https://github.com/ArctiqTeam/network-self-healing

Self-Healing Networks with Ansible and F5

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What are we looking to Solve?

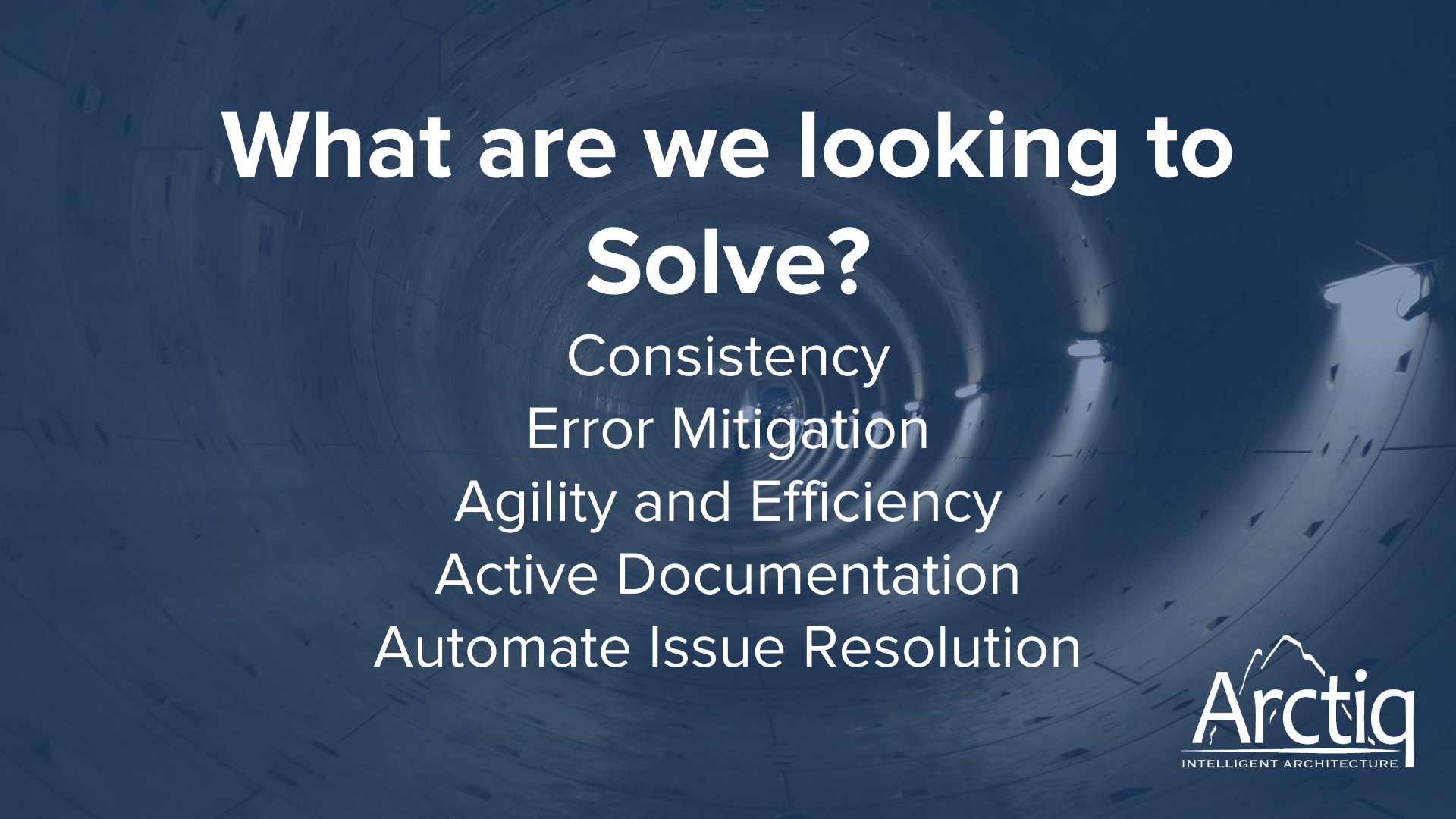
Consistency

Error Mitigation

Agility and Efficiency

Active Documentation

Automate Issue Resolution



A New Perspective on
Network Management
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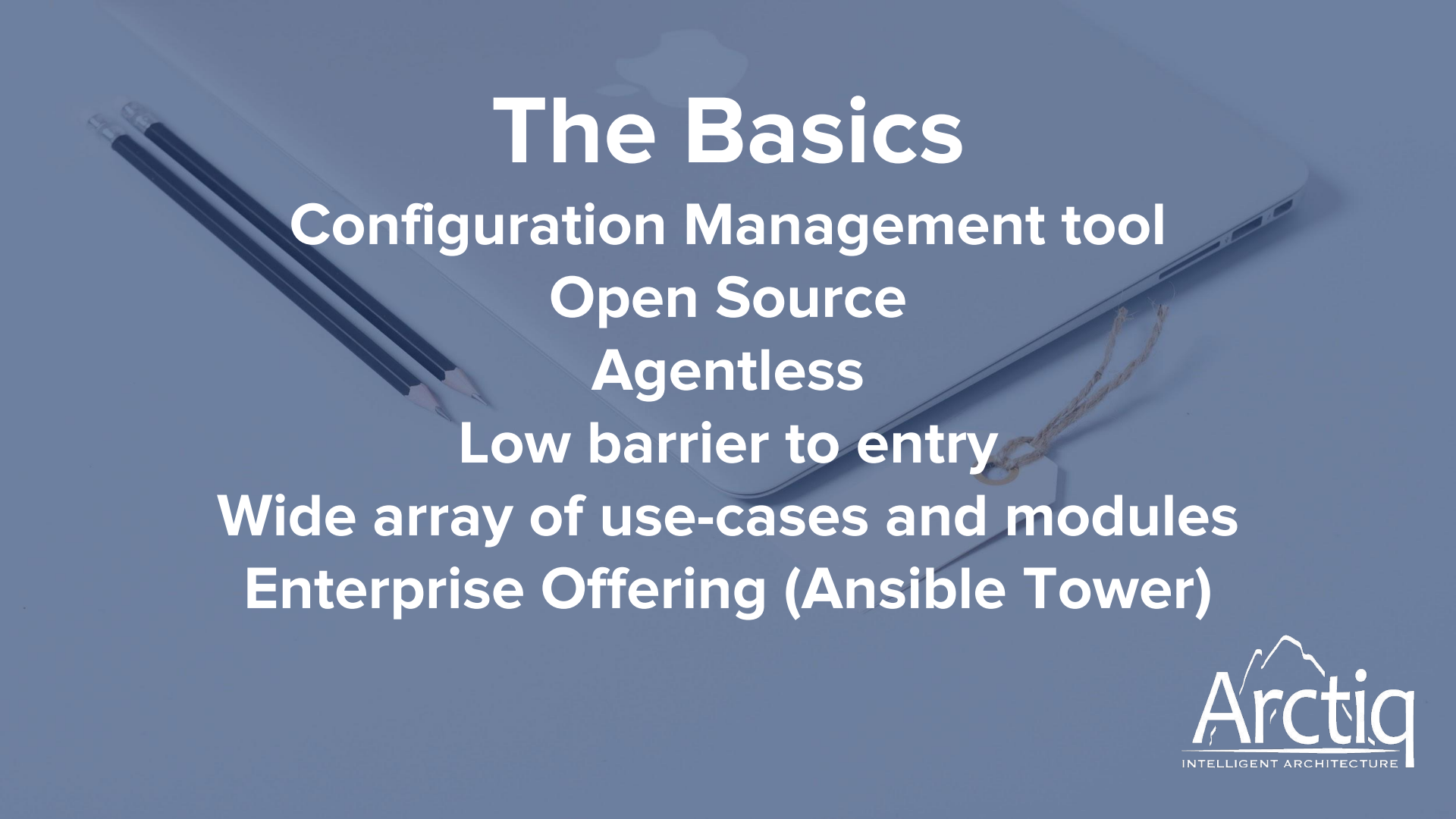

The Basics

Configuration Management tool

Open Source

Agentless

Low barrier to entry

Wide array of use-cases and modules

Enterprise Offering (Ansible Tower)

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What’s New from Ansible
Resource modules
Aggregate resources
Declarative intent
Additional platform support and modules
New network connection types
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F5 for Network Automation

iControl REST API

Native Ansible Modules (65+)

Super-NetOps

Automation for the Entire Application Ecosystem

Integrate into Existing Pipelines

https://f5.com/SuperNetOps

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Lab - Description and Applicabilities

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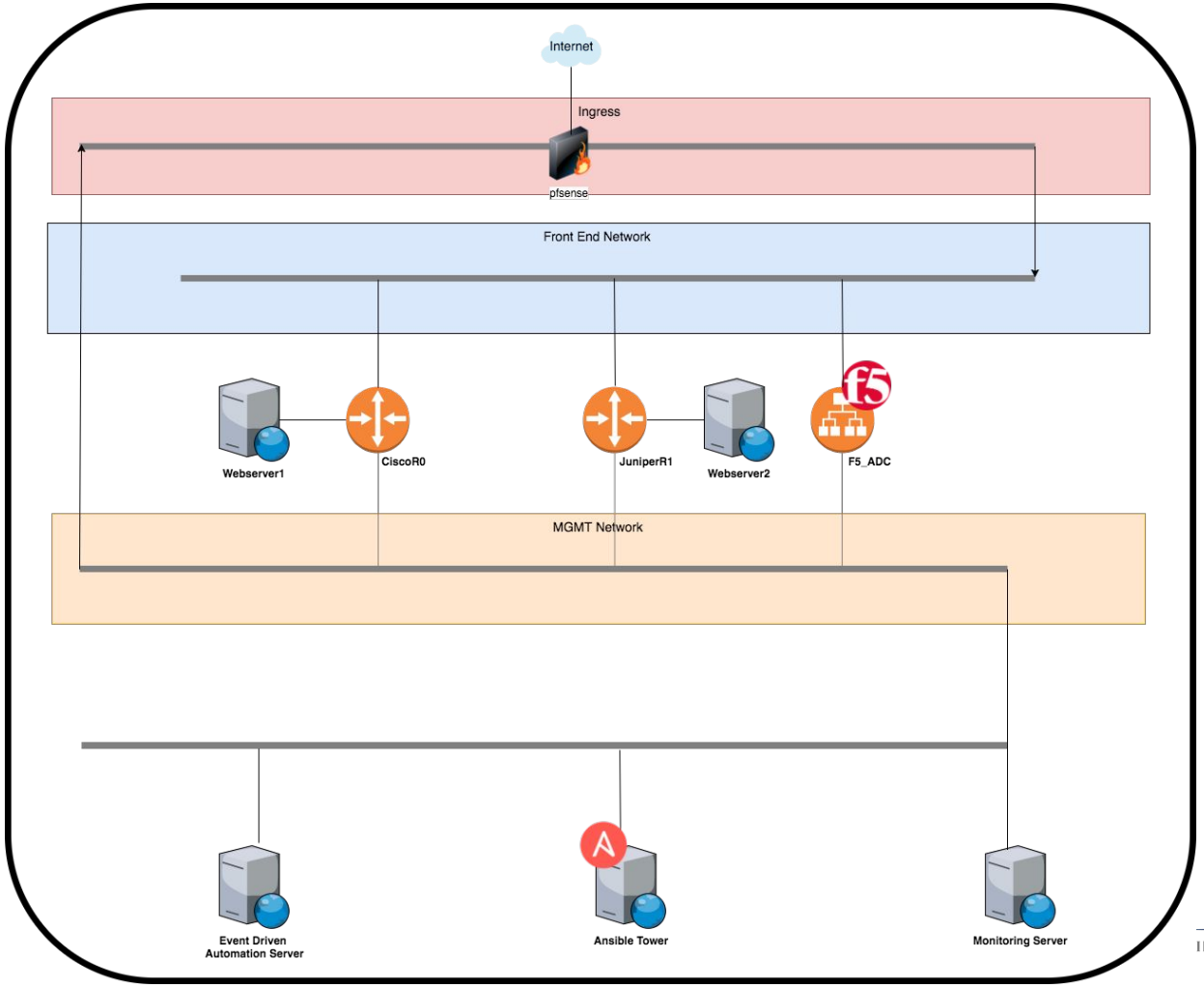

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CI/CD for Networks

StackStorm

slack

GitHub

packet

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Self-Healing Networks - See it in action ...

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Use Case 1:
Lab Reset and Standup with Ansible Tower

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Use Case 1 - Demo

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Use Case 2: Webhook Integration - Git IaC

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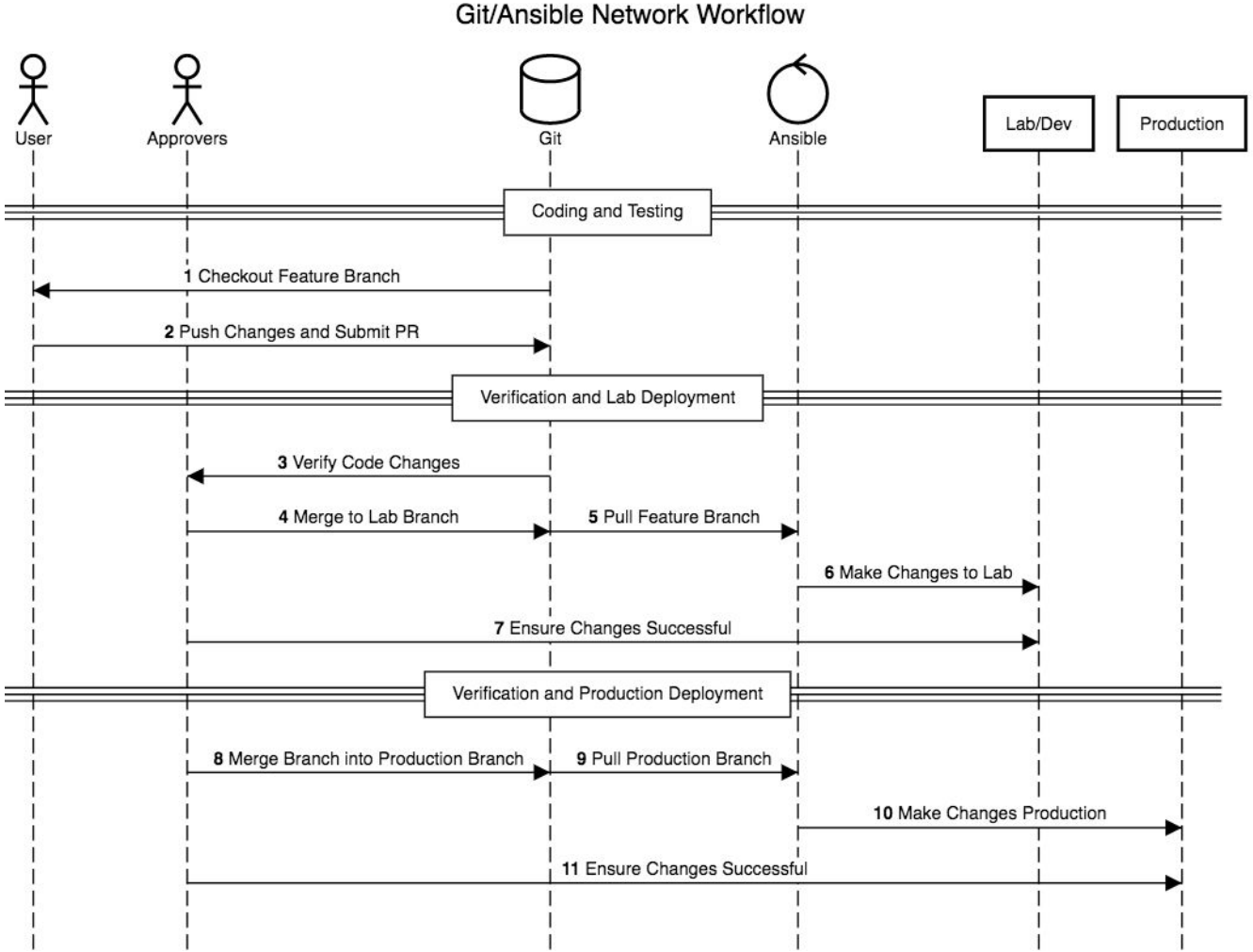
Git/Ansible Network Workflow
User
Approvers
Git
Ansible
Lab/Dev
Production
Coding and Testing
1 Checkout Feature Branch
2 Push Changes and Submit PR
Verification and Lab Deployment
3 Verify Code Changes
4 Merge to Lab Branch
5 Pull Feature Branch
6 Make Changes to Lab
7 Ensure Changes Successful
Verification and Production Deployment
8 Merge Branch into Production Branch
9 Pull Production Branch
10 Make Changes Production
11 Ensure Changes Successful

Use Case 2 - Demo

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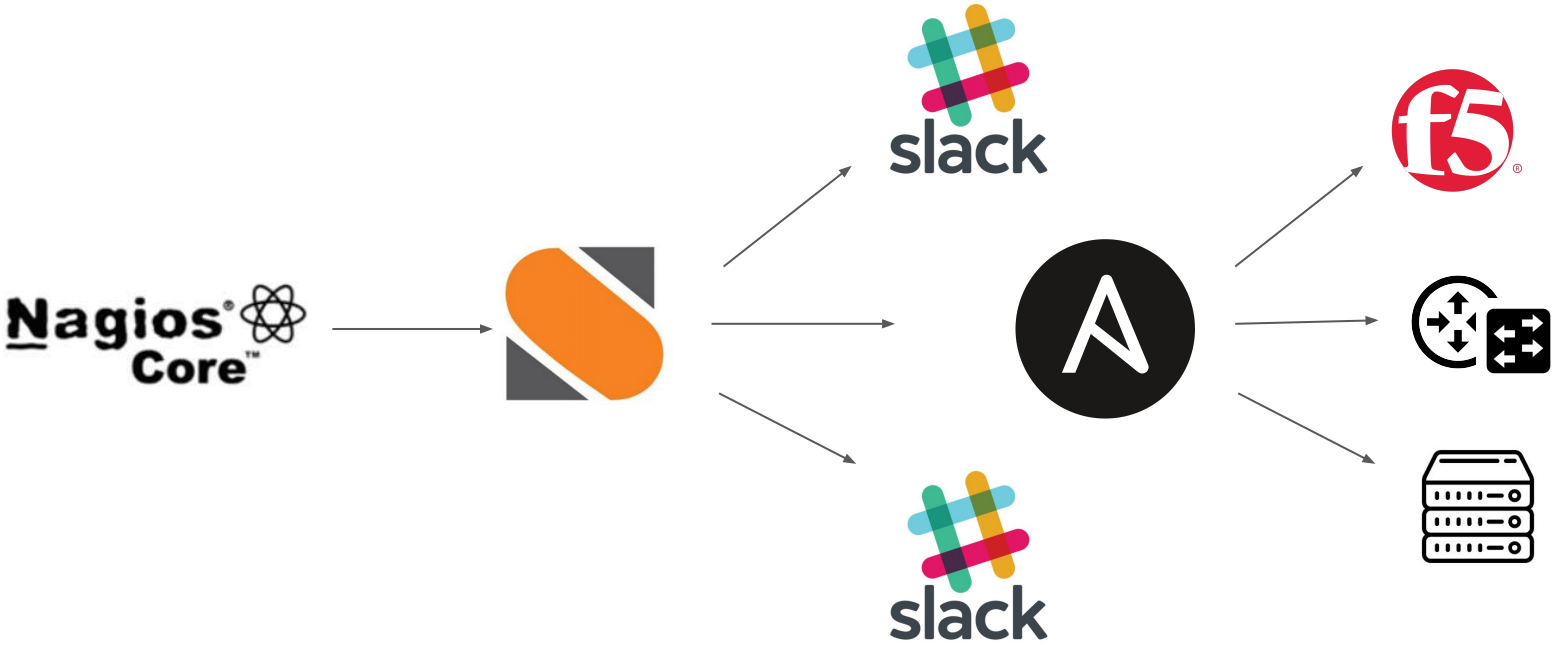
Self Healing Workflow



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Use Case 3: Catastrophic Network Failure / F5 VIP down

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Use Case 3 - Demo

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Use Case 4: WebApp Integrity Enforcement

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Use Case 4 - Demo
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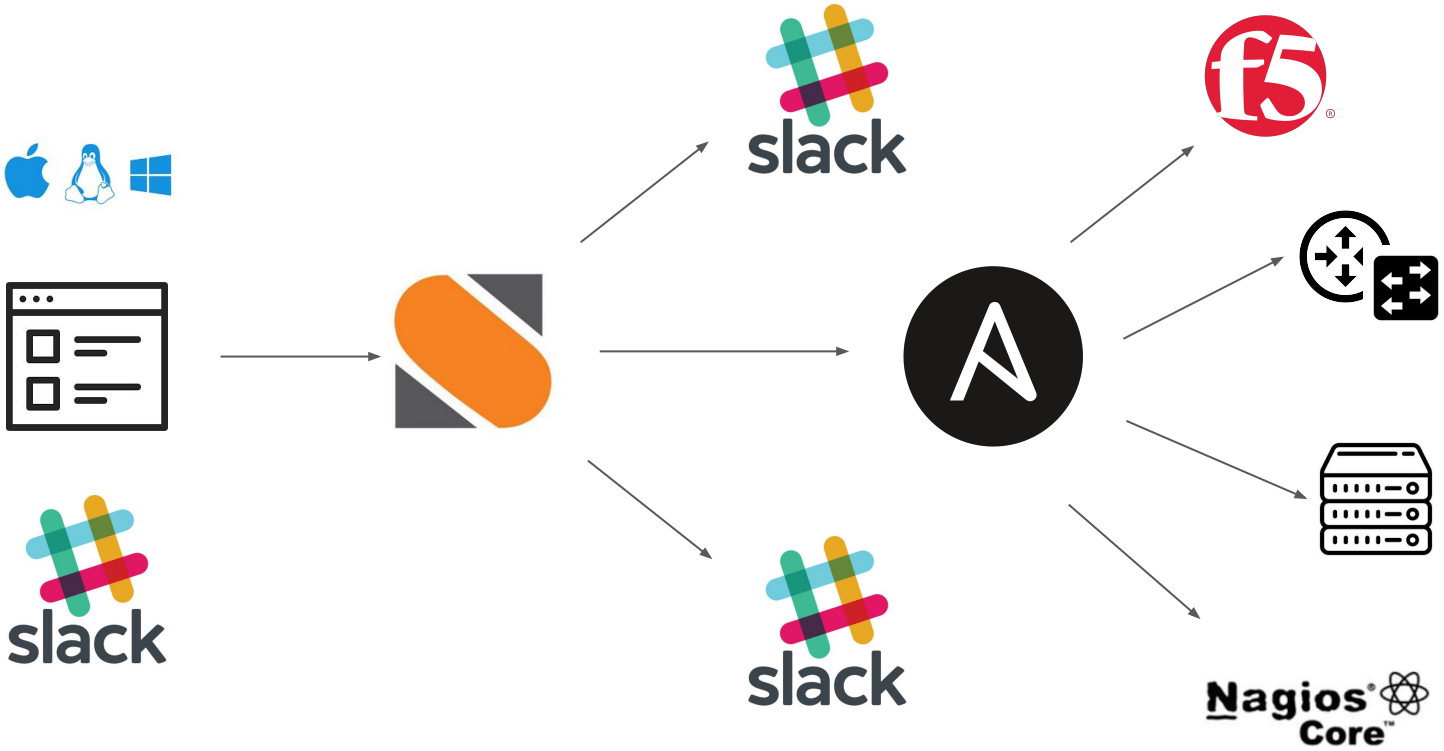
Automated Provisioning Workflow



Where are we headed?

Soooo many more apps
(microservices)
With much more Open
Source
Demanding deeper
application visibility
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Enterprise Support for Open Source Solutions

redhat.

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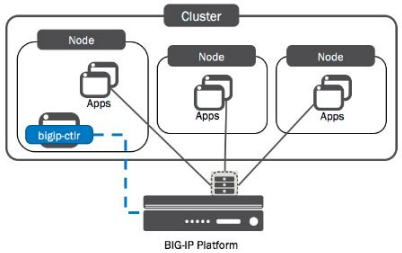
Integrate F5 ADC into the development workflow



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Additional Use Cases:

Dynamic Network Configuration

Pipeline / Release Management

Self-serve provisioning portal

Full Stack Deployments

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Get Creative - It’s the ONLY Limitation
Find a Use Case
Convert MOPs into Playbooks
Low Barrier to Entry
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Presentation and all example code available online
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