

## Foundation for the Next-Generation Internet: SP Data Center and IP-NGN

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# Traffic Patterns are Changing Service Networks

## Streaming Media



**162 GB/month**

## 3DTV / HDTV



**13 TB/month**

## Smart Phones



**500 MB/month**

## Tablets / eBooks



**1 GB/month**

## TelePresence



**2 TB/month**

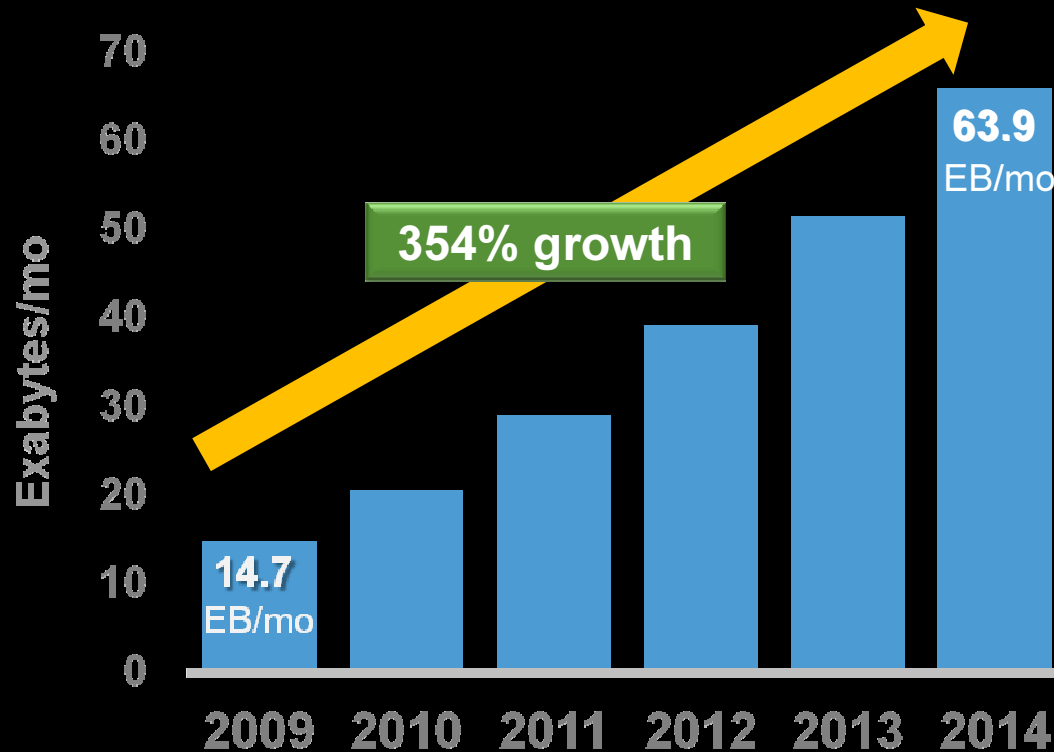
## Gaming




**45 GB/month**

**Result: Explosive Growth in Storage, Compute and Network**

# Video, Mobile Data and Cloud to Dominate Growth; 2009–2014



**3/4** of a zettabyte annually by 2014

 Video will exceed **91%** of global consumer IP traffic

 Global mobile data traffic will grow **3858%**

 Cloud service traffic will grow more than **200%**

## Tomorrow's IP Traffic Mix Will Be Fundamentally Different

Source: Cisco Visual Networking Index—Forecast, 2009-2014

# Growing Demand is Changing the Rules



**Virtualized Workloads  
In the Cloud**



**Video Caching  
and  
Distribution**

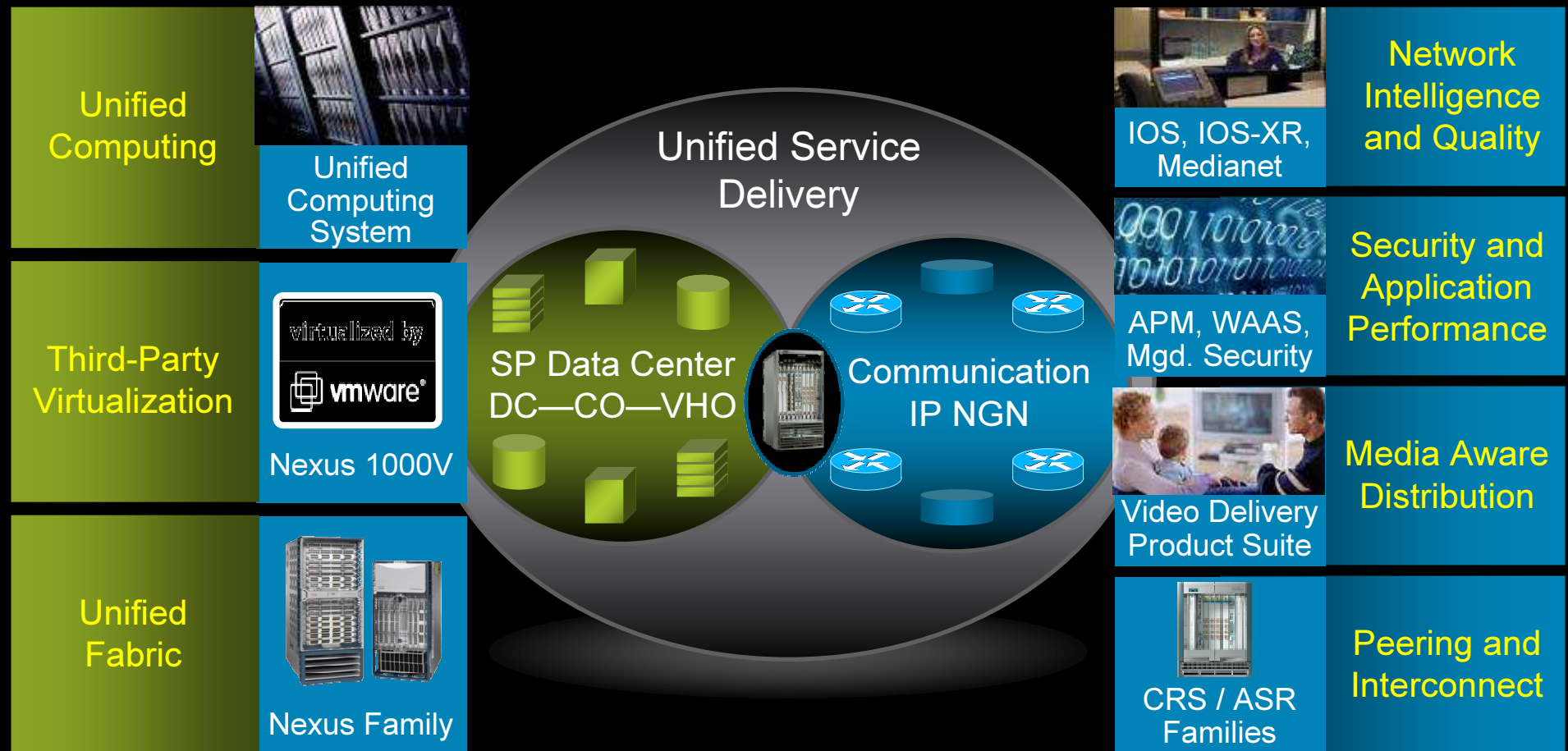


**IP  
App Store  
Traffic**

**New Levels of Integration  
IP NGN ↔ Data Center**

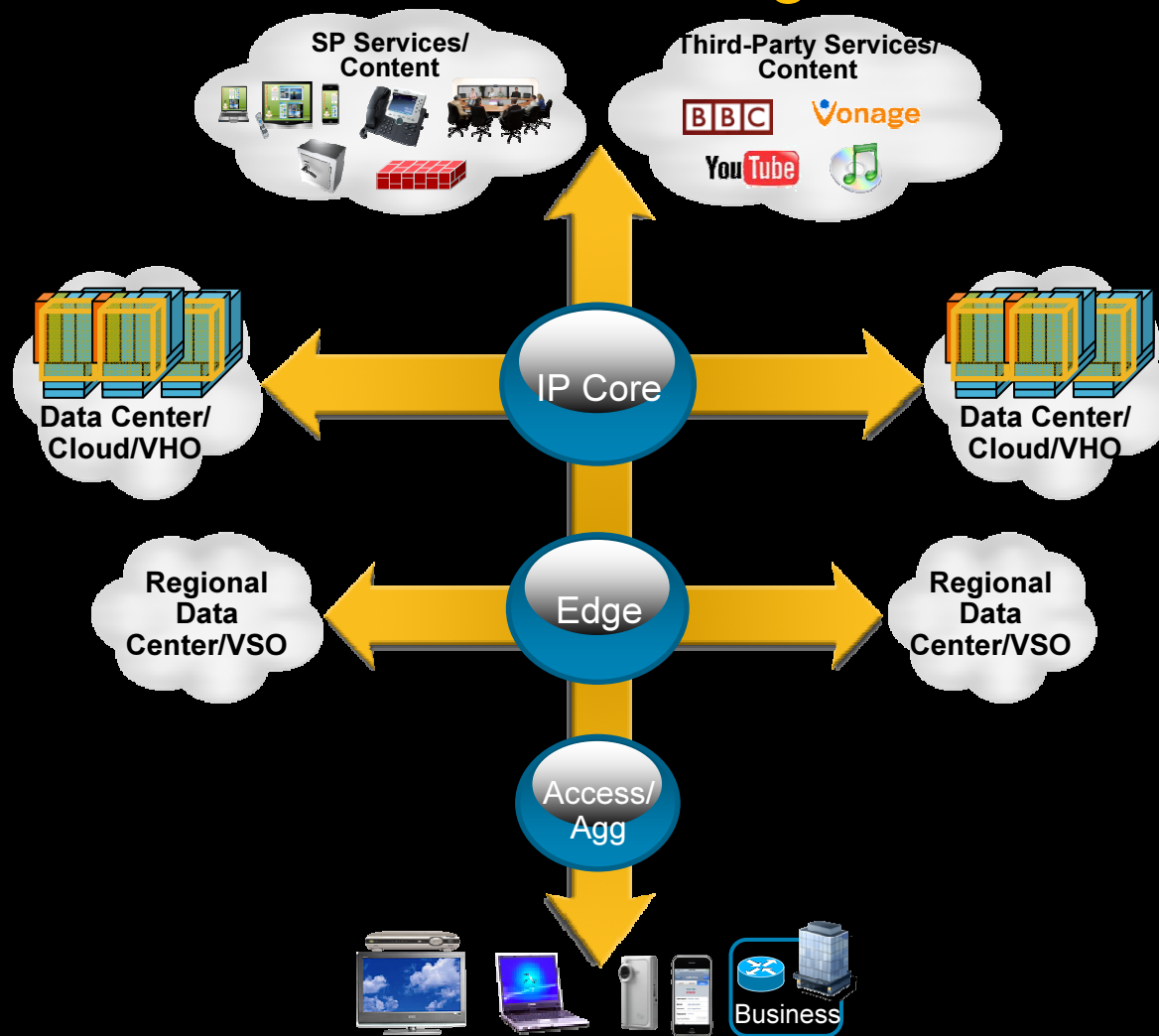
# Unified Service Delivery

## Pathway to Cloud Services



# Next-Generation Internet

## Multi-directional Networking



# Next-Generation Internet Attributes

## Multi-directional Networking

What's Needed?

### Scale

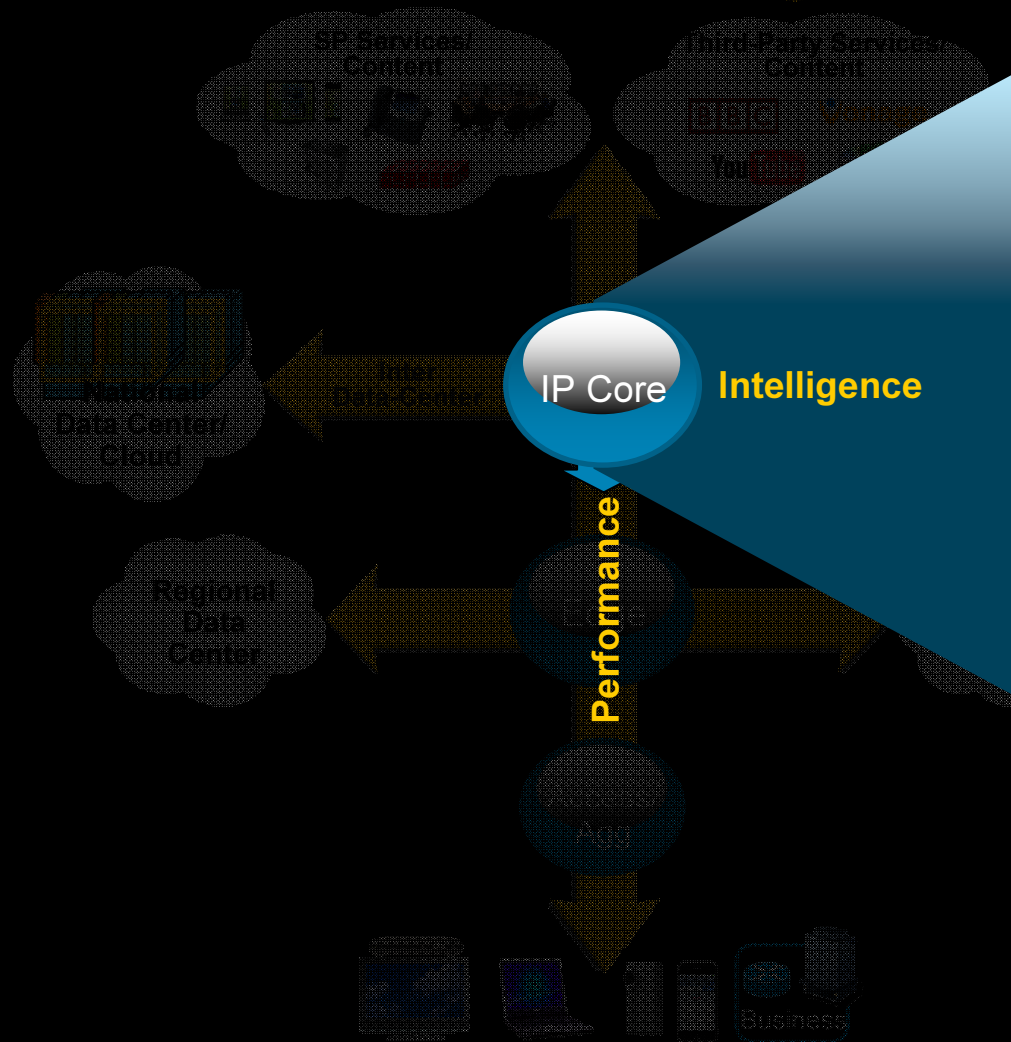
Respond to accelerating bandwidth requirements

### Service Intelligence

Make network and DC/Cloud to work as one

### Savings

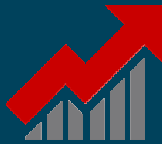
Reduce CapEx and OpEx



Scale + Service Intelligence + Savings

# CRS-3 = 3x CRS-1

## Changing the Dynamic of Router Networks



### Unmatched Scale

3x CRS-1 = CRS-3 = 322Tbps



### Unique Service Attributes

2x Intelligence (SP DC + IP-NGN = USD)



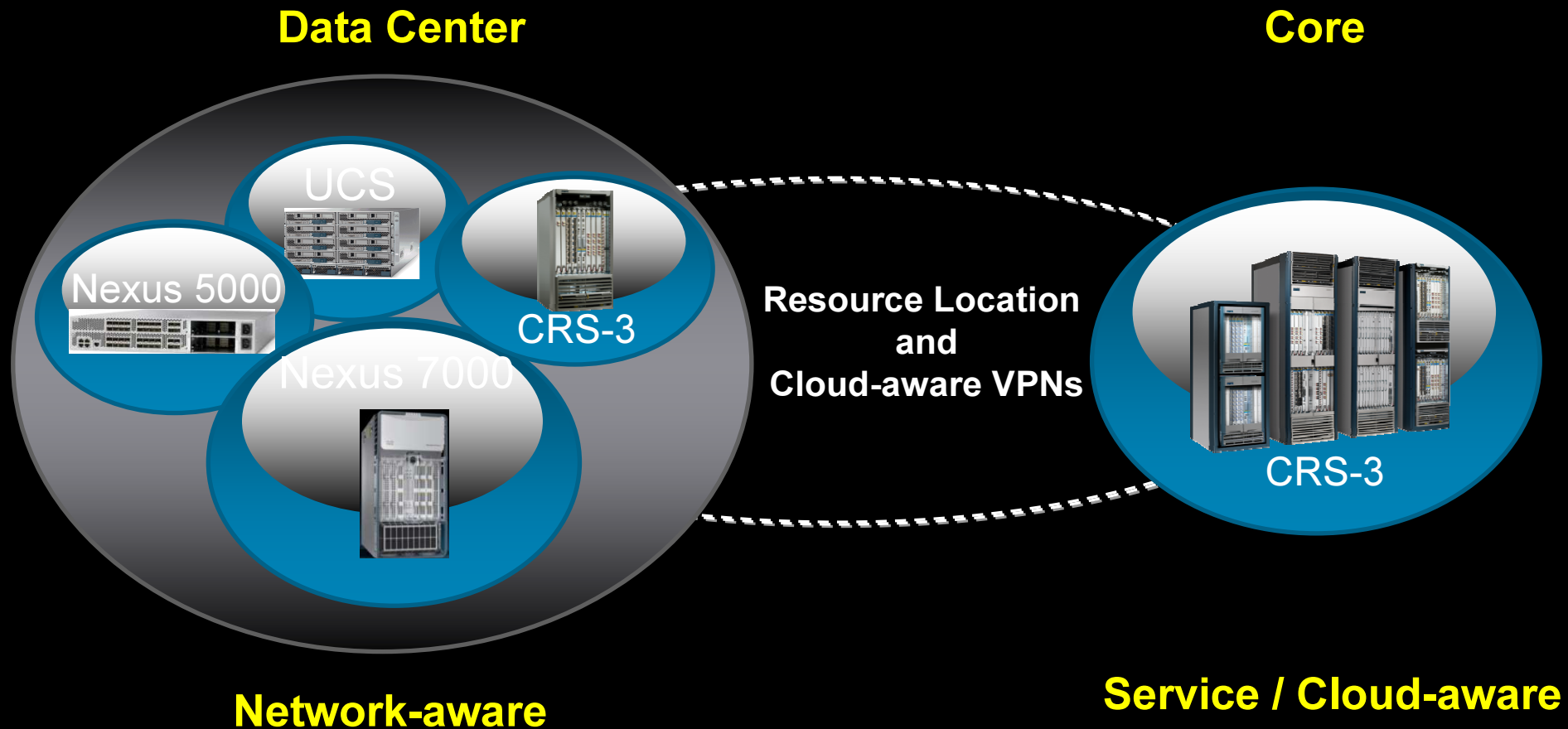
### Unprecedented Savings

1x CRS Family Protecting Investments

## Foundation for the Next-Generation Internet



# New Levels of Integration Required Between the Data Center and the Core



# Intelligence Spanning Networks and DC/Clouds



## Network Positioning System (NPS)

L3-L7 info for best path to data centers  
Improves Experiences, reduces costs

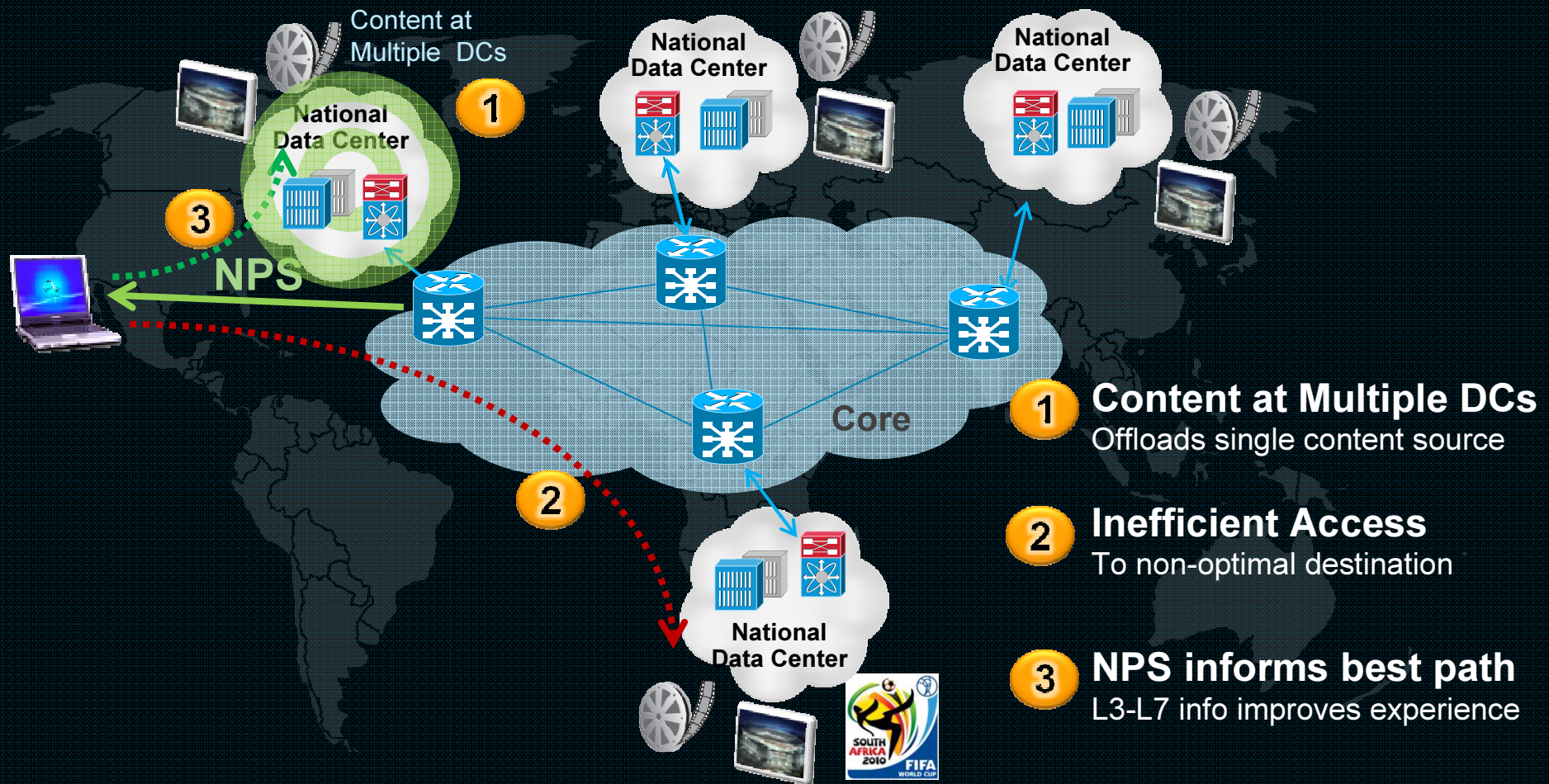


## Cloud VPNs for IaaS

CRS + Nexus automate Inter-DC connections for UCS  
'Pay-as-you-go' for compute, storage, network

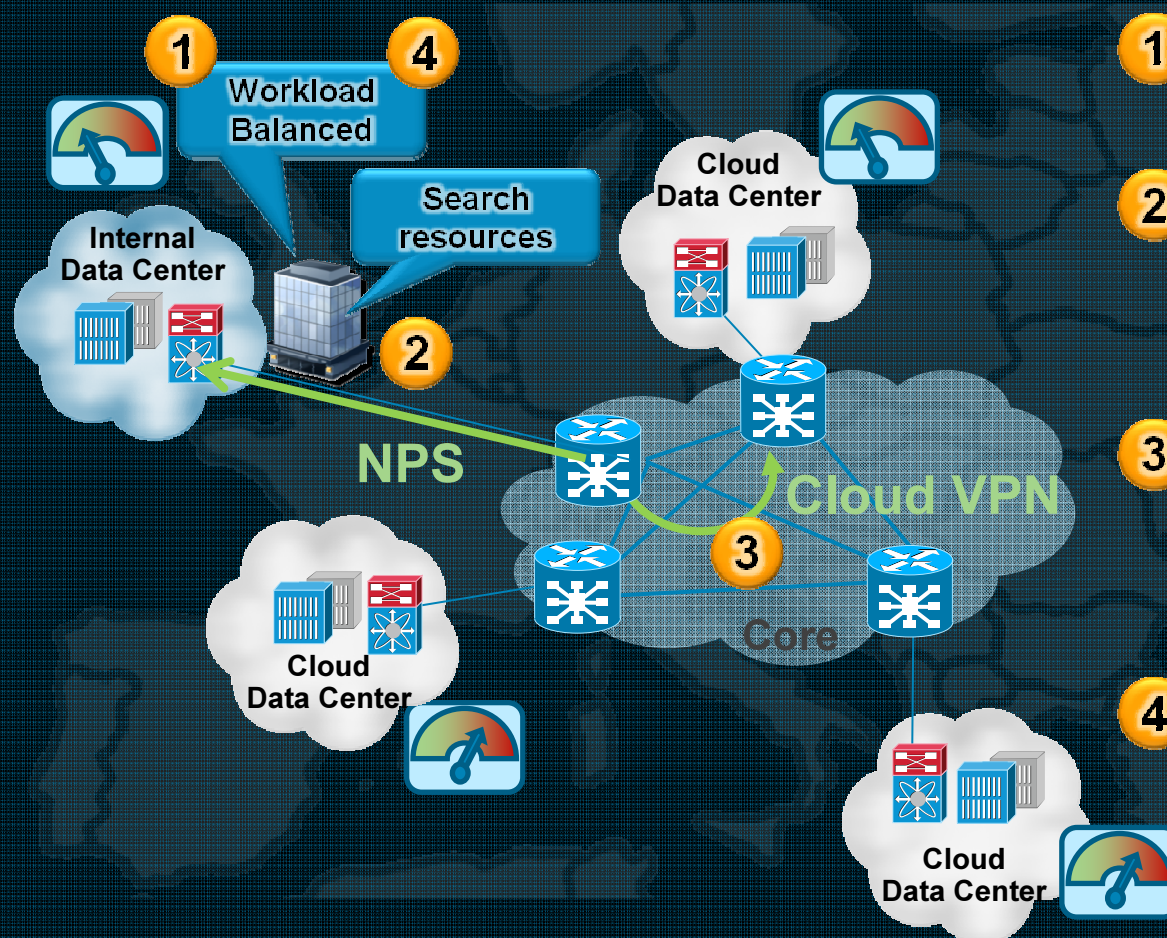
## Tight Linkages Between DC/Cloud and Core

# Network Positioning System (NPS)



Improves Experiences, Reduces Costs

# Cloud VPNs for IaaS



- 1 Workload Increases**  
Strain on DC Resources
- 2 NPS Locates Extra Resources**  
Finds best compute and storage in the cloud
- 3 Cloud VPN self-provision Network for Virtual Compute, Storage**  
UCS + Nexus + CRS
- 4 Workload Redeployed**  
DC Services System alleviates resource strain

‘Pay-as-you-go’ for compute, storage, network

# Cisco Unified Service Delivery

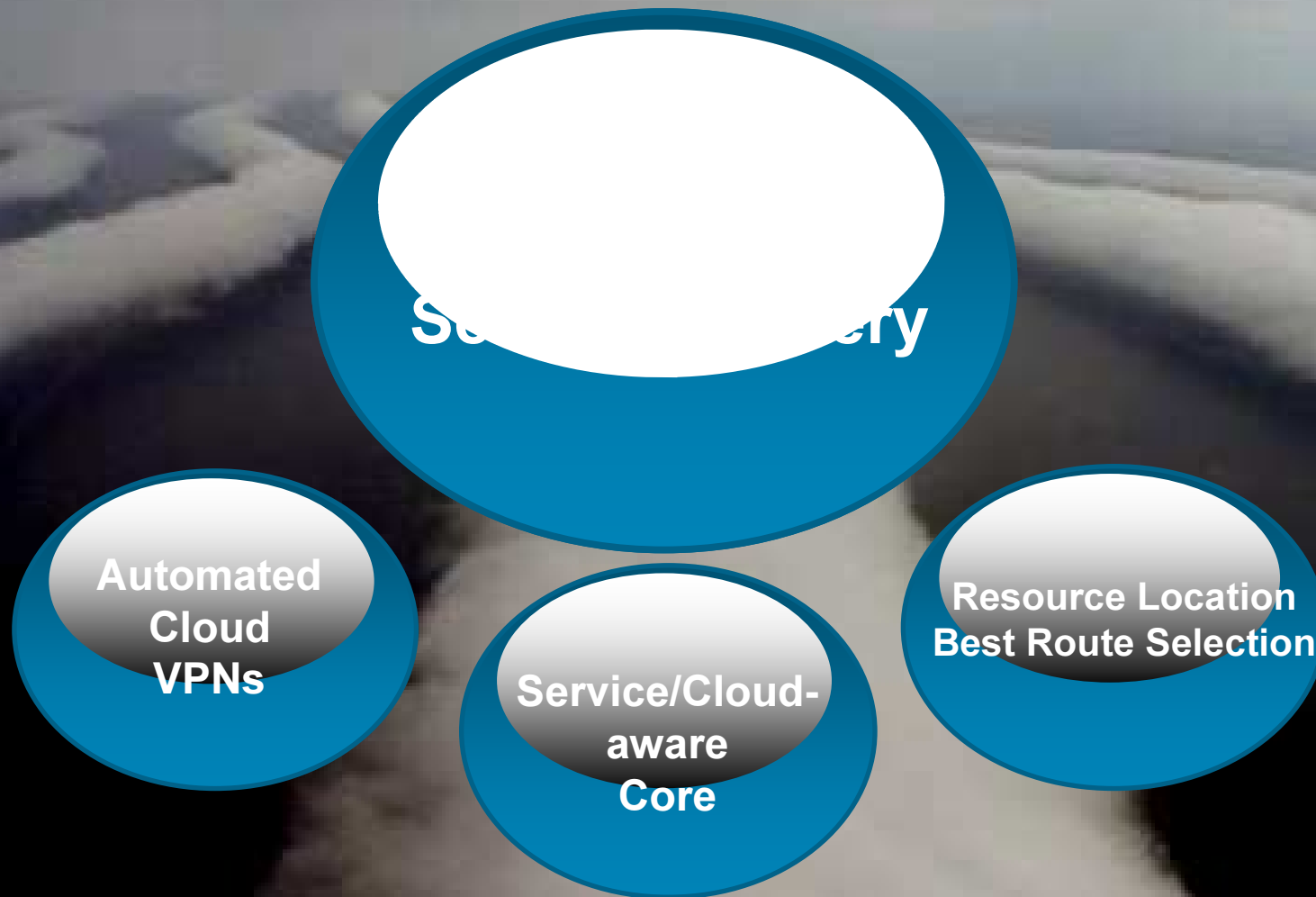
## Competitive Leadership





# Cisco Unified Service Delivery

## The Pathway to Cloud Services



Dynamically Fusing the Network to the Data Center

