The Network. Intuitive.

Transforming the Network for the Digital Business

Driven by Software Defined Platforms

Tomas Kupka
EN and DC Architecture Lead, Eastern Europe
October 2017

How Digitization Impacts the Network Discussion?

Operational

Labor Costs & Skills

Bandwidth Economics

Increasing Business Demand

Transformational

Mobility

Cloud

Internet of Things

Threats

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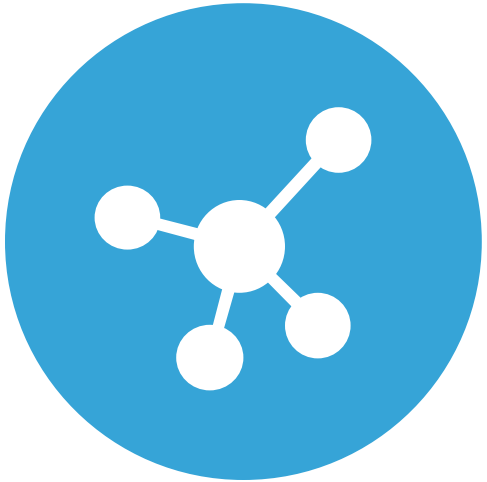
How Digitization Impacts the Network Discussion?



Network

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Is the Network Ready to Provide a Digital Foundation?

Yesterday`s Network

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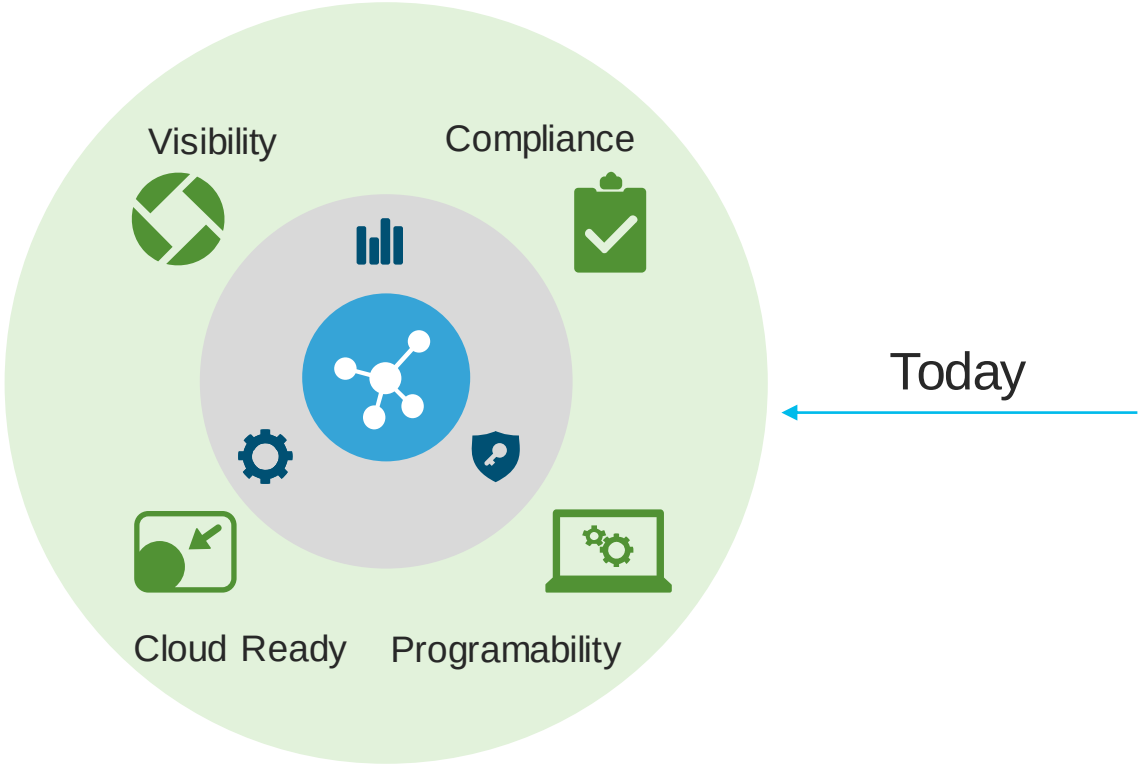
Is the Network Ready to Provide a Digital Foundation?



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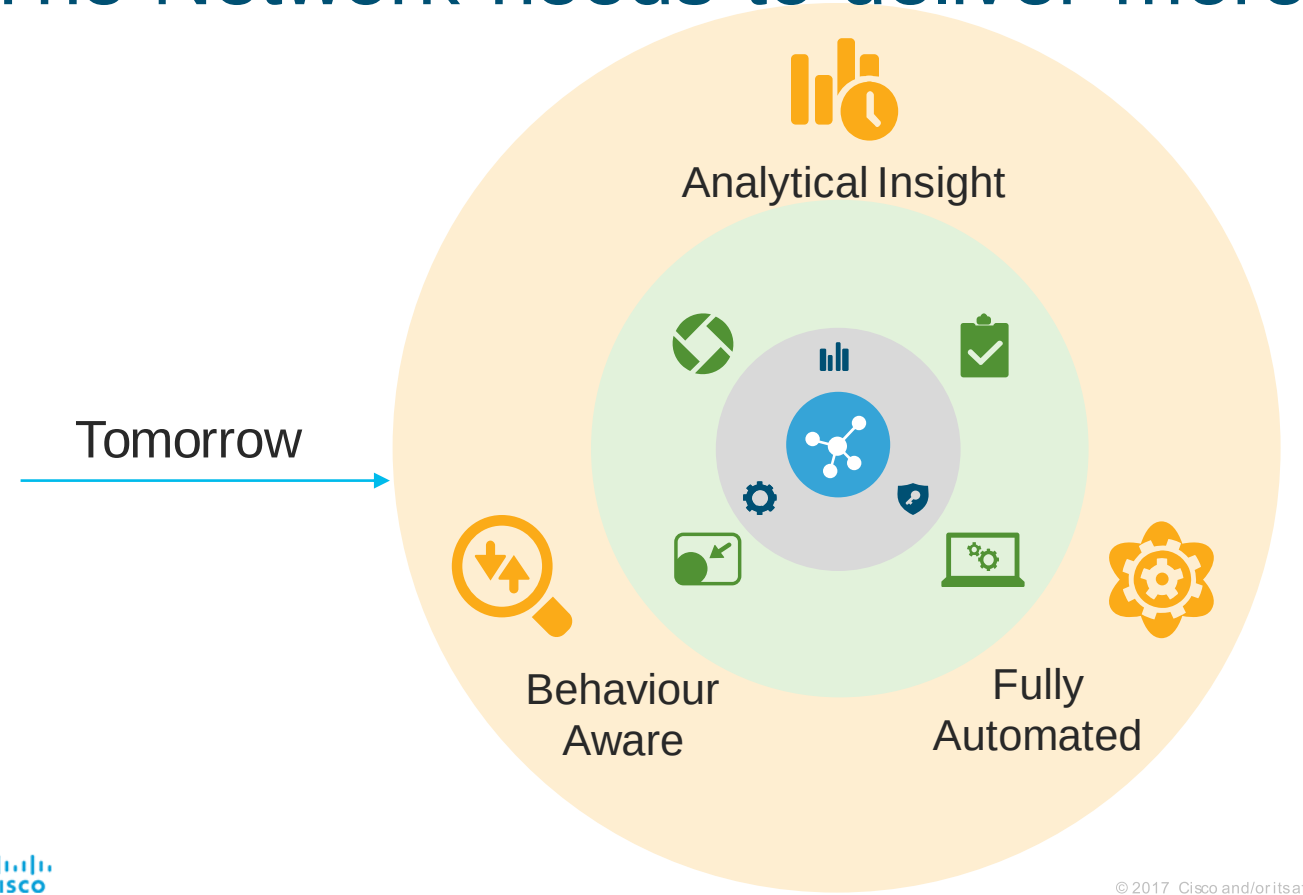
The Network needs to deliver more Value



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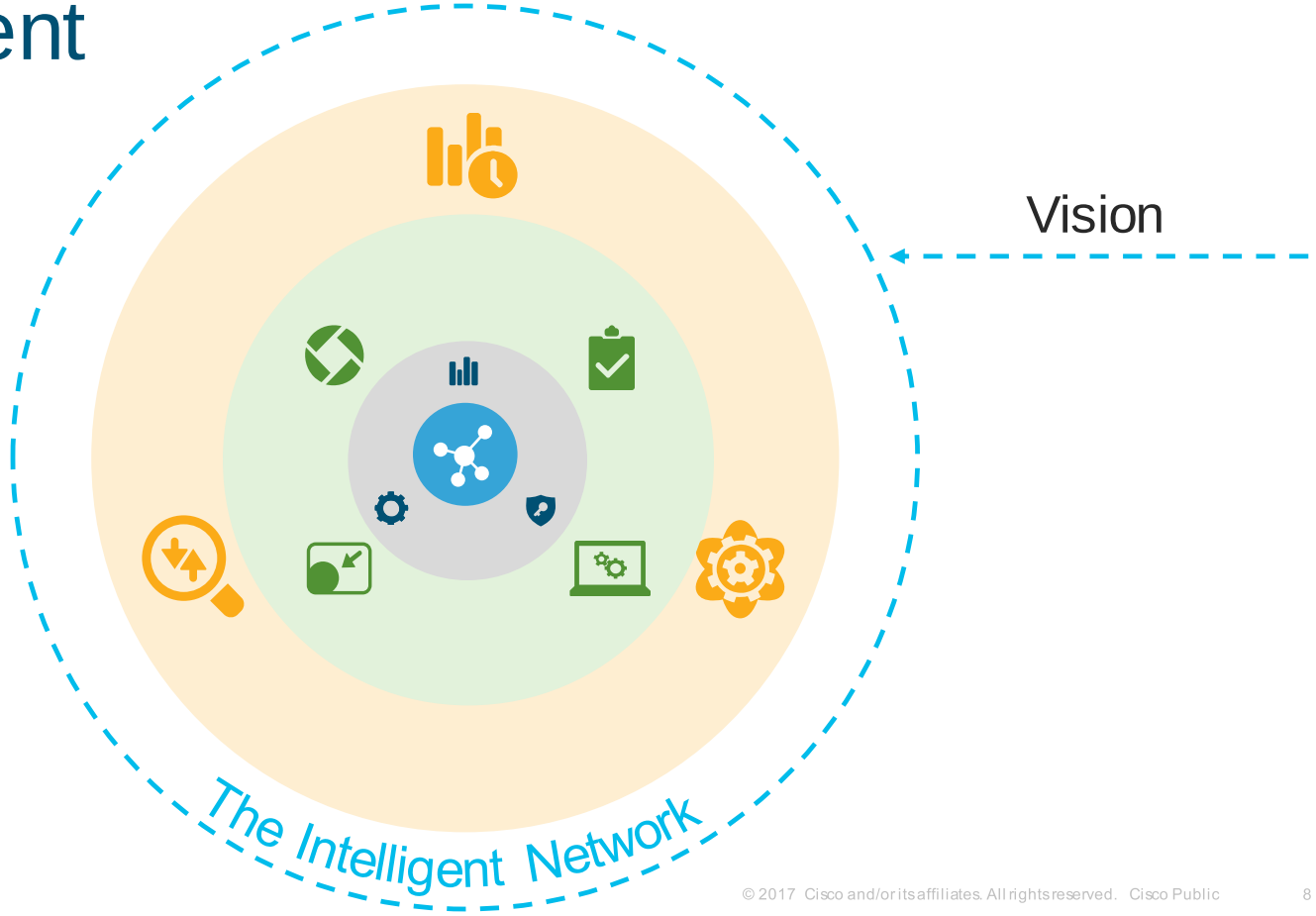
The Potential is for a Complete Autonomic Environment



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What is stopping this Network Evolution?

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Overwhelming complexity

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Humans can’t scale to manage networks of this size

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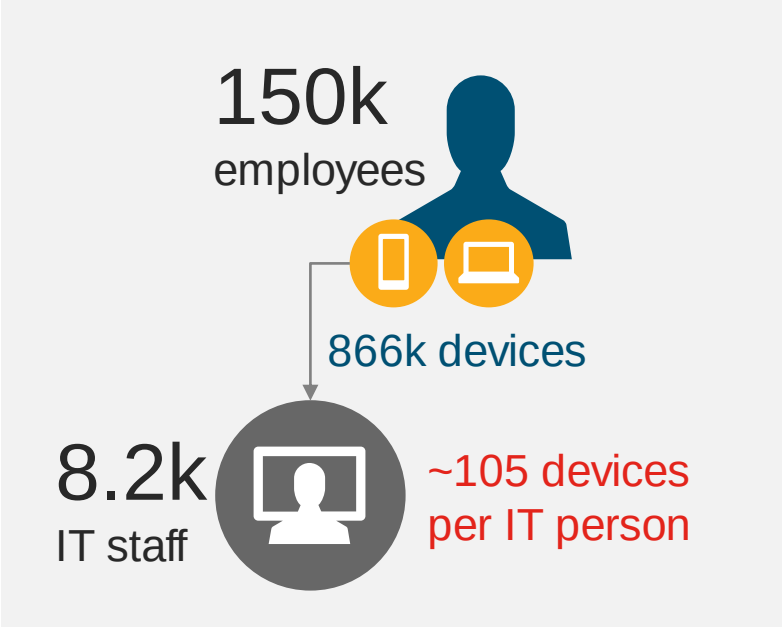
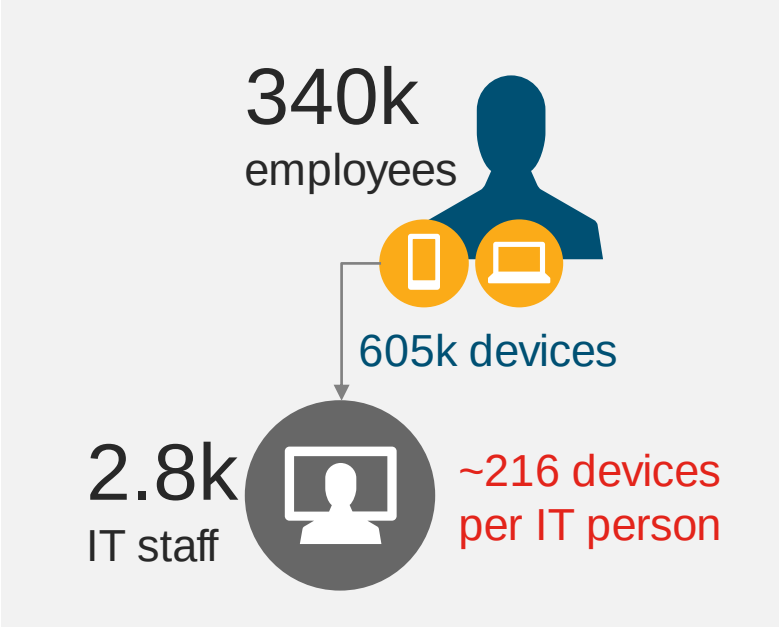
Major Bank

Today



Major Retailer

Today



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1:200

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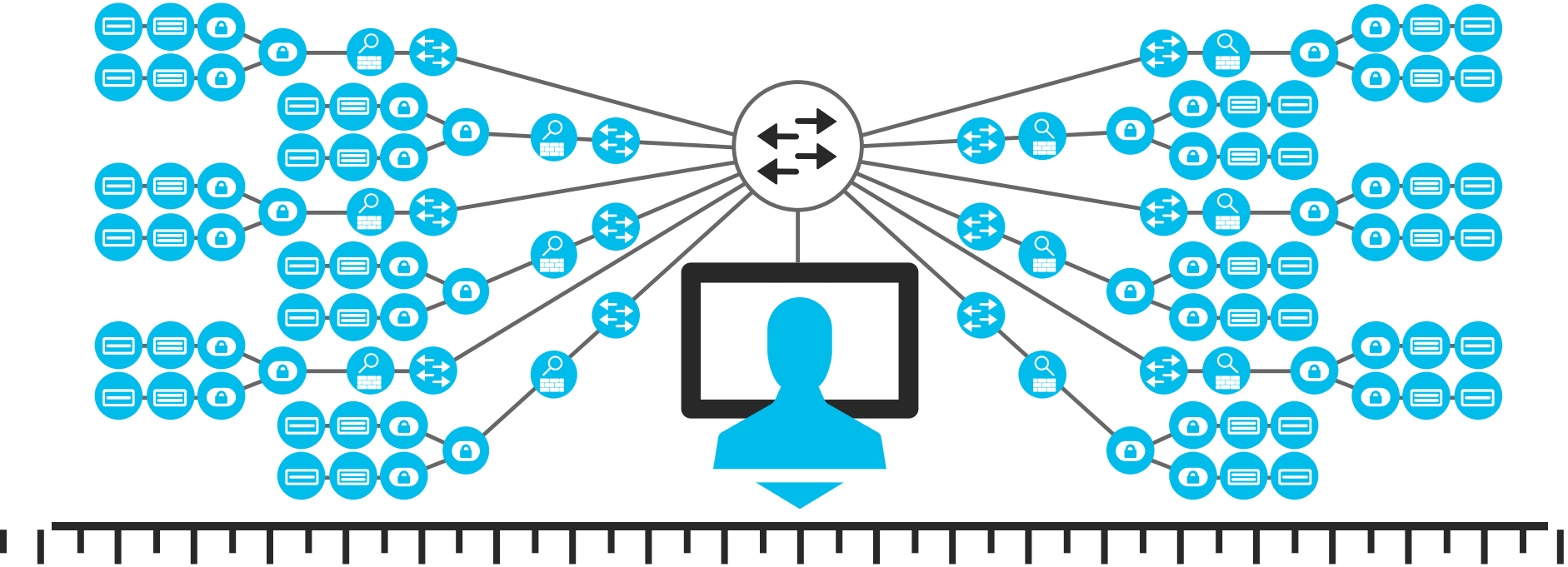
Why only 200 devices per IT person?



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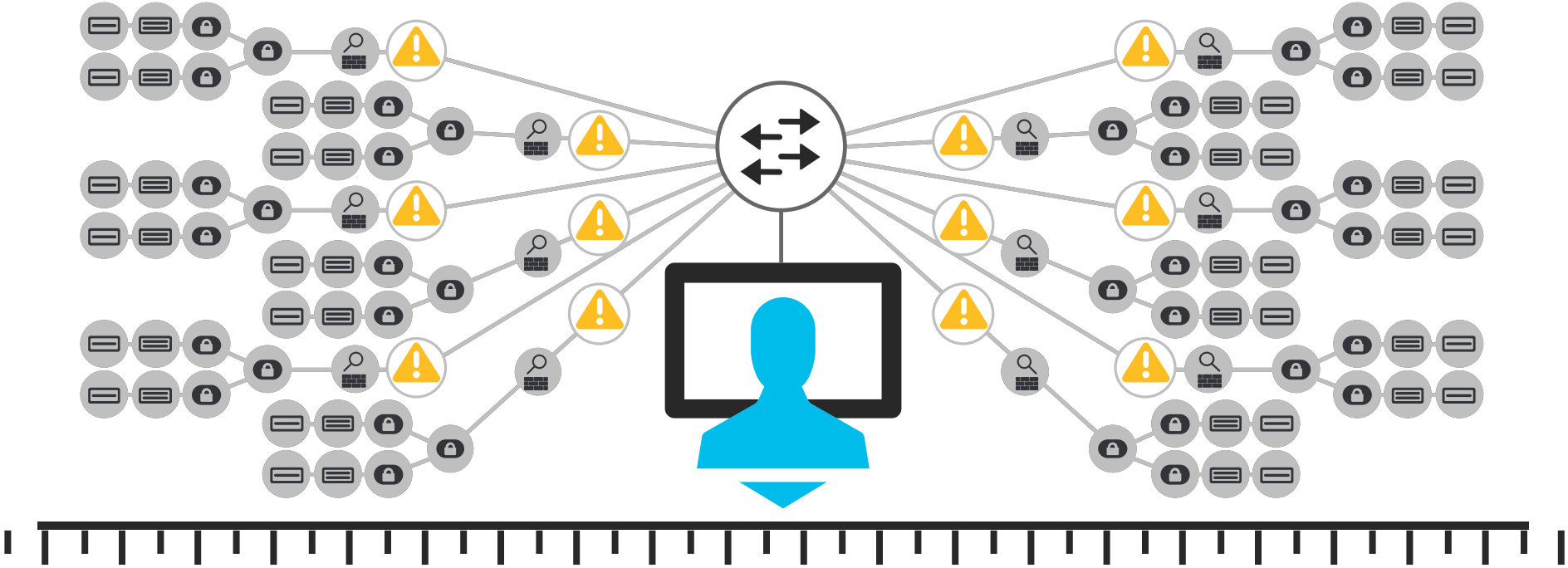
Why only 200 devices per IT person?



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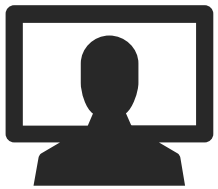
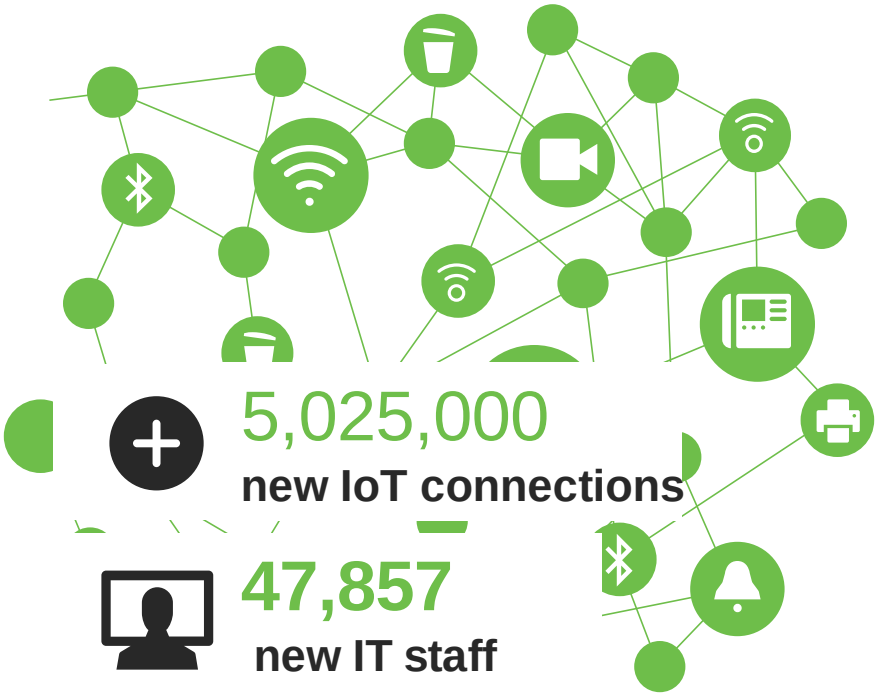
1:1,000,000



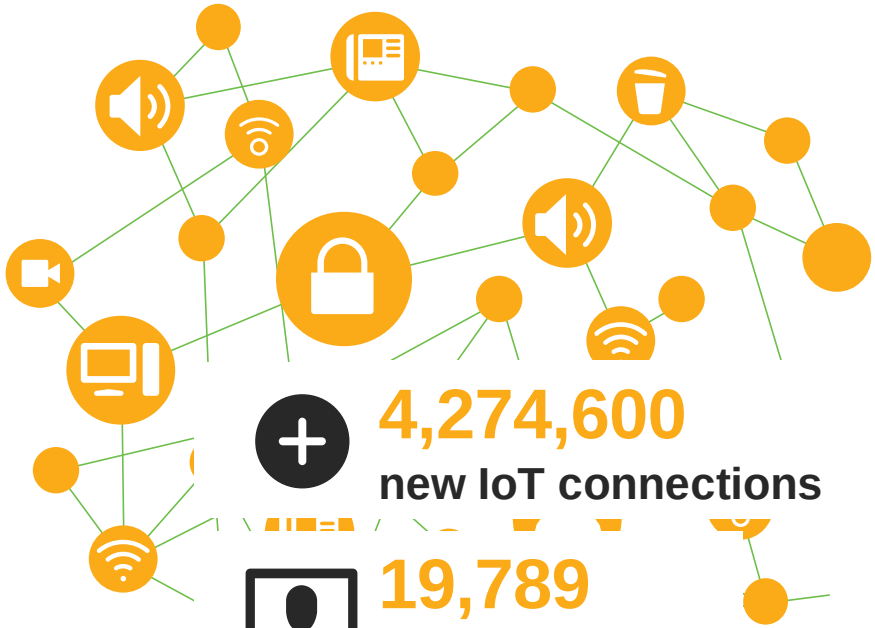
Major Bank



5,025,000
new IoT connections

47,857
new IT staff

Major Retailer



4,274,600
new IoT connections

19,789
new IT staff

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The Strategy to reduce complexity with a Roadmap to Digitization

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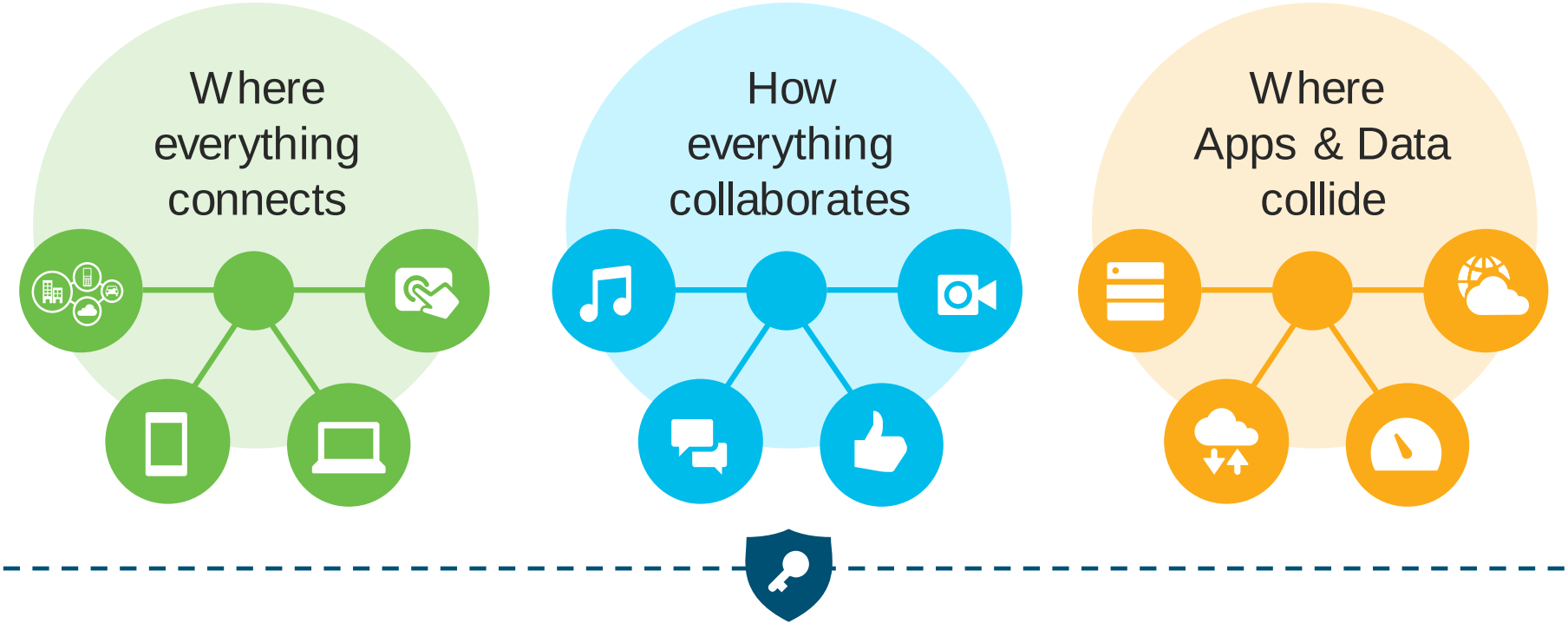
Define the strategic battlegrounds



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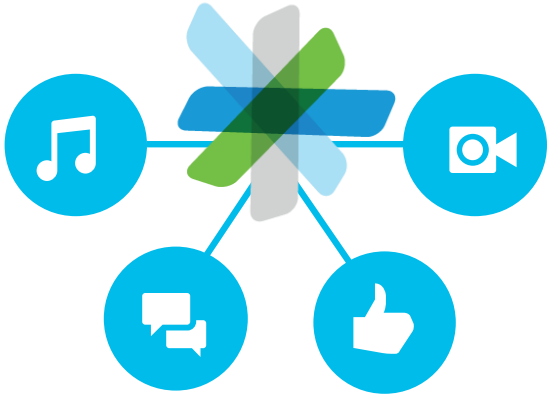
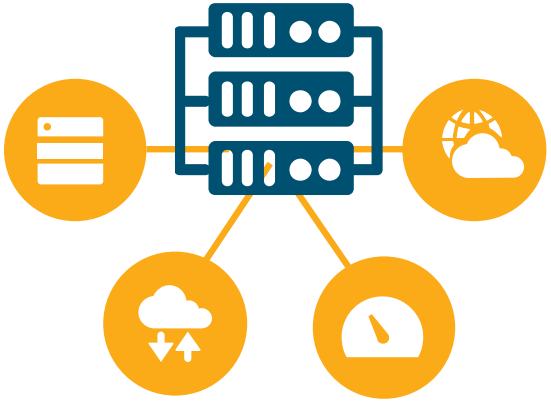
Define the strategic battlegrounds

DNA

Spark



ASAP



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Intent Based Networking

Introducing Cisco SDA

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The Enterprise Network Needs New Approach

Today's Networks

Manual

Complex

Inefficient

Fragmented

Rigid

Opaque

Tomorrow's Networks

Open & Software delivered

Protected everywhere

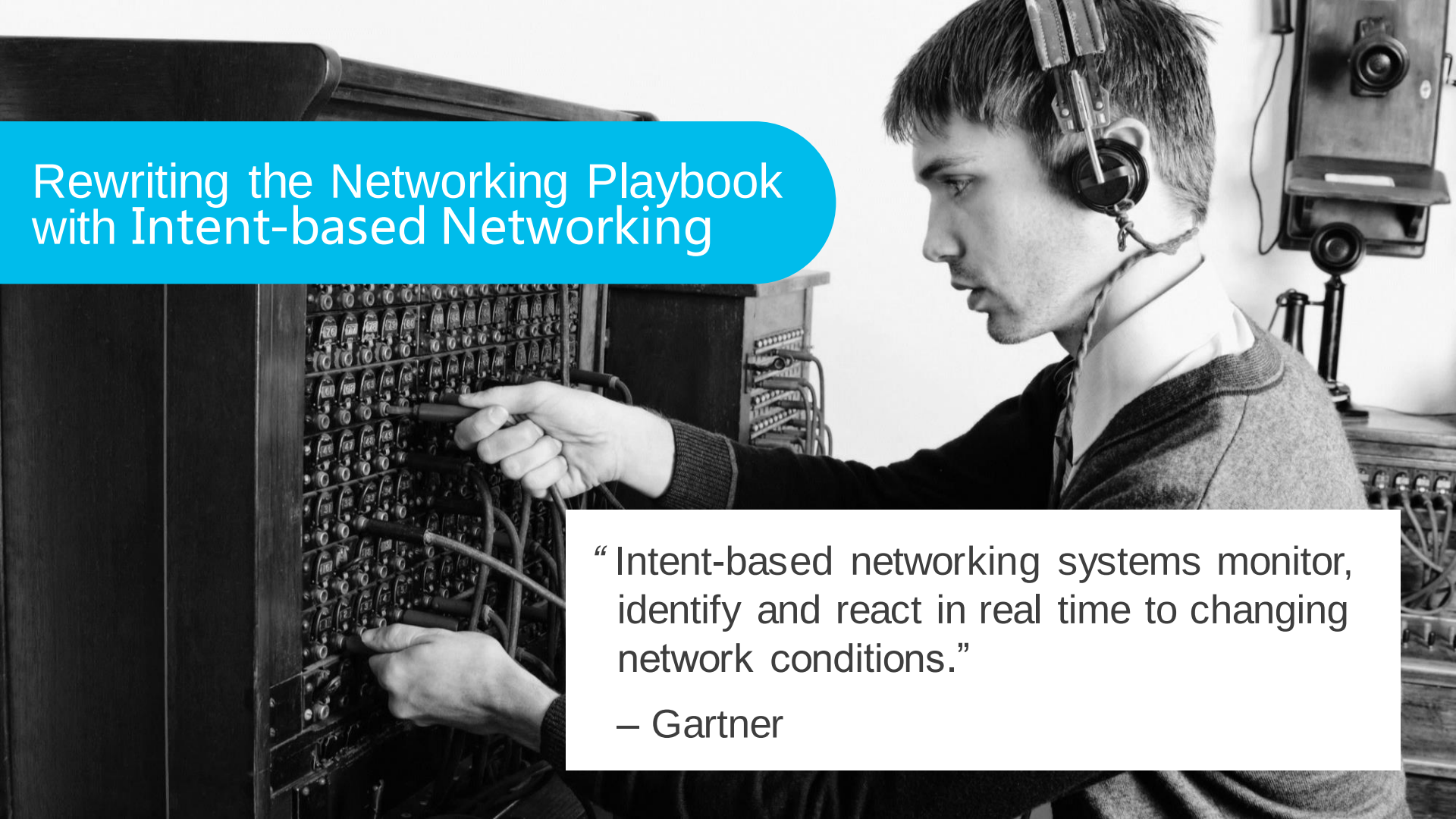
Powered by Intuition

Driven by intent

Informed by Context

The more you use it, the smarter it gets

Rewriting the Networking Playbook with Intent-based Networking



> “Intent-based networking systems monitor, identify and react in real time to changing network conditions.”
>
> – Gartner

What is Intent?

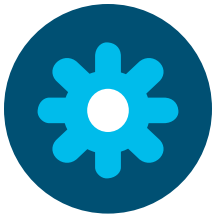
	Intent	Execution
	I have scheduled a telemedicine session at 10:00AM	Create a HD video connection; prioritize with E2E QoS; validate performance; keep the communication safe; tear down connection after call.
	I am rolling out a new IoT app for factory equipment monitoring	Create a new segment for all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

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

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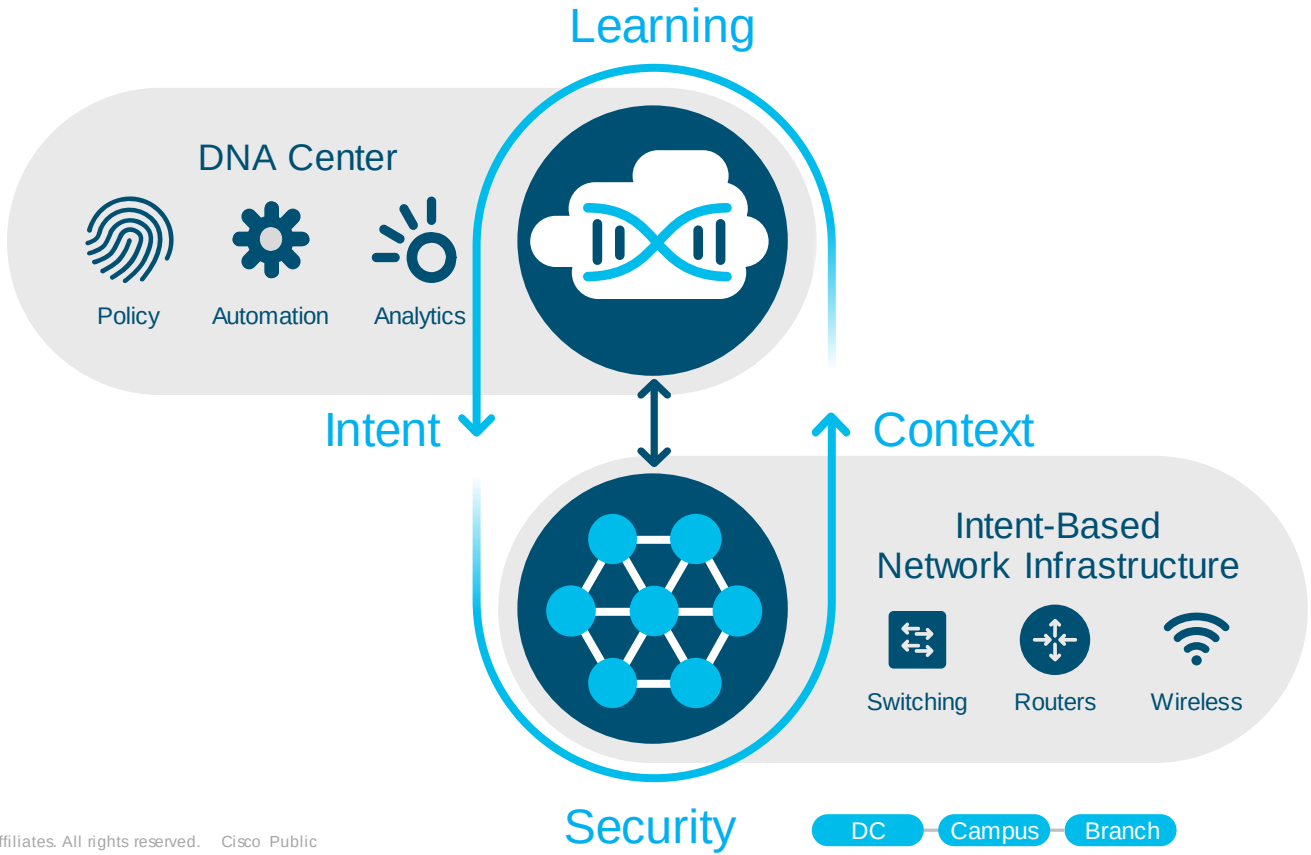
The Network. Intuitive.



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What Has Been Announced ?

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One Network Fabric that Automatically Adapts

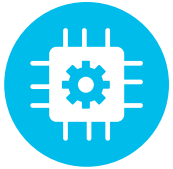
Software Defined Access

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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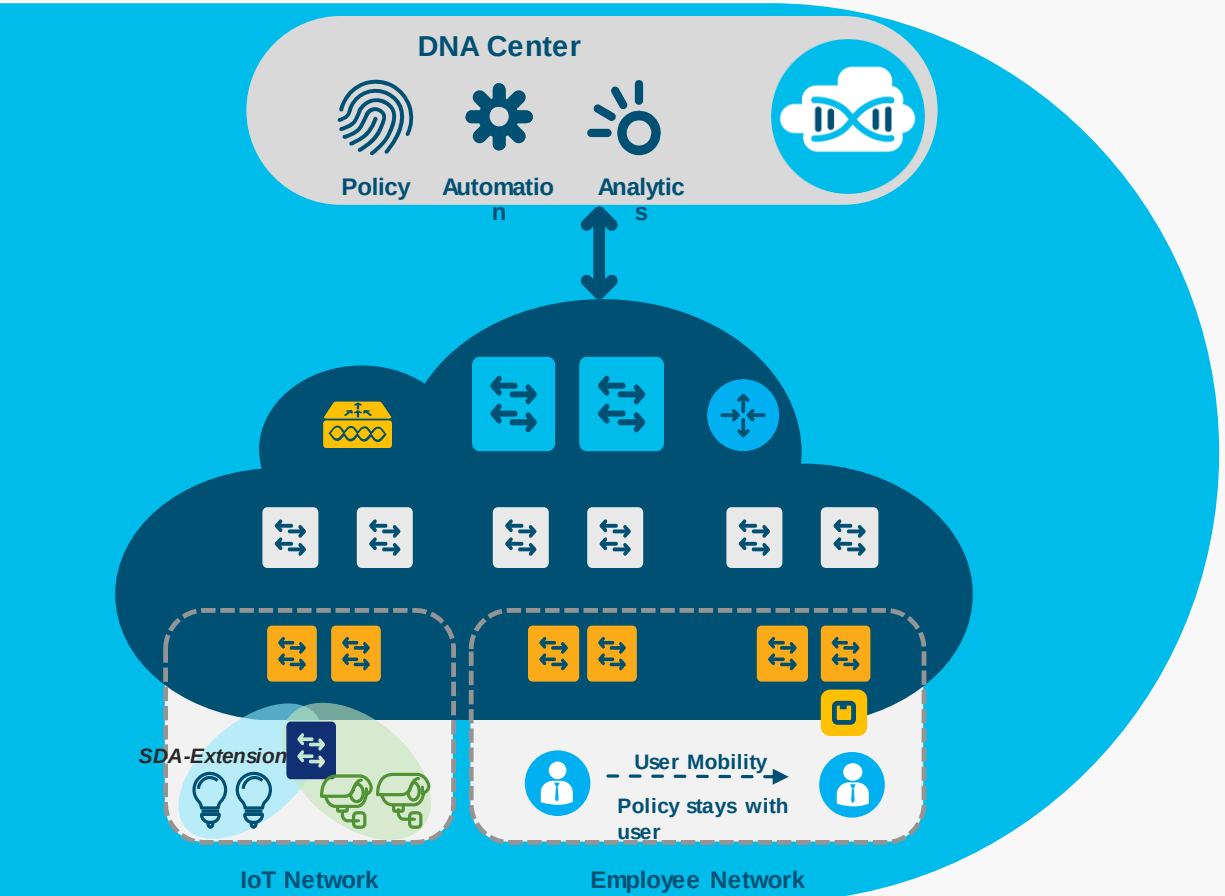
Software-Defined Access

Networking at the speed of Software!



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

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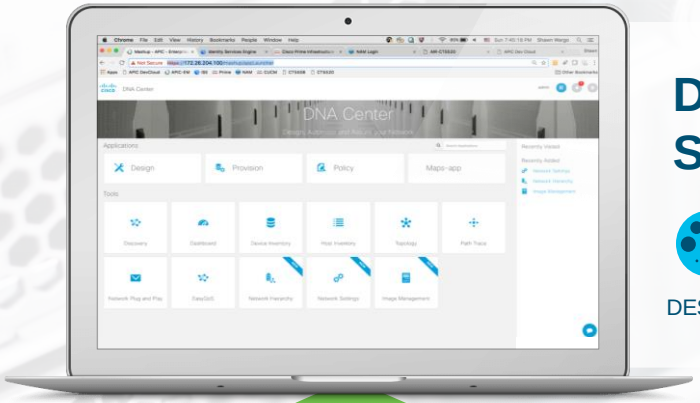
Enterprise Portfolio



DNA Center: Simple Workflows

DESIGN PROVISION POLICY ASSURANCE

DNA Center

Software-Defined Access

Network Data Platform — **APIC-EM** — **Identity Services Engine**

Routers **Switches** **Wireless AP** **WLC**

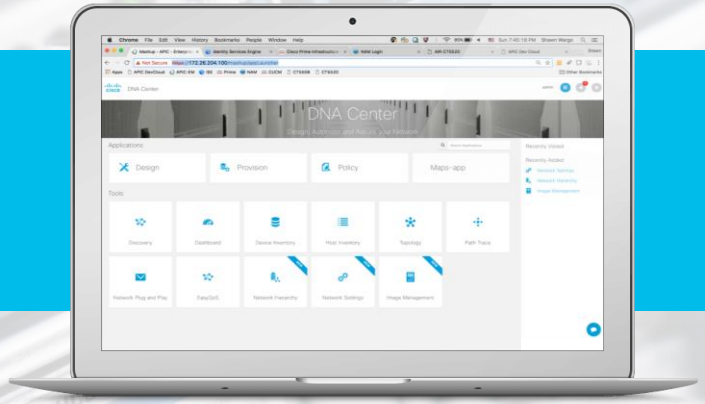
Simplifying How You Manage the Network

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

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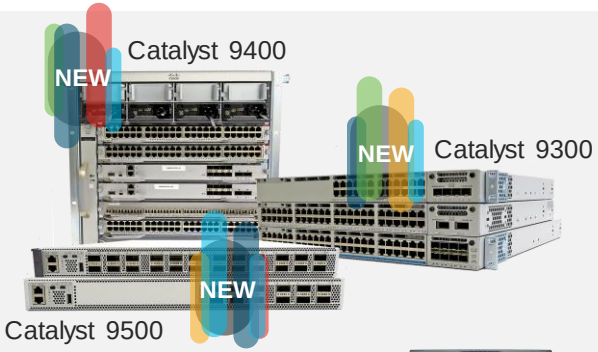
SD-Access Support

A single fabric for your digital ready network

Switching



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)

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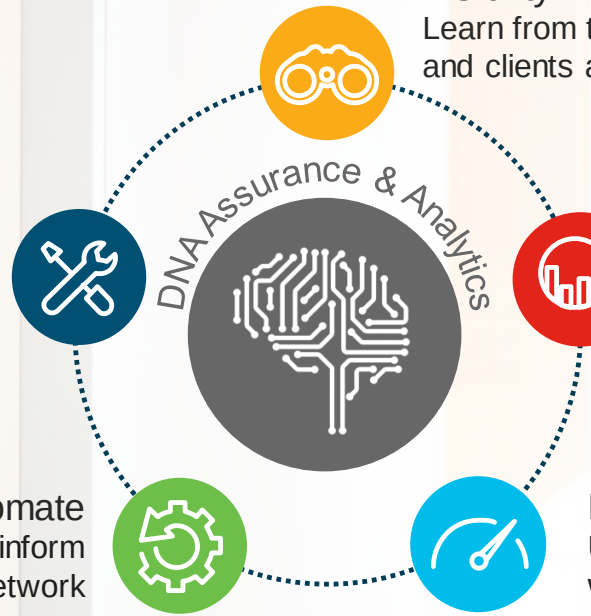
Applied Intelligence with DNA Assurance

Converting Data to Business and IT Insights



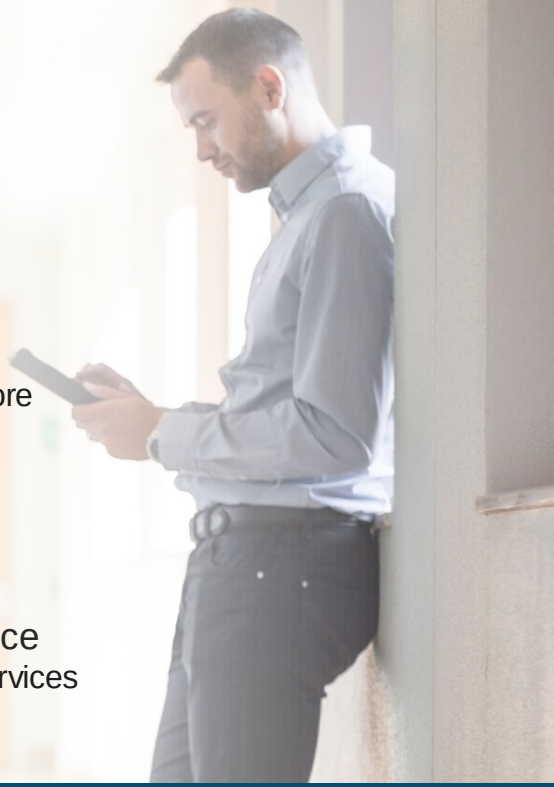
Visibility
Learn from the network and clients attached to it

Insights
See problems before your end users do

Predictive Performance
Understand how new services will impact service levels

Automate
Recognize changes and inform the self-driving network

Troubleshoot
Find root cause faster with granular details



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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