



*Conductor of the Application Orchestra*  
@eddbaker

# Digitization

## *The Tale of 2 ITs*

Model1  
Certainty  
Risk  
SysAdmin  
Reliability  
HighCeremony  
Approvalbased  
Specialisation  
InfrastructureDefined  
3Tier  
SystemsofRecord  
Availability  
CostReduction  
Getitright  
Slow  
Sequential  
Consolidation  
2ndPlatform  
DataCenter  
Governance  
PricePerformance  
Virtualisation  
Model2



Efficiency

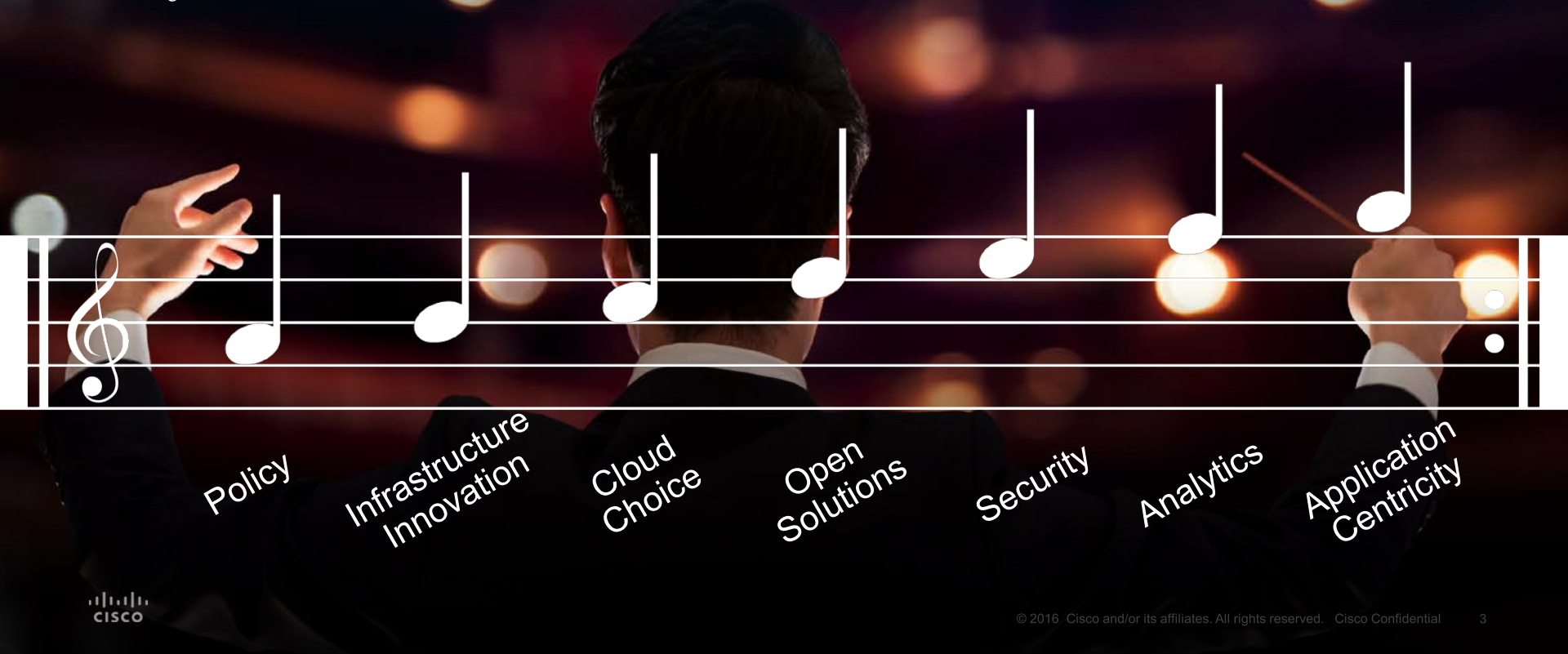
ShadowIT  
Distributed  
Getitfast  
Source  
3rdPlatform  
SystemsofEngagement  
Processbased  
ContinuousInnovation  
DevOps  
Mode2  
IoE  
Open  
RevenueGrowth  
LowCeremony  
Composite  
Mobiles  
Hybrid  
Microservices  
Empirical  
Containers  
SoftwareDefined  
Cloud  
Agile  
Uncertainty  
Consolidation  
2ndPlatform



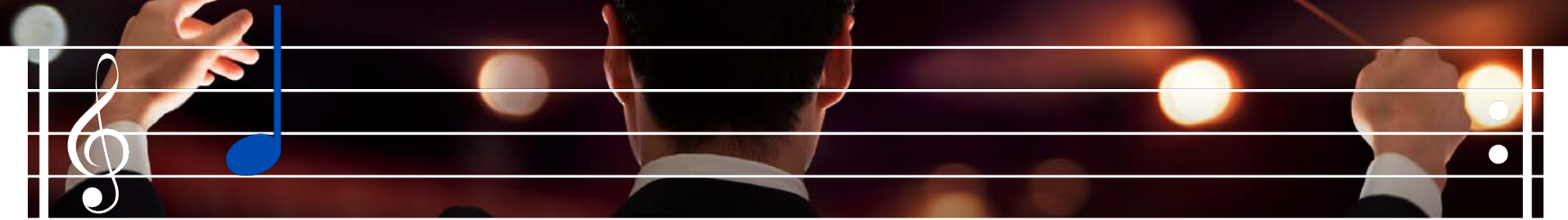
Speed

# Conductor of the Orchestra

*You just want to listen to the music.....*

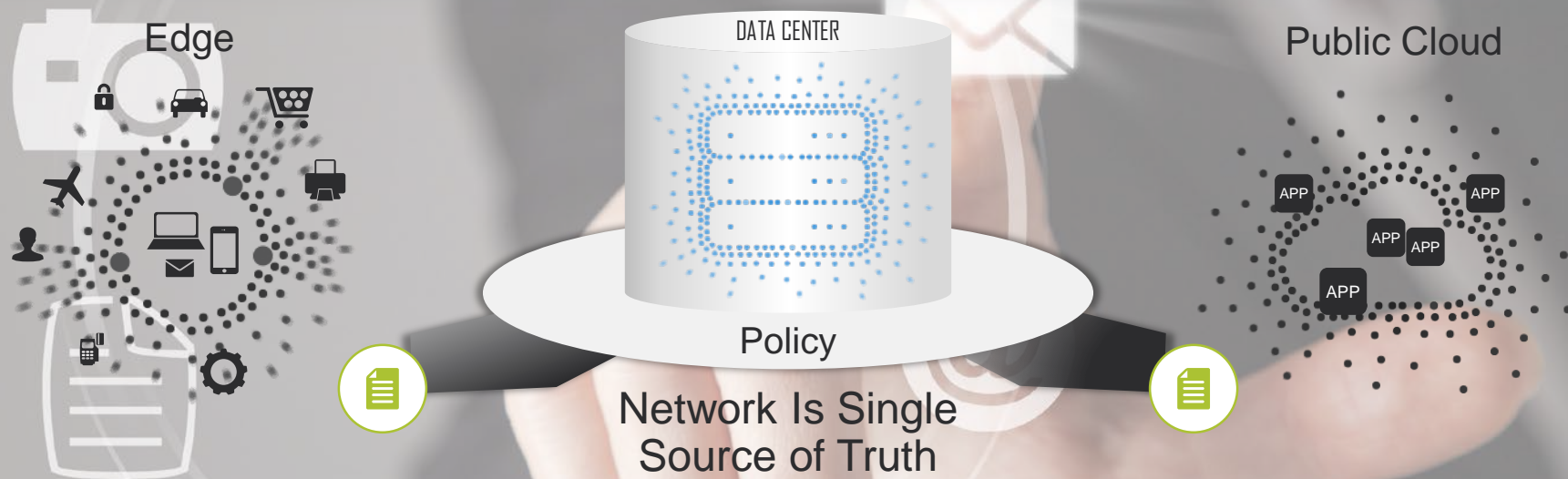


# Importance of Policy



*The notes on the stave are a musical policy...*

# Applications & Data Everywhere



Network Single Source Of Truth

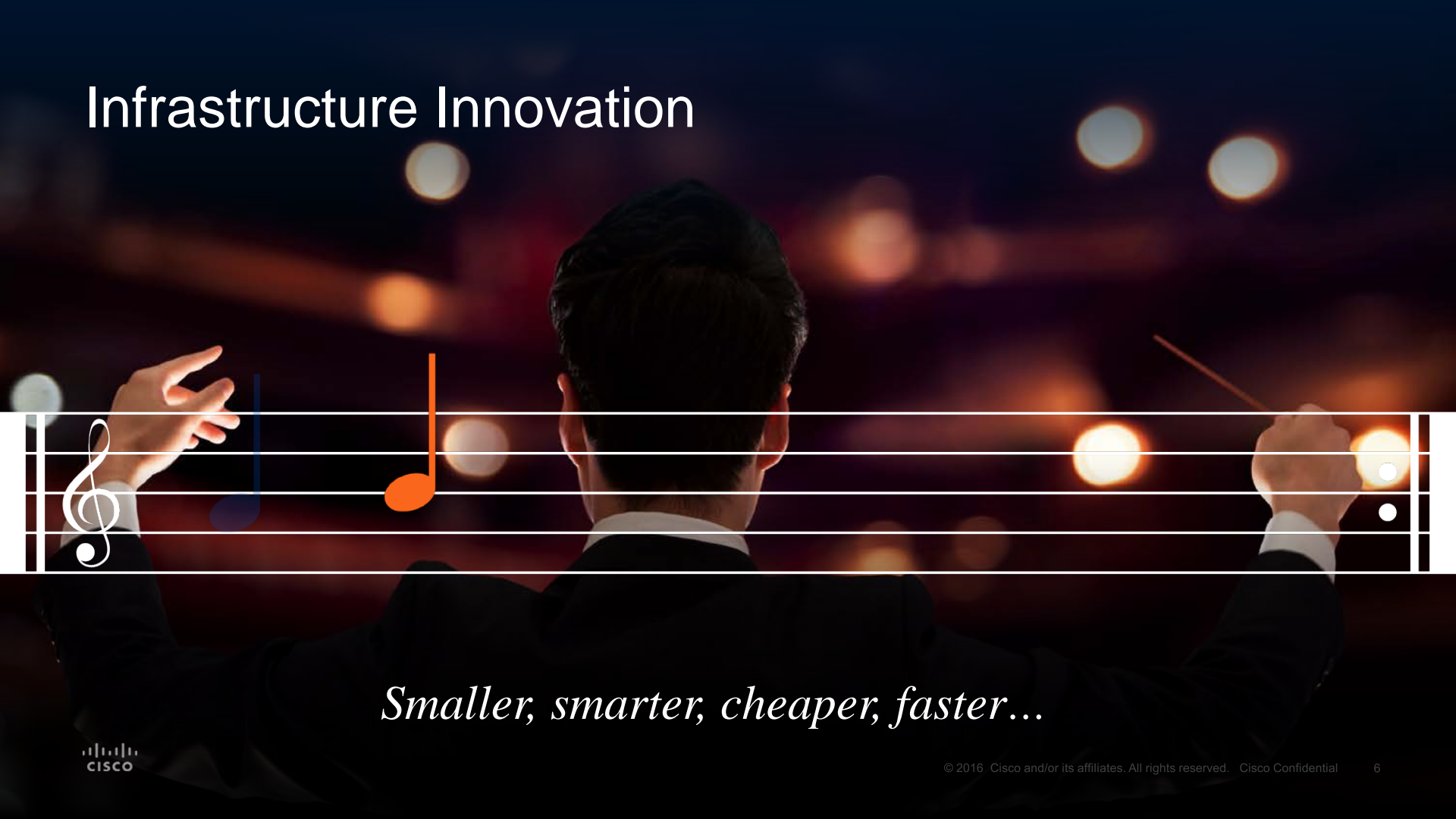
Policy Driven Infrastructure

Result Is Security And Speed

Applications Are Everywhere = Need Policy Everywhere



# Infrastructure Innovation



*Smaller, smarter, cheaper, faster...*

# Infrastructure Innovation

## NEXUS 9000

Cloud scale switching.....

**25G at price of 10G**

**100G at price of 40G**

2.5x Bandwidth at Same Price

**Embedded Security, Analytics,  
and Telemetry**

at 100G Wire Rate

## HYPERFLEX

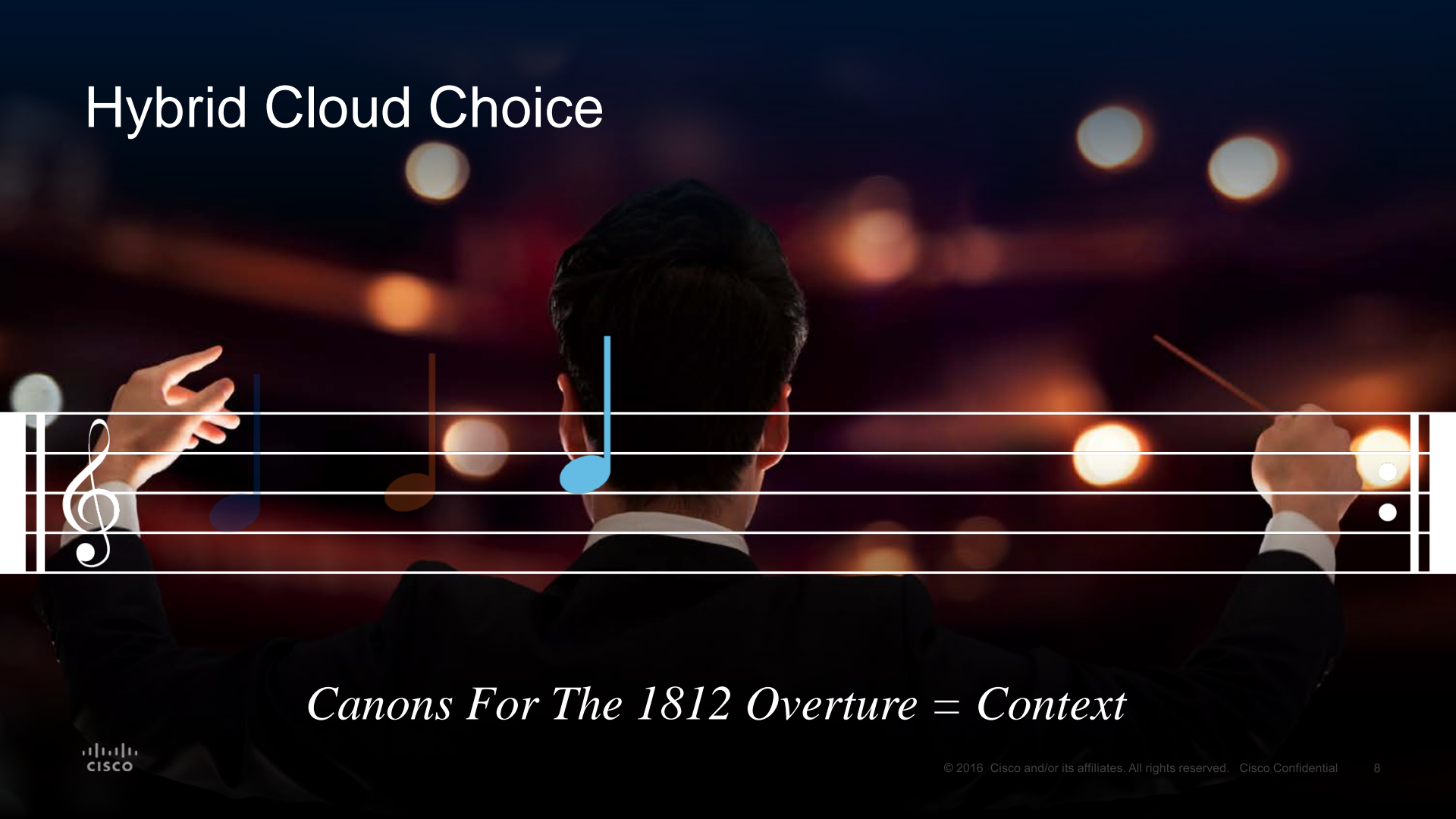
Deploy in minutes....

**80%**  
Data  
Reduction

**30%**  
Lower TCO Than  
Competition

**48%** Higher  
Performance

# Hybrid Cloud Choice



*Canons For The 1812 Overture = Context*



# Hybrid Cloud Choice

## What

1

IT Managed Stack

2

Cloud Native Stack

3

Multi-cloud  
Management

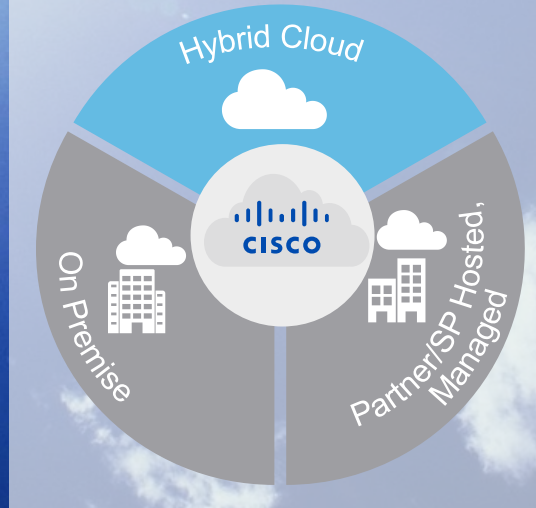
4

App  
Modernization

5

Containers &  
Microservices

## Where



## How



Transactional

Perpetual | Subscription



Partner Services

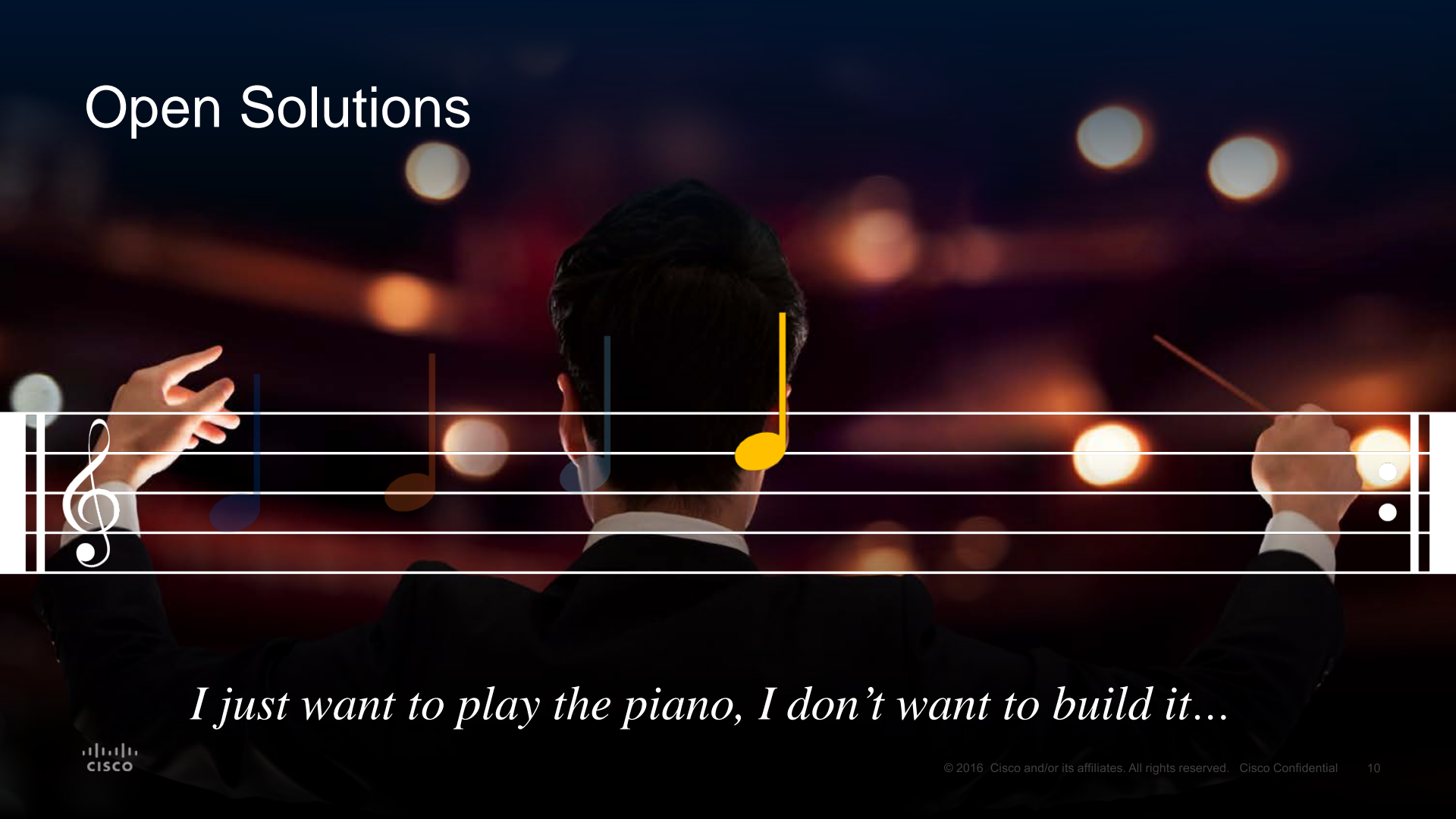
Integration | Migration



Security

Control | Compliance

# Open Solutions



*I just want to play the piano, I don't want to build it...*

# Open Solutions

## Enterprise Applications

All the major vendors



All the major workload  
Big Data  
VDI  
ROBO & Migration

Performance up 50%



Deployment  
down 90%  
Cost down by 30%



50% of worlds  
converged solutions  
run on UCS

## Cisco Open Stack Contribution

Innovation leader

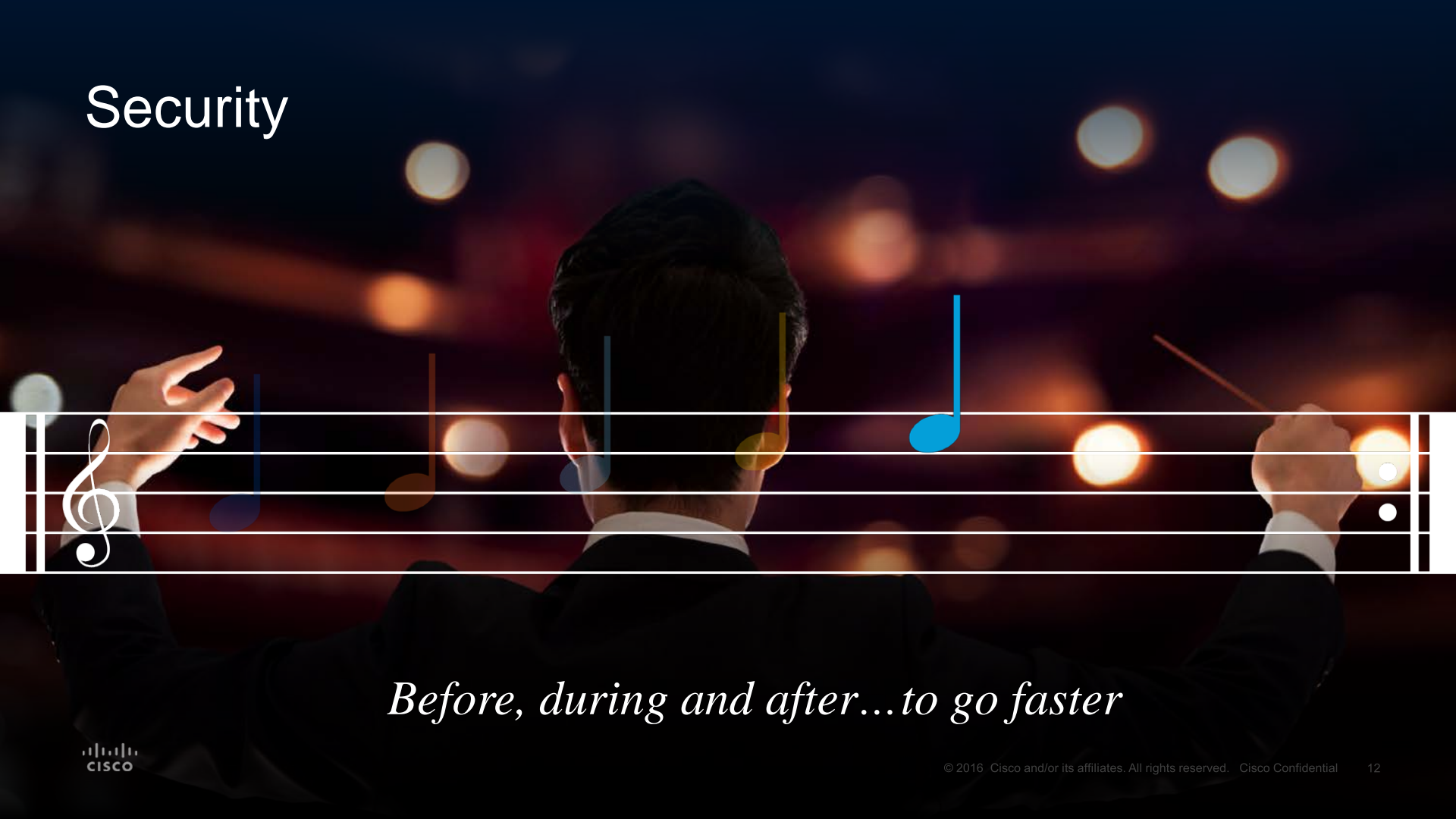
820 commits

#1 Kilo Neutron Blueprints

Metacloud = reduced complexity

UCSO integrated offer with Red Hat

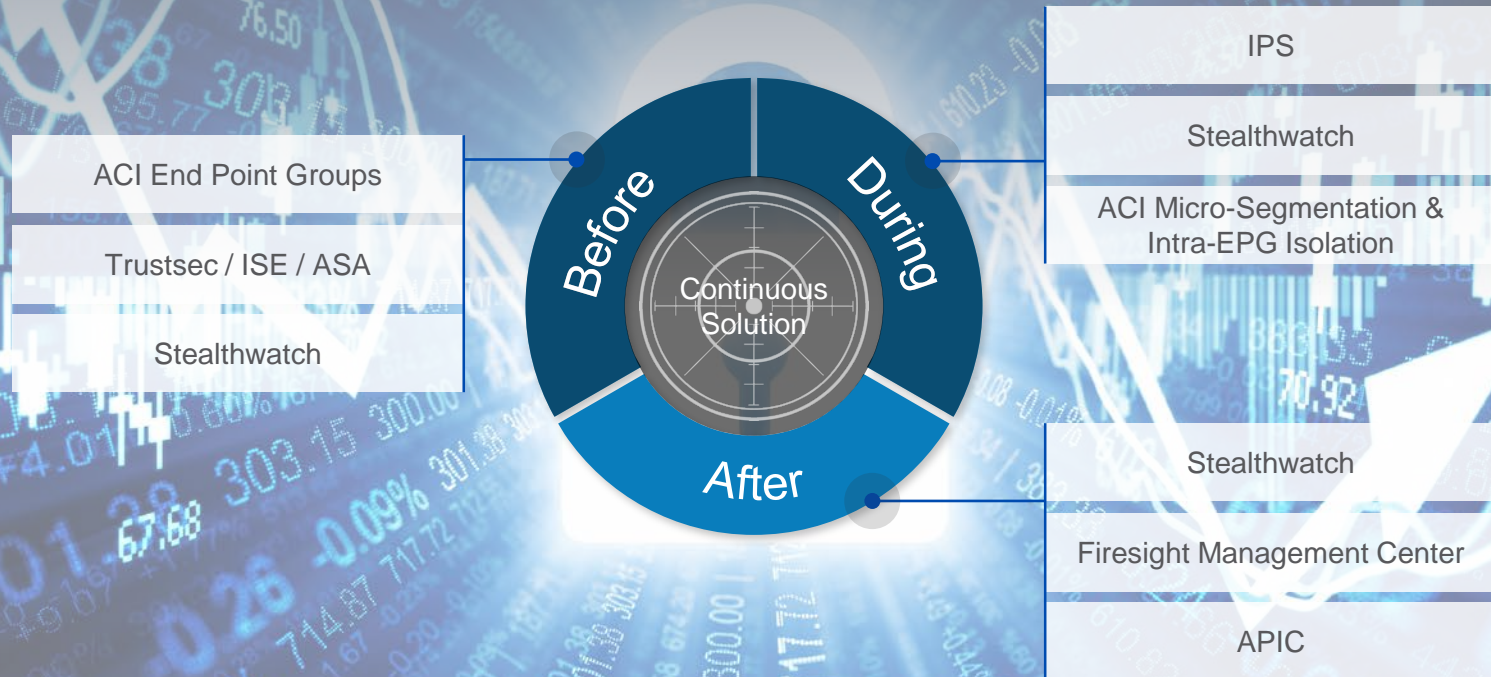
# Security



*Before, during and after...to go faster*

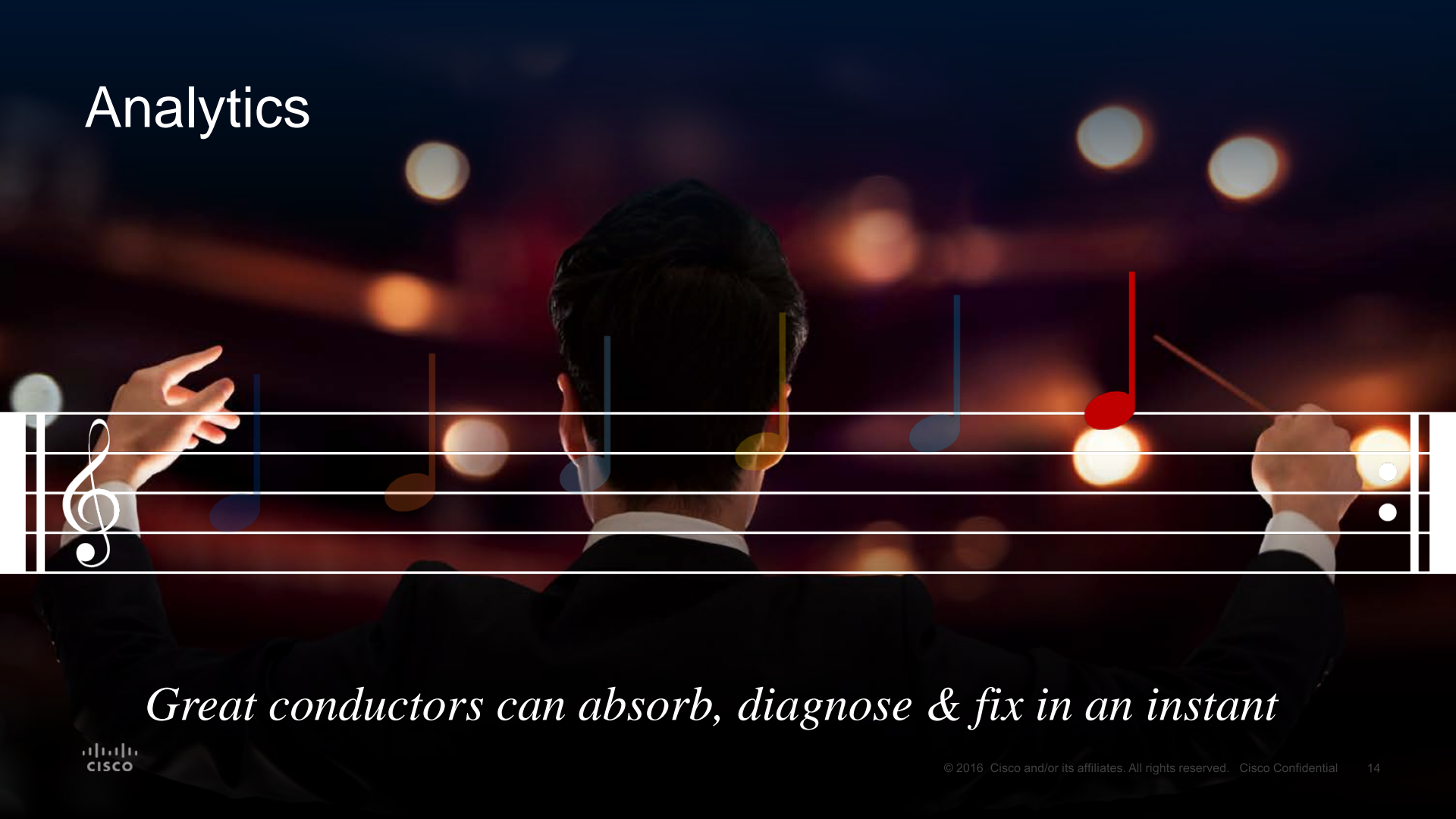


# Securing the Datacenter





# Analytics



*Great conductors can absorb, diagnose & fix in an instant*

# Analytics & Shadow IT

## Cloud Consumption Portal



### Visibility

Monitor Use & Predict  
Cloud Needs



### Risk

Reduce Cloud Risk &  
Protect Your Business

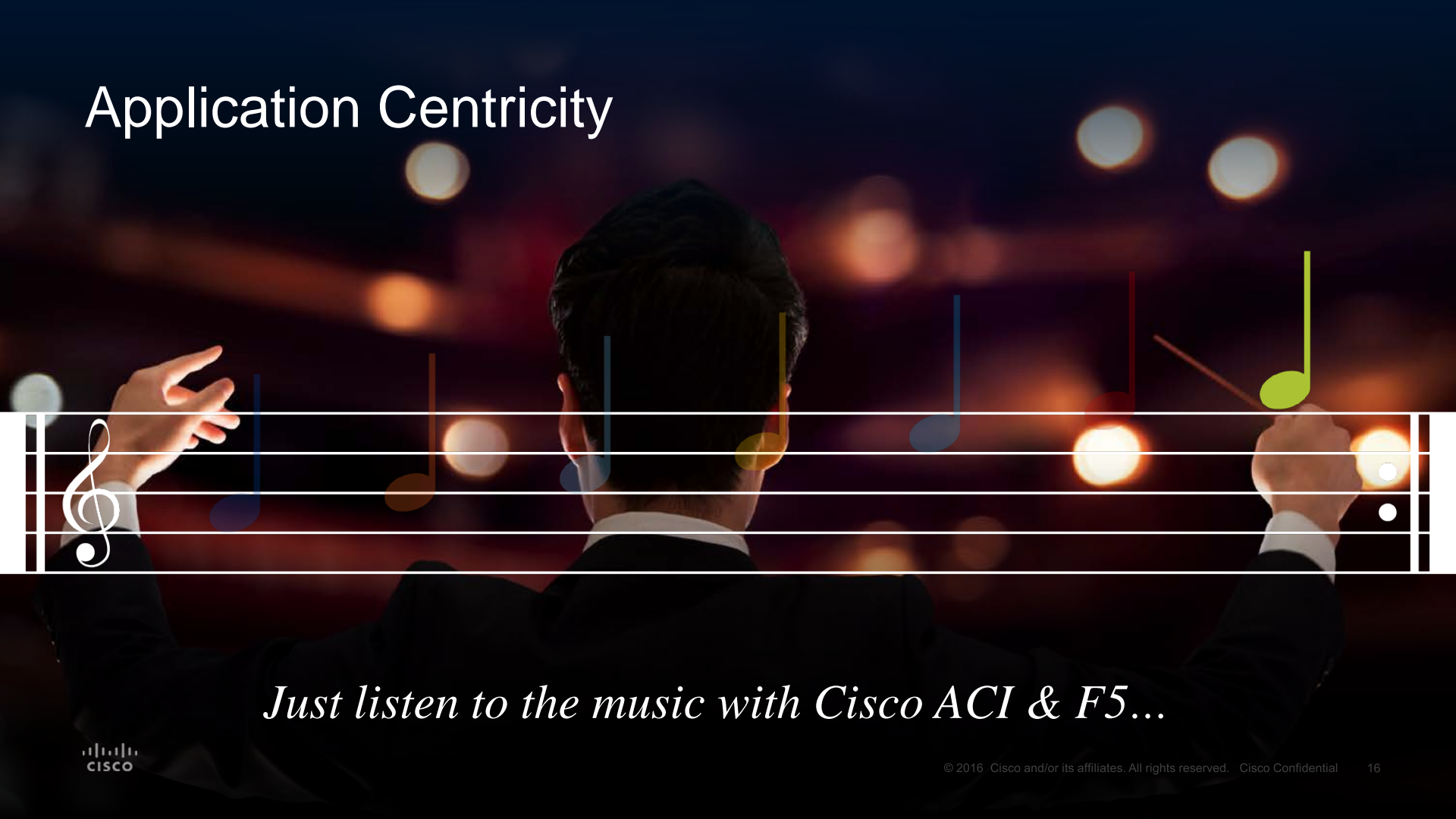


### Benchmarking

Discover & Evaluate  
Providers

*The business is downloading from iTunes but my collection is still vinyl...*

# Application Centricity



*Just listen to the music with Cisco ACI & F5...*

# Partnership Focus

Deep technology integration across L2-L7 network services with intelligent services orchestration

F5 BIG IP and F5 BIG IQ integration with Cisco ACI

Comprehensive application-centric policy framework and enforcement as part of ACI Ecosystem

Address joint Customer needs in Data Center and Cloud Deployments Worldwide

Extensible platform supporting future service growth

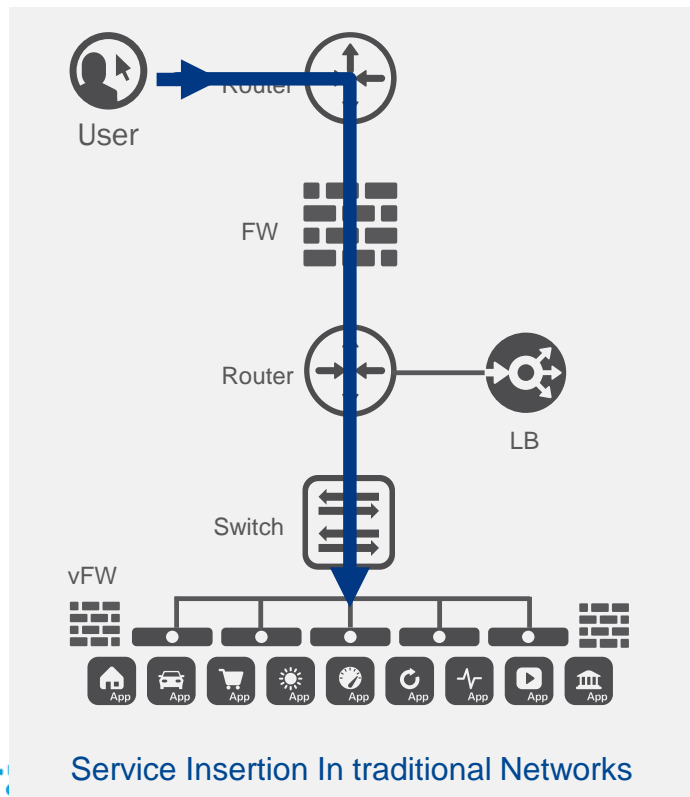
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**Deliver a Fundamentally Superior Application Experience**



# Applications Deployments are Difficult

## Traditional Network Service Insertion Challenges



Configure Network to insert Firewall

Configure firewall rules as required by the application

Configure Router to steer traffic to/from Load Balancer

Configure Load Balancer as required by the application

Configure Switches for L2 connectivity

Configure vFW to protect Virtualized App Tier

Service insertion takes days/weeks

Network configuration is time consuming and error prone

Difficult to track configuration on services



# ACI - Policy Driven Automation for a Cloud Model

## Foundational Challenges

Simplification

Drive Agility & Automation

Optimize Operations > TCO

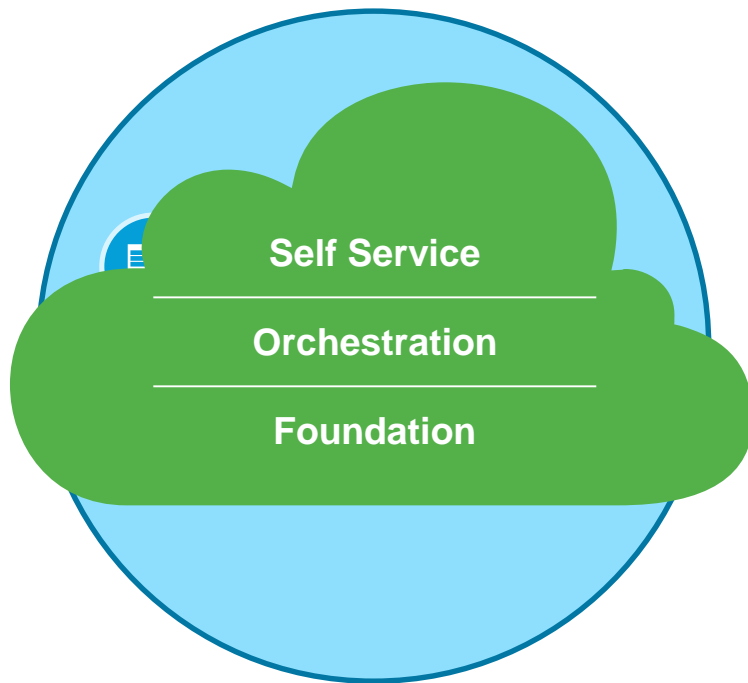
Open & Programmable

Security to Meet Compliance

Segment with Multi-tenancy

Elastic Model

Develop Hybrid Cloud Model



# ACI - Policy Driven Automation for a Cloud Model

## Foundational Challenges

Simplification ✓

Drive Agility & Automation

Optimize Operations > TCO ✓

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Security to Meet Compliance ✓

Segment with Multi-tenancy

Elastic Model ✓

Develop Hybrid Cloud Model

ACI  
Solves



# Foundation for Cisco SDN Solutions

## Speed, Visibility, Security, Reliability, and Scale Built In

N9K Modular  
9500 Series



Shipping  
Now

N9K Fixed  
9200/9300 Series



**Cisco Cloud Scale Technology**

Embedded NetFlow/Security | Enhanced Scale (Ports, Table Sizes)

### Industry First

36-port wire rate  
40/50/100G

### Investment Protection

Use existing chassis for  
new line cards

### Same Hardware

For standalone and ACI

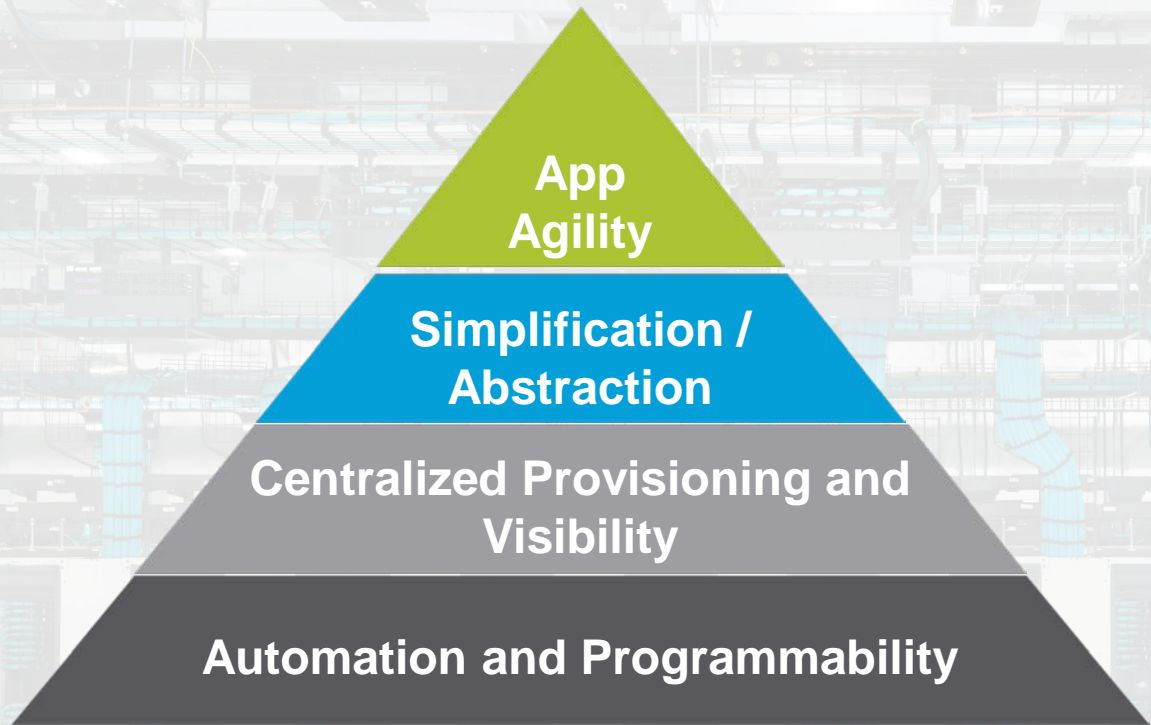
### Industry's Only

Native 25G

### Consistent NX-OS Image

Between Nexus 3K  
and Nexus 9K







App Based Automation



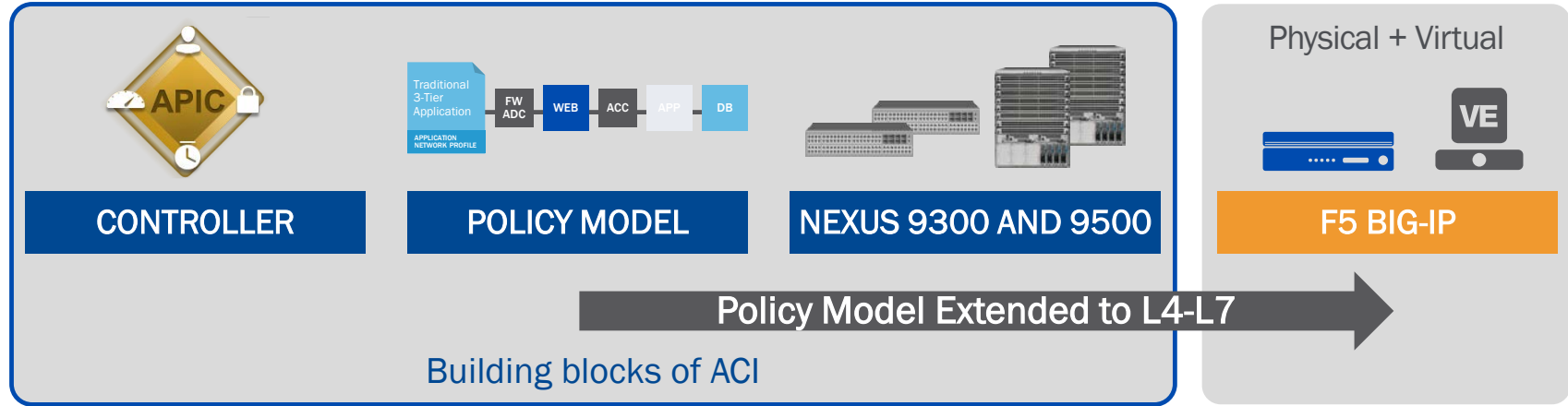
Automated L4-7 Stitching



Turn-key Network Automation



# Extending the Policy Model to F5 Big-IP & Big-IQ



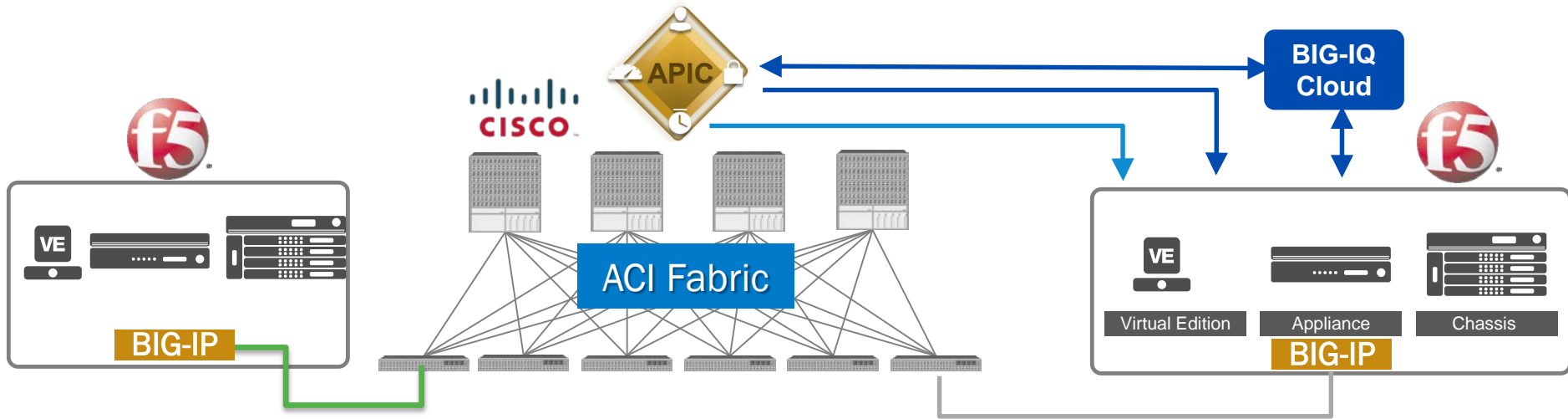
Configure and Manage VLAN allocation for service insertion

Configure the network to redirect traffic through service device

Configure network and service function parameters on F5 Big IP

And much more... now also with Big IQ integration!

# F5 and Cisco ACI Integration Models Offer Operational Choices



# Unmanaged



## Service Chaining w/ Service Graph

## Managed Static



# F5 Big-IP Device Package

## Managed Dynamic



## F5 Big-IQ Dynamic Device Package

# Complementing Cisco APIC Application Intelligence

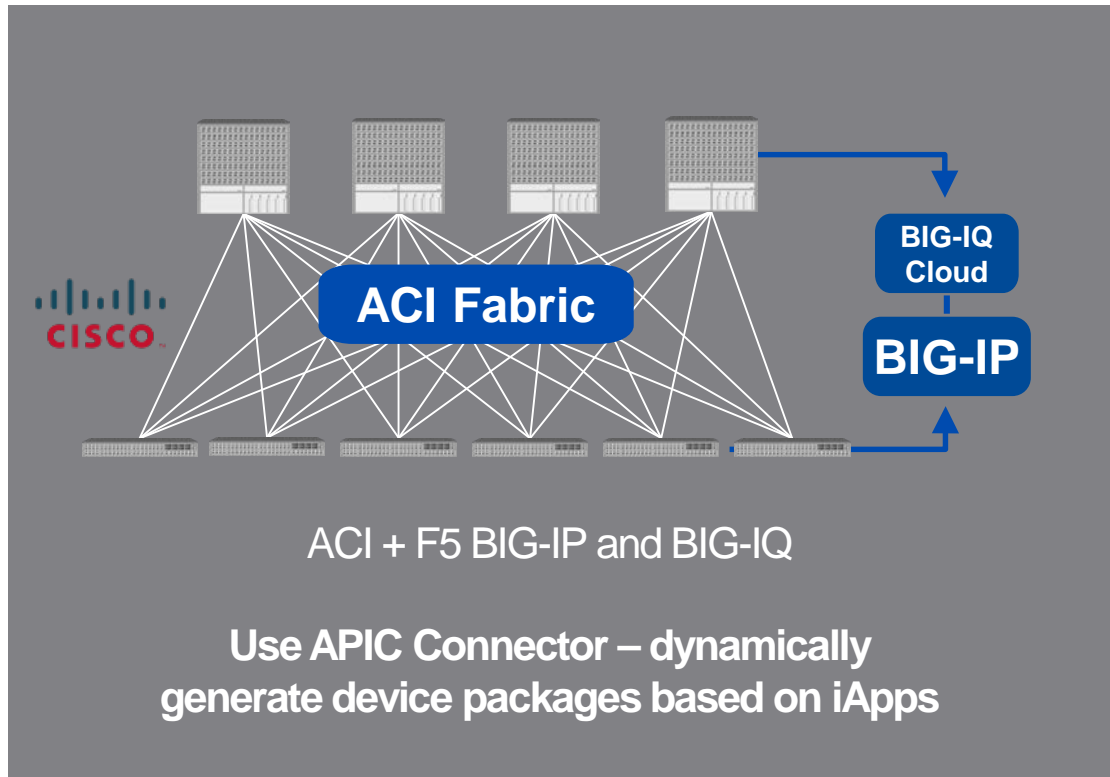
BIG-IQ Cloud dynamically creates device package based on iApps

## Business requirements

- Ability to easily and programmatically manage application services in APIC

## Benefits

- Broadest range of L4-7 services
- Complement ACI application intelligence with F5 iApps technology
- Dynamically generate APIC device packages
- Flexible architectures with both physical and virtual ADCs



# Music from the Real World



**Martin Lipka**

Head of Connectivity Architecture

# Listen to the Music of Cisco ACI and F5 Playing Together



**Accelerated  
deployments**

**Simplify and accelerate application deployment lifecycle to deliver applications: fast, secure, available**



**Simplify  
automation**

**Centrally manage service policy definitions enabling automation and consistent services across Cisco and F5 infrastructure to improve operational efficiency**



**Investment  
protection**

**Designed to meet both current and emerging needs**



**Multi-  
Tenancy/  
Multi-Graph**

**Agile and efficient network foundation delivering high availability & secure multi-tenancy**

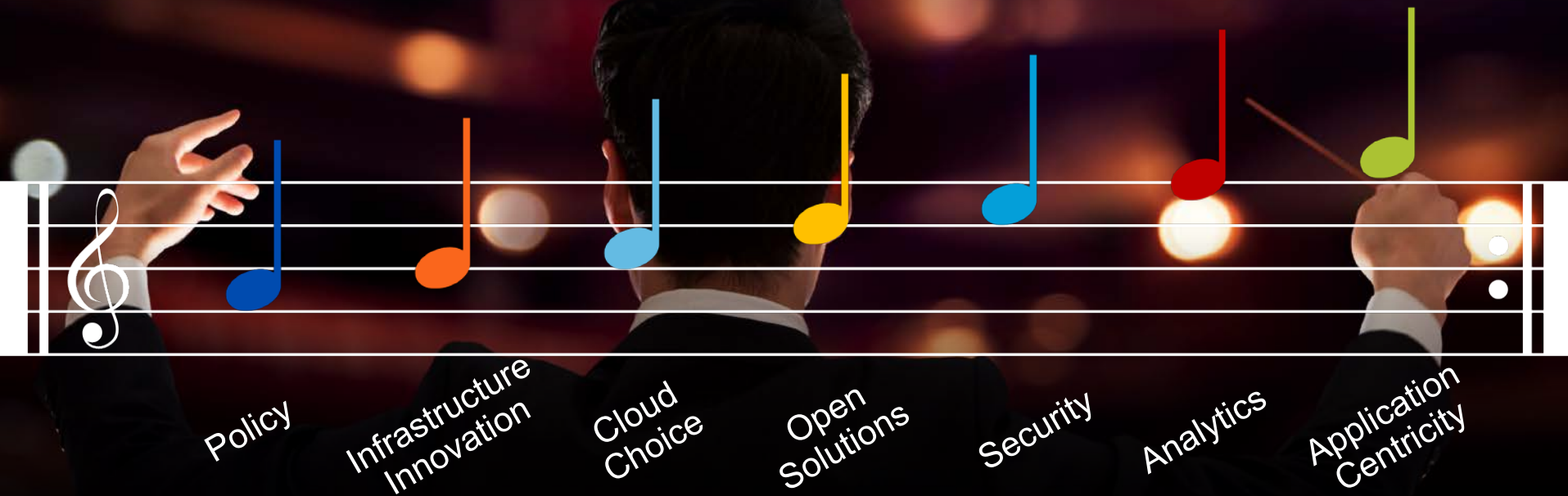
**f5**



**CISCO**



# Be the Conductor with Cisco & F5



# Conductor of the Orchestra

## Picking up the Baton

We are here in Vienna, lets talk.....

Take a look at our booth

Talk to local F5 representative

Work with Cisco ACI team

Cisco F5 Incentive with Westcon

Cisco DCloud for Partners

F5 ITC  
(International Technology Center)

<https://f5.com/solutions/technology-alliances/cisco>

<https://f5.com/solutions/enterprise/reference-architectures/next-generation-ips>