



8 khái niệm của Network Automation

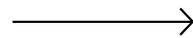
Slide cho cộng đồng VnPro Automation

- Infrastructure as code?
- Source of Truth?
- Data centric automation?
- Pipelines?
- DevOps?
- CI/CD?
- GitOps?
- NetDevOps?

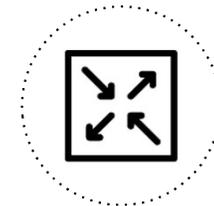
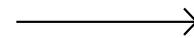
Infrastructure as code

manage IT infrastructure through definition files rather than physical hardware configuration or interactive configuration tools

```
vlan:  
- name: desktops  
  vlan_id: 20  
- name: servers  
  vlan_id: 30  
- name: printers  
  vlan_id: 40  
- name: DMZ  
  vlan_id: 50
```



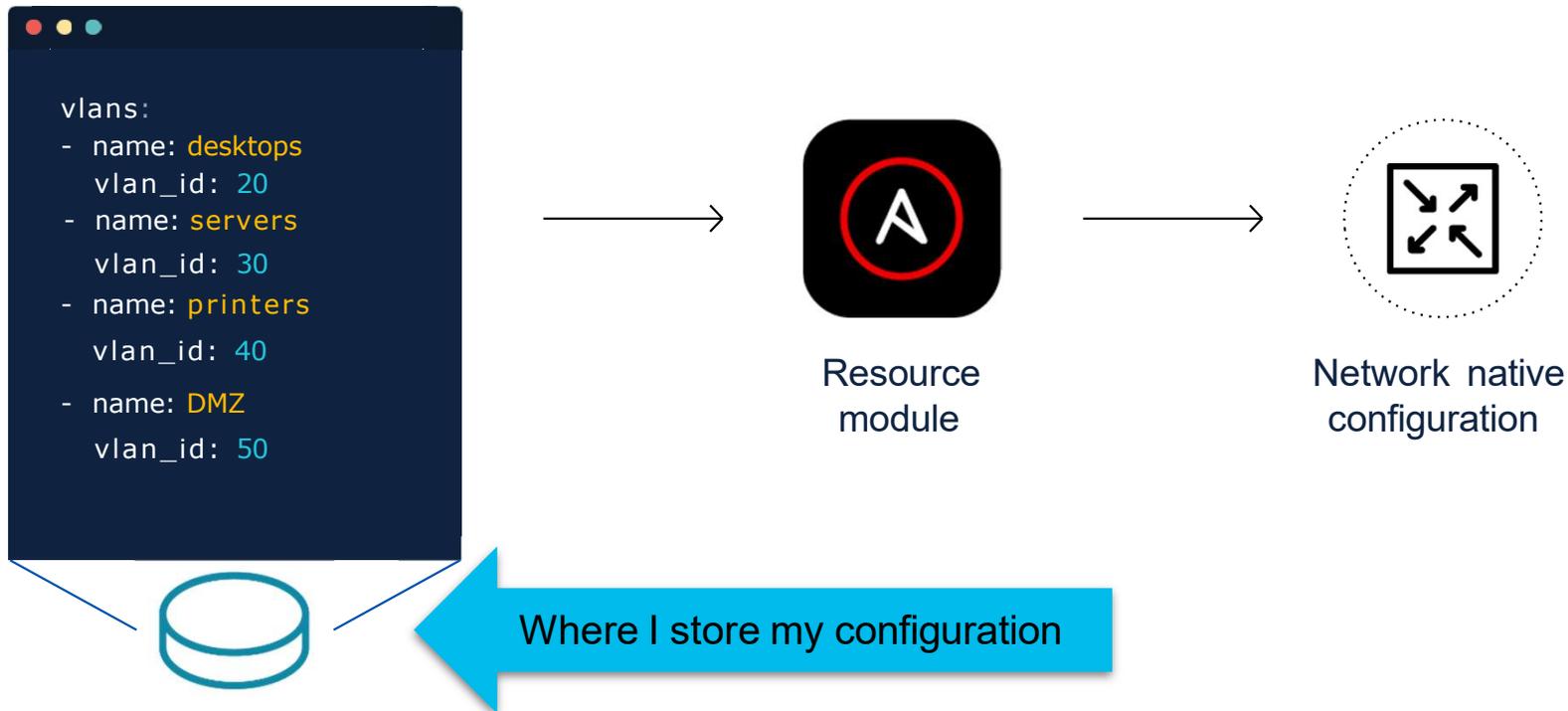
Resource
module



Network native
configuration

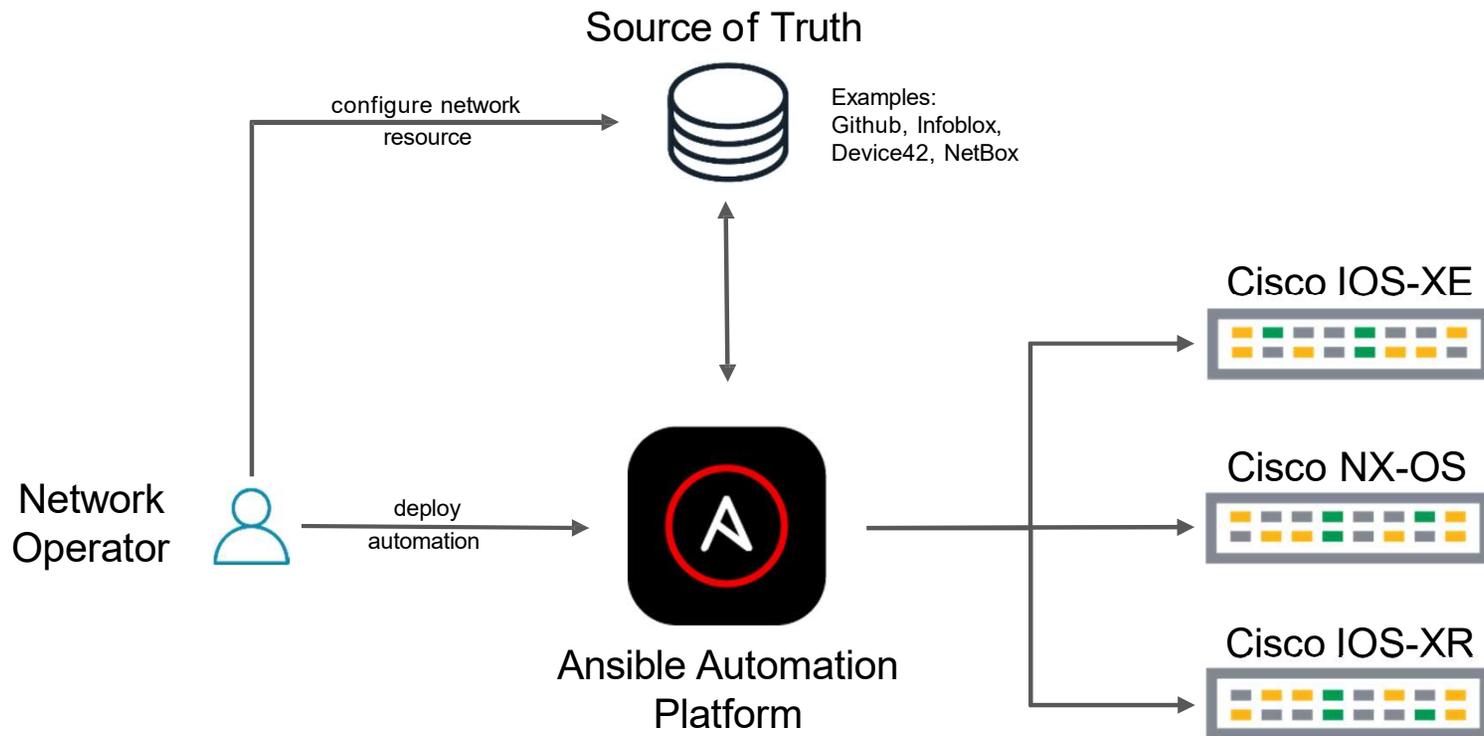
Source of Truth (SoT) 1/2

approach that ensures every piece of information is stored and updated in only one location



Source of Truth (SoT) 2/2

approach that ensures every piece of information is stored and updated in only one location



Data centric automation

focus on important data, not the implementation

```
vlan:  
- name: desktops  
  vlan_id: 20  
- name: servers  
  vlan_id: 30  
- name: printers  
  vlan_id: 40  
- name: DMZ  
  vlan_id: 50
```

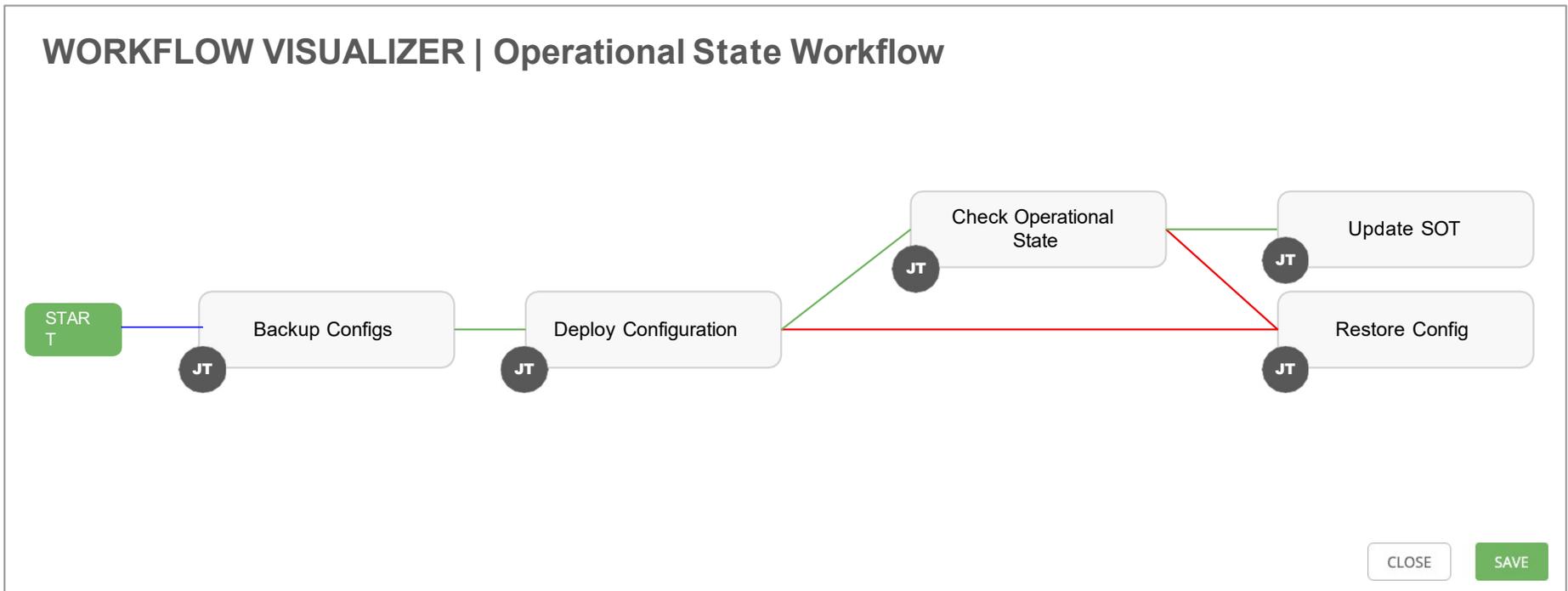
data

```
switch(config)# vlan 20  
switch(config-vlan-20)#  
switch(config-vlan-20)# vlan 30  
switch(config-vlan-30)# name servers  
switch(config-vlan-20)# vlan 40  
switch(config-vlan-40)# name printers  
switch(config-vlan-40)# vlan 50  
switch(config-vlan-50)# name DMZ
```

implementation

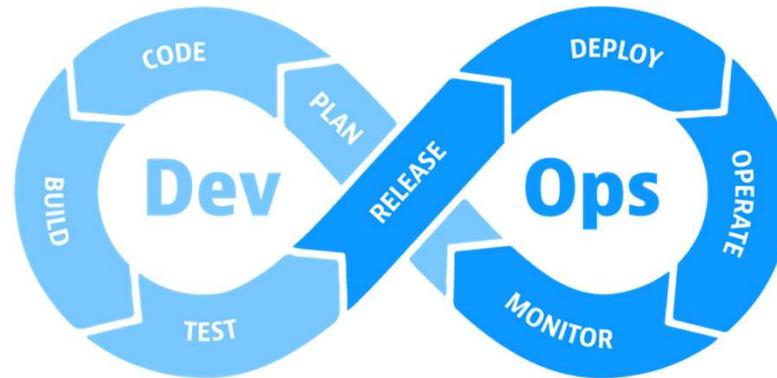
Pipelines

sequence of automated tasks or processes that work together to achieve a specific outcome or goal.



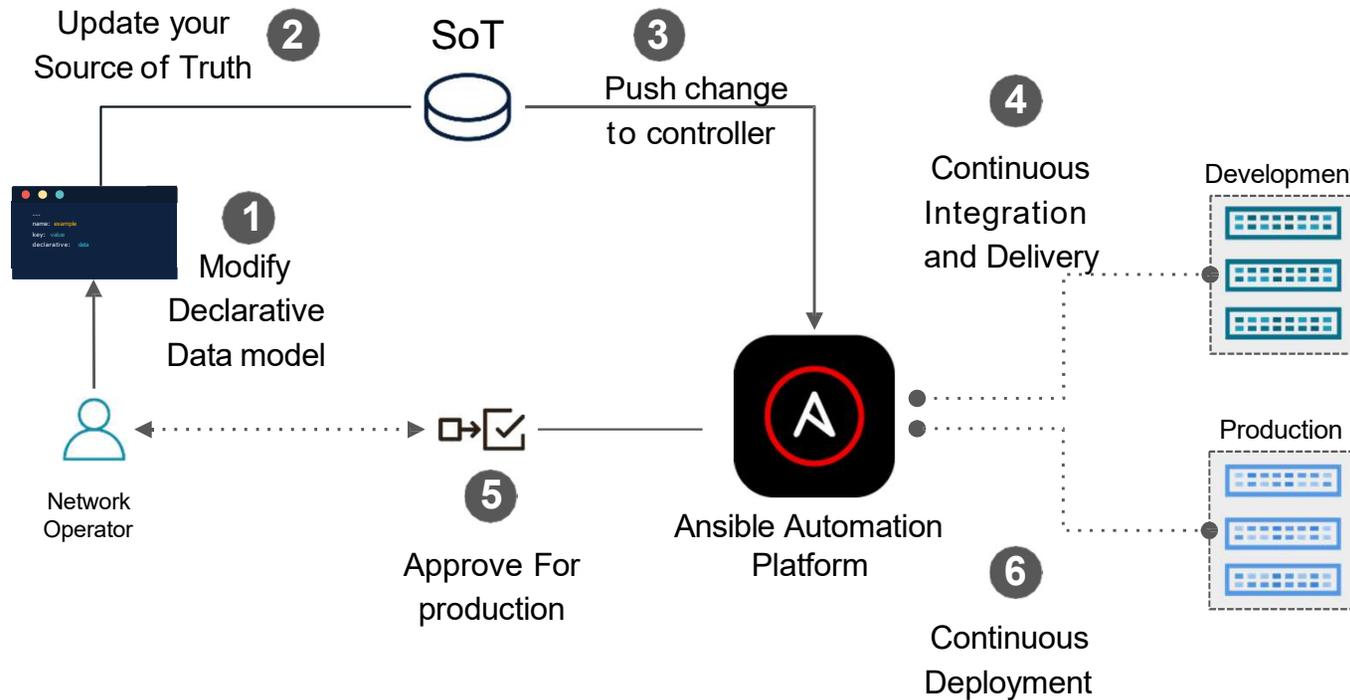
DevOps

breaking down the traditional silos between development and operations teams and promoting a culture of collaboration, shared responsibility, and continuous improvement.



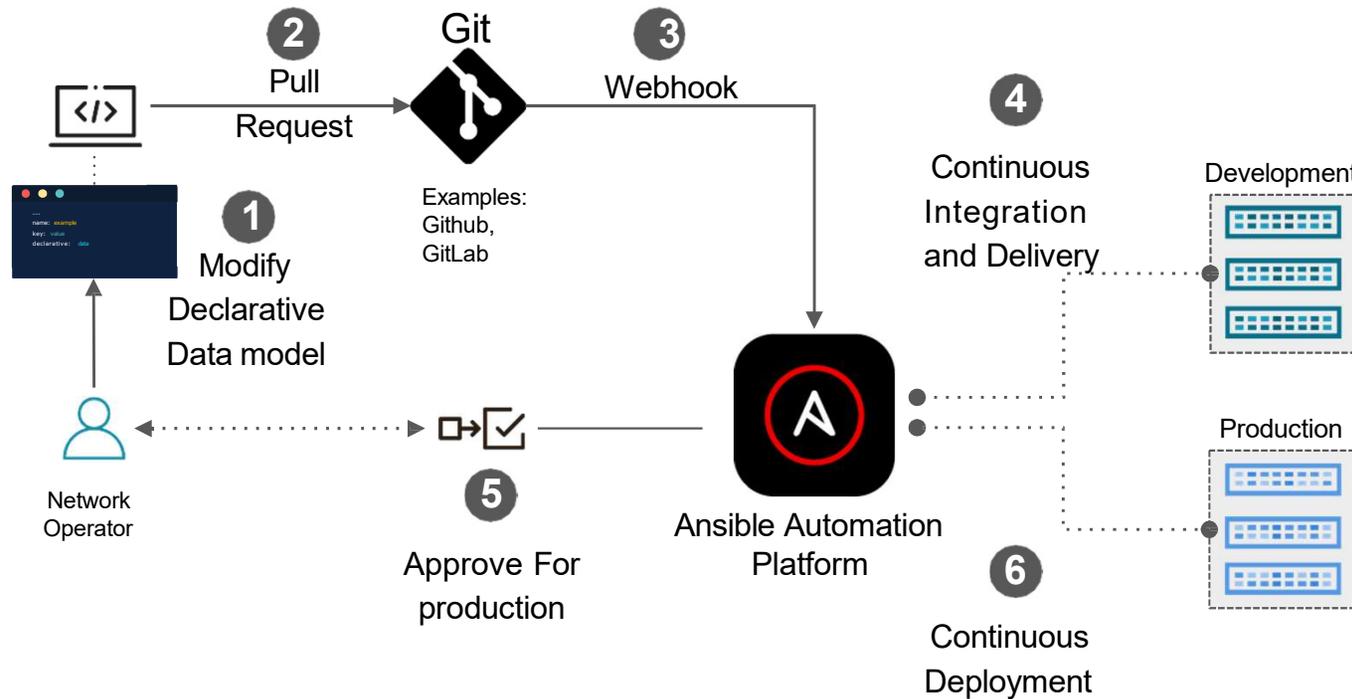
CI/CD

Continuous Integration and Continuous Delivery/Deployment. It is a set of practices and principles that aim to automate and streamline the process of building, testing, and deploying software applications.



GitOps

GitOps enables a declarative, version-controlled approach to managing infrastructure and applications



NetDevOps

practices and principles that applies DevOps methodologies to network infrastructure operations

