

NITA Based Offers and Services

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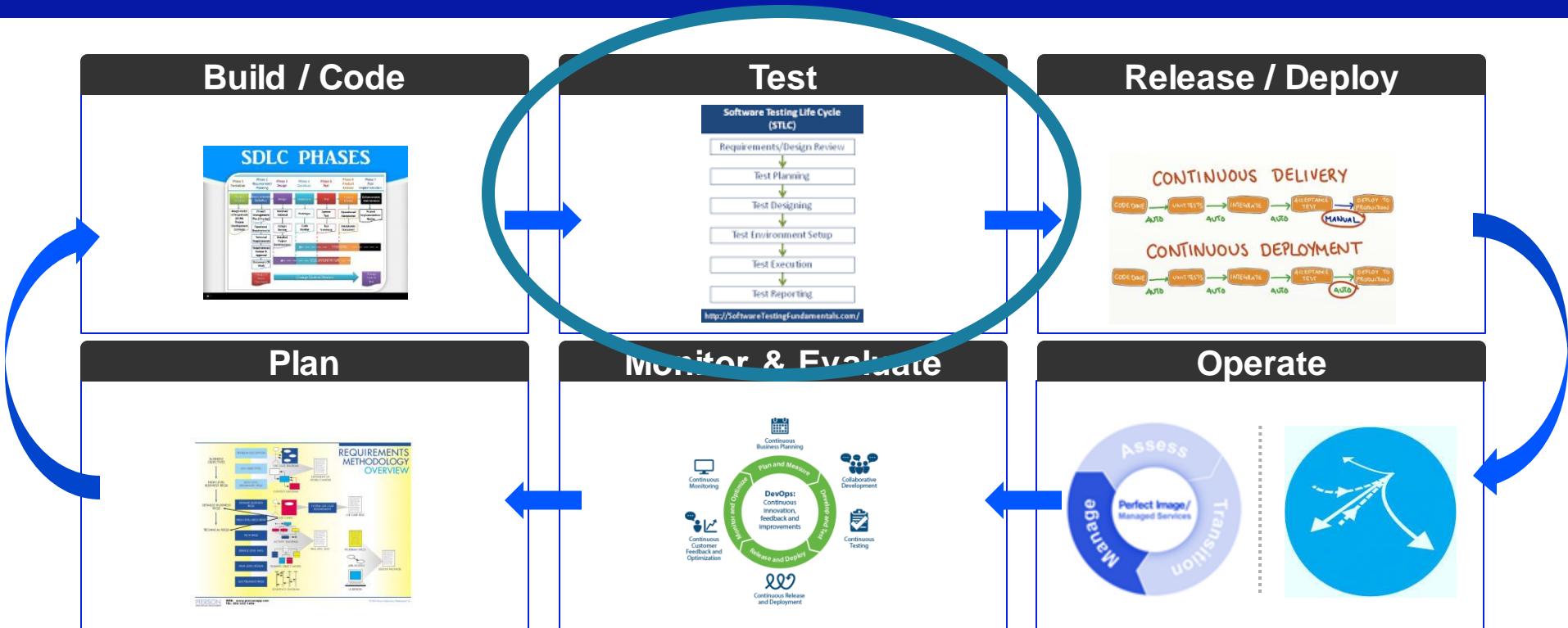
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Agenda

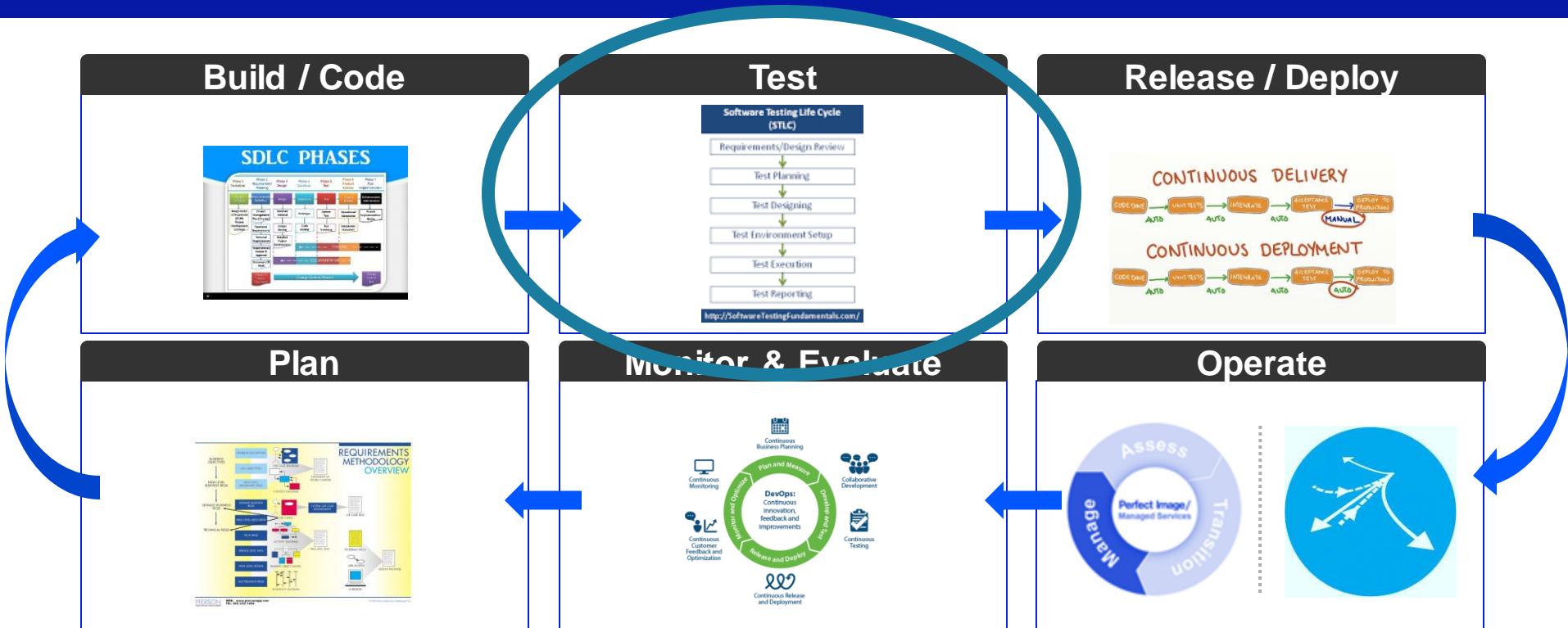
1. Purpose of NITA
2. Problems it Addresses
3. How it Works
4. Automated Lab Testing, Automated Deployment
5. Case Studies
6. Architecture
7. How to Get NITA in your Network

The Purpose of NITA

DevNetOps Cycle

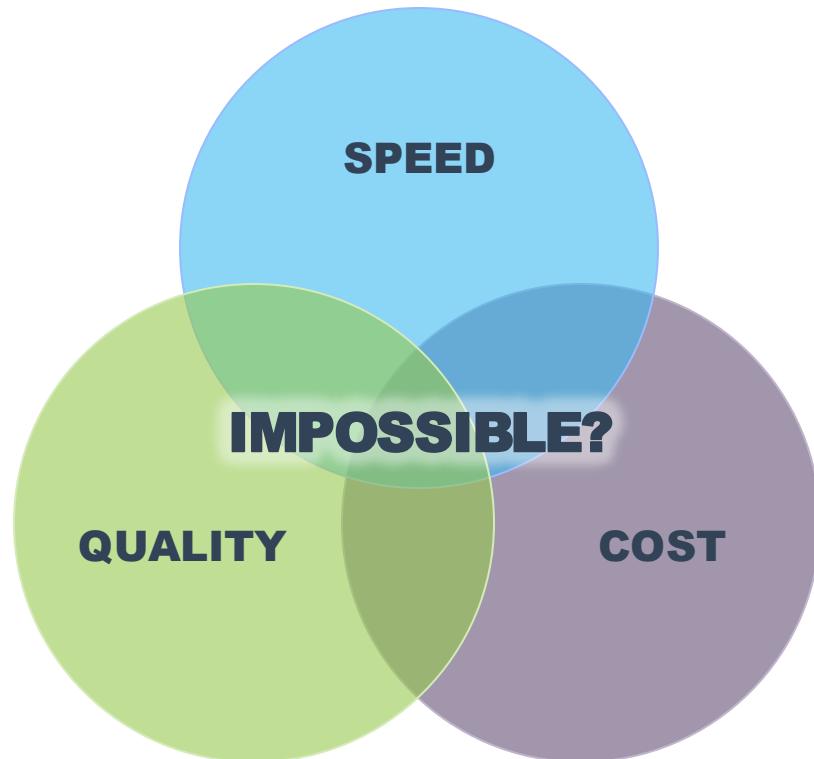


DevNetOps Cycle

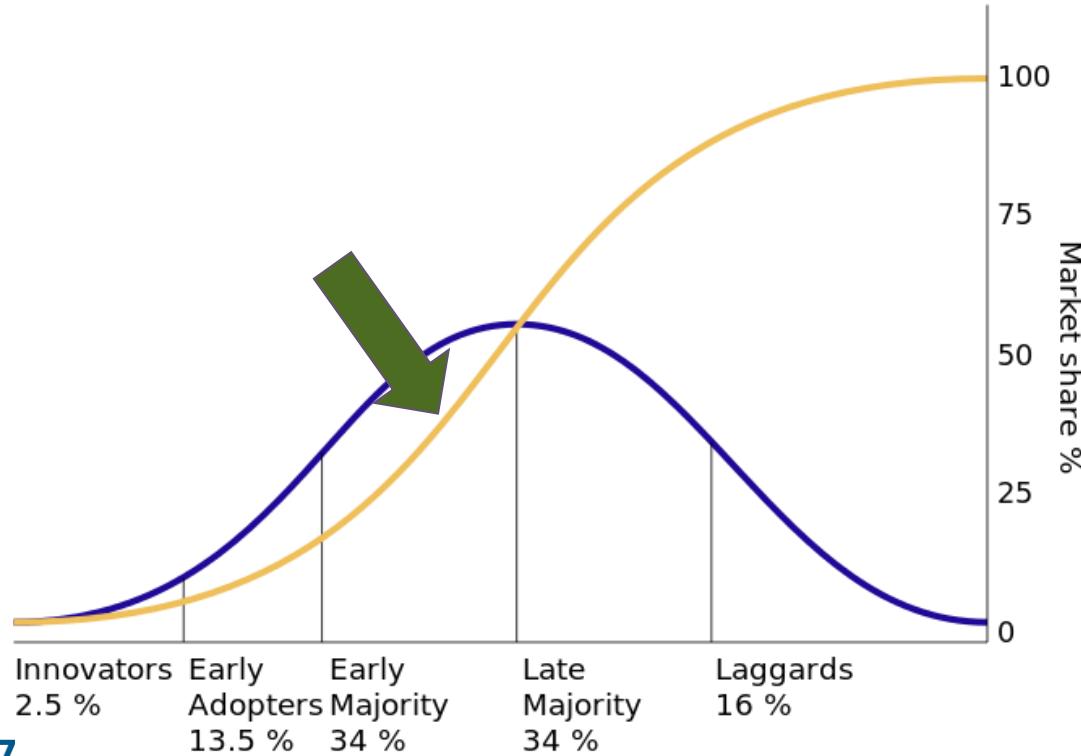


Market Problems We Are Addressing

Automation Eliminates Trade-offs



Get Automation in your Network NOW!

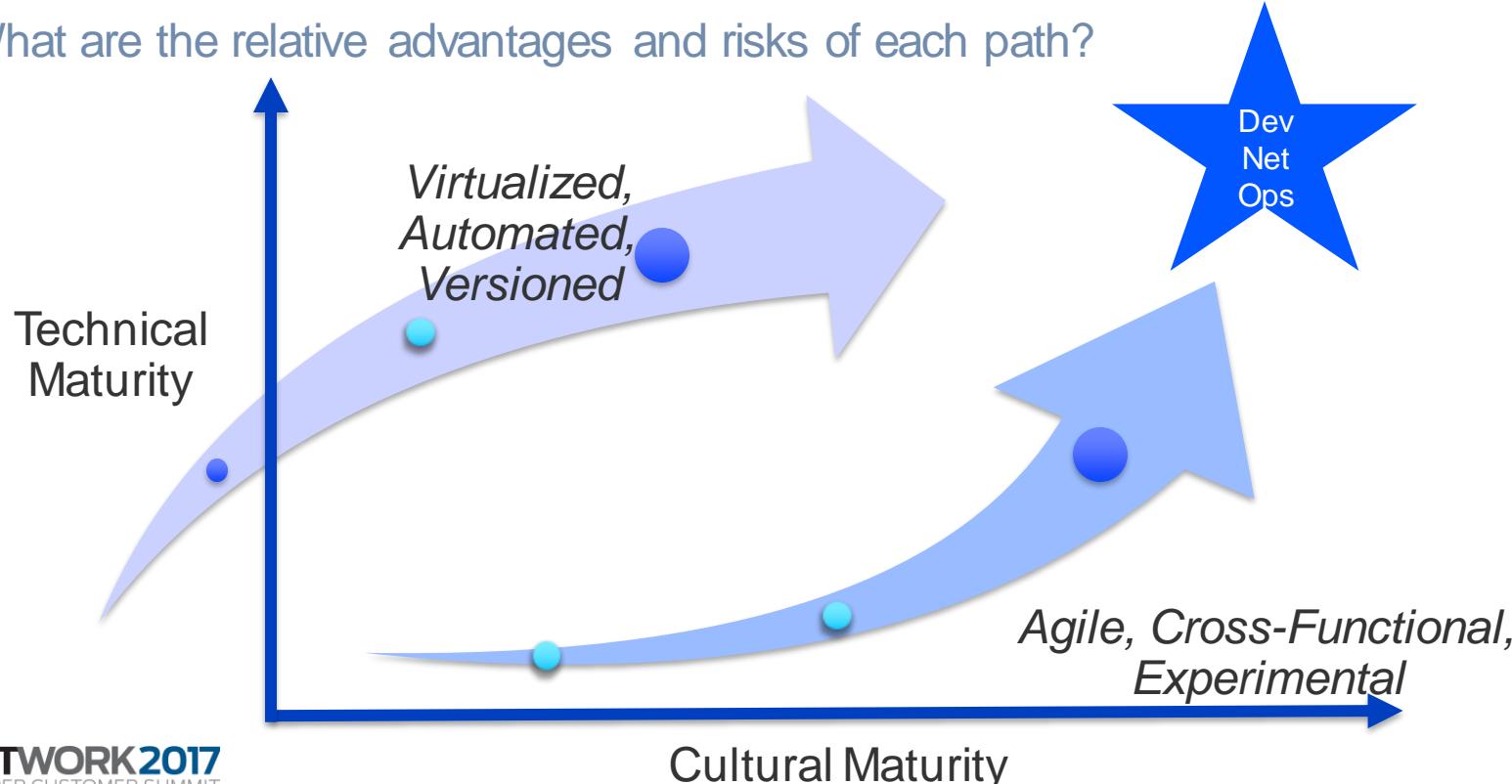


Metrics for IT Operational Expenses

Annual Averages & Estimates	Change Failure Rate	Downtime Cost per Change	Technical Staff Time Spent on Rework
High Performing Org	7.5%	\$37,500	21%
Medium Performing Org	38%	\$4,560,000	32%
Low Performing Org	23.5%	\$2,820,000	27%

Many Paths on the DevNetOps Journey

What are the relative advantages and risks of each path?



How Does NITA Work?



Enabling Rapid, Quality Outcomes

Audit/
Compliance



Testing for
Quality



Continuous
Development



Configuration
Generation

Automated Lab Testing, Automated Deployment

VIRTUAL TOPOLOGY

**TEST
CONTINUOUS INTEGRATION**

DEPLOYMENT

CHANGE CONTROL

**TELEMETRY &
ANALYTICS**

EVENT DRIVEN

NETCONF | REST APIs | On-device Scripts | Python | Open standards

Automated Lab Testing



TESTING

Traditional
Time Consuming

Coverage Incomplete

Resource Intensive

Lack of visibility

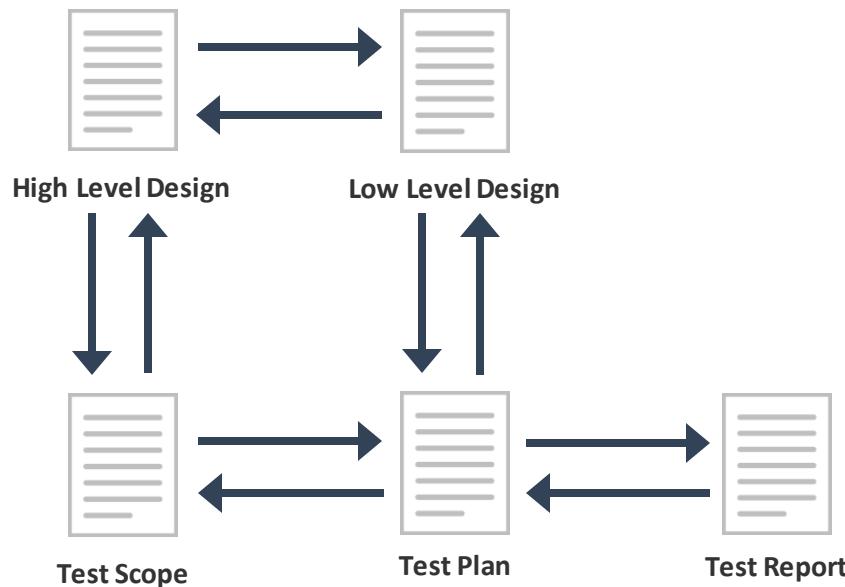
Automated Benefits
Shorter validation and delivery times

Faster time to market without sacrificing quality

Quick lab setup and teardown windows

Insight and awareness into what is being tested

What You Design is What You Test



The design is the source of all testing

HLD, Test Scope = What

LLD, Test Plan = How

Design it if you deploy it

Automated Lab Testing Video Demo

Automated Deployment

Deployments

Traditional

Slow

Lack of trust

Convoluted

Complex

Automated Benefits

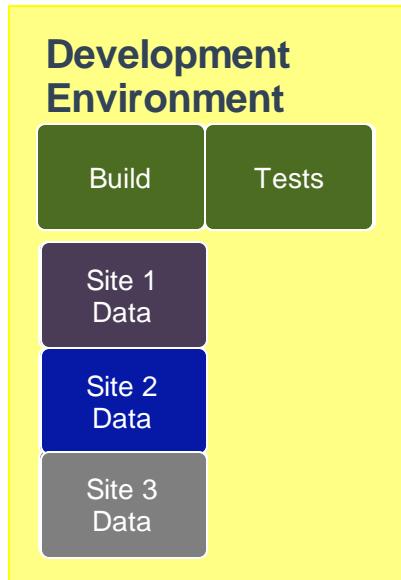
Faster validation windows

Shorter troubleshooting times

Easy reporting of progress

Consistent and streamlined

Automated Deployment Workflow



Site 1

Site 2

Site 3

Automated Deployment Video Demo

Case Studies

Case Study #1

Use Case	Automated Lab Testing
Region	APAC
Customer Description	Telecommunications Operator
Test Cases	357
Examples	<ul style="list-style-type: none">• OS Upgrades on the EX-series• Migrations• Multi vendor interoperability• Physical and virtual MX topologies

Case Study #2

Use Case	Automated Lab Testing and Automated Deployment
Customer Description	American Oil and Gas Corporation
Project Description	Data Center Modernization
Deliverables	<ul style="list-style-type: none">■ Test Driven Design and Low Level Design■ Design Validation Testing■ Automated Deployment Plan and Automated Testing Plan■ Network Operations Document■ Knowledge Transfer Workshops

Case Study #3

Use Case	Automated Lab Testing and Automated Deployment
Customer Description	European Financial Services
Project #1 Description	Remote Branch Office Deployment
Deliverables	<ul style="list-style-type: none">▪ Two data centers...▪ With 300 sites▪ Deployed at 20 sites/week
Project #2 Description	Next Gen Campus Network
Test Cases	40

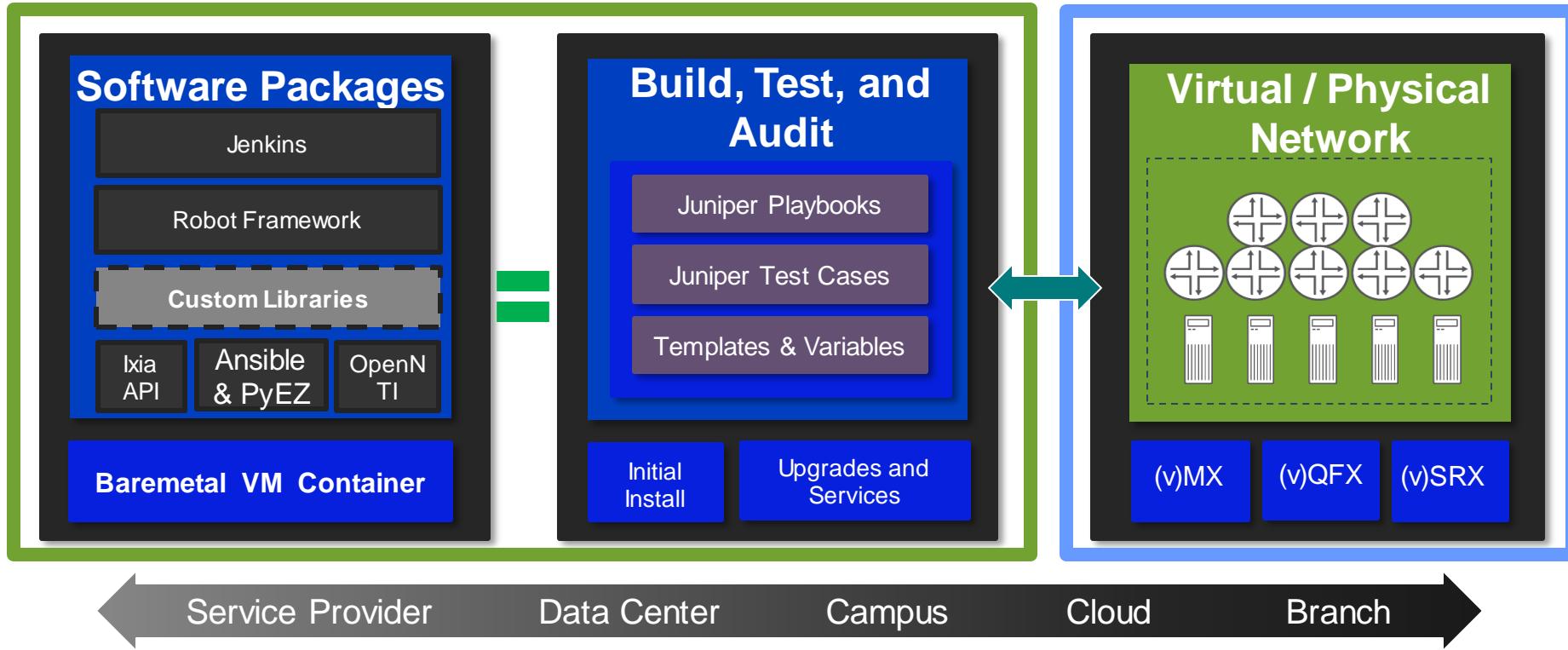
Architecture

Juniper Solution. NITA.



- Open Source, Vendor agnostic automation framework
- Playbooks
- Libraries of real-world test cases
- Automation scripts representing best-practices
- Supported
- Battle tested

NITA Reference Architecture



NITA Reference Architecture



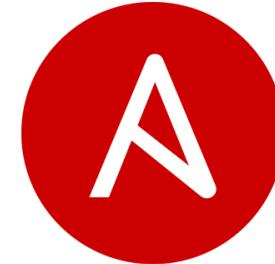
JENKINS

- CI/CD
- Leading open source automation server
- Support version control



ROBOT FRAMEWORK

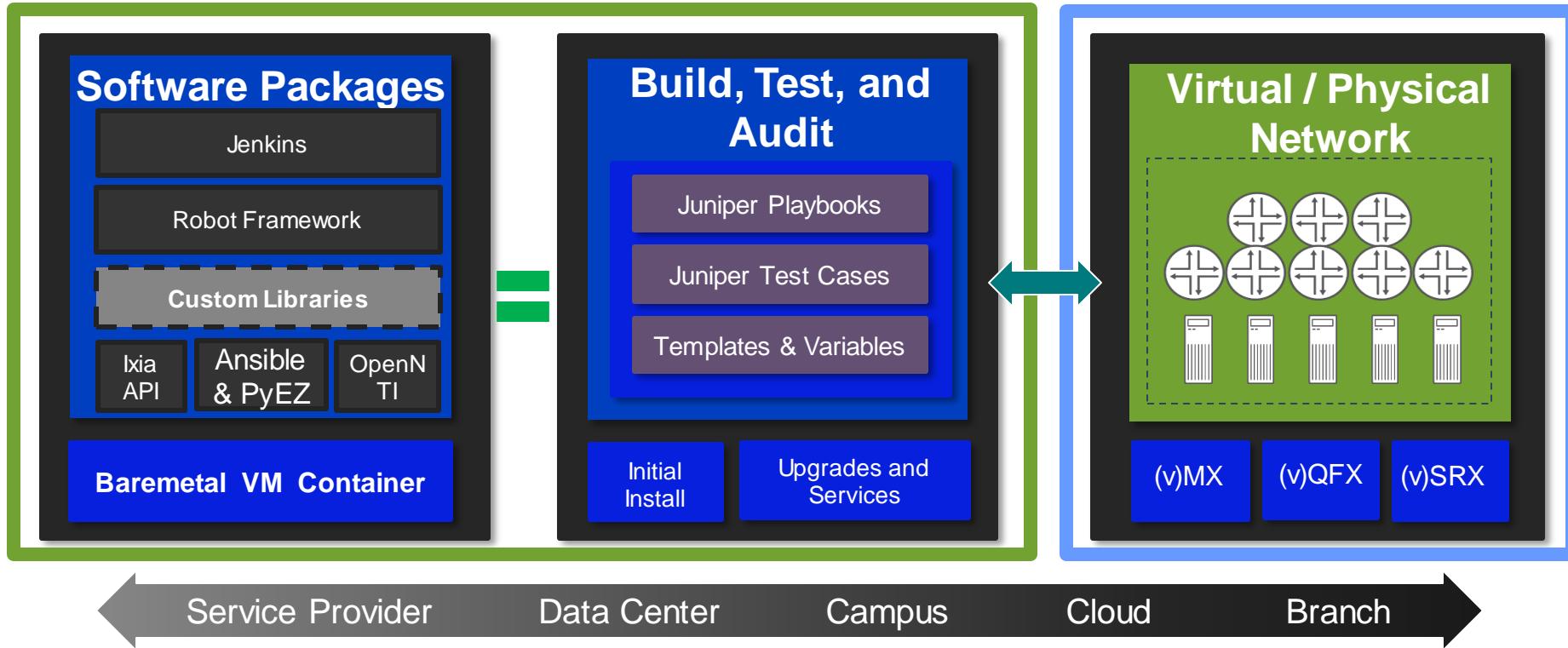
- Supports acceptance testing & acceptance test-driven dev



ANSIBLE

- Agentless
- Python based
- Multi-Device setup and configurations

NITA Reference Architecture



How to Get NITA in Your Network

NITA Automation Components

Platform Activation

Automation Development

Platform Support

Platform Maintenance



Juniper Professional Services

Build

Test

Audit



Customer Specific Automation Use Cases

Playbooks

Test Cases

Templates & Variables



Juniper NITA Baseline Testing & Ops Scenarios

Jenkins

Ansible

Robot Framework

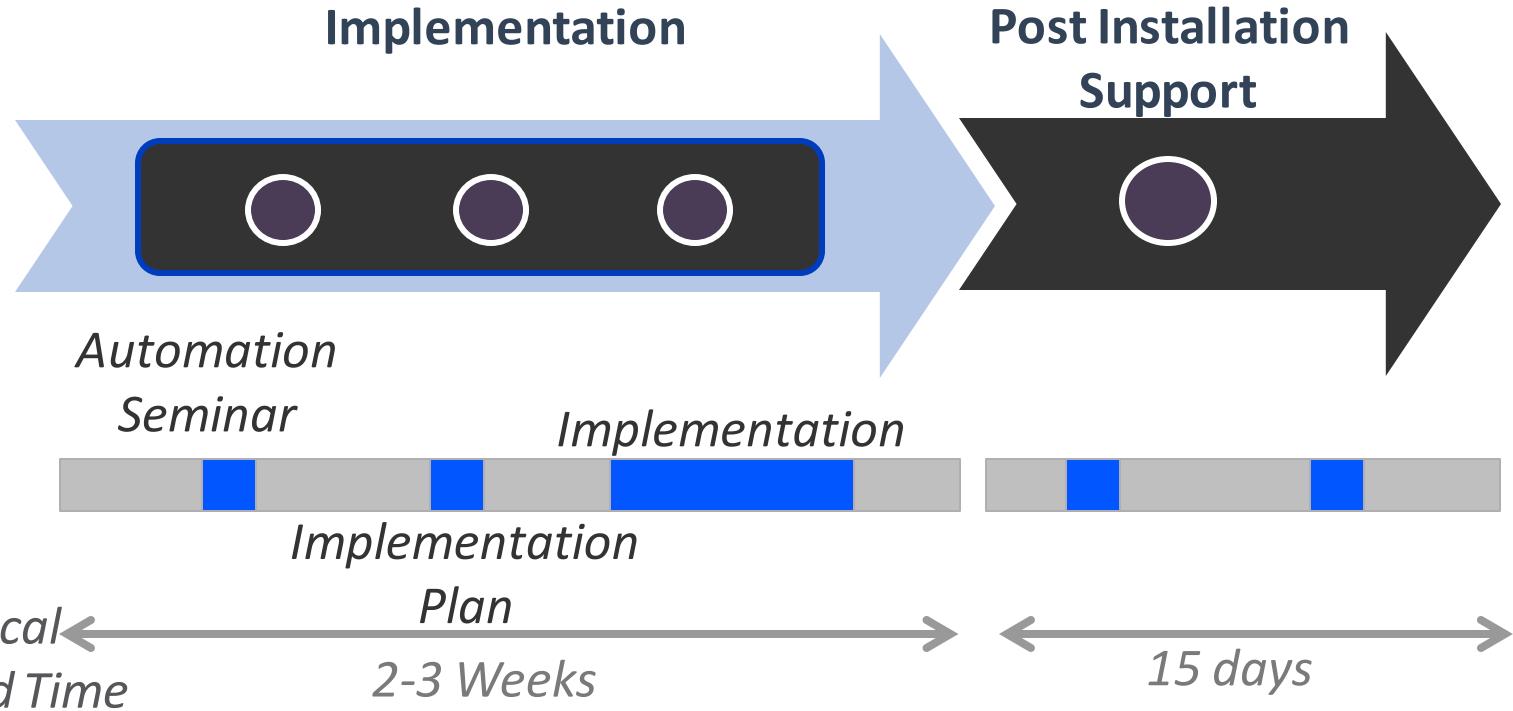
PyEZ

Django

Jinja2



NITA Open Source Automation Platform



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THANK YOU!

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