The Network. Intuitive.
Transforming the Network for the Digital Business

Driven by Software Defined Platforms

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How Digitization Impacts the Network Discussion?

Operational
- Labor Costs & Skills
- Bandwidth Economics
- Increasing Business Demand

Transformational
- Mobility
- Cloud
- Internet of Things
- Threats
How Digitization Impacts the Network Discussion?
Is the Network Ready to Provide a Digital Foundation?

Yesterday`s Network

Performance

Reliable

Secure
Is the Network Ready to Provide a Digital Foundation?

- Visibility
- Compliance
- Cloud Ready
- Programability

Today
The Network needs to deliver more Value

Tomorrow

Analytical Insight

Behaviour Aware

Fully Automated
The Potential is for a Complete Autonomic Environment
What is stopping this Network Evolution?
Overwhelming complexity

- Analytics
- Mobility
- Automation
- Security
- Virtualisation
- Open APIs
- Multi-Cloud
- Policy
- IoT
- SDN
Humans can’t scale to manage networks of this size
**Major Bank**

*Today*

- 150k employees
- 866k devices
- 8.2k IT staff
- ~105 devices per IT person

**Major Retailer**

*Today*

- 340k employees
- 605k devices
- 2.8k IT staff
- ~216 devices per IT person
1:200
Why only 200 devices per IT person?
Why only 200 devices per IT person?
Major Bank

- 5,025,000 new IoT connections
- 47,857 new IT staff

Major Retailer

- 4,274,600 new IoT connections
- 19,789 new IT staff
The Strategy to reduce complexity with a Roadmap to Digitization
Define the strategic battlegrounds

Where everything connects

How everything collaborates

Where Apps & Data collide

Effective Protection
Define the strategic battlegrounds
Intent Based Networking
Introducing Cisco SDA
The Enterprise Network Needs New Approach

Today’s Networks
- Complex
- Inefficient
- Fragmented
- Rigid
- Opaque

Tomorrow’s Networks
- Open & Software delivered
- Protected everywhere
- Powered by Intuition
- Driven by intent
- Informed by Context
- The more you use it, the smarter it gets
“Intent-based networking systems monitor, identify and react in real time to changing network conditions.”

– Gartner
### What is Intent?

<table>
<thead>
<tr>
<th>Intent</th>
<th>Execution</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have scheduled a telemedicine session at 10:00AM</td>
<td>Create a HD video connection; prioritize with E2E QoS; validate performance; keep the communication safe; tear down connection after call.</td>
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<tr>
<td>I am rolling out a new IoT app for factory equipment monitoring</td>
<td>Create a new segment for all factory devices to connect to the IoT App; isolate from other traffic; apply SLA; validate SLA; optimize.</td>
</tr>
<tr>
<td>I am opening a new branch to serve customers better</td>
<td>Provision and configure the branch network; set up secure access for staff and customers; apply network services; validate application performance.</td>
</tr>
<tr>
<td>I need the lawn cut</td>
<td>Take mower out of shed; fill gas and oil; pull starter cord; push onto lawn; clean mower; return to shed.</td>
</tr>
</tbody>
</table>

With an IBN, the administrator determines the "what," & the system then figures out the "how." -Zeus Kerravala
A New Network

Constantly Learning  Support 100X new devices, apps, users

Constantly Adapting  Respond instantly to business demands with limited staff and budget

Constantly Protecting  See and predict issues and threats and respond fast

Cisco DNA
The Network. Intuitive.

DNA Center
Policy  Automation  Analytics

Learning

Intent-Based Network Infrastructure
Switching  Routers  Wireless

Context

Security
What Has Been Announced?

One Network Fabric that Automatically Adapts
Software Defined Access

Manage the network as one entity
DNA Center

Agile Infrastructure
Catalyst 9000 Switching Portfolio with Software Subscription

Predict Issues Before they Become Issues
Network Data Platform

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BUILT ON CISCO DNA
Software-Defined Access
Networking at the speed of Software!

DNA Center
- Policy
- Automation
- Analytics

Identity-based Policy & Segmentation
Decoupled security policy definition from VLAN and IP Address

Automated Network Fabric
Single Fabric for Wired & Wireless with Workflow-based Automation

Insights & Telemetry
Analytics and insights into user and application behavior

Idempotent User Mobility
Policy stays with user

SDA-Extension
IoT Network

Employee Network
Cisco DNA
Enterprise Portfolio

DNA Center:
Simple Workflows

Software-Defined Access

Network Data Platform  APIC-EM  Identity Services Engine

Routers  Switches  Wireless AP  WLC
Simplifying How You Manage the Network

Logical workflow to design, provision, set policy
Respond to changes faster

Monitor end-to-end network performance
Predict and act on problems before they happen

Pinpoint problems faster
Reduce downtime with an end-to-end view instead of hop by hop

Manage hardware and software lifecycles
Keep up to date, meet compliance and plan for refresh

DNA Center: Design, provision, automate policy and assure services from one place
SD-Access Support
A single fabric for your digital ready network

Switching
- Catalyst 9400
- Catalyst 9300
- Catalyst 9500
- Catalyst 4500E
- Catalyst 6K
- Nexus 7700
- Catalyst 3850 and 3650

Routing
- ASR-1000-X
- ASR-1000-HX
- ISR 4430
- ISR 4450
- CSR 1000V

Wireless
- AIR-CT5520
- AIR-CT8540
- AIR-CT3504
- Wave 2 APs (1800, 2800, 3800)
- Wave 1 APs (1700, 2700, 3700)
Applied Intelligence with DNA Assurance
Converting Data to Business and IT Insights

Troubleshoot
Find root cause faster with granular details

Visibility
Learn from the network and clients attached to it

Insights
See problems before your end users do

Automate
Recognize changes and inform the self-driving network

Predictive Performance
Understand how new services will impact service levels

Industry’s First Self-Predicting Network Analytics Platform
Cisco DNA
Delivering real outcomes today.

- 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 NOT Networks

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