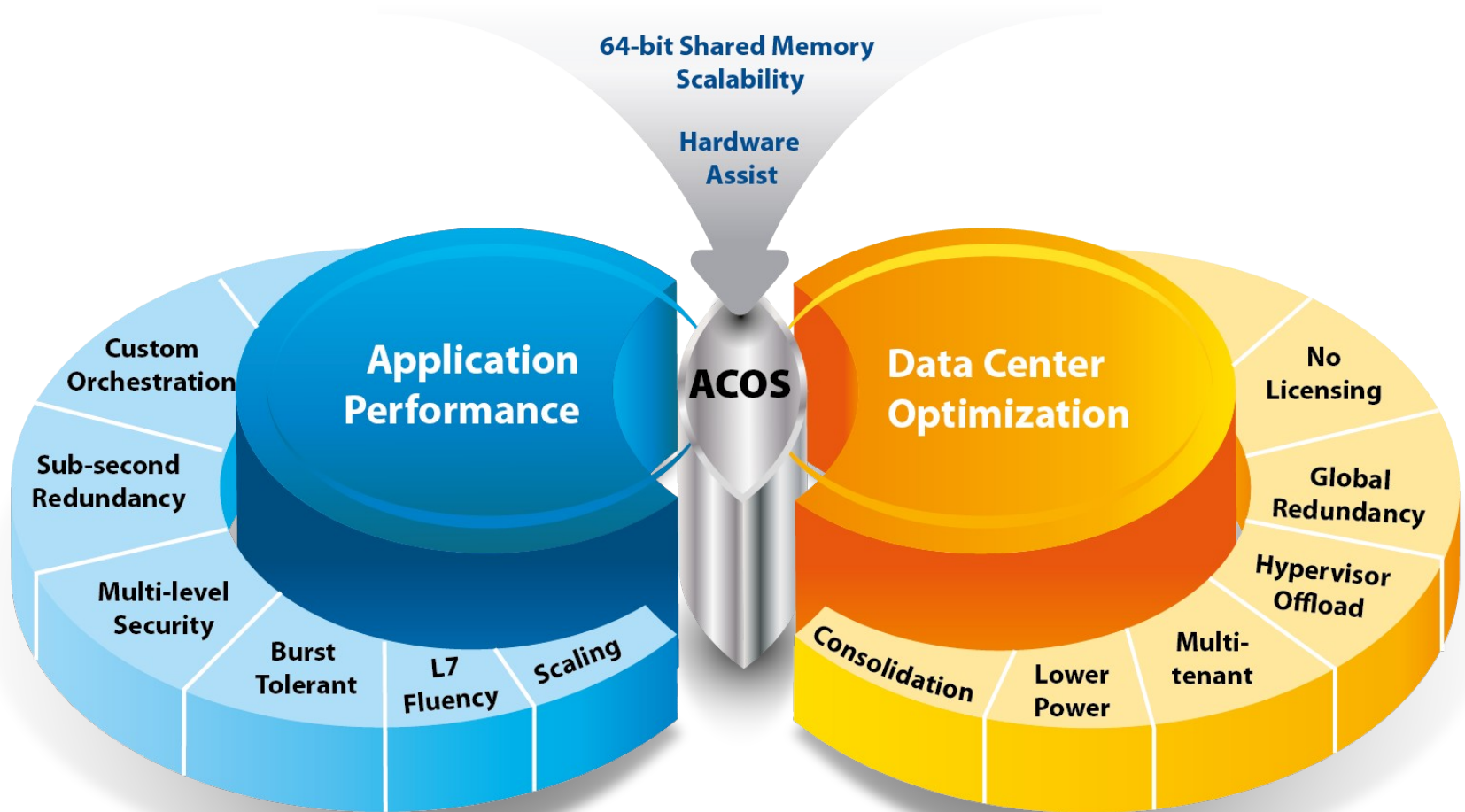
Security

Advanced Core Operating System (ACOS)

Sample Customers

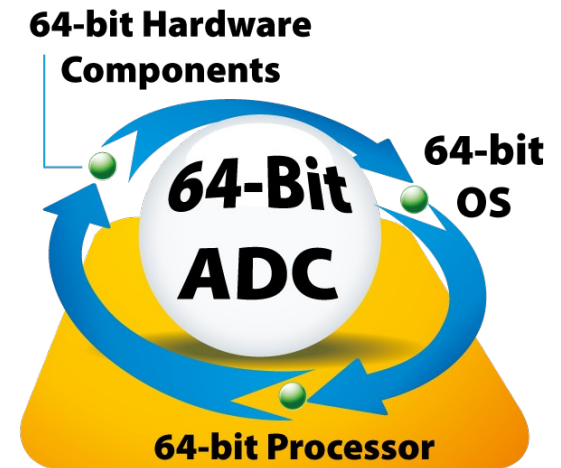


Application Performance & Data Center Efficiency

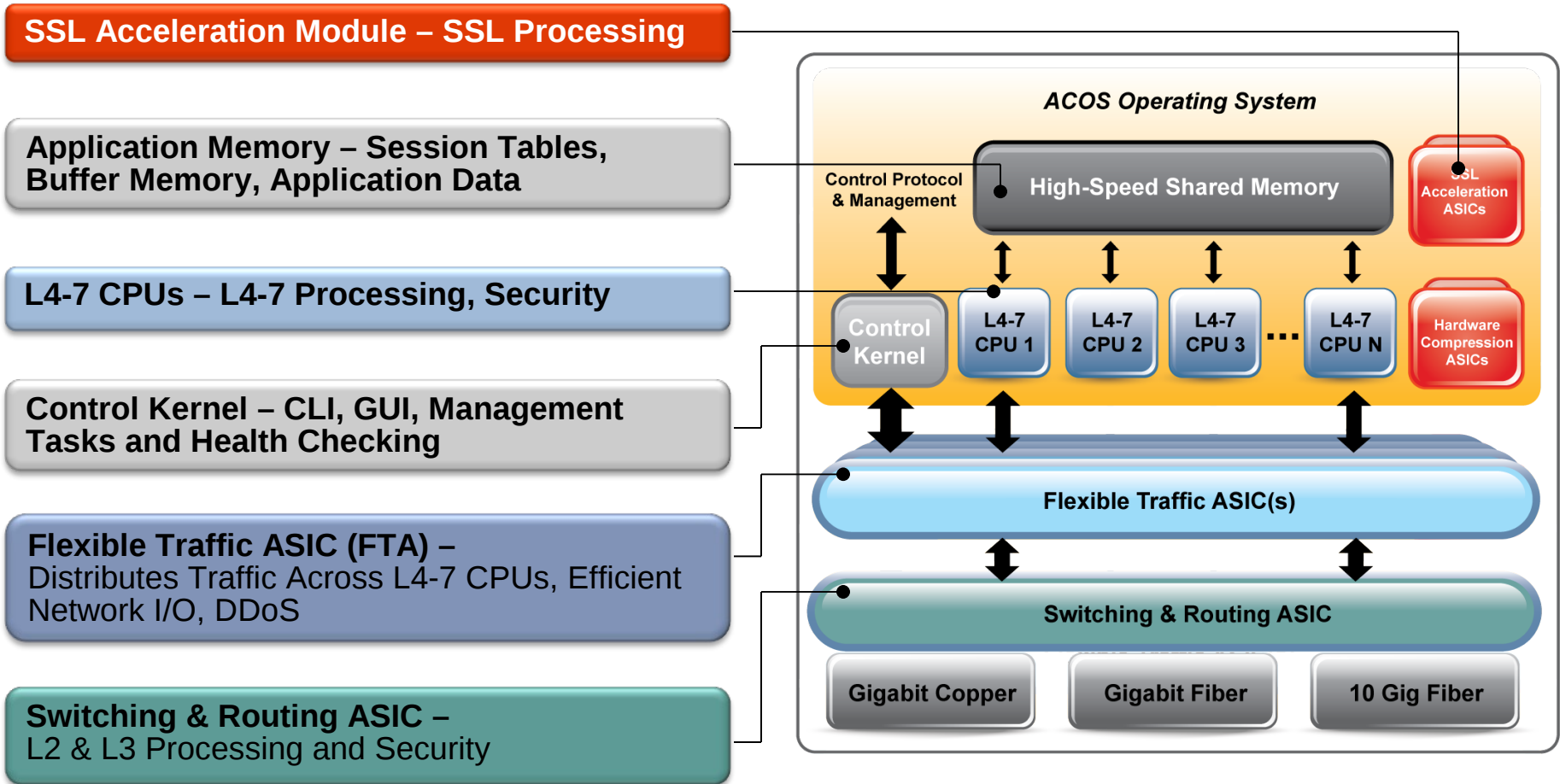


Powered by ACOS

- **Software is the key differentiator**
- **Multi-core CPU, shared memory architecture**
- **64-bit scalability**
- **Efficient design**
 - Power, memory, space & resource consumption
- **Scalable Symmetrical Multi-processing (SSMP)**
- **Flexible and adaptable**



A10 AX Architecture Overview



ACOS Design Highlights

- **ACOS on the data plane**
 - Zero locking
 - Zero IPC
 - Zero interrupt
 - Zero scheduling
 - Zero buffer copy for low latency packet processing
- **Linux on the control plane**
 - Used by Management CPU only
- **All application delivery traffic handled by ACOS**
- **Efficient use of memory – no duplicate data**

IPv6 Migration

- A10 solves IPv4 exhaustion, allowing uninterrupted business, eliminating costly IT fire drills and protecting brands
- The AX Series provides advanced solutions for IPv4 preservation, IPv6 access and full IPv6 migration
- A10 leads this market with large deployments worldwide

ACOS

First Live Deployment - NTT Plala, Japan

The IPv6 network, model for the future?

- Project: Hikari-TV, implementation and live in 2008
- Purpose: IPTV broadcasting and video on-demand service (and Karaoke!)
- Network: Native IPv6-based, fiber-to-the-home network
- First large-scale, commercially successful application of IPTV service that runs over a IPv6 network
- *"After a comparative test...we selected A10's AX Series..as the high-performance server load balancer platform for 'Hikari-TV'...video distribution" service..."*



NTT Plala Takes Hold of the Future With Hikari-TV

Hikari-TV service comprises 76 channels, more than 10,000 video on demand titles, and over 13,000 titles in its karaoke service.

Network (NGN), a closed end-to-end IPv6 over fiber to the home (FTTH) network. NTT Plala receives live broadcasts from TV stations, and encodes and simultaneously delivers the broad-



Where Will They Go Next?
The growing interest in IPTV combines

NTT Plala

What Does Your Network Look Like?

❑ No standard compatibility

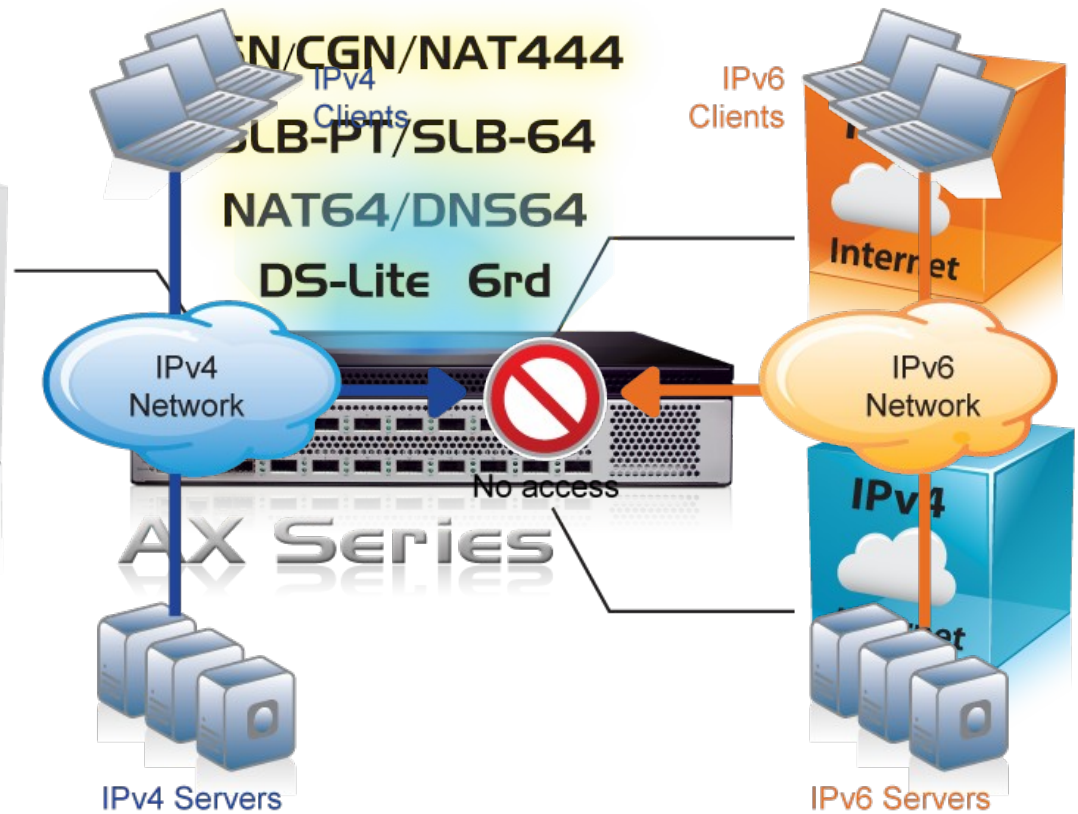
❑ Different requirements

❑ Home

❑ Enterprise

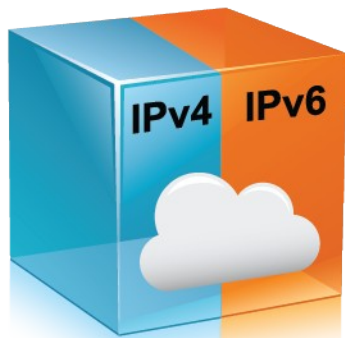
❑ Service Provider

❑ “IPv4 Legacy Networks”

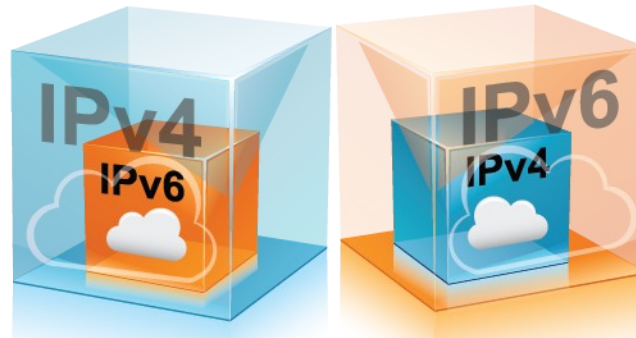


Common IPv6 Migration Techniques

Dual-Stack



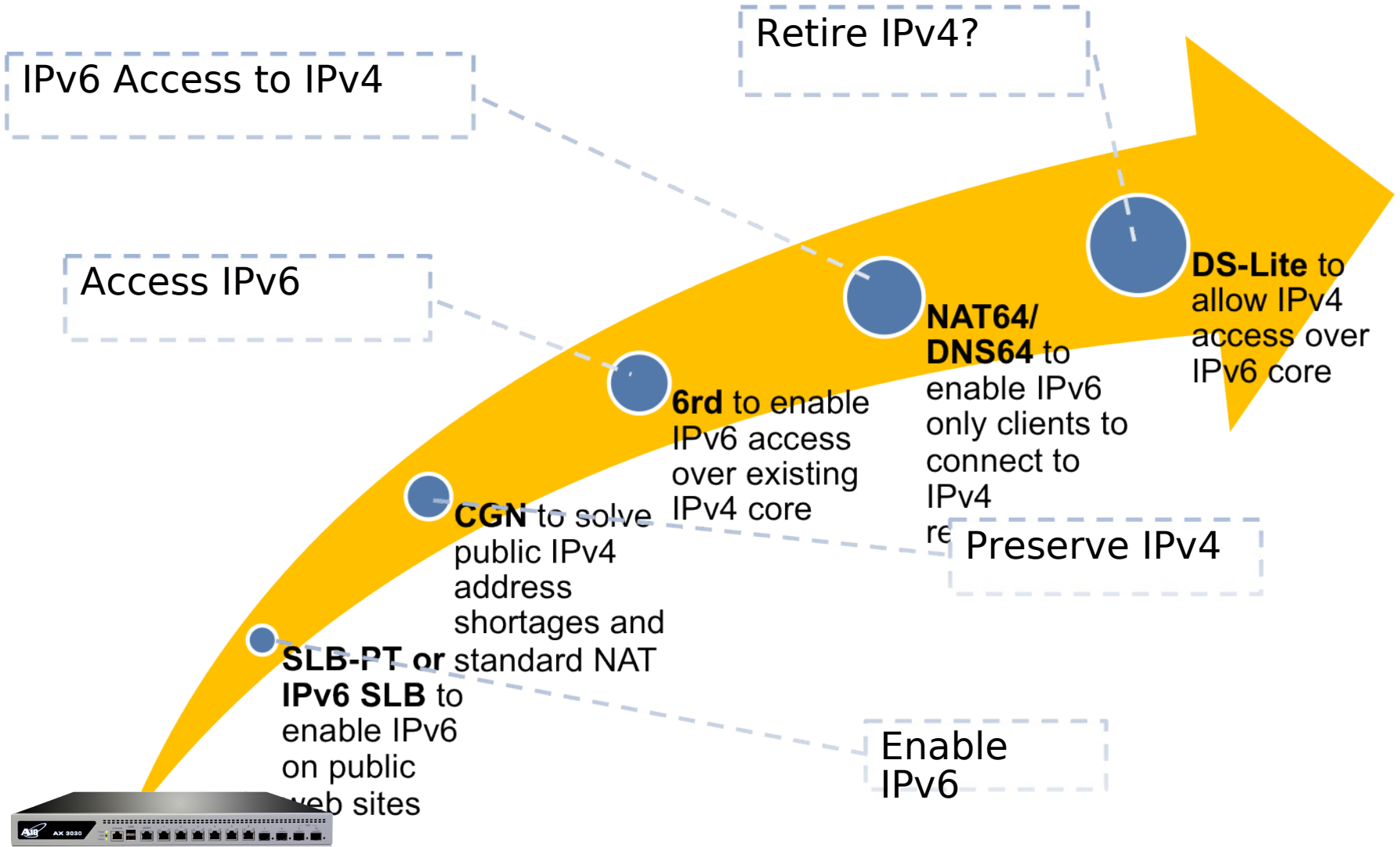
Encapsulation



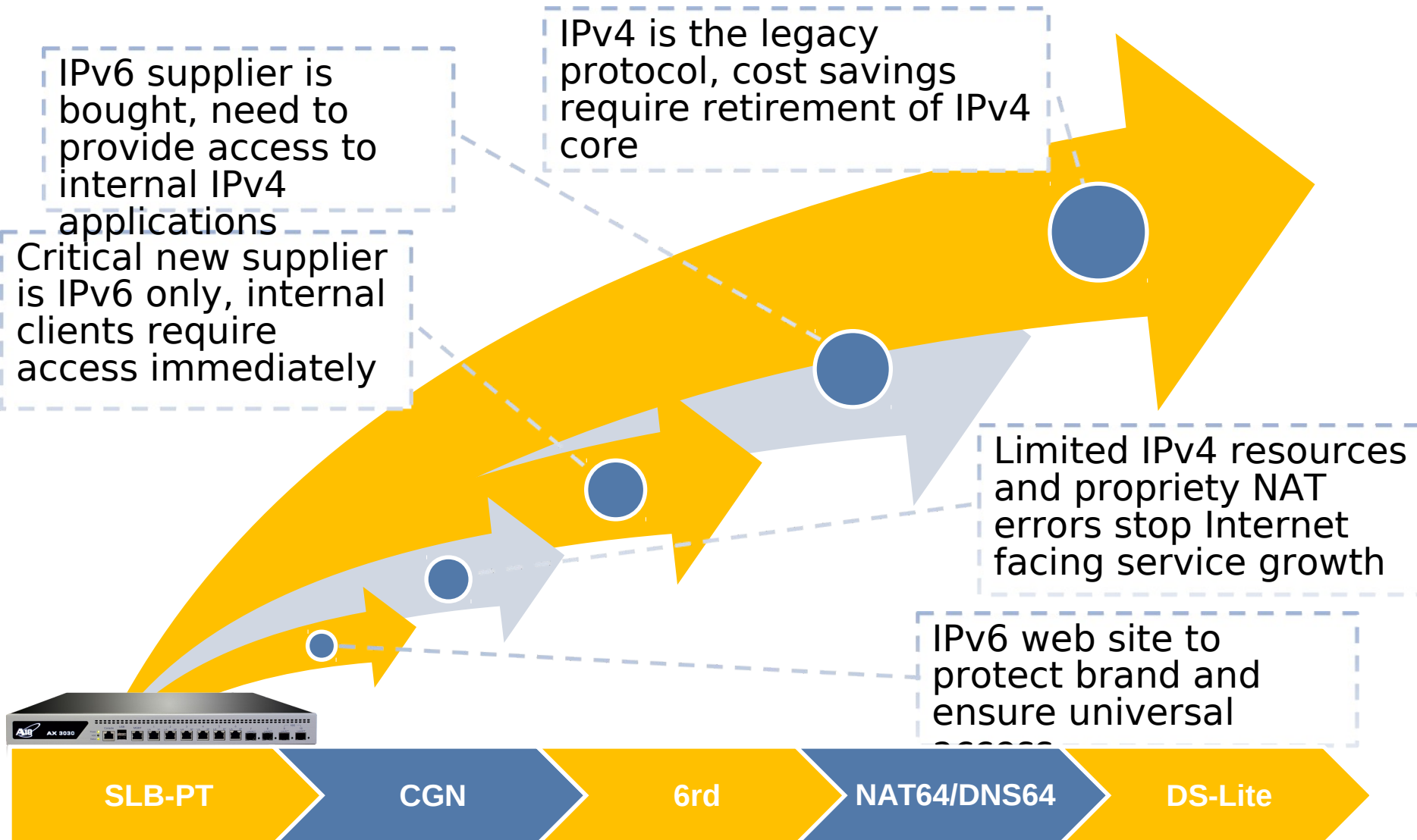
Translation



What Does Each Technology Do?



What Are the Benefits and Real Use Cases?



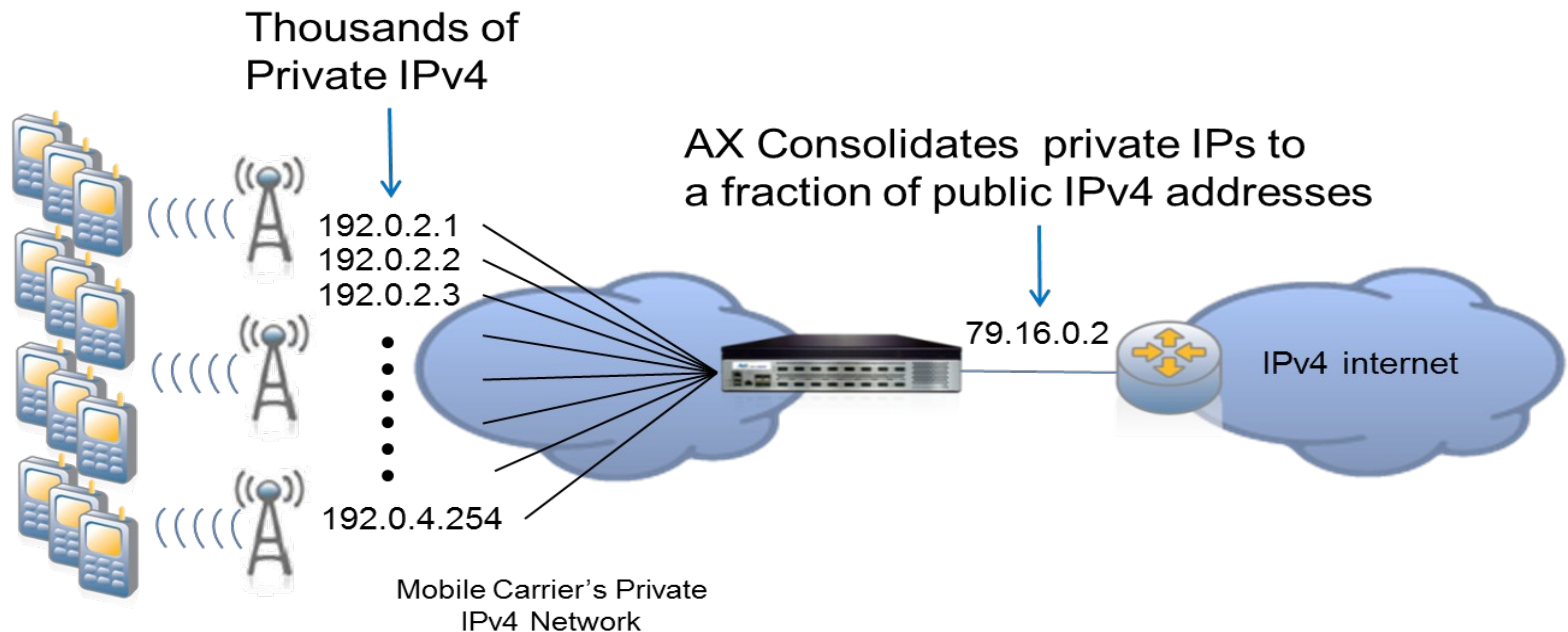
IPv6 Service Provider Deployment

- **Major European service provider solves IPv6 connectivity issue**
 - Background: IPv6 access for all customers and systems, Nov 2011 saw 15,000th IPv6 connection added
 - Purpose: IPv6 ready to communication with IPv6 only APAC partners, catalyst being the APNIC address depletion
 - Network: Dual-stack IPv4 and IPv6 connectivity
 - *“By our choice...of A10 load balancers all consumer websites are now accessible via IPv6...in one single action a significant portion of our services over IPv6!”*

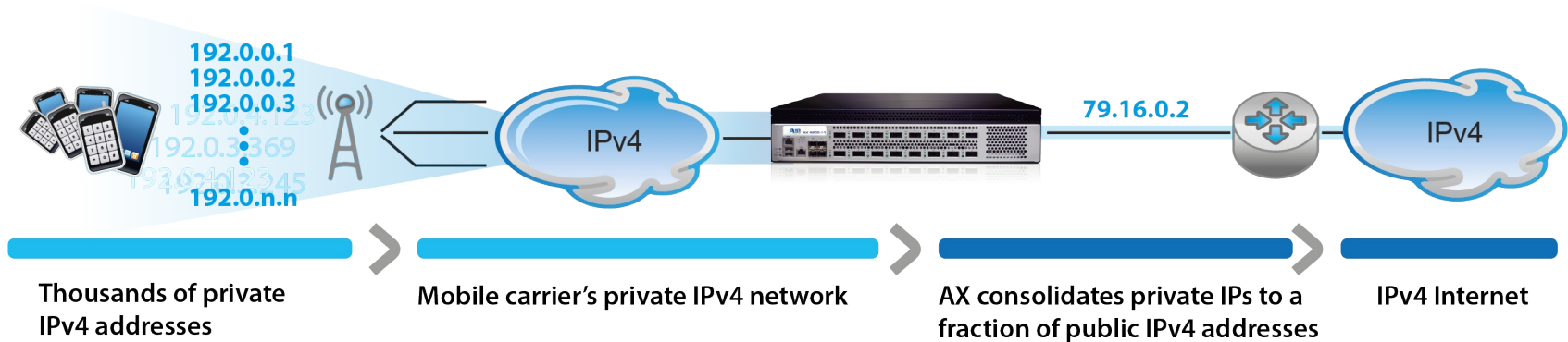


Cellular LSN/CGN Case Study and Implementation

- **Top 4 US wireless carrier needed to expand while facing IPv4 address exhaustion**
 - Project: Mobile handset data network expansion
 - Purpose: Add IPv4 address capacity for streaming apps to smartphone users
 - Network: Legacy IPv4-based, cellular data network
 - Fully operational LSN/CGN implementations

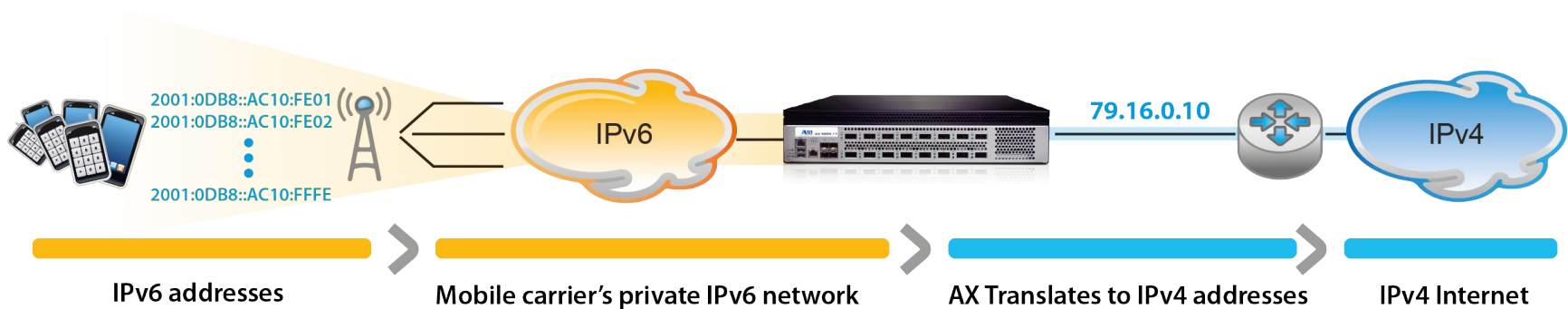


CGN/LSN for Top US Wireless Carrier



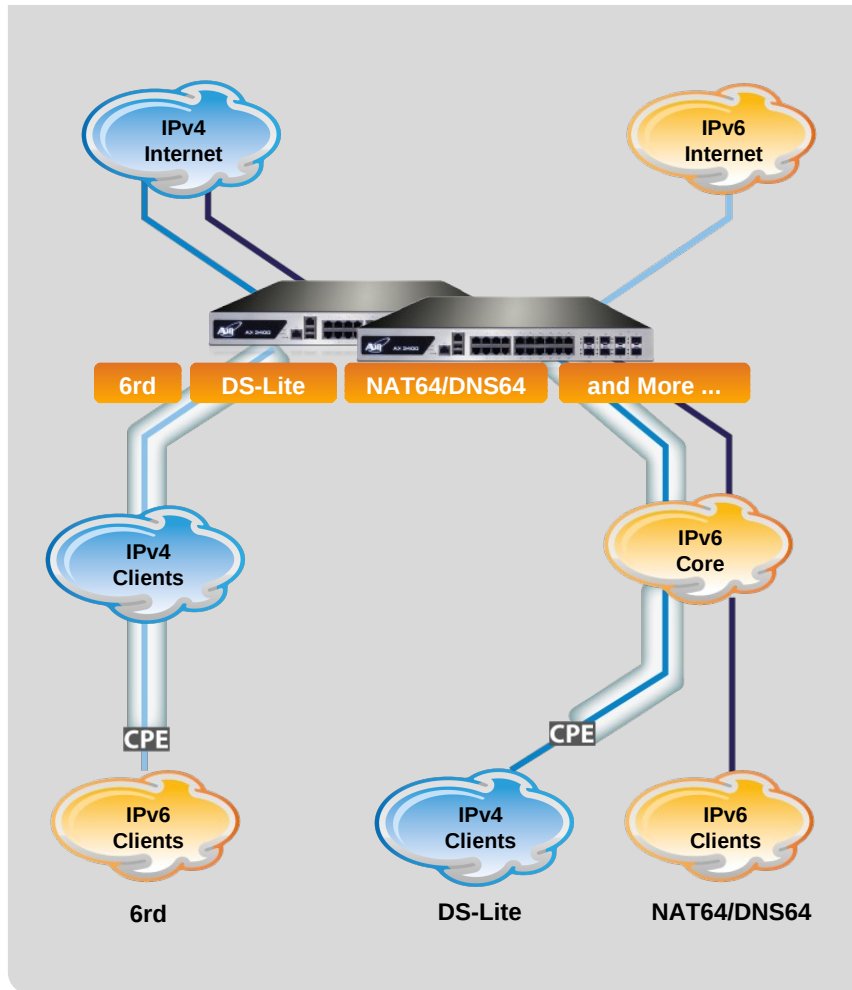
- Consolidation of IPv4 address space, 90% IPv4 address reclaimed
- Feature-rich CGN/LSN capabilities
- High Availability (HA)
- Significant CAPEX savings
- Reduced equipment footprint
- Significant scalability for future growth

NAT64/DNS64 for Top US Wireless Carrier



- Offers access to new users over IPv6
- Alternative to dual-stacked host option, simpler to manage
- NAT64 translates IPv6 packets into IPv4 packets
- DNS64 translates associated DNS queries on behalf of IPv6 clients
- Provides future proof scalability by allowing IPv6 customers to have access to IPv4-only Internet sites and services

Key Product Requirements



Interplay

Stateful fail-over

True CGN/LSN capabilities

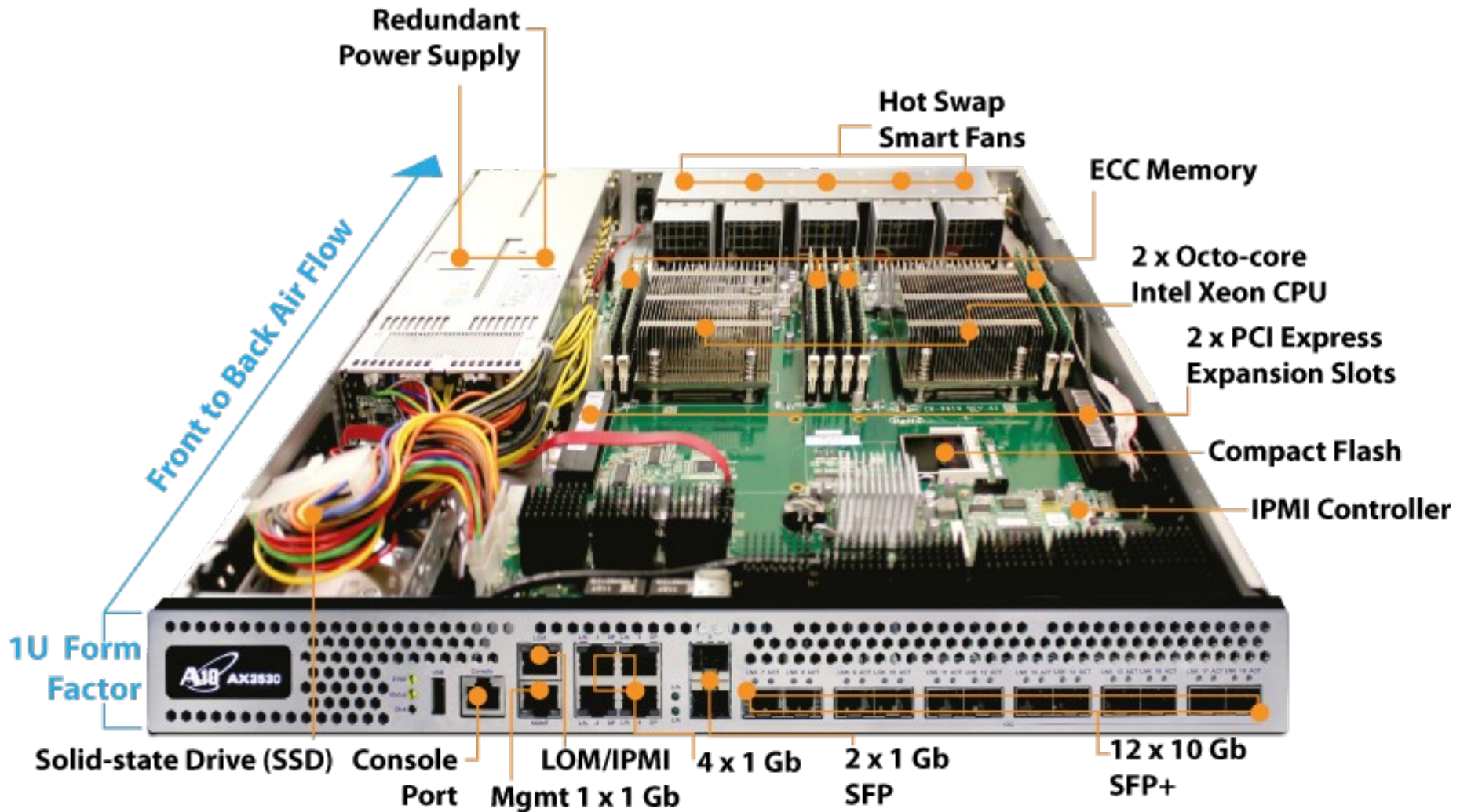
Logging

New features

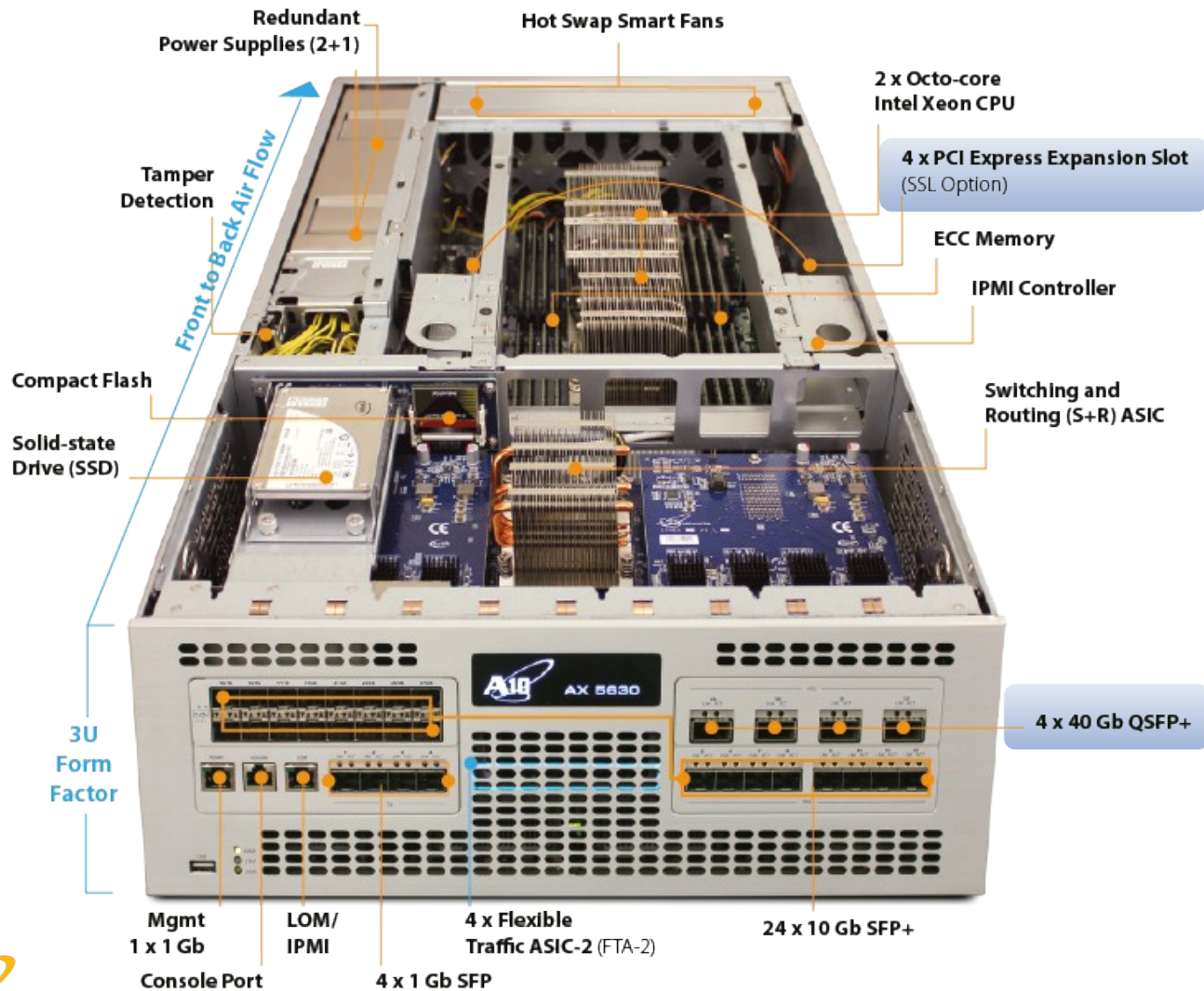
Data Center Efficient

Budget Friendly

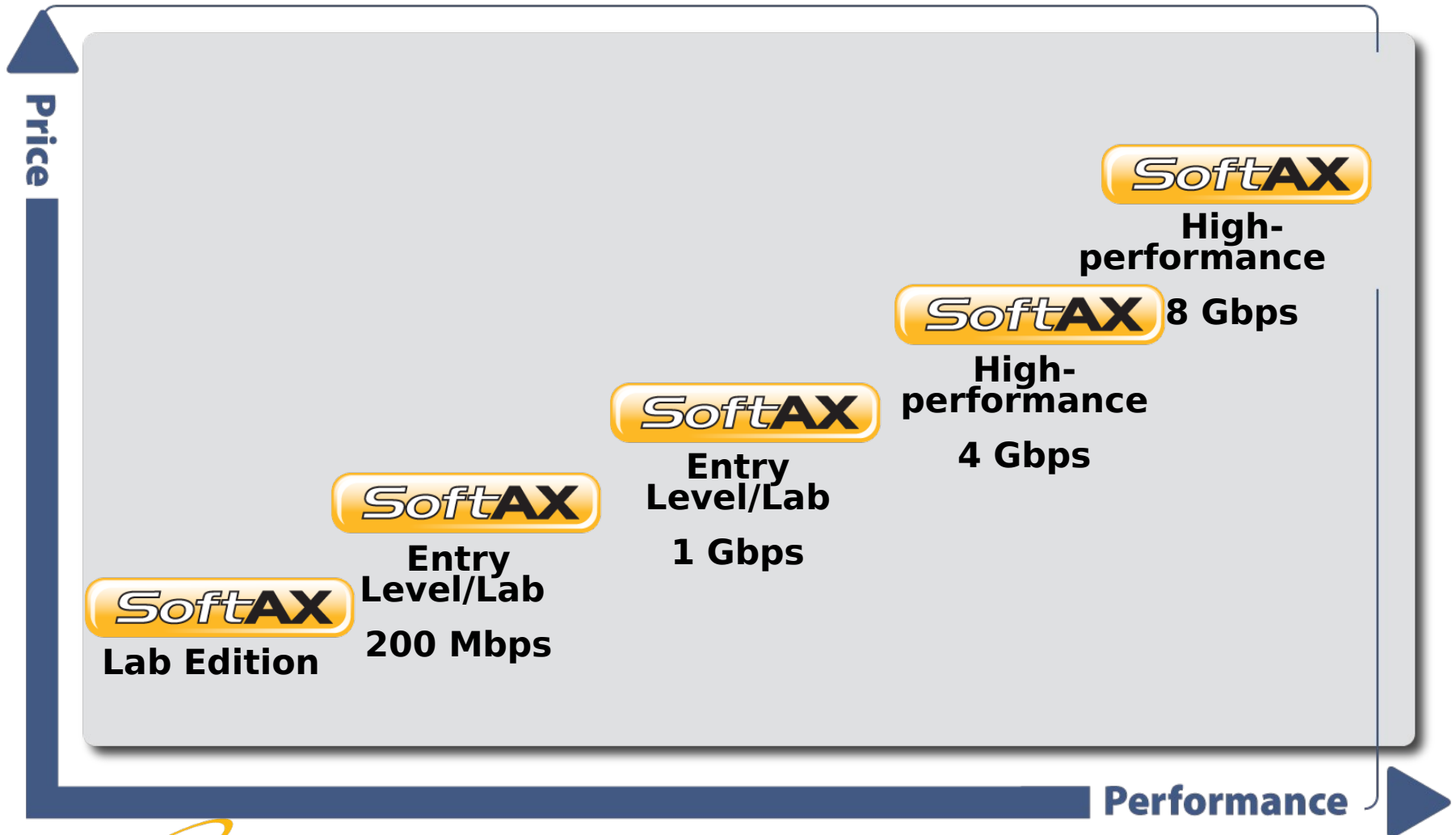
High Throughput in 1 Rack Unit



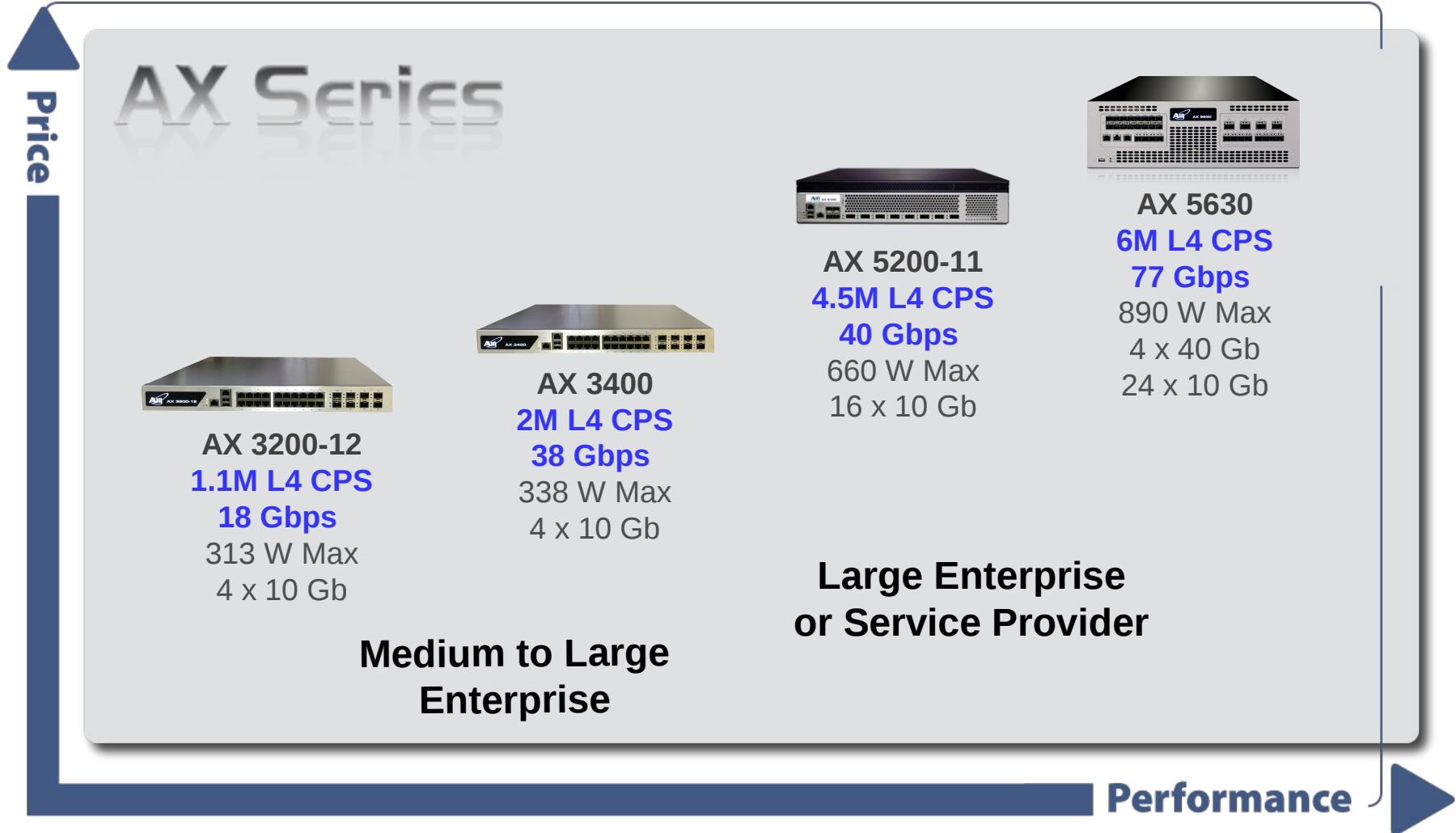
High Packet Per Second Rates with Hardware Assist



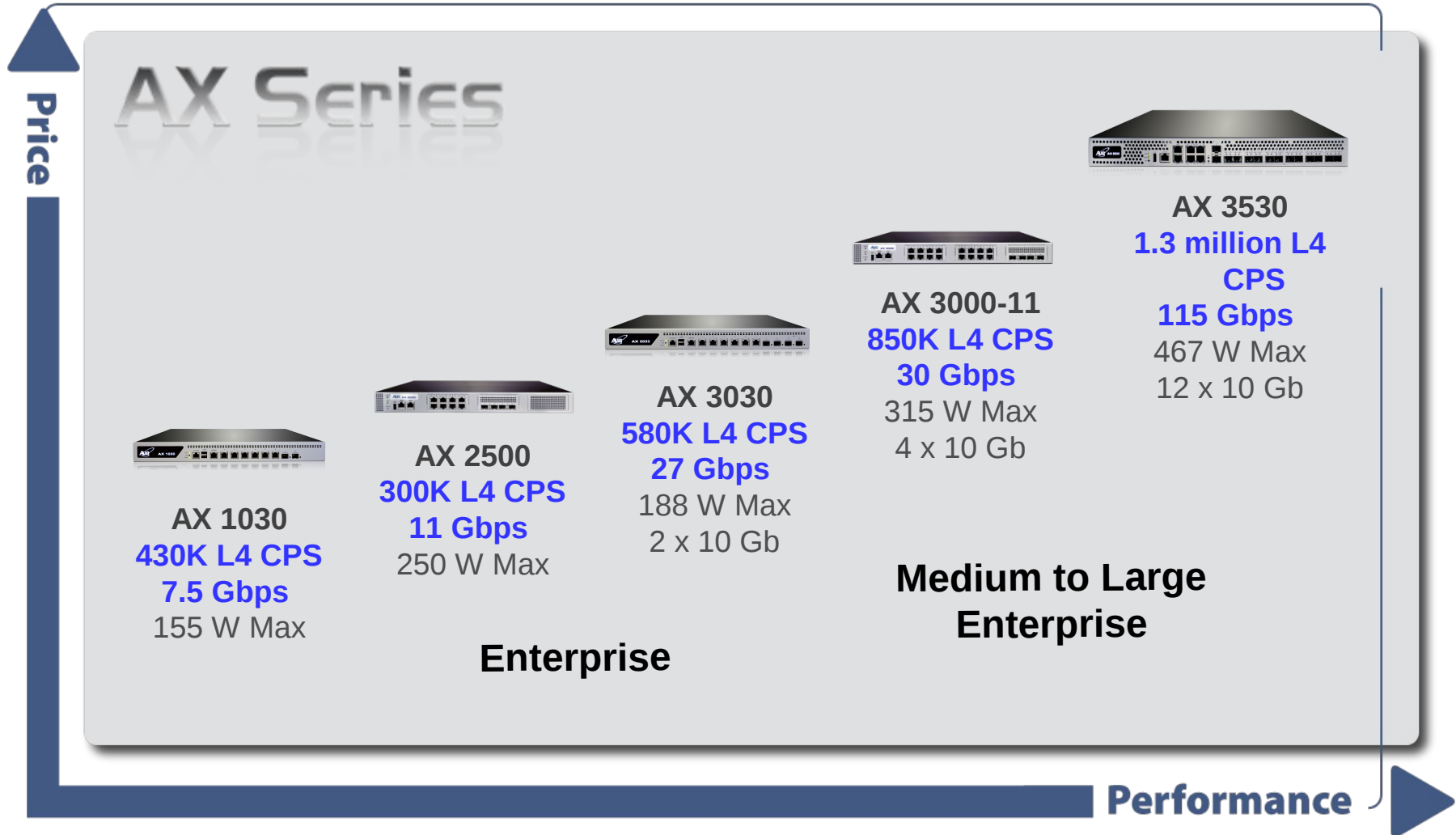
64-bit SoftAX Virtual Appliances



AX Series Models – 64-bit FTA Line-up



AX Series Models – 64-bit Non-FTA Line-up



A10 IPv4-to-IPv6 Migration Advantages

- Industry-leading and mature implementation
- Advanced features and high performance
- Ideal 'green' form factor
- Price/performance advantage



Thank You



Any App



Any Cloud



Any Size

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