



The bridge to possible

SDWAN as a NetDevOps Engineer

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BRKENT-2006



#CiscoLive

Experience the
NetDevOps
practice

The ACME corporation is a big enterprise with a worldwide footprint. They recently implemented SDWAN in their global network.

They are adopting a NetDevOps approach for their operations.

Today this email came in...



Dear team,

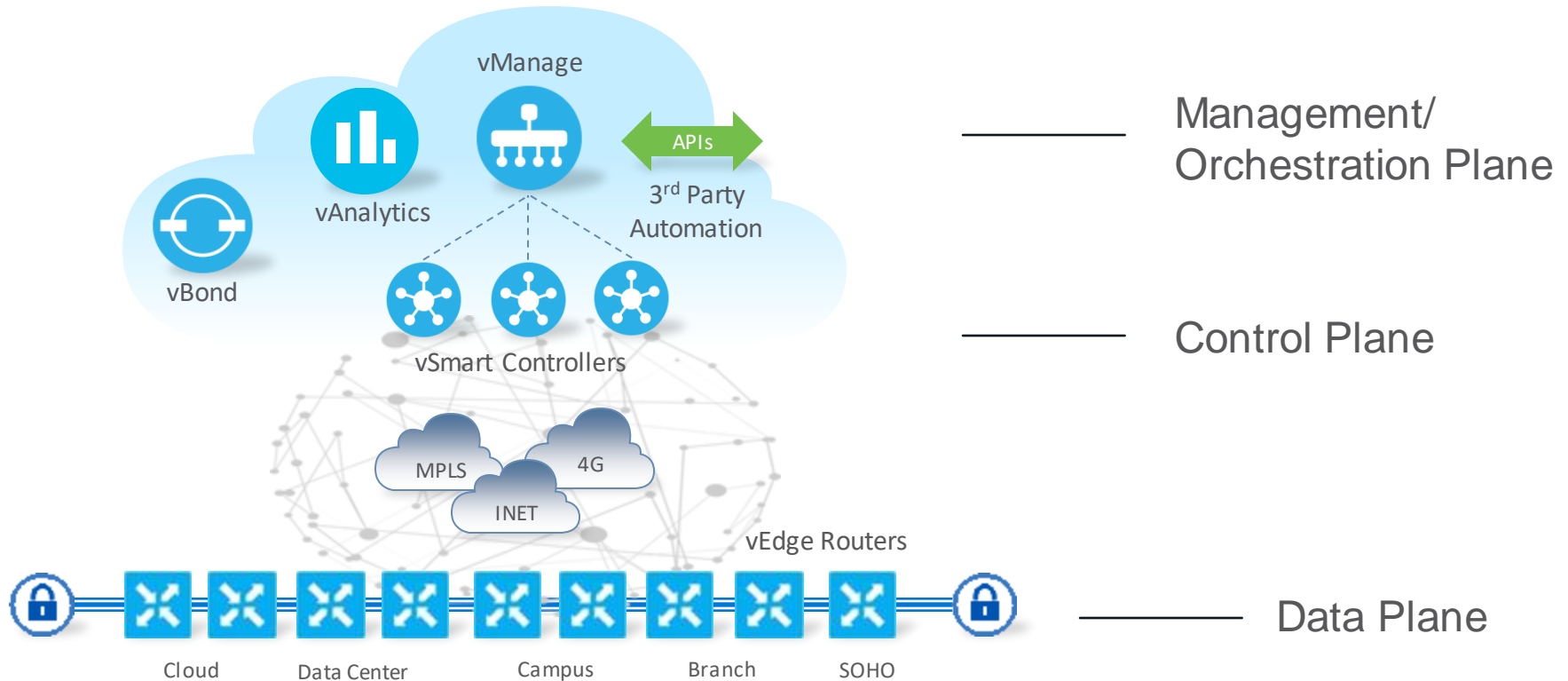
I am the IT manager of the Rome branch and I would like to open this ticket to dismiss the link we have with our MPLS provider.

Thanks



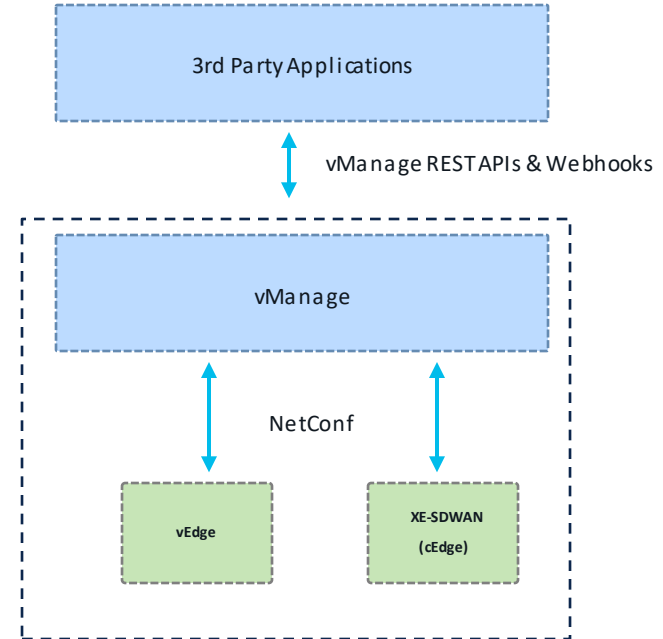
Cisco SD-WAN Solution Overview

Applying SDN Principles Onto The Wide Area Network

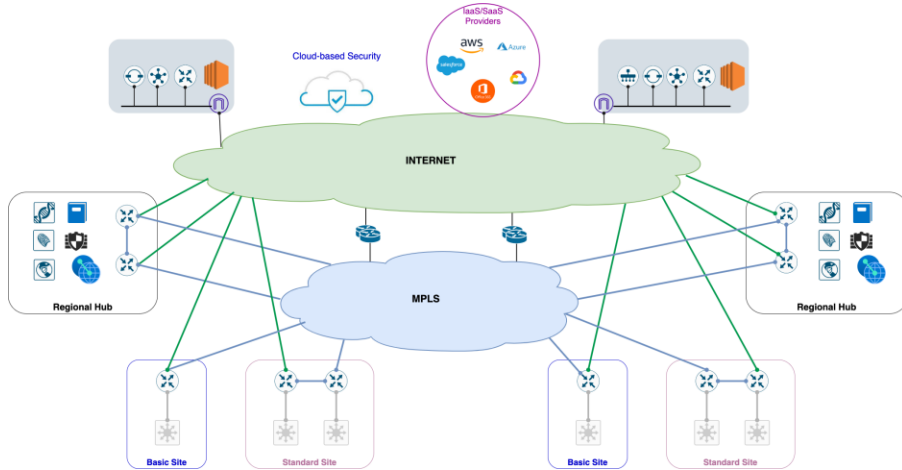


vManage REST APIs

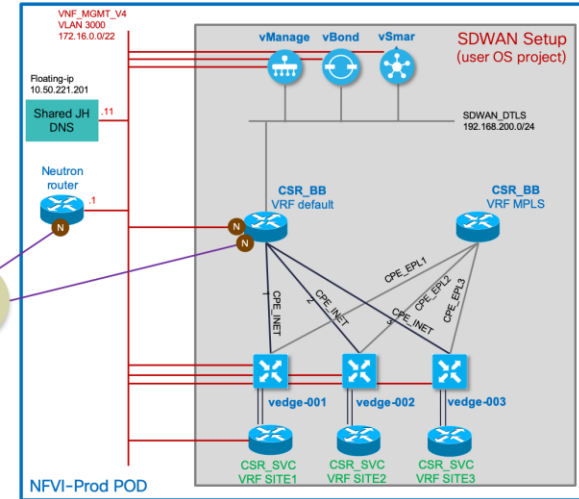
- vManage uses REST architecture which is stateless, client–server, cacheable communications protocol.
- vManage exposes REST APIs and webhooks to integrate with 3rd party systems
- vManage uses NetConf for configuring and managing edge devices



Our Design and Our On-demand LAB



Good approximation



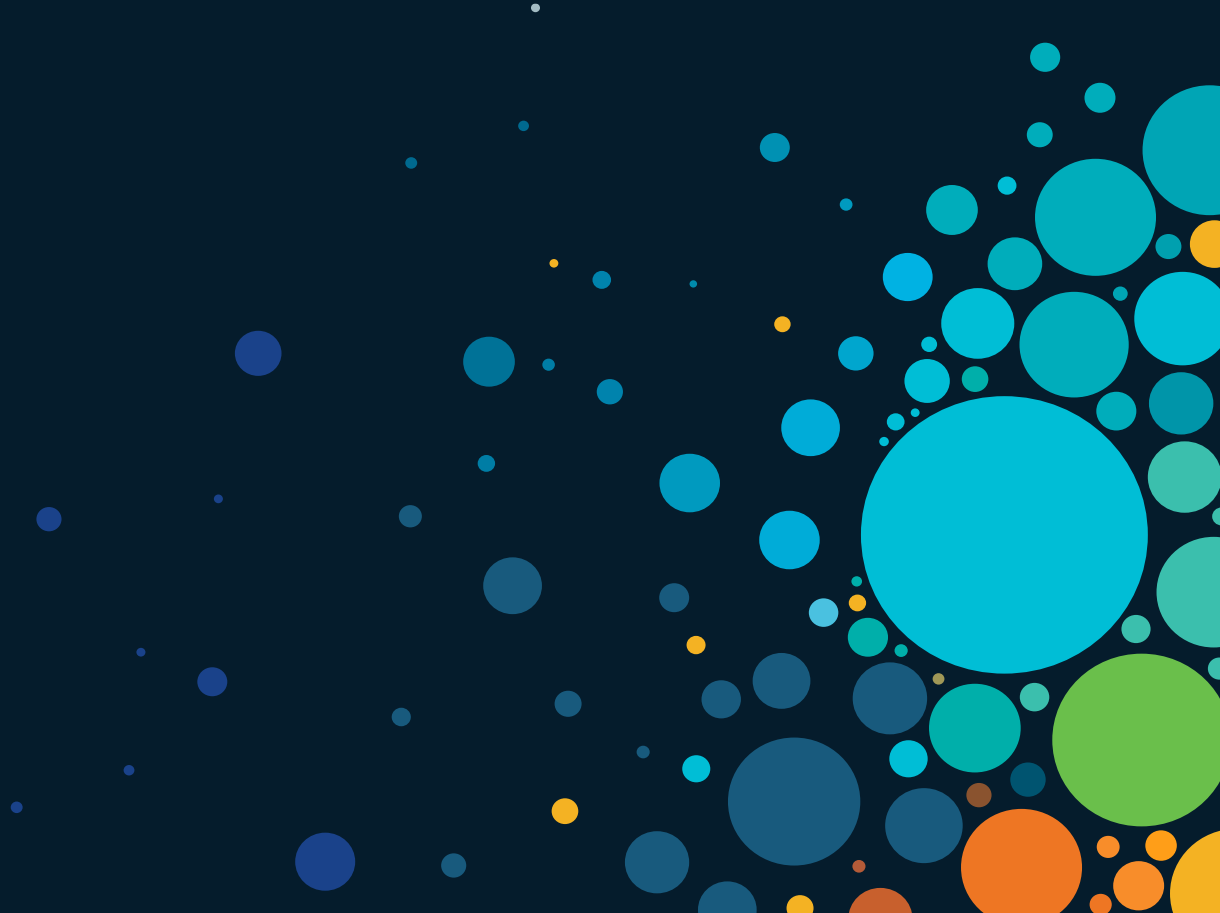
My notes during the process explanation

1. Reach the repository
2. Create a branch with the candidate change
3. Perform the change and commit
4. Trigger the Pull-Request
5. Enjoy the coffee



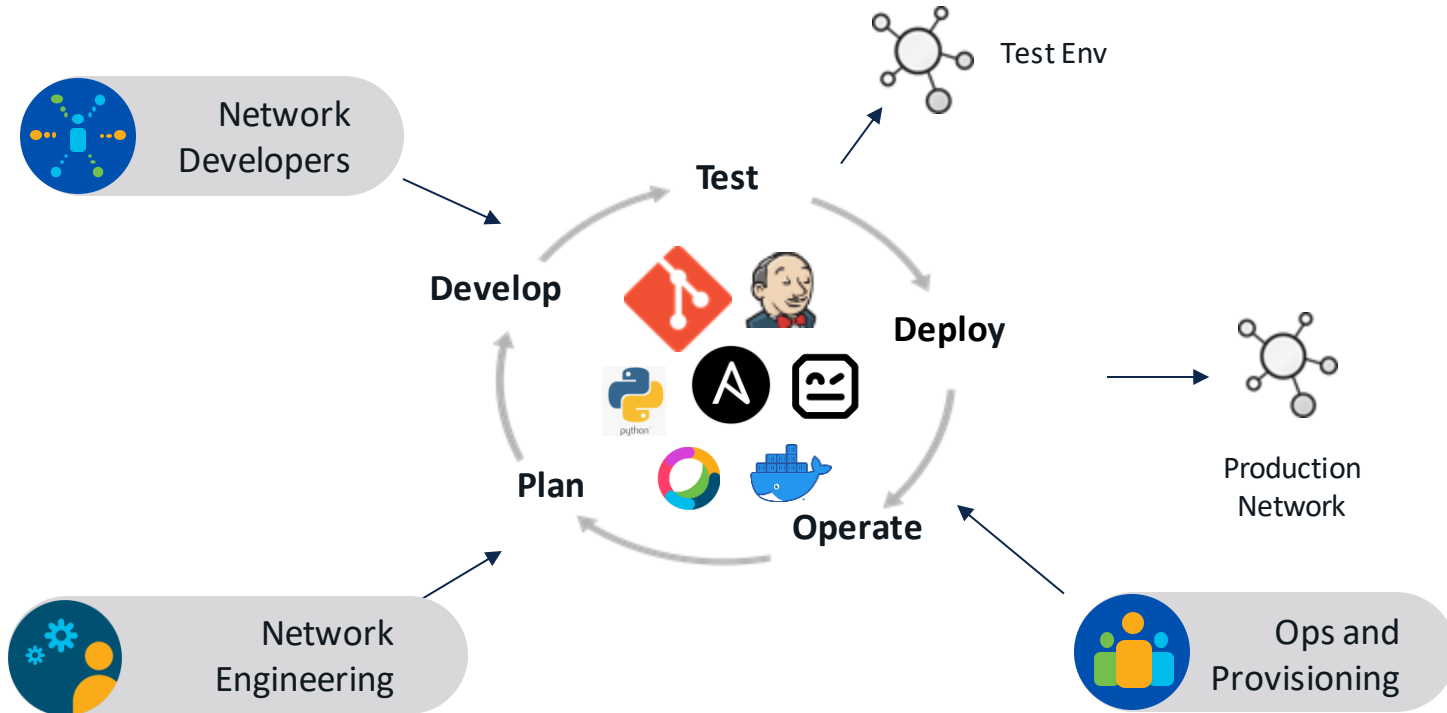
DEMO

Let's perform the change

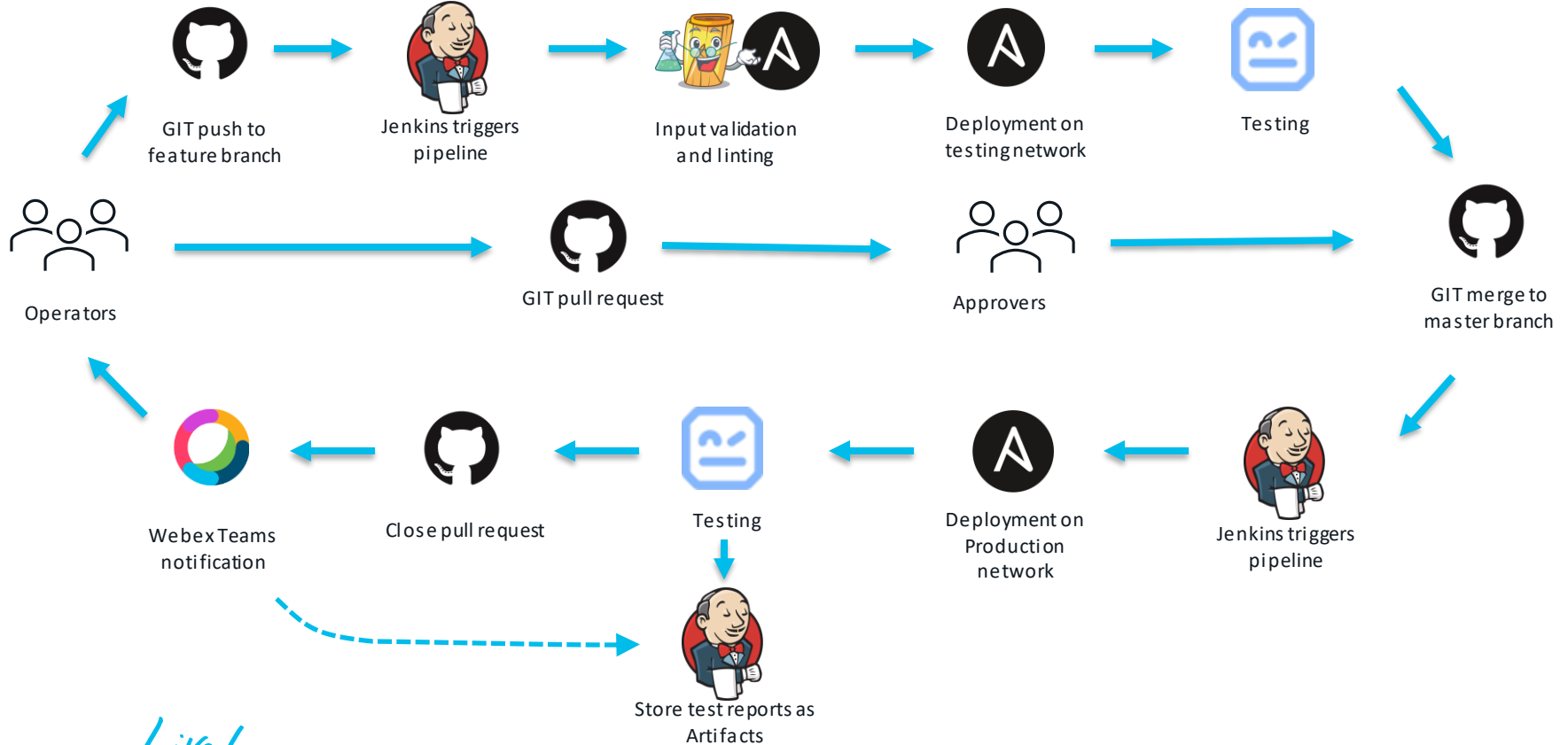


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Automation Tools and Capabilities



The pipeline in detail



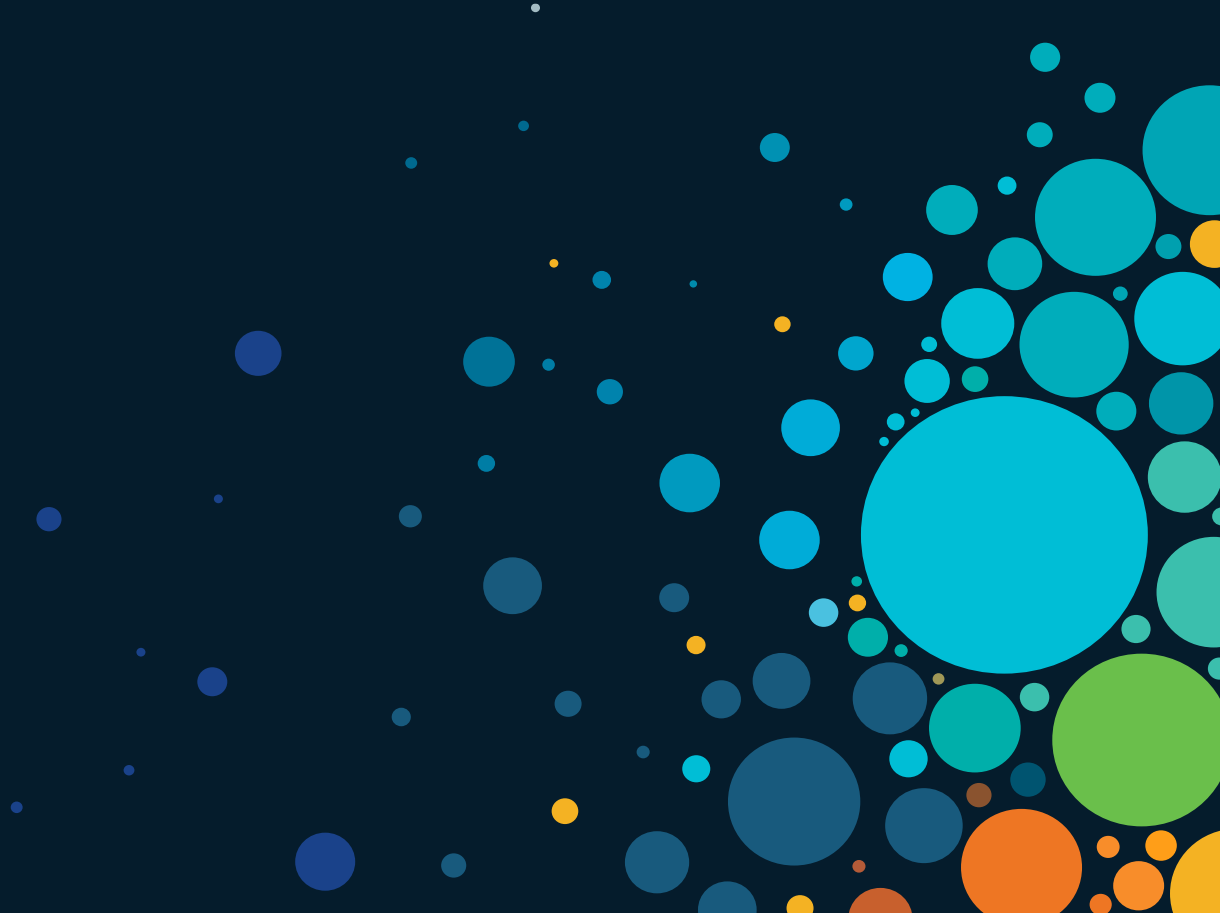
Test Automation

- Robot Framework
 - Open source **Test Automation Framework**
 - Test abstraction using natural language **keywords**
 - Large Ecosystem with a variety of **Keyword Libraries** already available
 - Easily integrates Python test libraries

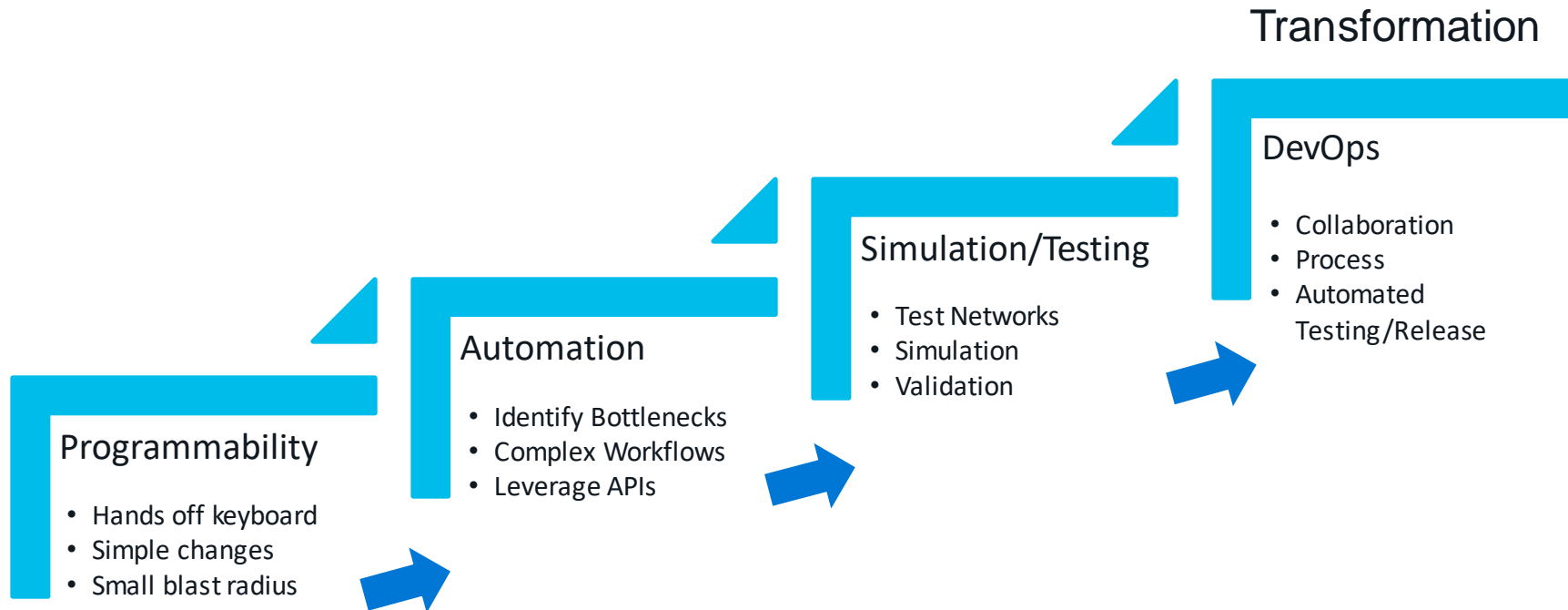
```
1  *** Settings ***
2  Library  CXTA
3  Resource  cxta.robot
4  Suite Setup  setup-test
5
6  *** Variables ***
7  ${TESTBED}  /home/cisco/cxta/src/CXTA/robot/sdwan_testbed.yaml
8  ${vmanage}  vmanage1
9
10 *** Test Cases ***
11 # vManage test cases
12 Verify the Organization Name
13     ${result}= sdwan API get org_name from "${vmanage}"
14     Should Contain  ${result}  CX-EMEAR-SDWANLAB
15     Log To Console  ${result}
16
17 Verify the Organization Name (alternative)
18     ${res}= sdwan API get object URI "/settings/configuration/organization" from "${vmanage}"
19     ${result}= jq filter text=${res} filter=.data[0].org
20     Should Contain  ${result}  CX-EMEAR-SDWANLAB
21     Log  ${result}
22
```

DEMO

Let's review the change



Automation Journey





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Thank you

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