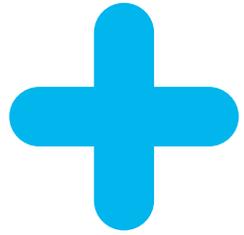


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A Framework for Network Automation @Scale

Build your roadmap for developing clear automation strategies

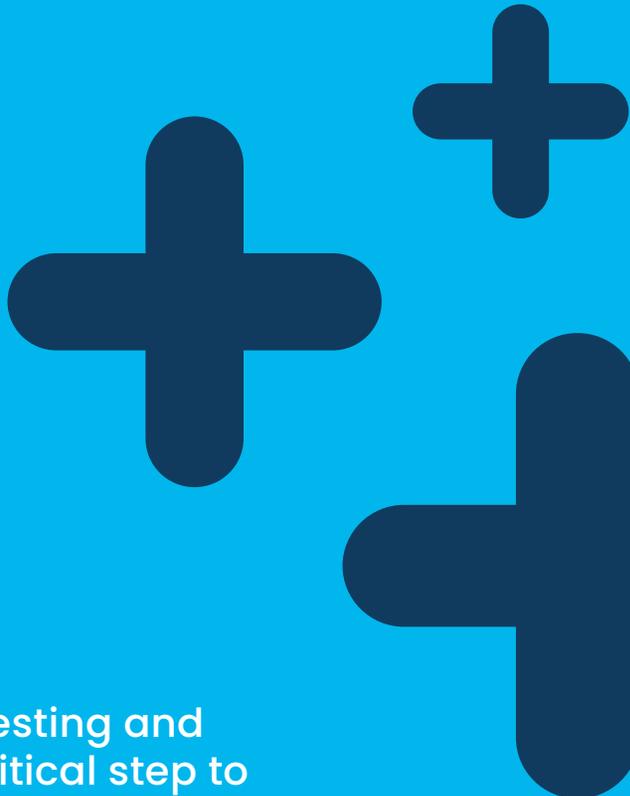
By developing clear automation strategies and roadmaps for our customers, firms large and small can realize substantial benefits by taking their first deliberate steps to automating their network and network security infrastructure.

What's The Problem?

Networking connects every part of an enterprise – from cloud, manufacturing floors, sprawling campus offices and even individual remote workers. The sheer sprawl of network infrastructure required to sustain businesses is often too much for firms to manage day-to-day using traditional methods, never mind when failures occur.

Public cloud comes with unique challenges for network teams– the platform is managed, provisioned and configured in a completely different way than physical networks enterprises are used to, which leads to errors, configuration drift, and other problems that quickly follow adoption. We've seen it more times than we can count.

- › Inconsistency Between Cloud and On-Premises Environments
- › Security Policy Implementation is a Separate Workstream
- › Manual Testing and Validation is Still Commonplace
- › Not Knowing Where To Start = Overwhelmed



This is a Test

Every responsible networking team knows that testing and validation prior to and following a change is a critical step to successfully maintaining infrastructure. However, test plans and their execution are still done almost entirely manually by our networking clients. And these test plans often miss checks that could expose issues that wouldn't normally show up until hours after the change is completed.

Automation has a clear and established list of benefits for infrastructure teams, but ironically, it is often seen as a major risk, when the result of uptime and consistency benefits are quite the opposite.

The Strategic & Tactical Benefits of Network Automation

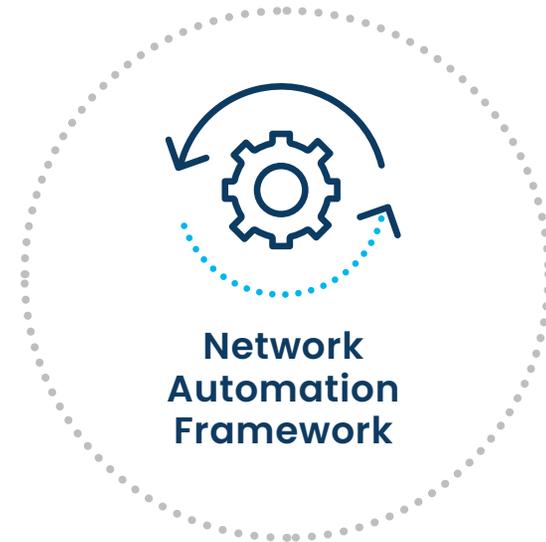
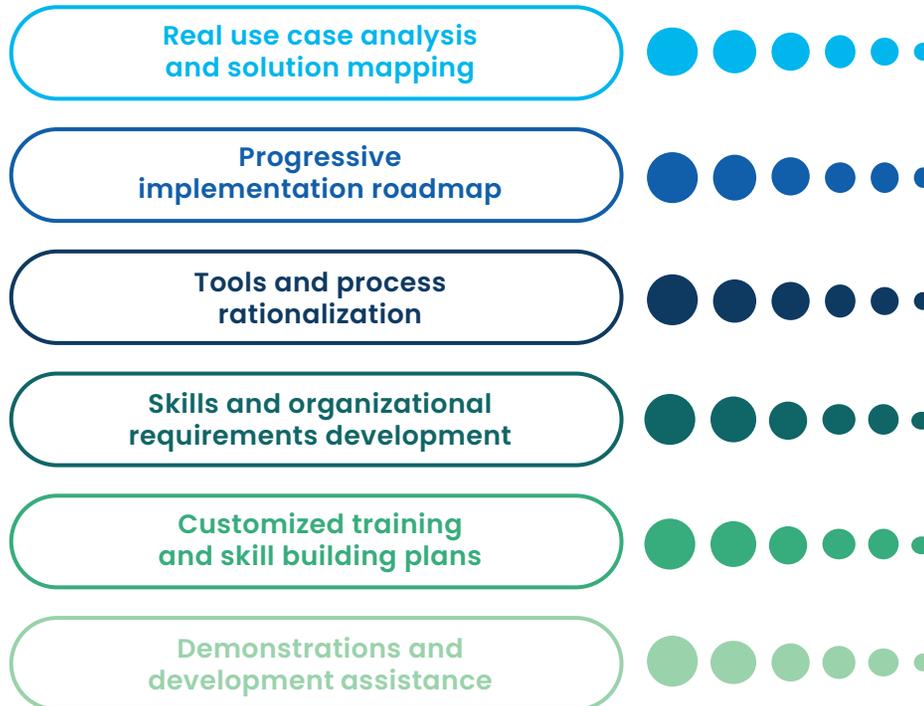
The name of the game here is simple and safe; not a rush to deploy automation in production. Moving too quickly to production changes will only open the door to automation negativity.

It's important to start with strategy and roadmap development, by automating testing and validation operations, and then utilizing these automated tests before and following network changes to start at the ground level by developing a network automation framework first.

- > Develop a Network Automation Framework
- > Develop Clear and Actionable Roadmaps for Success
- > Get Started through Automated Testing
- > Speed Up Security Policy Implementation

Tailoring a Strategy to Each Organization's Unique Needs

Instead of a generic high-level strategy, we customize the solution based upon the specific background, aspirations, and skillsets of the Client.



Educating our customers on common tools and mapping them to their unique requirements is an integral piece of our overall strategy solution.

AHEAD focuses on mapping skills requirements to the tools and use cases determined in previous steps. Taking this “skills-and-organization” approach a step further, we also recommend customized training and skill-building plans.

The Five Building Blocks of AHEAD's Network Automation Framework

Network Automation Use Cases



Test/Validate

How to auto test and validate our changes prior to deployment?
How do we automatically roll back?



Trigger

What can we use to trigger our pipeline and get notified of activity (success, failure, etc.)?



Build

What tools or languages will we use to build?



Sources of Truth

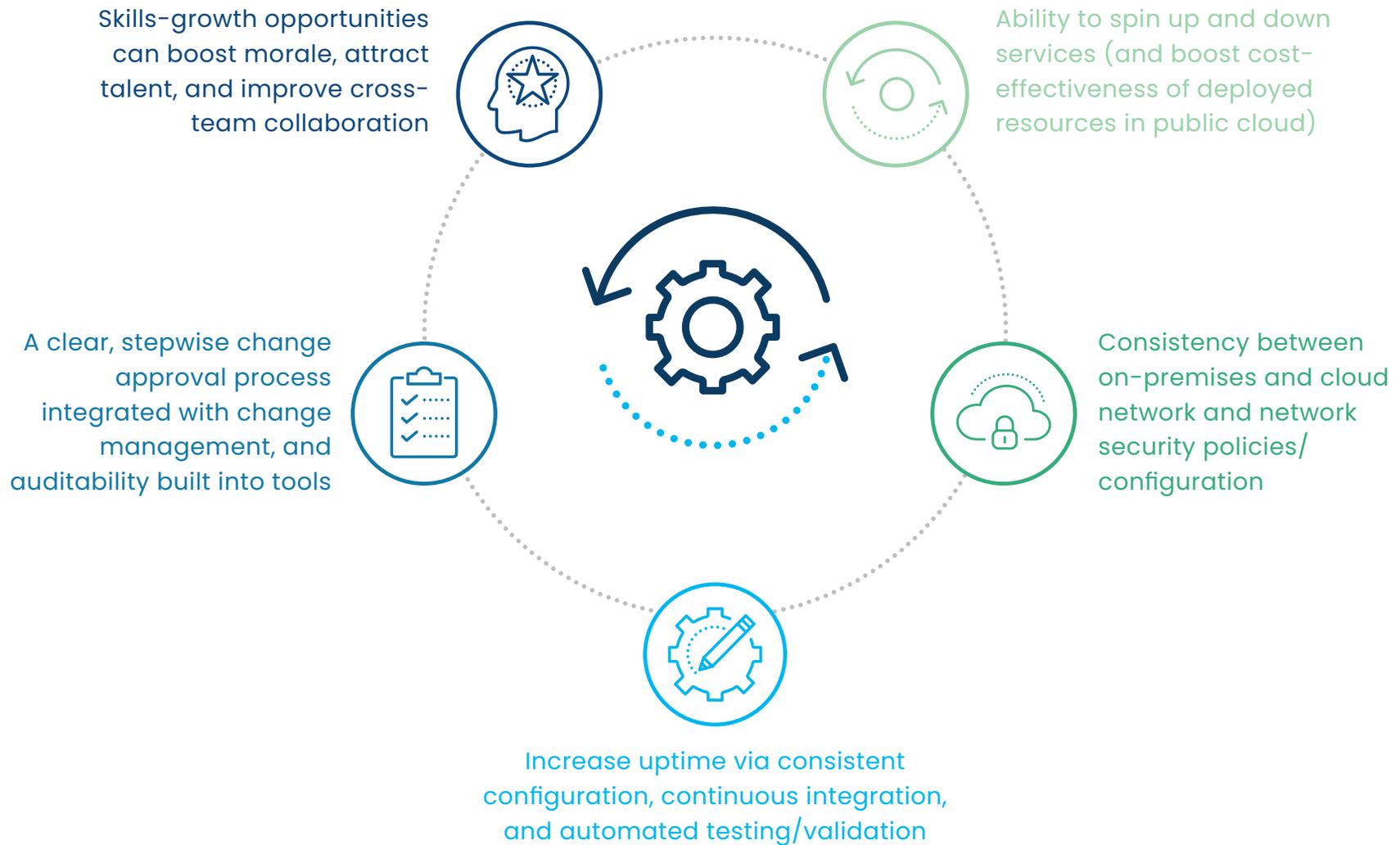
What holds the authoritative information we need for building?



Orchestrate

What ties it all together?

AHEAD's Network Automation Outcome & Benefits



Network Automation Summary Checklist



Divide and conquer, make gradual and realistic progress



Leverage training, but be experimentalists too



**Stick to tools and methods with large community support
(Ansible, GitLab, etc.)**



Always keep testing and validation in focus



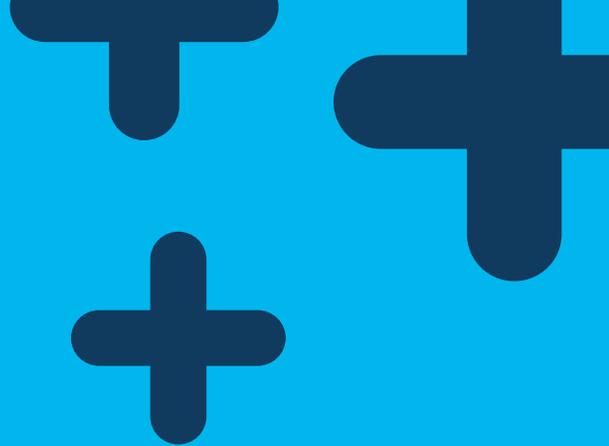
Define and measure successes along the way



**Form bonds with other teams, offer to add to their pipelines,
and learn to speak their language**



Approach on-prem automation the same way you approach cloud



AHEAD Network Automation Expertise

- › Automation has already been a part of many AHEAD Cloud network engagements:
 - Terraform, Ansible, Python, Azure, DevOps, Jenkins, GitLab
- › Key insights into what works and what doesn't work from our own internal experience
- › Keen understanding of client challenges and roadblocks to adopting automation
- › Long experience completing projects with automation as a principal output
- › An established useable and repeatable framework
- › Can execute strategically and tactically, and can excute both on-prem and cloud



Success Story

As an example of our capabilities in network automation, we recently completed a hybrid networking strategy engagement for a large midwest energy company.

IN 4Q2020 WE COMPLETED A HYBRID NETWORKING STRATEGY ENGAGEMENT

- › Customer plans to increase consumption of public cloud services and is concerned with maintaining consistency with their on-premises environment
- › Disparate management methods, manual configuration changes, lack of source of truth and tool sprawl presents risks to uptime
- › Network team has little experience with automation beyond one-off scripts
- › The wider organization is working to establish a culture of automation and is supportive of additional efforts

AHEAD PROVIDED A NETWORK AUTOMATION FRAMEWORK & STRATEGY:

- › Standardized framework for use cases
- › Customized use case analysis
- › Tools recommendations for each stage (build, testing, orchestration, triggers/notifications, etc.)
- › Skill building roadmap and timelines
- › Prescriptive recommendations for progressive implementation

Take The Next Step

AHEAD's approach is the ultimate in automating network and network security infrastructures. We're ready to help our customers begin and sustain their network automation journey together.

contact@ahead.com

AHEAD

Learn. Grow. Achieve

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