



# Intent-Based Networking An Introduction

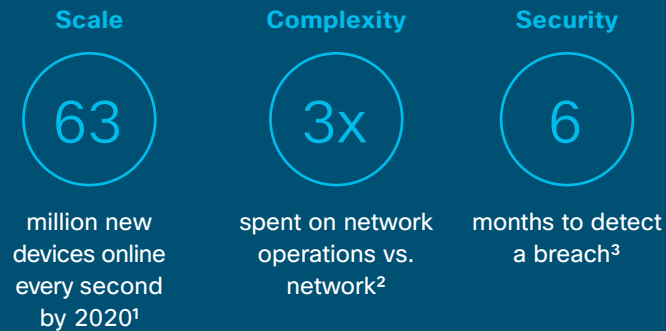
# A network that predicts, protects and adapts

IT must be able to change fast and at scale.

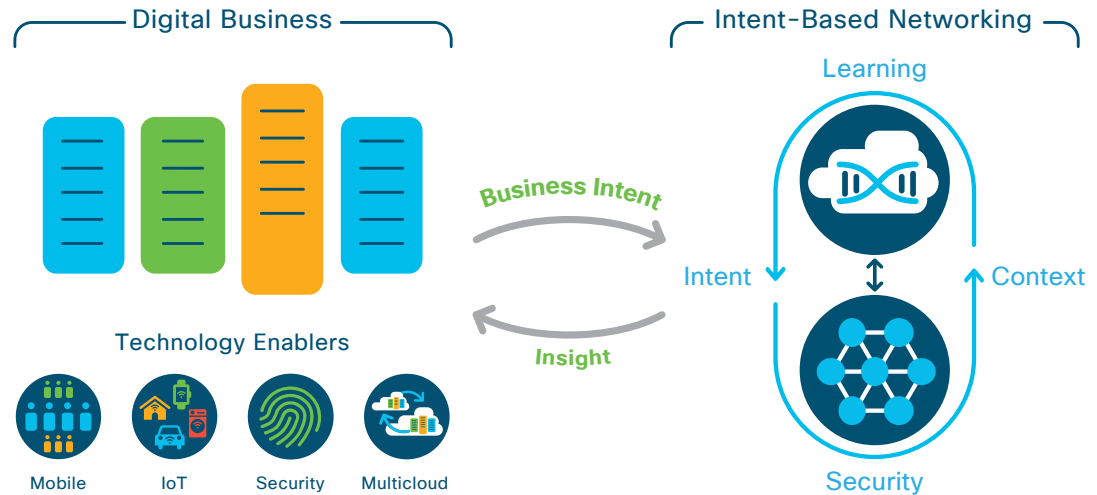
The industries that define our lives—healthcare, transportation, finance, retail, manufacturing—are rapidly changing. It’s inspirational and motivating . . . and unstoppable.

This evolution introduces an onslaught of applications and devices, a need for greater efficiency, and new security threats.

Today’s networks are not set up to meet current demands.



1. Gartner, 2017 Strategic Roadmap for Networking, Danilo Ciscato, Mark Fabbi, Lisa Pierce, 2017  
 2. McKinsey Study of Network Operations for Cisco, 2016  
 3. Ponemon Research Institute Study on Malware Detection, June 2017



By adopting an intent-based approach, your network will meet these challenges. It will understand business intent and continuously align to it. It will use context and analytics to constantly learn and adapt to changing needs and conditions. And, its fully integrated security capabilities will constantly protect your organization.

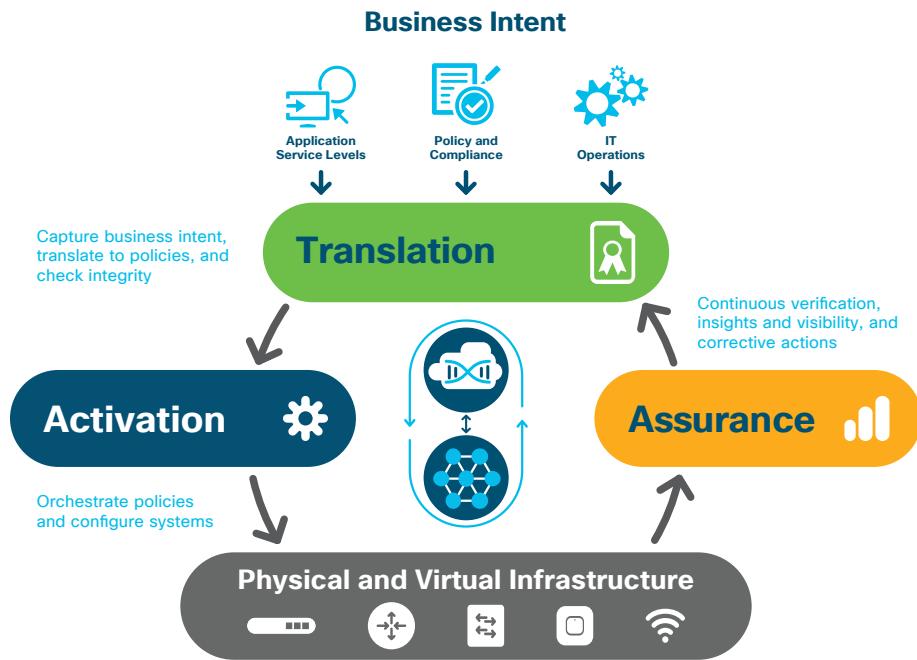
Cisco delivers the benefits of intent-based networking today, across the campus, branch, and WAN with Cisco DNA™, and in the data center with Cisco ACI™, Cisco NAE, and Cisco Tetration™.

“Gartner sees the biggest benefits from Intent-Based Networking Systems (IBNS) are improving network agility and availability, and supporting unified intent and policy across multiple infrastructures.”<sup>4</sup>

4. Gartner, Innovation Insight: Intent-Based Networking Systems, Andrew Lerner, Joe Skorupa, Sanjit Ganguli, February 2017

# Defining the model

A complete intent-based model needs to deliver on a number of fundamental functions that work in a continuous loop to deliver the required outcomes.



## Activation

Installs policies across the physical and virtual infrastructure with networkwide automation.

## Translation

Intent is captured, interpreted and translated into policies that are also checked for integrity.

## Assurance

Ensures that the intent is honored and maintains validation and verification, while also recommending corrective action.

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# Starting your journey

Cisco's solutions help customers achieve end-to-end intent-based networking based on Cisco's open platforms and third-party technologies.



## Data Center

### Cisco Network Assurance Engine (NAE)

Provides always-on assurance for data centers. NAE predicts the impact of changes, proactively verifies network behavior, and helps assure policy and compliance.

### Cisco Application Centric Infrastructure (Cisco ACI)

Policy-based automated network fabric, covering the translation and activation phases of the intent-based network framework.

### Cisco Tetration Platform

Dramatically improves data center security by enabling zero-trust operations and real-time visibility. Using behavior-based application insights and machine learning, it provides customers with a whitelist policy model, enabling segmentation through automated policy enforcement.



## Enterprise Networking

### Cisco Digital Network Architecture (Cisco DNA)

Intent-based networking platform for enterprise campus, branch, and WAN environments, providing automation and analytics for wired and wireless, software-defined access, and software-defined WAN domains. Cisco's Identity Services Engine (ISE) provides identity-based policy and rich contextual information.



## Cisco Services

New Cisco Services help you accelerate network assurance, gain analytical insight, improve productivity, and lower risk by leveraging our unique expertise, best practices, innovative tools, and business and IT insights.



Learn more

<https://www.cisco.com/go/intentbasednetworking>