Beyond SDN to an Application Centric World

Wendy Mars
Senior Director, Data Center & Virtualisation EMEAR

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These Transitions are Changing the Role of IT

TECHNOLOGY TRANSITIONS

MOBILE

SECURITY

NETWORK AT THE CENTER

GROWTH & PRODUCTIVITY

EXPERIENCE EXPECTATIONS

ENERGY

BUSINESS IMPLICATIONS

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What is your Data Center here for ?

To run your Business Critical

Applications

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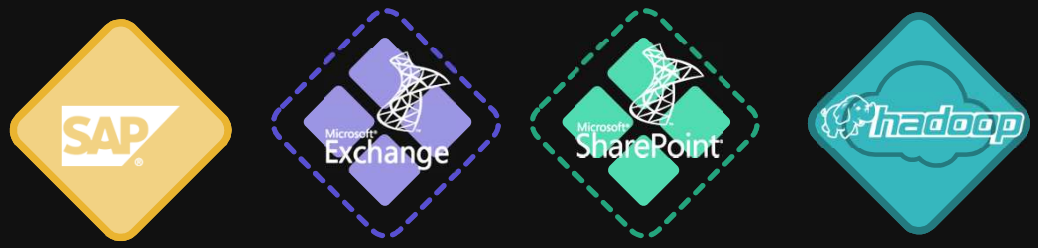
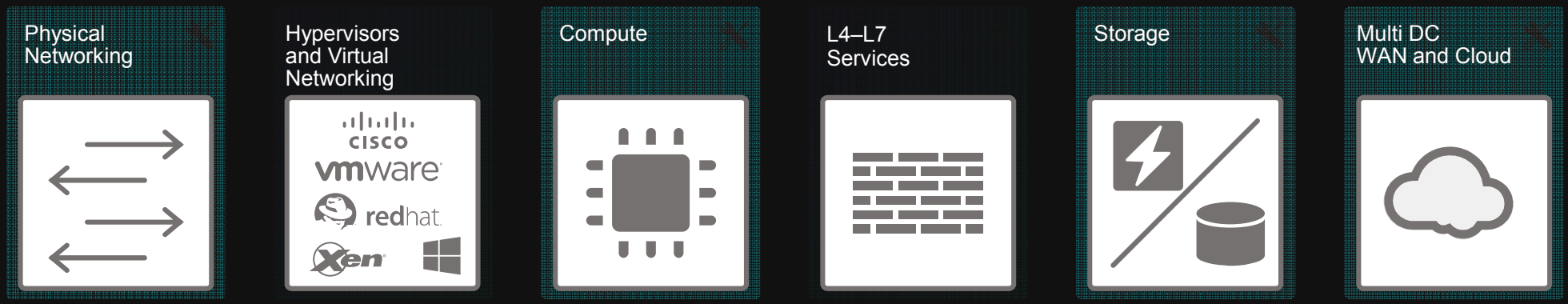
Diverging Application Requirements

Physical, Virtual, Cloud/Emerging Applications

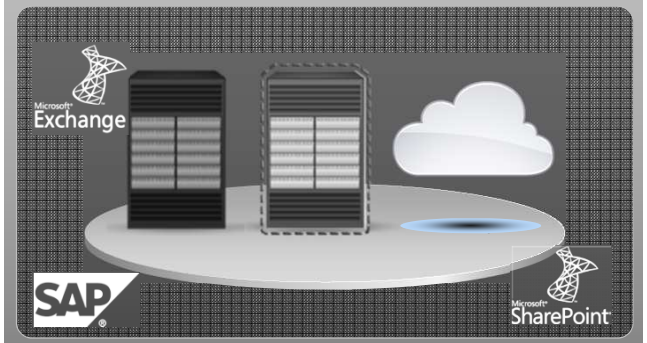




BUSINESS REQUIREMENTS ARE APPLICATION CENTRIC

Market Trends
Virtualization and Cloud

APPLICATIONS



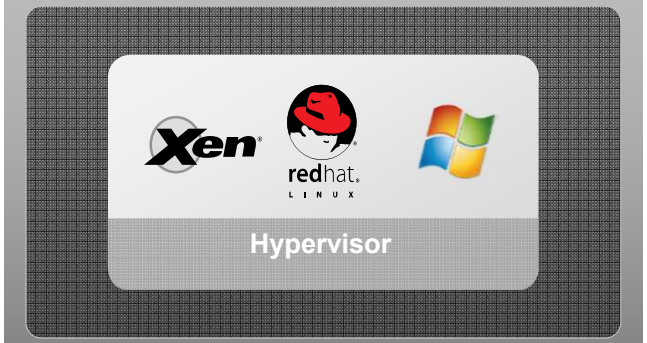
PHYSICAL + VIRTUAL

60–80% OF WORKLOADS VIRTUALIZED

~20% OF PHYSICAL SERVERS VIRTUALIZED BY 2016

Gartner survey 2013

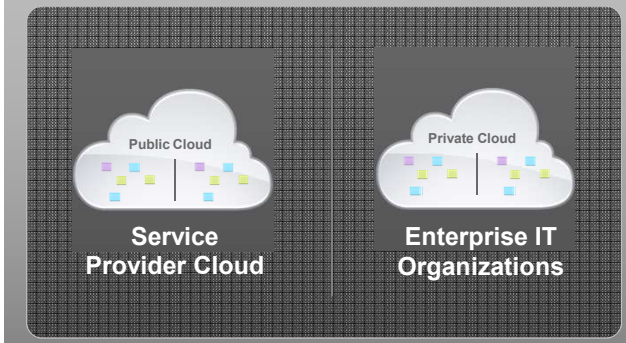
HYPERVISOR FRAGMENTATION



42% OF BUSINESSES USE MULTIPLE HYPERVISORS

Information Week survey 2013

PRIVATE/PUBLIC CLOUD



CLOUD WILL ACCOUNT FOR 2/3 OF GLOBAL DC TRAFFIC BY 2016

INTEGRATED DEVELOPMENT AND OPERATIONS

IDC predictions 2013

OPEN RESTFUL APIS, OPEN SOURCE

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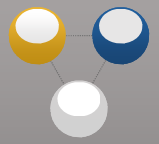
A New Operating Model is Required

TRADITIONAL NETWORKING MODEL



Network of Devices

Proven and Reliable

Existing Infrastructure Model

Existing Application Model

Many Data Center today

TODAY'S SDN MODEL

Software-Based Network Virtualization

Does not remove Complexity

Disjoint Overlay and Underlay

Multiple Management Points

FUTURE MODEL

Application Centric Infrastructure

Radical Simplification

Centralized Automation with Application Profiles

SW Flexibility with HW Performance

Applications will drive the network behavior and NOT the opposite

What is
Application Centric Infrastructure ?

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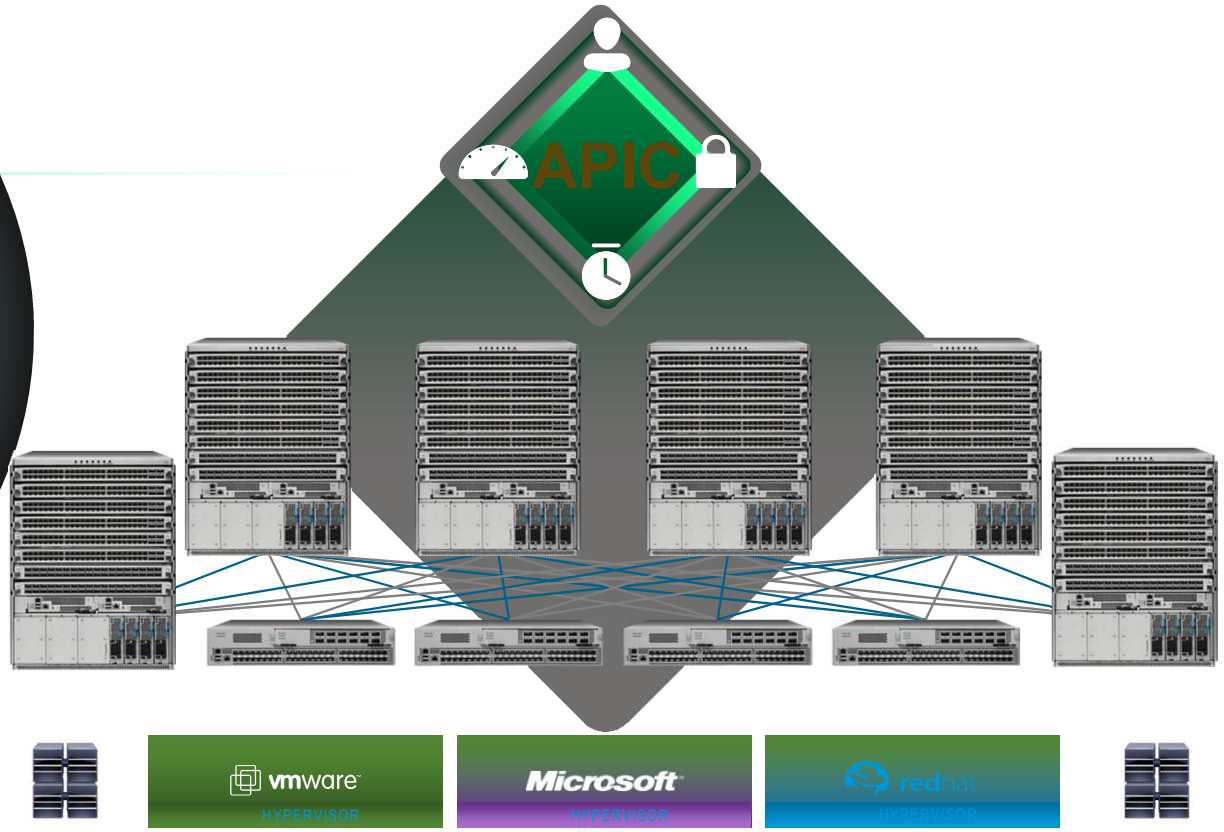
The Architecture

SINGLE POINT OF CONTROL

SCALABLE ARCHITECTURE

PHYSICAL AND VIRTUAL



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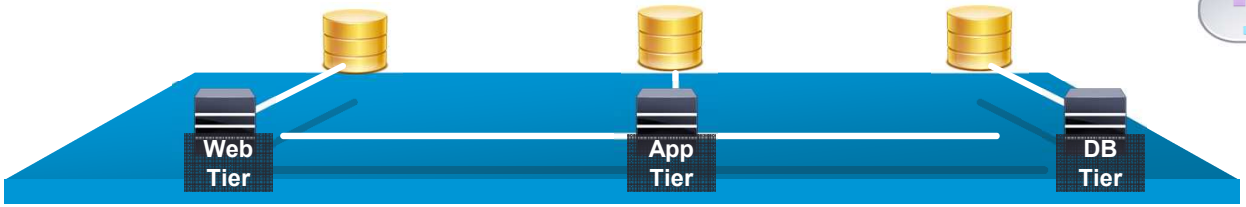
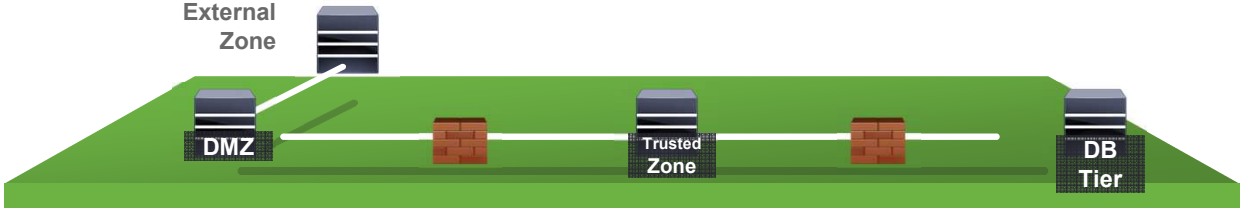
Common Policy and Operations Framework

Cloud Admin

Application Admin



Security Admin



Network Admin

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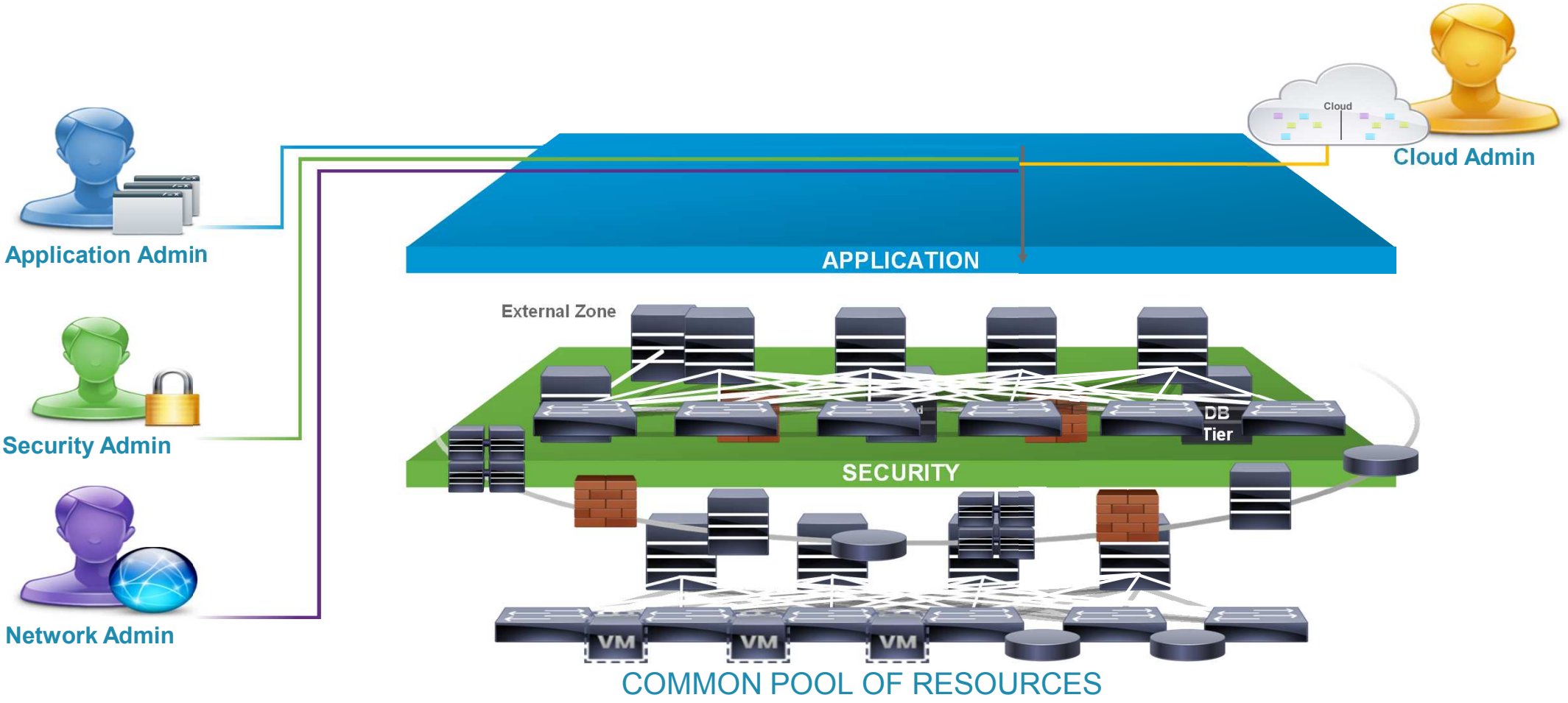
Common Policy and Operations Framework



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Any Application, Anywhere – Physical and Virtual

Common Application Network Profile

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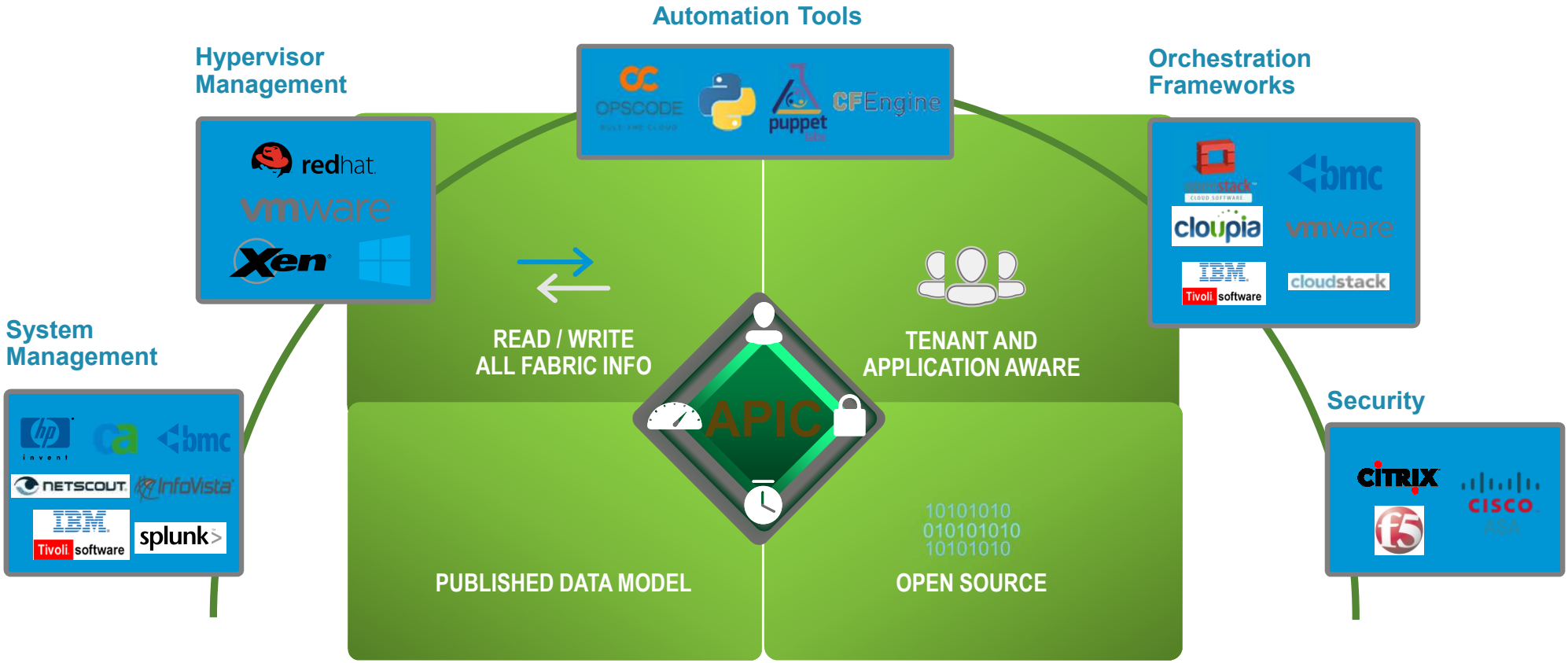
Open Ecosystem, Open APIS

Comprehensive Access to Underlying Information Model



A *Platform* approach to Data Centre Infrastructure

Industry Standard Compliant

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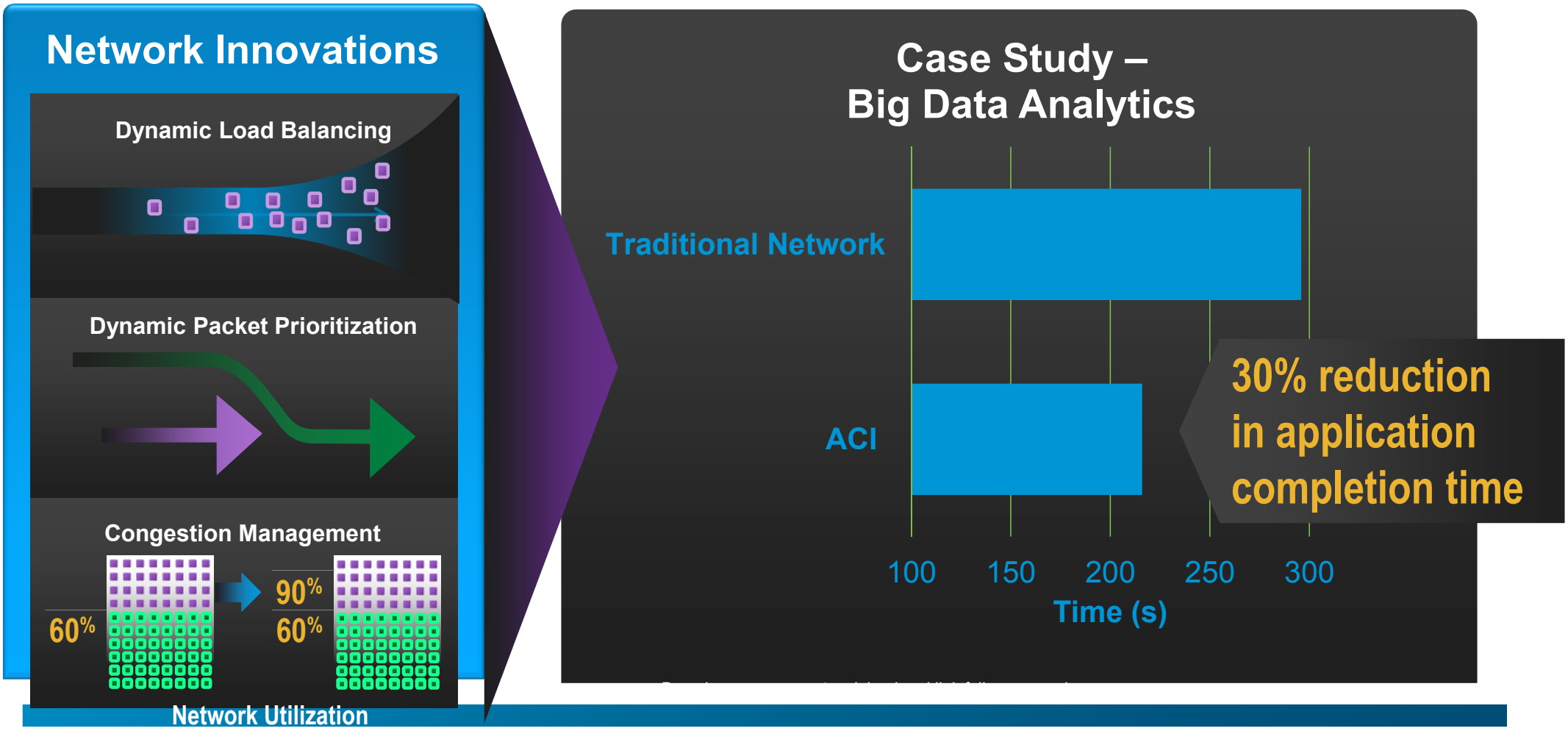
Innovation Driving Application Performance



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In Summary

- Application Centric Infrastructure is a superset of SDN

  It leverages the best of open software, open hardware custom and merchant ASICs and allow us to automate all the services delivery on the network.

- Diverse admin teams build the application policies

  ACI will bring the various Administration teams closer together. The team integration is good and will increase the efficiency for bringing new applications to life faster.

- The ecosystem plays an active role

  We built many north bound API connectivity in APIC. We want to have our controller open to the automation and orchestration tools. This is a key requirement for our customers and partners. As an example we have tight integration with Citrix and F5 (ACI certified).

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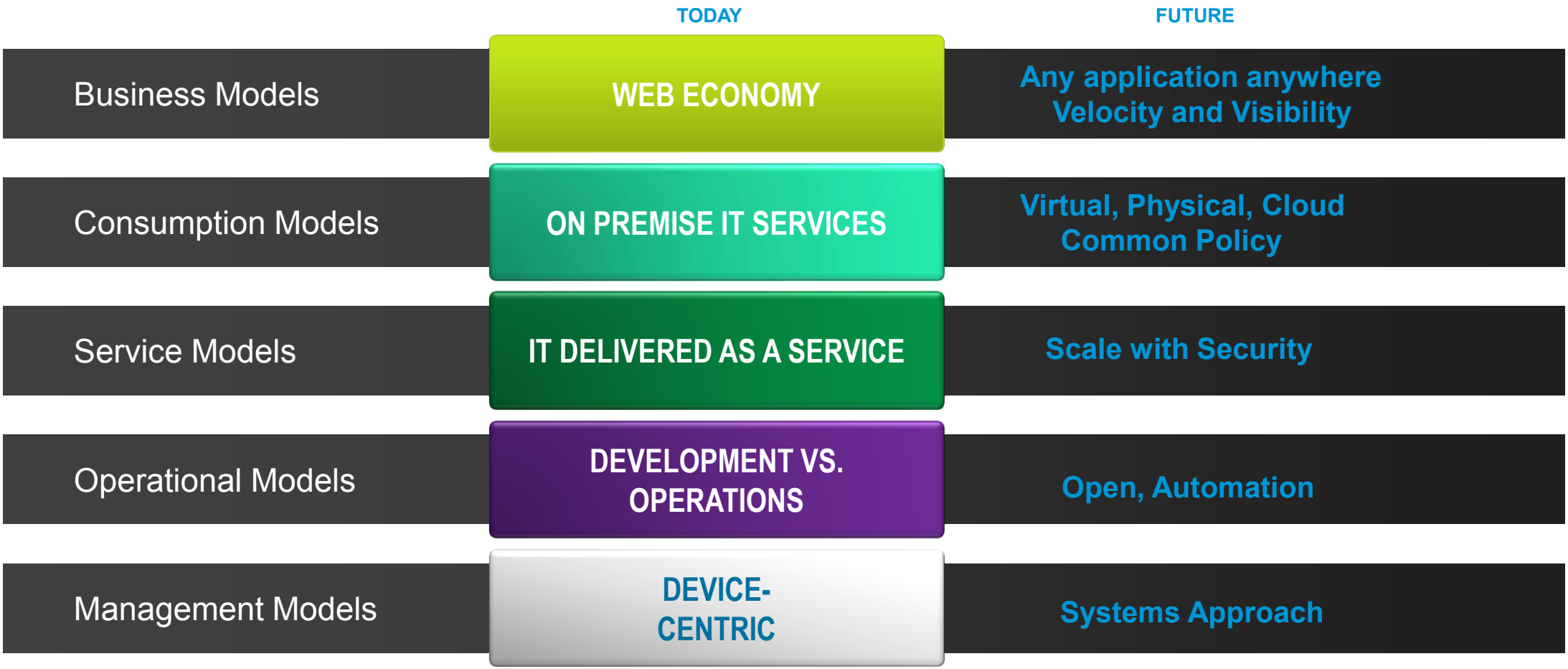
Thank You

It’s All About the Application



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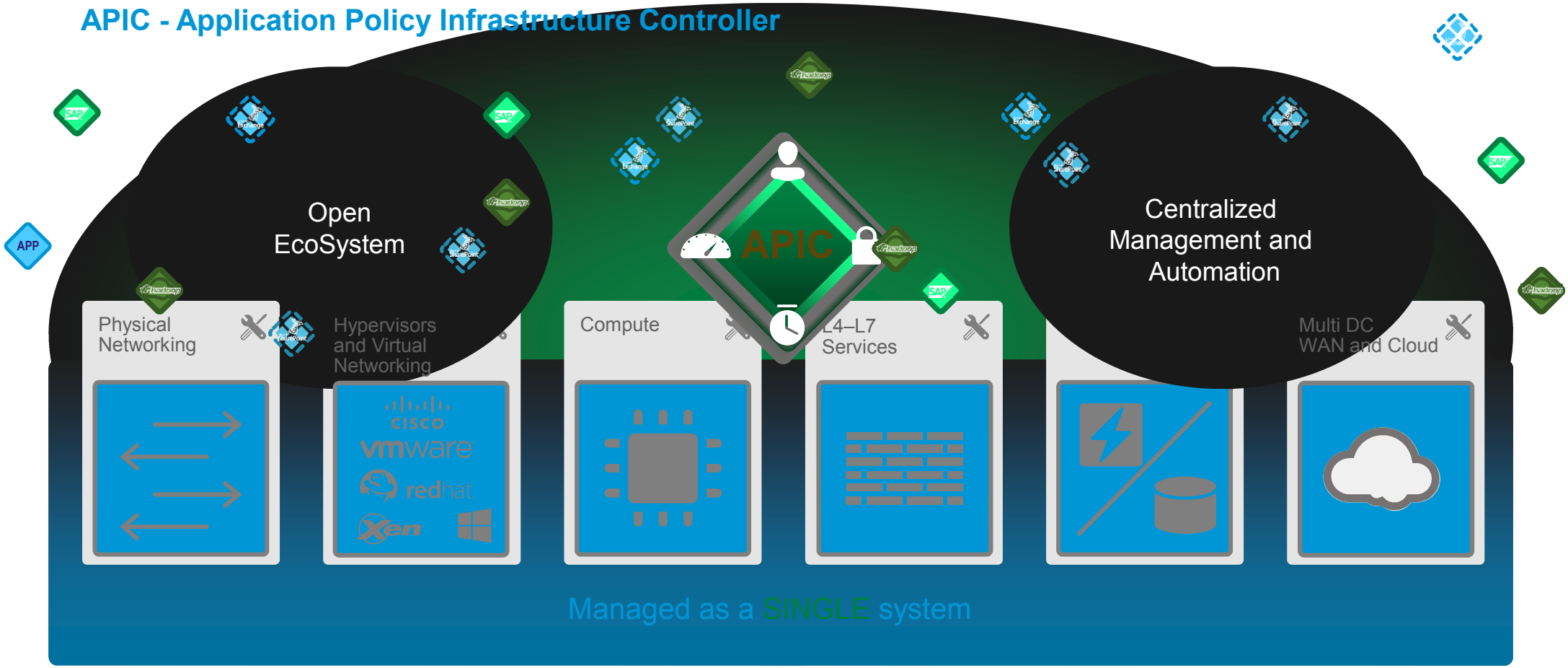
ACI - An Application Centric approach to Networking



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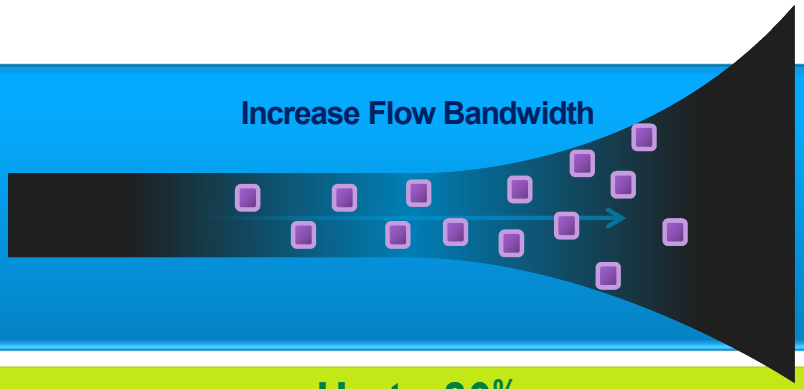
Improved Application Delivery Time

Up to 80% Improvement in Application FLOW Performance

MORE APPS

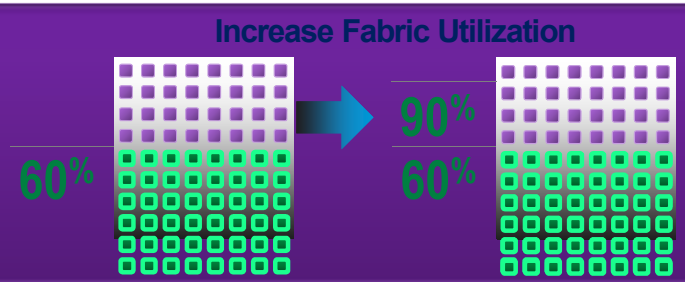


AVOID HOTSPOTS WITH
DYNAMIC LOAD BALANCING

IMPROVE PERFORMANCE

QUALITY OF SERVICE VIA
DYNAMIC PACKET PRIORITIZATION

OPTIMIZE UTILIZATION



LOWER COST AND
NO OVERBUILD WITH
CONGESTION MANAGEMENT

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