https://github.com/ArctiqTeam/ansiblefest-sf-2017

Ansible for Networks: Beyond Static Templates

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```yaml
---
 - name: Juniper Configuration Playbook
   hosts: prod
   gather_facts: no
   connection: local
   tasks:
     - name: Install the Configuration to the Device(s)
       junos_config:
         src: "files/{{ inventory_hostname }}-interfaces.cfg"
         update: "{{ config_method | default('merge') }}"
         comment: "Configuration Updated by Ansible"

```

```
interfaces {
    em1 {
        description "Link to CiscoR0";
        unit 0 {
            family inet {
                address 192.168.100.11/24;
            }
        }
    }
    em2 {
        description "Link to PC Net";
        unit 0 {
            family inet {
                address 192.168.202.1/24;
            }
        }
    }
}
```

Dig Deeper - Did we solve the problem?

Consistency
Error Mitigation
Agility and Efficiency
Active Documentation

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How does the flow need to change?

Build the config files dynamically first - using Jinja2
Assemble and organize config files as needed
Deploy the generated config files

See it in action ...

Other Use Cases

NTP Configurations
SNMP Hosts and Traps
MOTD / Banner Messages

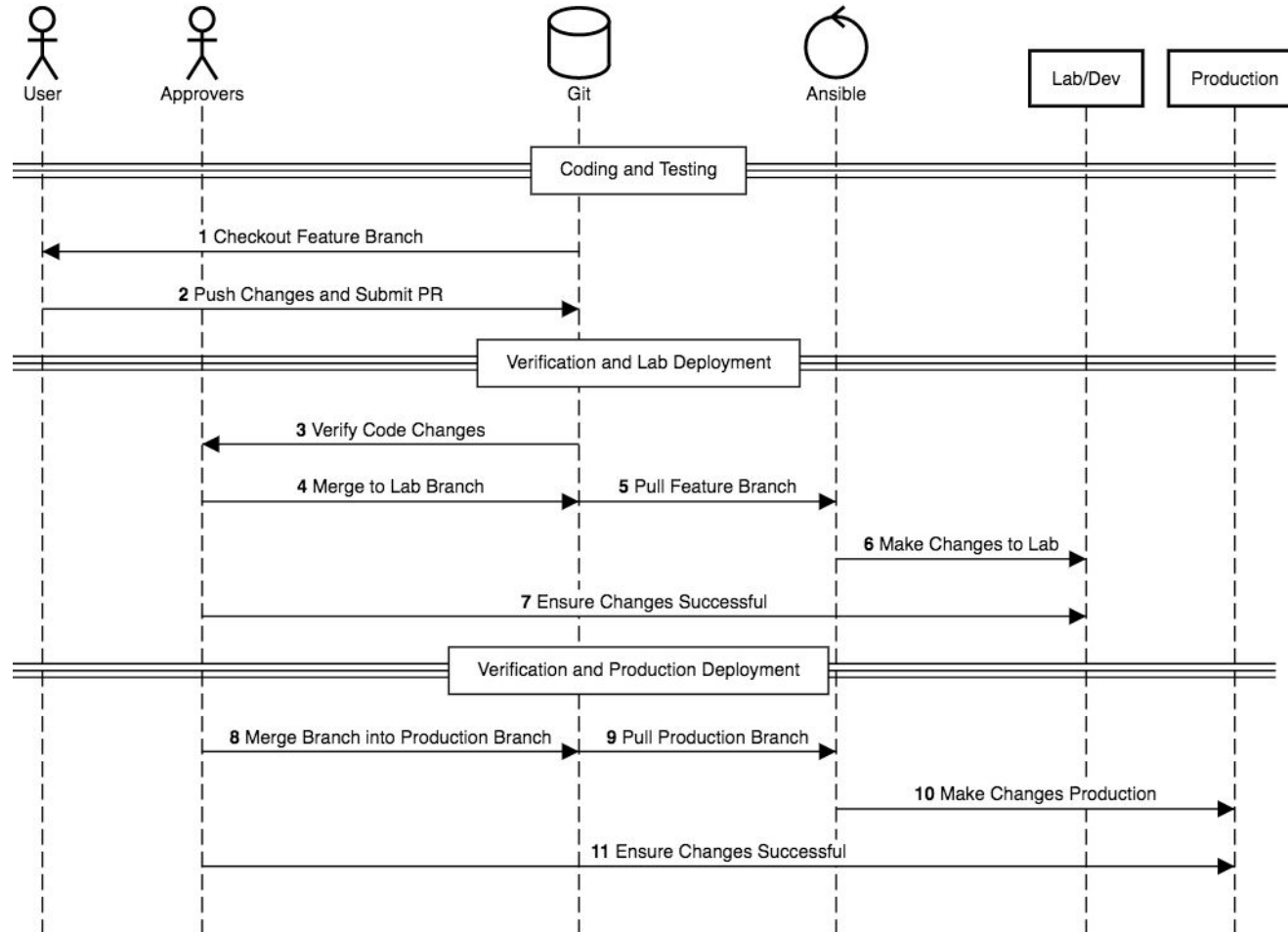Apply These Variables in Group and Host Vars as
Appropriate

How Do You Maintain this?

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```
├── ansible.cfg
├── inventory
│   ├── Lab
│   │   ├── group_vars
│   │   │   └── all
│   │   │       ├── ntp.yml
│   │   │       ├── snmp.yml
│   │   │       └── system.yml
│   │   ├── host_vars
│   │   │   ├── router3
│   │   │   │   ├── interfaces.yml
│   │   │   │   └── routing.yml
│   │   │   └── router4
│   │   │       ├── interfaces.yml
│   │   │       └── routing.yml
│   │   └── hosts
│   └── Prod
│       ├── group_vars
│       │   └── all
│       │       ├── ntp.yml
│       │       ├── snmp.yml
│       │       └── system.yml
│       ├── host_vars
│       │   ├── router1
│       │   │   ├── interfaces.yml
│       │   │   └── routing.yml
│       │   └── router2
│       │       ├── interfaces.yml
│       │       └── routing.yml
│       └── hosts
├── provision.yml
└── roles
    ├── junos
    │   ├── README.md
```

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

See it in action ...

CI/CD for Networks

Jenkins · Ansible · StackStorm · HU-BOT · slack · GitHub · Arctiq INTELLIGENT ARCHITECTURE

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
https://github.com/ArctiqTeam/ansiblefest-sf-2017

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