Intent-based Networking
Powered by Cisco Digital Network Architecture

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2nd November 2017
40% of incumbents risk of being displaced in 5 years
26% more profitable business that have Digitize
By 2020, 75% organizations will be Digitize or preparing to Digitize
Less than 15% organizations have a digital ready network.

Next 2 years this will grow by 3 times.

The Network is the Cornerstone of Digital Success or Failure.

Digitization Technology Trends:
- Mobility
- Internet of Technology
- Cloud
- Security
Intent-based Networking with Cisco

Digital Business

- Mobile
- Security
- IoT
- MultiCloud

Network

- Learning
- Intent
- Context

Powered By Intent. Informed by Context.
Cisco’s Intent Based Networking

Shift IT Time to Business Focus

67% Network Provisioning Time Savings

80% Improve Issue Resolution

48% Reduced Security Breach Impact

61% Reduced Operating Expense

*Source: Internal TCO Analysis with Large Enterprise Customer (actual results may vary)
**Capex Reduction based on converging IoT Networks
Business Imperatives

Security
How do you defend against threats?

Scale
How do you scale for the mobility & IoT explosion?

Assurance
How deliver a great user experience?

Cloud
How do you manage across a multi-cloud world?
Security
Evolution of Security Threats
Secure Segmentation and Onboarding: Software Defined Access

IT Simplicity
- No VLAN, ACLs or IP Address management required
- Single network fabric
- Define one consistent policy

Security
- Simplified Micro-Segmentation
- Policy enforcement

Completely Automated | Policy follows Identity | Minimize Lateral Threat Movement
Seeing and Acting on ALL Threats

- 80% of organizations are victims of malicious activity*
- 41% of attacks used encrypted traffic to evade detection*

How Do You Provide Security While Maintaining Privacy?
Machine Learning Identifies Malware

Encrypted Traffic Analytics

Malware in Encrypted Traffic

Security AND Privacy

Detection: 99.99% Accuracy

Infrastructure view of the data

Google Search

Firefox self-repair

Bestafera Malware

Data Exfiltration

C2 Message

Self-Signed Certificate

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IoT
‘Shadow’ Internet of Things Coming to Every Business

63M network connections per second by 2020
Automate IoT Deployments at Scale
Software Defined Access

Box by Box
Manual | Error Prone

Automation
Scalable | Simple

Design
from 2 hours to 15 minutes

Policy
from 4 hours to 5 minutes

Provision
from 5 hours to 5 minutes

Mass Scalability | Users, Device & IoT Segmentation | Policy-based Automation

2 from hours to 15 minutes
4 from hours to 5 minutes
5 from hours to 5 minutes
## Comparison of Total Workflow Time

<table>
<thead>
<tr>
<th>The Old Method</th>
<th>The New Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Workflow for Fifty Devices</td>
<td>50 days 25 minutes</td>
</tr>
<tr>
<td>One Device</td>
<td>25 minutes</td>
</tr>
</tbody>
</table>
Where is IT Spending There Time?

Finding the Source of an issue, is a complex, end-to-end problem

43%
Of IT time spent troubleshooting; #1 consumer of time

Source: Cisco DNA Customer Survey, June 2016
The Best Data: End-to-End Assurance

- On-boarding & connectivity
- Visibility & performance
- Configuration compliance
- Network health

**Office Site**
- Mobile Clients
- APs
- Local WLCs

**Network Services DC**
- CUCM
- DHCP
- NMS
- SFCDC
- BOX
- SNOW

**Cloud Apps**
IT Services Leader Case Study

Challenge

• Invest in digital to improve experience
• Deliver to services faster to open revenue streams
• Simplify through hyper automation

Business Outcomes

• Time-to-Market: move resources faster, from 1 week to minutes
• Workforce Mobility: policy follows users
• Client security & data privacy maintained through segmentation
• SaaS Simplicity: higher Office 365 uptime

Solution: Cisco DNA Center, ISE and Catalyst 9K

New Resource Deployment
One week to minutes
Global Pharmaceutical Case Study

Challenge

• Enable researchers across 5 companies to collaborate
• Maintain security policy

Business Outcomes

• Cost Savings: consolidate 5 companies in new site to 1 network
• Simplified Segmentation: Easy to maintain groups and policy
• Employee Productivity: Increased collaboration across researchers over high performing WiFi

Solution: Cisco DNA Center, ISE and Catalyst 9K

Secure Collaboration
Five companies & one network
Cloud
Innovations Overwhelming the WAN

Expensive Bandwidth

Device Proliferation

Apps Moving to Cloud

Viptela Advantage

Up to 30% Intra spend in WAN OpEx Savings

20x More Bandwidth

4x Improved Application Experience
Why Viptela
Trusted by Fortune 500 Enterprises

The Most-Deployed Enterprise Grade SD-WAN
Thousands of sites, every major industry, including:

- RETAIL
- HEALTHCARE
- FINANCIAL SERVICES
- ENERGY

Standards Compliant:
- HIPAA
- PCI
...and more

Most deployed and trusted by Fortune 500 enterprises

Winning 95% of competitive POCs
Need Simplicity, Lower Cost, Application Experience

Cisco SD-WAN

Top Use Cases:
SD-WAN
Cloud Onramp

Cloud Delivered

Analytics

Users

Devices

Things

Applications

DC
IaaS
SaaS
vDC
Global Retailer
Customer Story

Challenge
• Reduce OpEx and CapEx costs across 1600 stores
• Re-energize customer in-store experience
• Improve mobile application performance
• Securely manage 7 segments

Business Outcomes
• 26x Bandwidth improvement
• 5x Improvement store conversions
• $20M Saved over 3-years

Solution: Cisco SD-WAN (Viptela)
Global Industrial Firm Case Study

Challenge
- Rapid M&A integration
- 14 different environment, 8 carriers
- Massive migration to O365 & AWS
- Business unit segmentation

Business Outcomes
- 14 to 1 Carrier MPLS VRFs
- Months to weeks rapid M&A onboarding
- 46 Portfolios consolidated

Solution: Cisco SD-WAN (Viptela)
The Journey to the New Network

Secure Foundation
- Rapid threat detection and mitigation

Analytics for Assurance
- Predictive performance with machine learning

Infrastructure Readiness
- Open and Programmable

Policy Based Automation
- Simplify, scale network deployment for Cloud, Mobile, IoT

Intent-based Network
- Constantly learning, adapting, protecting

Cisco and Partner Services Help You Make Your Transformation
Connecting Trusted Users to Trusted Devices with an Uncompromised Experience