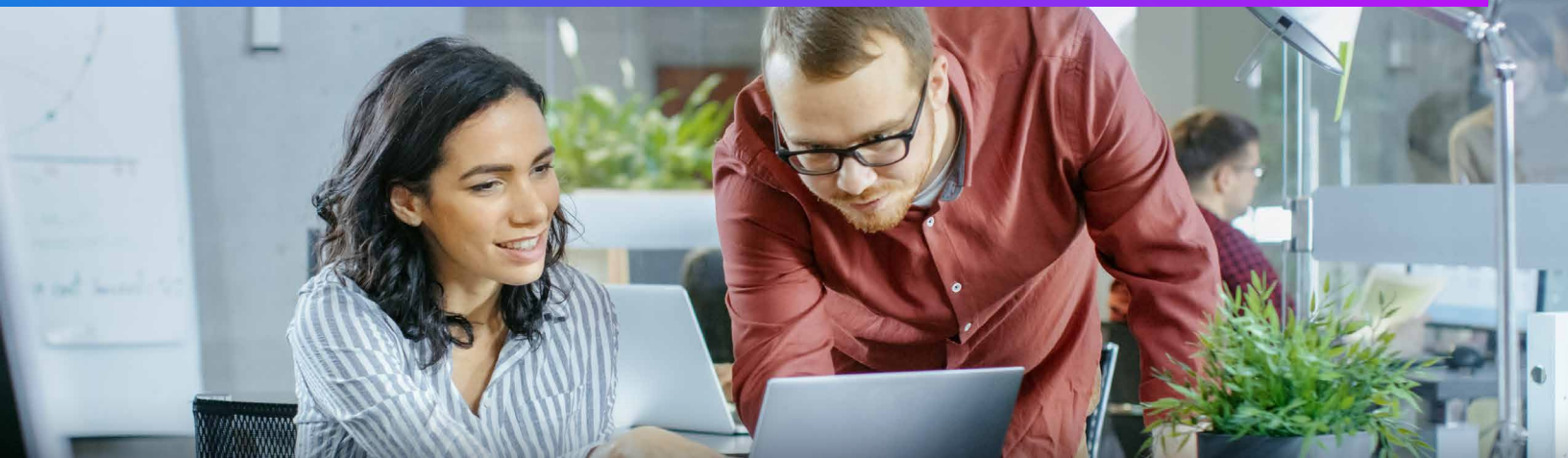**NetBrain**
DEMOCRATIZING NETWORK AUTOMATION

Overcoming the Complexity of the ACI Fabric

In the decade since Cisco's Application Centric Infrastructure (ACI) was introduced, many enterprises still struggle with the challenge of a heterogenous network. For many IT teams, ACI is such a novel way of operating a network compared to traditional technologies that it becomes a case of "one company, two networks" to administer the hybrid infrastructure.

Software-defined network (SDN) solutions like Cisco ACI can enhance the agility and scalability of datacenters with rapid deployment of applications and services. But they abstract network tasks only to their proprietary devices leaving interoperability with legacy systems an afterthought. Increased complexity in interoperability, new potential security vulnerabilities, and the need for specialized skills make administration of the entire heterogenous network daunting and inefficient.

Manage ACI and Legacy Networks with No-Code Automation

Why "no-code" automation?

NetBrain Next-Gen No-Code Automation eschews the typical DevOps and code development lifecycle. Instead, IT and network engineers directly automate entire ACI workflows in just minutes through an intuitive graphical interface that requires no scripting or coding prowess. No-code automation makes it easier to:

- Digitize your ACI experts' knowledge as automation without occupying your DevOps resources.
- Query any network device, legacy or ACI, regardless of vendor or interface (CLI, API, SNMP).
- Scale and replicate one assessment into automation for your entire ACI datacenter.

NetBrain Next-Gen bridges the gap between your SDN, cloud, and legacy environments with Intent-based automation of the entire multi-vendor network. Observability is powered by NetBrain's Digital Twin and Dynamic Maps while automation of "Day 2" workflows such as troubleshooting, change management, and outage prevention is simplified with Next-Gen's abstractions of network configurations across technologies as Network Intents, the expected network function and behavior.

The integration between NetBrain and Cisco ACI—via REST API—equips IT teams with deeper visibility and the ability to make their Cisco ACI knowledge shareable and executable as automation, expanding SDN expertise throughout the organization.

Underlay Topology Views
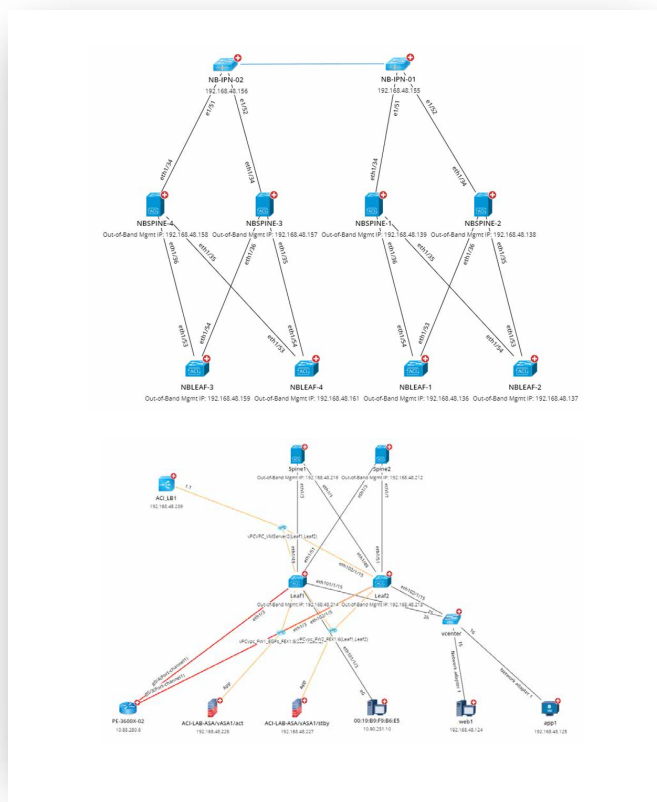
Application Views
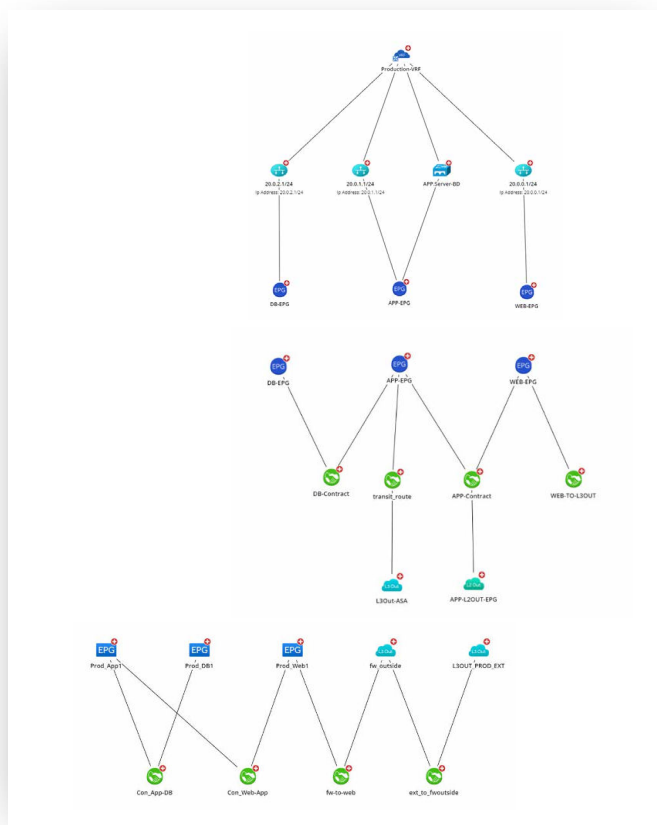

NetBrain Features and Benefits for ACI

Visualize and Troubleshoot Your Fabric Faster

Create a Digital Twin of the entire heterogenous network using real-time configuration and forwarding information gathered via CLI, SNMP, or API for SDNs like ACI.

- **Dynamic Maps:** Auto-Discover and map any part of your ACI or non-ACI infrastructure together on one screen with no boundaries.

- **A/B Path:** Calculate and map live traffic paths spanning ACI, legacy, and cloud networks while factoring ACLs, firewalls, and network translation (NAT).

- **Data Views:** Customize maps with enhanced context including VXLAN or MPLS overlays, 3rd-party monitoring data, application traffic paths, and Intent assessment results.

- **Auto Intents:** Use maps as an interactive canvas to create new assessment automations on the fly based on devices and topology on screen.
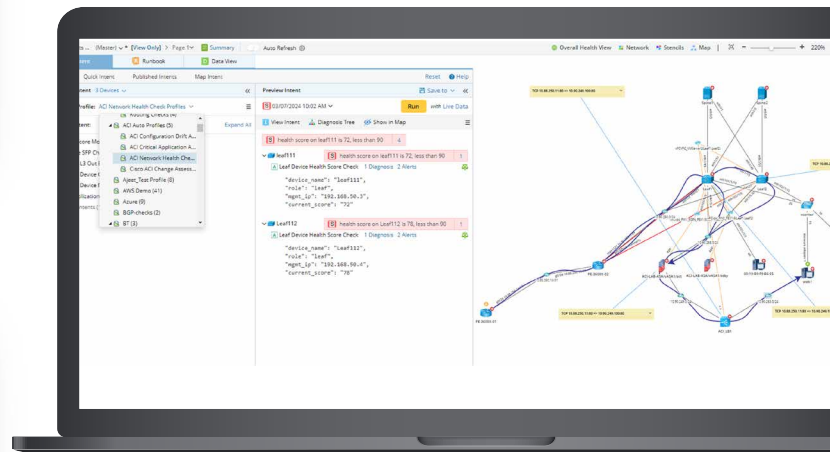
"Shift Left" Your ACI Incident Response

Initiate root cause analysis and resolve ACI datacenter issues earlier in the network support lifecycle to dramatically reduce MTTR.

- **Intent-Based Automation:** Diagnose and assess your ACI, cloud, or legacy networks based on the intended behavior designed by your subject-matter experts (SME).

- **Automated Diagnosis:** Integrate ITSM, third-party tools, or even your ACI controller (APIC) with NetBrain to trigger expert-level diagnosis of the ACI fabric before human support even has a chance to respond.

- **Automation Library:** Leverage and share your extensible repository of expert automated diagnosis for instant troubleshooting at any level of your tiered support to reduce escalations and expedite resolution.

- **Preventive Automation:** Execute continuous proactive ACI assessments to identify network vulnerabilities and avoid outages before a problem can occur.

Assess the Heterogenous Network from One Screen

Glance the real-time results of hundreds of automated assessments of your ACI infrastructure from easy-to-understand, customizable Dashboards.

- **Automation Dashboards:** Glance the real-time results of hundreds of automated assessments of your hybrid ACI, legacy, and cloud infrastructure from easy-to-understand, customizable dashboards.

- **Enhanced Collaboration:** Foster cooperation among teams and eliminate duplicated efforts when troubleshooting with incident dashboards that visualize all diagnosis automation triggered by machine or support personnel.

- **Continuous Assessments:** Run diagnosis automation on your ACI datacenter proactively for anti-drift protection, fault tolerance assurance, and security enforcement.

- **Detailed Analysis:** Drill down on any assessment to see result details, map a problem area live, track rapid changes to the ACI fabric, or compare against historical data.

Capture Your Org's Tribal Knowledge of ACI

Digitize the ACI troubleshooting skills of your best engineers as automation for expert diagnosis that is always available.

- **IBNA Library:** Jumpstart your automation with an extensive and extensible library of ACI assessments pre-built out of the box.

- **Workflow Automation:** Expand your library while working day-to-day tasks and automate every workflow; "execute once, automate forever".

- **Skill Sharing:** Empower junior engineers to leverage powerful SME skills from higher-level engineers as automation even when those SMEs are not available.

Make Worry-Free Network Changes

Be at ease making planned comprehensive changes to your hybrid datacenter with automated execution, validations, and rollback.

- **Triple Defense:** Understand the full impact of changes to your ACI fabric before, during, and after the change window with automated assessments and dashboards.

Summary

NetBrain Next-Gen no-code automation platform manages the complexities of ACI and hybrid network infrastructures by streamlining incident response, enhancing ACI troubleshooting, and facilitating continuous network assessments of the fabric, all while capturing and sharing expert SDN knowledge across the organization.

By eliminating the need for traditional coding, NetBrain enables datacenter engineers to automate ACI workflows quickly and efficiently. Comprehensive visualization and intent-based automation ensure seamless integration of your legacy and cloud environments with Cisco ACI, empowering IT teams with deeper visibility and more efficient operations.

Part 1 Cisco ACI Configuration Drift Assessment(Monday 6AM Weekly)

Dashboard and Intent Group	Device Results By Device Group		
	Total Device Results	Toronto Data C...	Boston Data Ce...
Cisco ACI Configuration Drift Assessment			
Check Contract without Provider EPG	119 / 4	100 / 4	19
Overlapping Contracts Check	1,402 / 8	1,368 / 8	34
Check Max Contract Number of EPG	80 / 1	62 / 1	18
Unused Tenant Check	393 / 0	361	32
Unused AP Check	390 / 2	359 / 1	31 / 1
Unused EPG Check	84 / 308	80 / 280	4 / 28
Duplicated Filters Check	59 / 8	44 / 8	15
Check Unused Static Port and EPG Binding	85 / 21	81 / 19	4 / 2
Interface Status and Locate Problem Sco...	26 / 0	1	25
ACI Devices Software Version Check	14 / 1	8 / 1	6
Total Alert Count ↓		322	31

About NetBrain Technologies

Founded in 2004, NetBrain is the market leader for NetOps automation, providing network operators and engineers with dynamic visibility across their hybrid networks and low-code/no-code automation for key tasks across IT workflows. Today, more than 2,500 of the world's largest enterprises and managed service providers use NetBrain to automate network problem diagnosis, generate real-time documentation, accelerate troubleshooting, and enforce enterprise architectural rules.

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