



# Intent-Based Networking and DNA Center

*Eric Campbell, Sr. Network Engineer*

# AN INTRODUCTION

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Acadia Technology Group is an IT solution provider operating out of our headquarters in Montclair, NJ, with offices in Washington, D.C., Austin, TX, and San Diego, CA. As a Cisco partner with decades of experience, we are responsible for some of the most cutting-edge, internet-of-things and security solutions within the retail, theme park, legal, finance, government and academic markets. We've been successful and built our reputation on client-centered service.

*We know you want to lead, not imitate. And we know your business objectives drive your network investments.*



# Acadia's Planning / Assessment Integration Services

## DATA CENTER

Monitoring  
Capacity Planning  
End-to-End Data Center Services  
(Security, Application Delivery, LAN, SAN, Storage)



## SECURITY

Architecture  
Managed Service  
Compliance  
Implementation / Integration



## UNIFIED COMMUNICATIONS / COLLABORATION

Unified Messaging  
Web, Voice & Video Conferencing  
Contact Center Design & Implementation



## NETWORK INFRASTRUCTURE

Network Design, Upgrade & Migrations  
Testing, Certifying, and Documenting the Network



## WIRELESS / MOBILITY

Infrastructure Design & Build  
Unify with Wired Network  
Monetize with Analytics  
Hyper-Relevant Offers



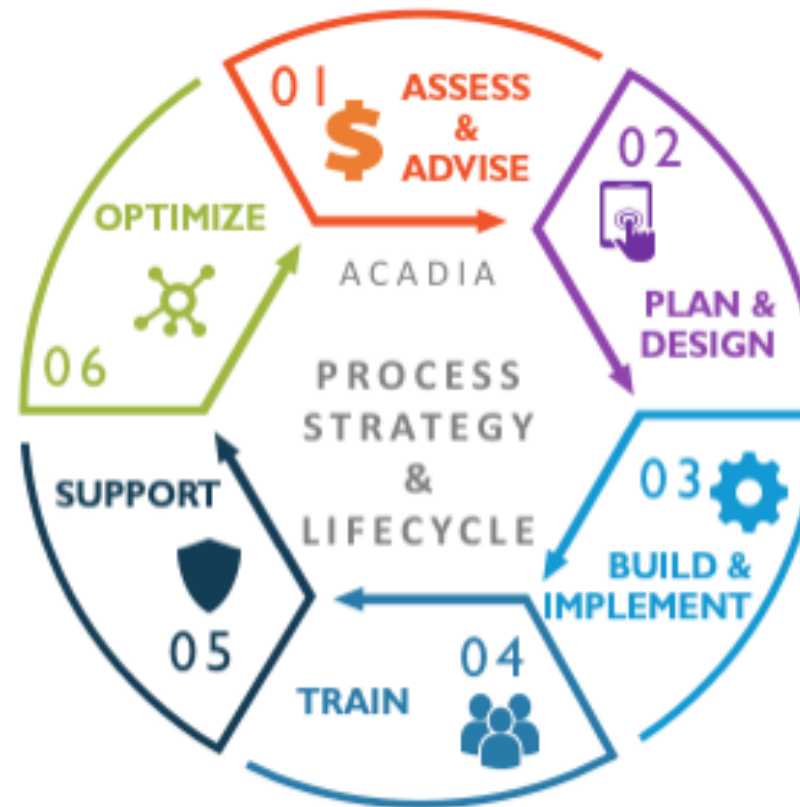
## INTERNET of THINGS

Device connectivity and connection  
Data sensing and collections  
Data analytics  
Data value defined by actions  
Human value, apps and experiences



# Acadia's Project Management / Lifecycle Methodology

- 01 ASSESS & ADVISE**  
Discovery of the existing environment to determine whether it can support the proposed system. Develop a statement of direction and a notional plan.
- 02 PLAN & DESIGN**  
Develop a comprehensive detailed design that meets corporate and technical requirements. Develop a detailed plan.
- 03 BUILD & IMPLEMENT**  
Integrate devices without disrupting the existing network or creating points of vulnerability. Develop a migration plan.



- 04 TRAIN**  
Provide training to employees, to ensure the team has the ability to support the solution.
- 05 SUPPORT**  
Maintain network health through day-to-day operations. Develop a change management and operational testing procedures.
- 06 OPTIMIZE**  
Achieve operational excellence through ongoing improvement, performance and functionality. Develop a performance review procedure.

## Acadia's Focus with our Clients

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- Our client business requirements define the solution we help design / implement.
- Leave customers in control of their environments.
- Increase **network sophistication** to meet evolving business needs while making it *simple to manage and live with*.

# **SIMPLE IS GETTING HARDER!**

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- The Digitization of Business
- Number of devices keeps growing exponentially each year
- Network management tools keep rising both in quantity & complexity
- Budgets are not keeping pace



# Today we will show you ...

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- How to work with more **efficiency**
  - Control your network all at once, not device-by-device
  - Automate configuration tasks
- How to improve your network **security**
  - Imagine only whitelisted traffic in your network
  - Imagine if every hop was a “Firewall”
- How to gain deeper network **insight**
  - Faster, guided, actionable troubleshooting
  - Telemetry and Analytics

# How to Begin: The Path to Building an Intent-Based Network

## CRAWL

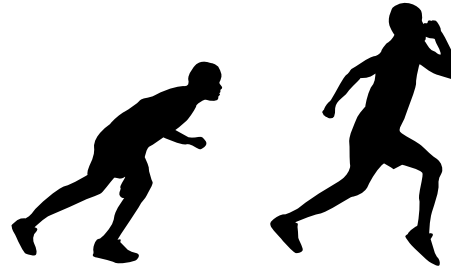


**Start with DNA-C Assurance / Analytics**

### BENEFITS:

- Deeper Insight
- Faster troubleshooting

## WALK



### BENEFITS:

- Increase efficiency
- Basic task automation

## RUN



**Create Campus Fabric**

### BENEFITS:

- Automation of configuration tasks
- Highly secure environment



# A Few Key Questions

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- What is Intent-Based Networking?
- What are the benefits of Intent-Based Networks?
- How to start adopting an Intent-Based Network?

# What is Intent-Based Networking?

*An intent-based network bridges the gap between business and IT. It captures business intent and continuously aligns the end-to-end network with that intent. Intent can apply to application service levels, security policies, compliance, operational processes, and other business needs.*



## What is Intent?

INTENT I want to do a hike in Acadia National Park.

## EXECUTION

- ✓ Plan your itinerary
- ✓ Pack up your stuff, gas up the car
- ✓ Get to the park
  - Tell your car to your destination
  - Drive, drive, drive
- ✓ ~~Do your hike~~

# What is Intent-Based Networking?

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## What is Intent?

### INTENT

I want to make sure the only people with access to the Payroll database work in the Accounting department.

### EXECUTION

- ✓ ID the “Payroll database” and the “Accounting department”
- ✓ Create a policy that protects the “Payroll database” from anyone except the “Accounting department”
- ✓ Determine where the policy needs to be applied
- ✓ Install the policy
- ✓ Verify the policy acts as intended
- ✓ Assure an Ops method can modify the policy appropriately when changes occur

# What is Intent-Based Networking?

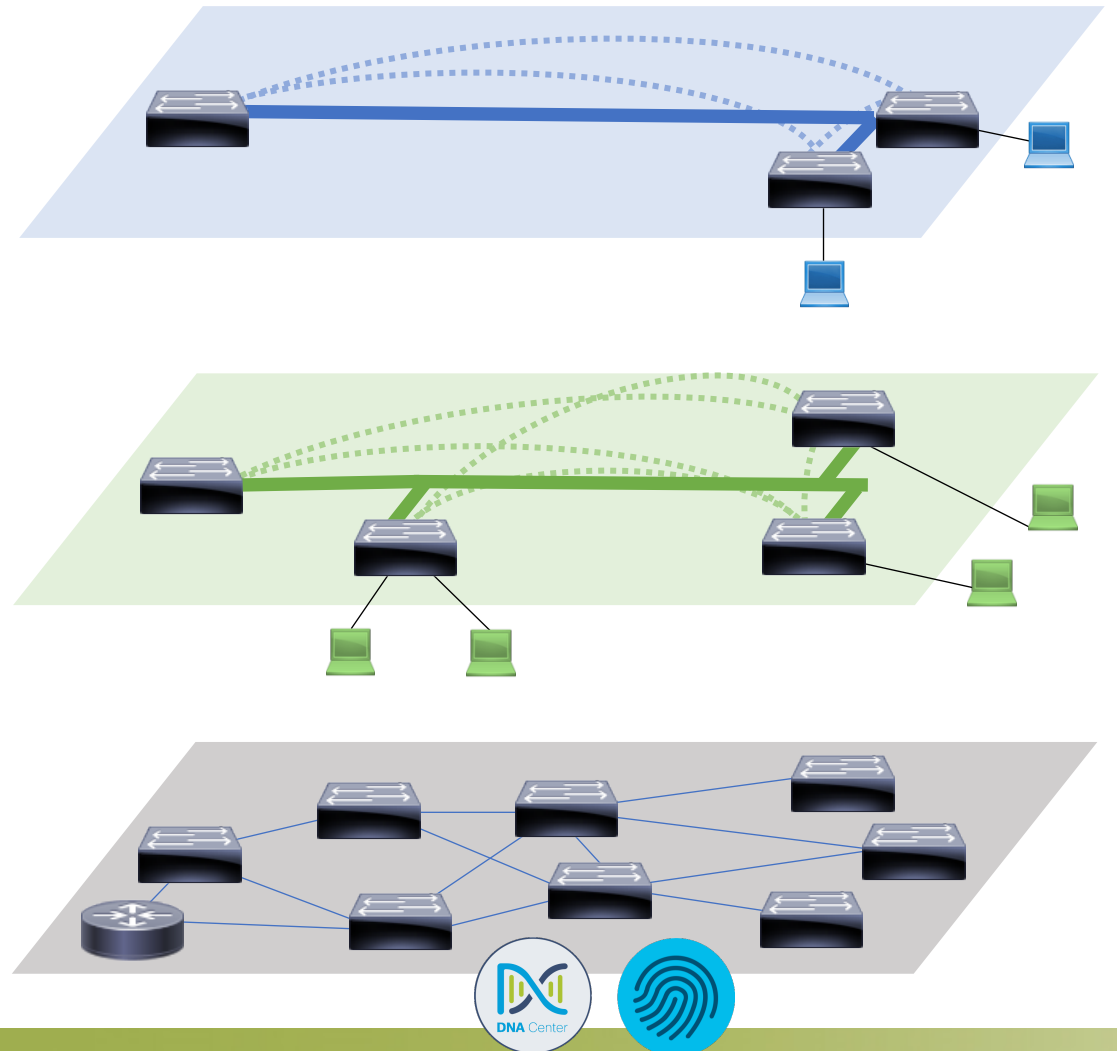
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## Business Intent



# What is Intent-Based Networking?

- Underlying infrastructure
  - “Underlay”
  - Layer 3
- Control
  - DNA Center
  - ISE
- Virtual Network
  - “Overlay”
- Standards-based
  - LISP
  - VXLAN
  - TrustSec



# Benefits of an Intent-Based Network

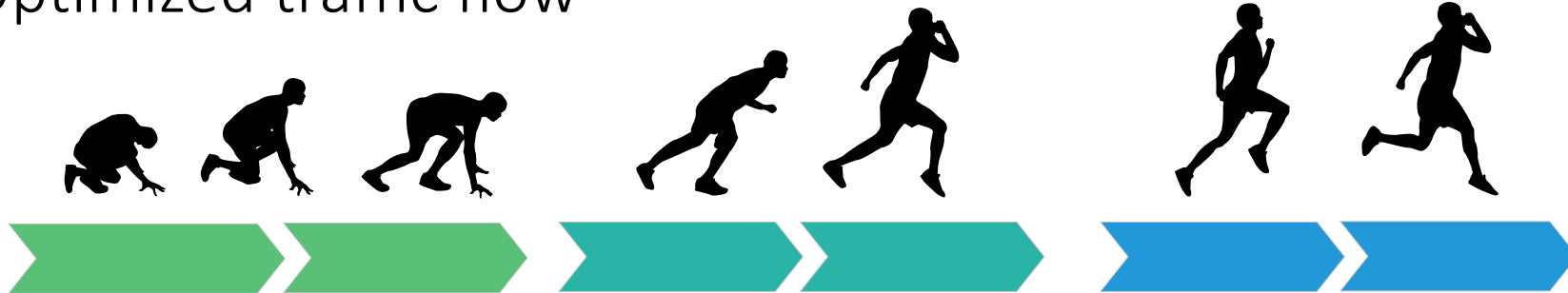
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- Abstraction of underlying infrastructure
- Unified UI, APIs
- Automation / Orchestration
- Modern Networking Technologies: LISP, VXLAN...
- Configurations based on
  - Cisco Validated Designs (CVDs)
  - Best Practices (BPs)

# Benefits of an Intent-Based Network

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- Configuration and Policy integrity
- Rapid deployment through automation
- Security is built-in
- Seamless integration of Wired + Wireless
  - Consistent management
  - Optimized traffic flow





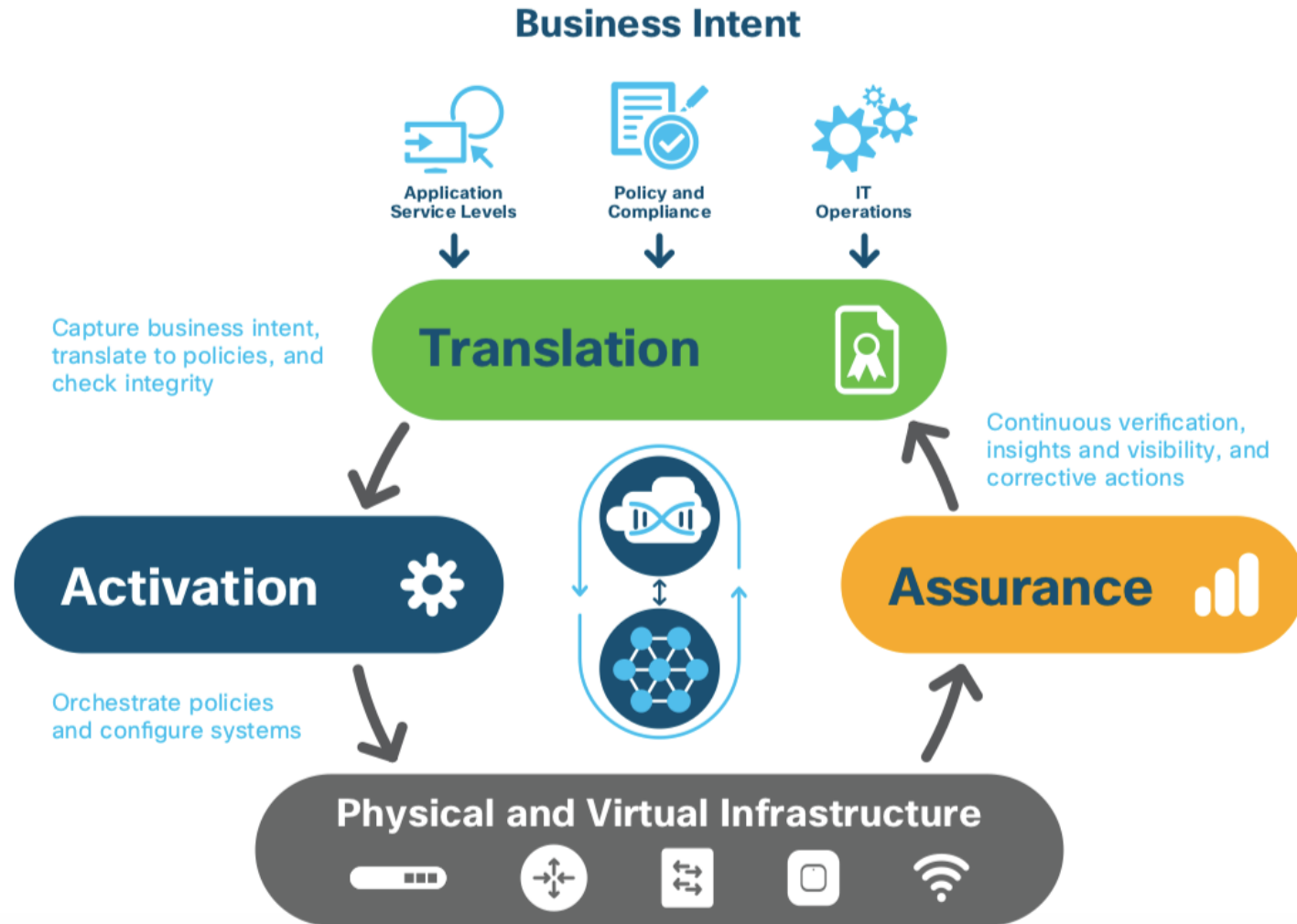
# Benefits of an Intent-Based Network

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## ■ Assurance

- Telemetry
- Analytics, Machine Learning
- Deep visibility
- Correlated insight
- Guided remediation, based on TAC experience
- Rewind the clock

# What is Intent-Based Networking?



# What's Next?

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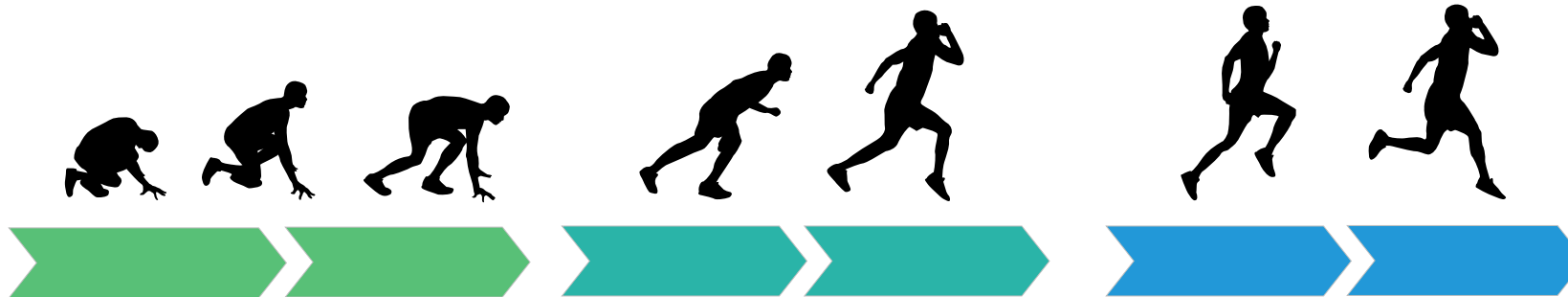
## ❖ Do some homework

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- E-Learning
- Training

## ❖ Call us

- Demos, PoVs, PoCs
- Lab Time
- Consultation

## ❖ Call your Cisco AM



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