

Red Hat Certified Specialist in Advanced Automation: Ansible Core

Highlighting Ansible Automation



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Course Introduction



Role of automation

Components of Ansible automation

Ansible connectivity

Variables in Ansible

Advanced features

Demos!



Module Introduction



Challenging landscape

Ansible architecture and components

Best practices

Main building blocks

Demos!



Environmental Landscape Challenges



Distributed computing

The risky manual approach

The issue of configuration drift

Introducing Ansible Automation

**Configuration
management**

**Pre-deployed
infrastructure**

Ansible and Python

Playbooks

**Current and desired
state**

A key point



Debug Module



Introducing Ansible Automation

**Configuration
management**

**Pre-deployed
infrastructure**

**Current and desired
state**

Playbooks

Ansible and Python

A key point



Demo



Control and managed hosts

SSH running

User with correct privileges





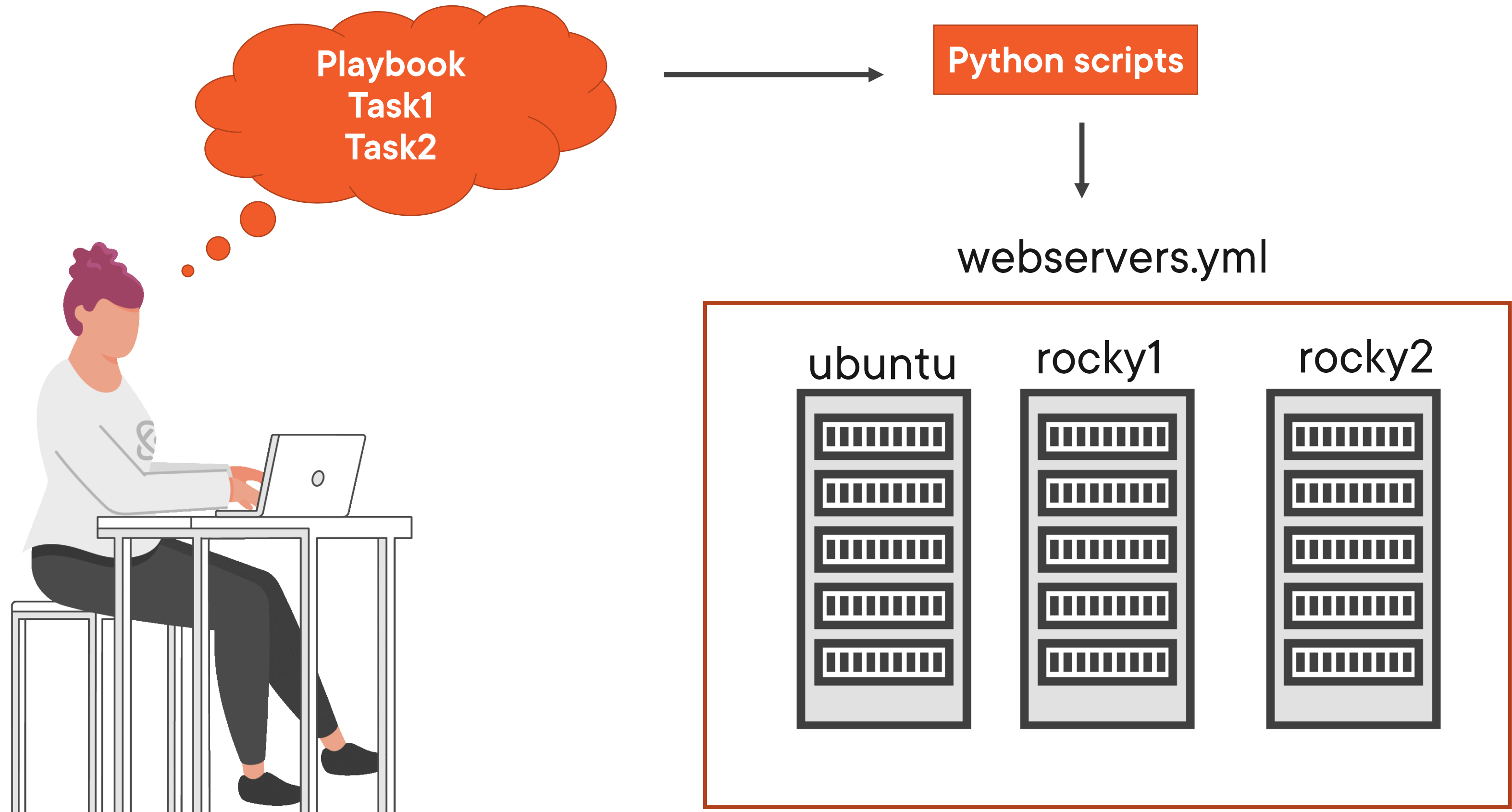
Separate code for site-specific configuration

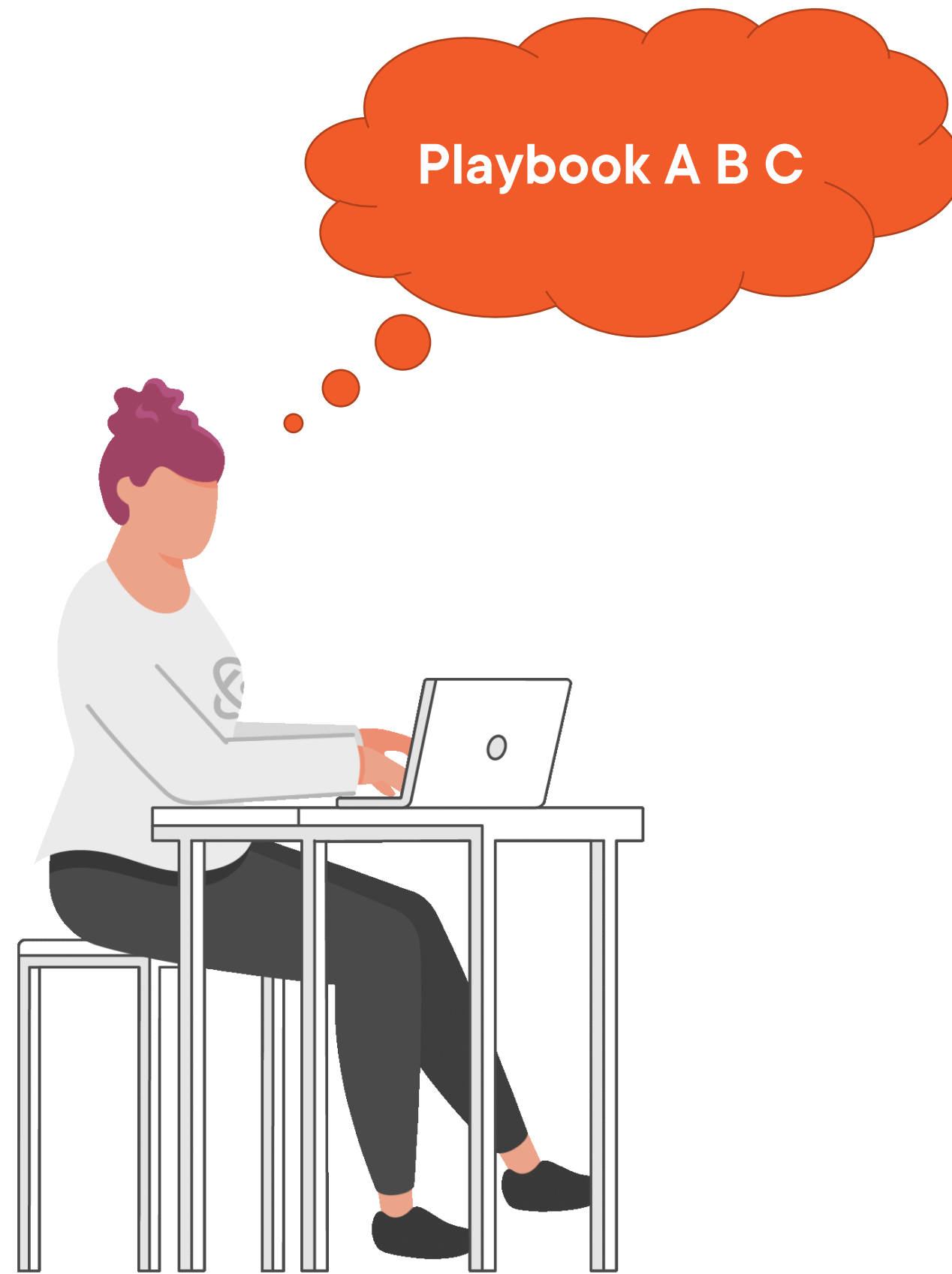
Agentless architecture

Ansible connectivity

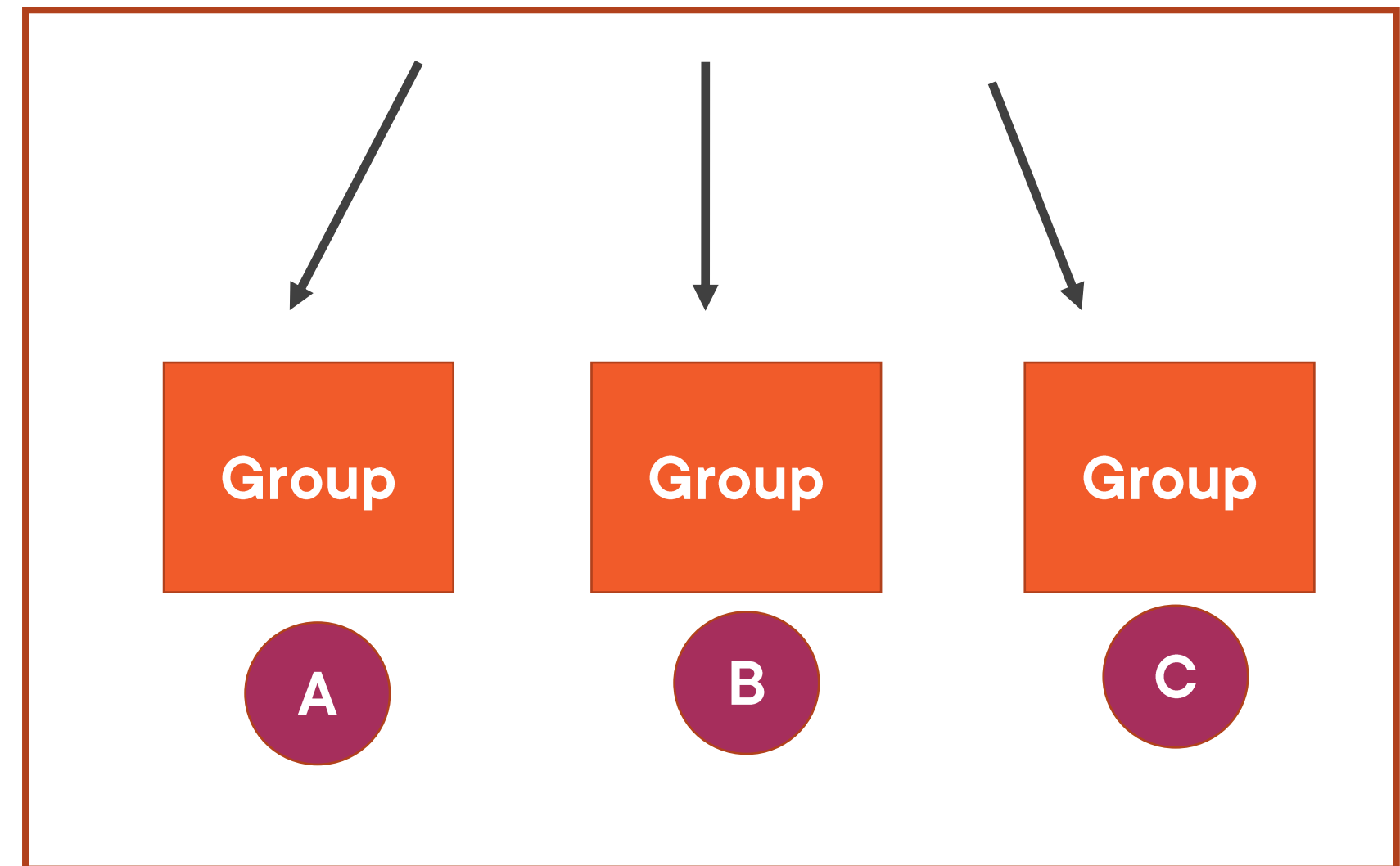
No daemons or listening agents







Ansible Inventory





Runs each task in parallel across hosts

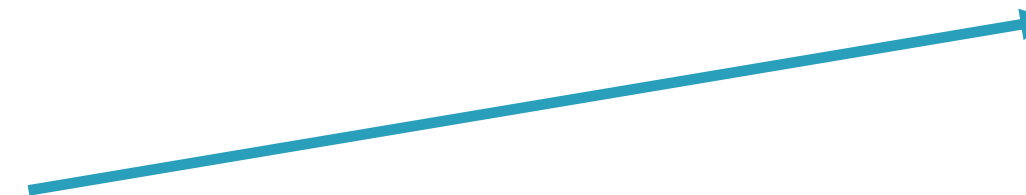
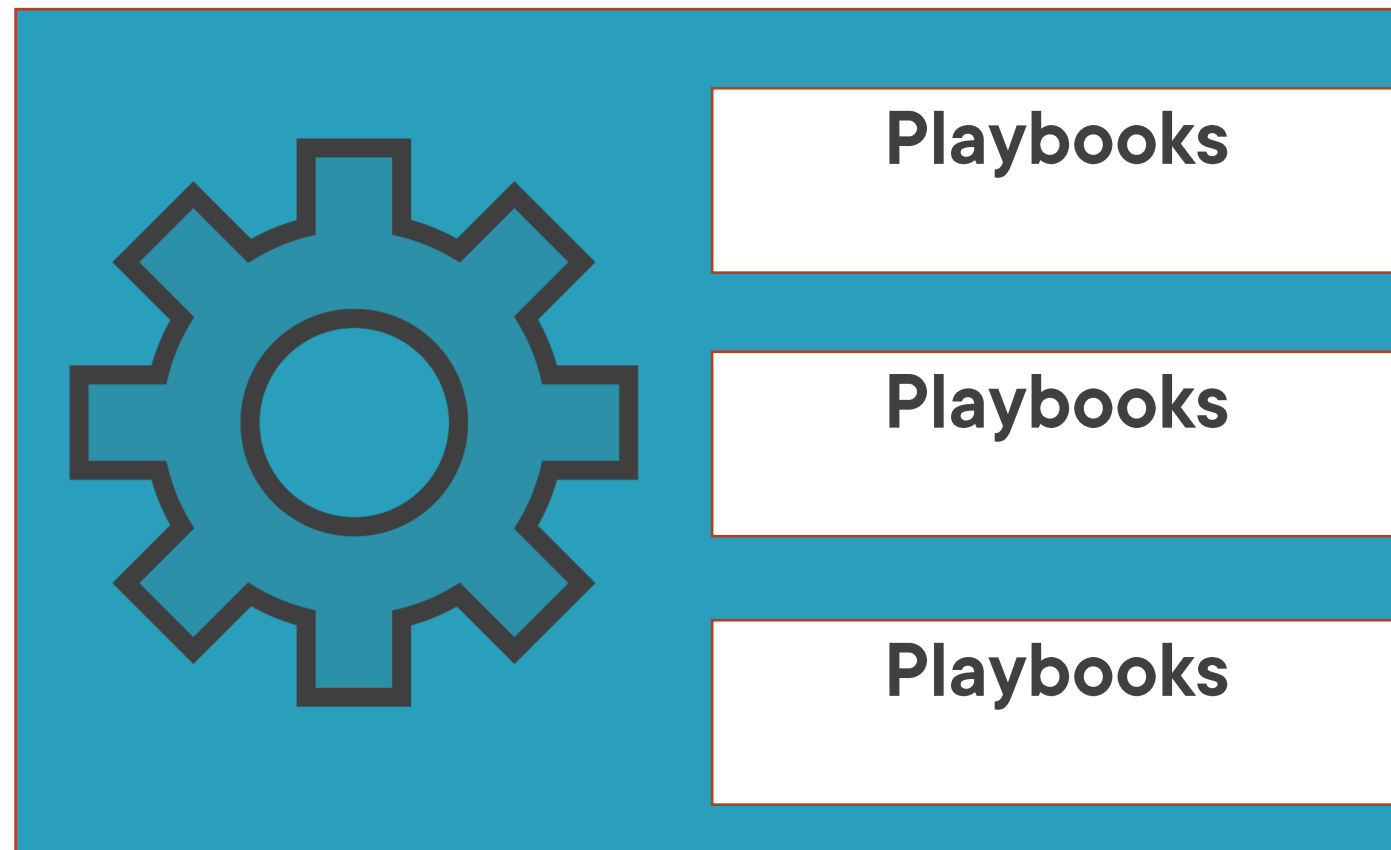
Ansible waits until all hosts have completed

Runs tasks in the order you specify them

Check playbook sanity and dry run



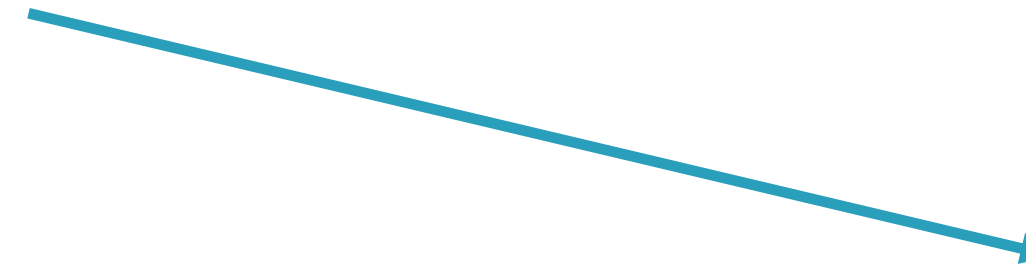
Ansible Controller



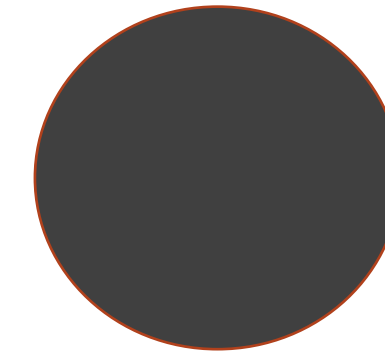
SSH Protocol



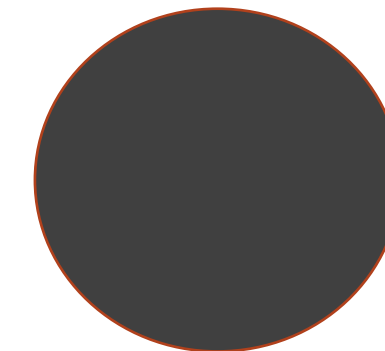
TCP Protocol



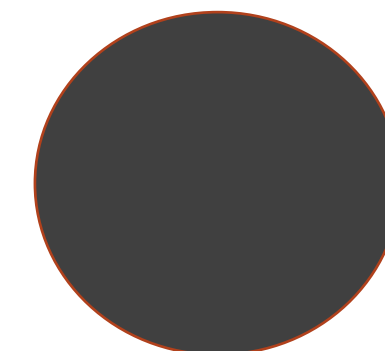
Ubuntu



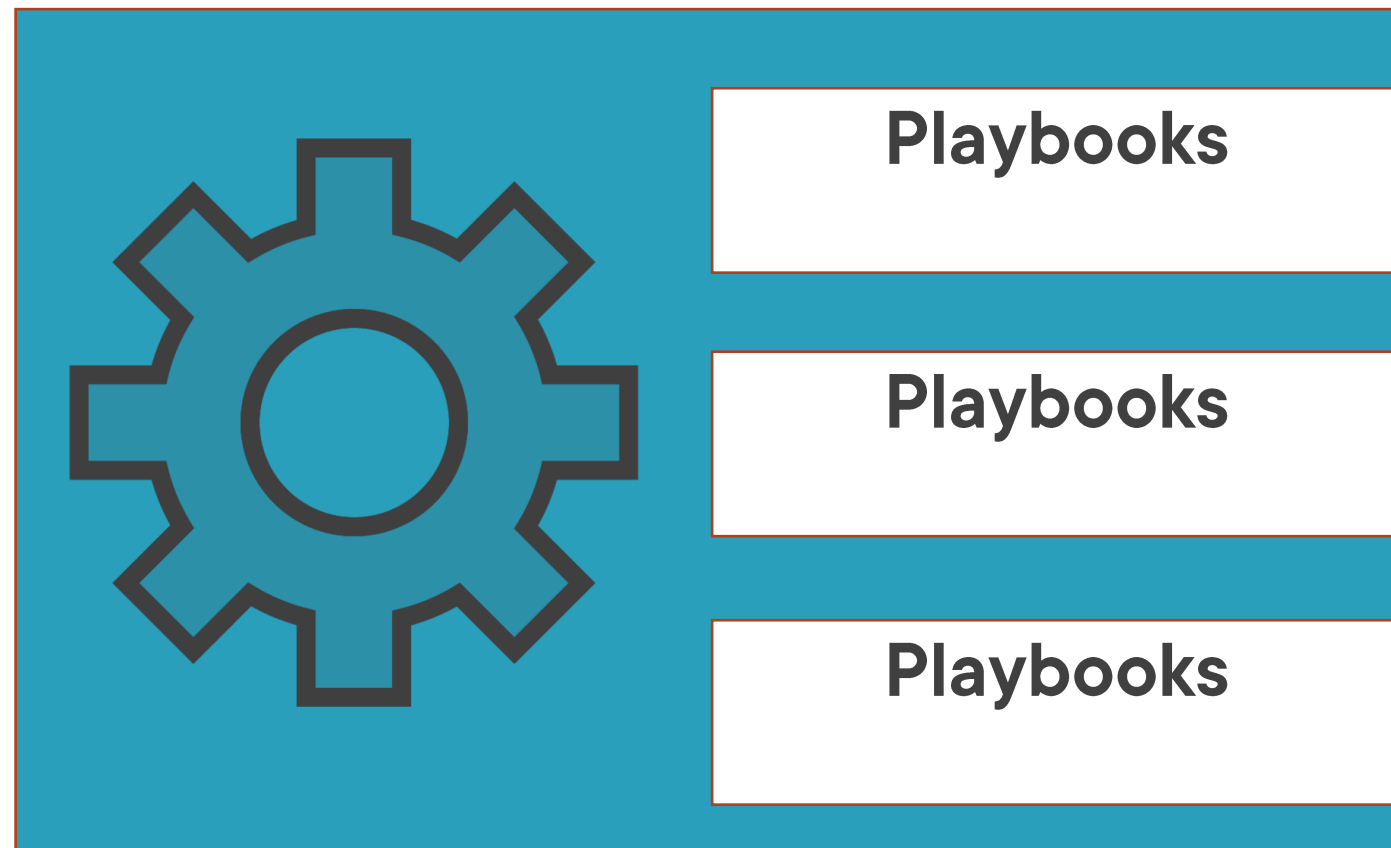
Rocky1



Rocky2



Ansible Controller

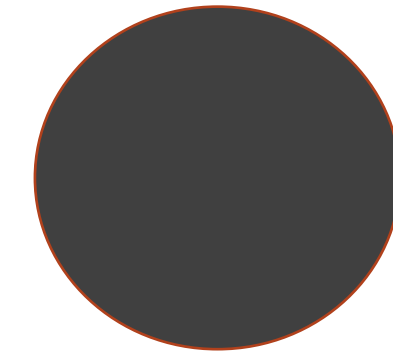


Control Master

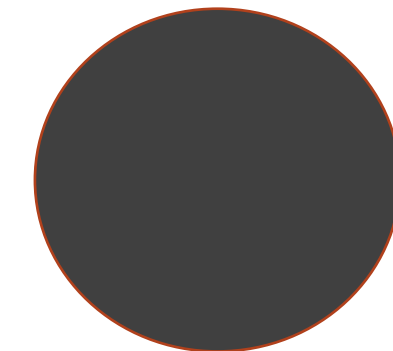
Control Persist

Pipelining

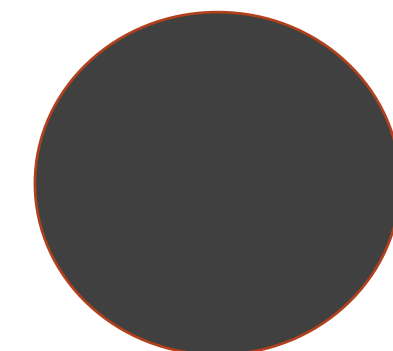
Ubuntu



Rocky1



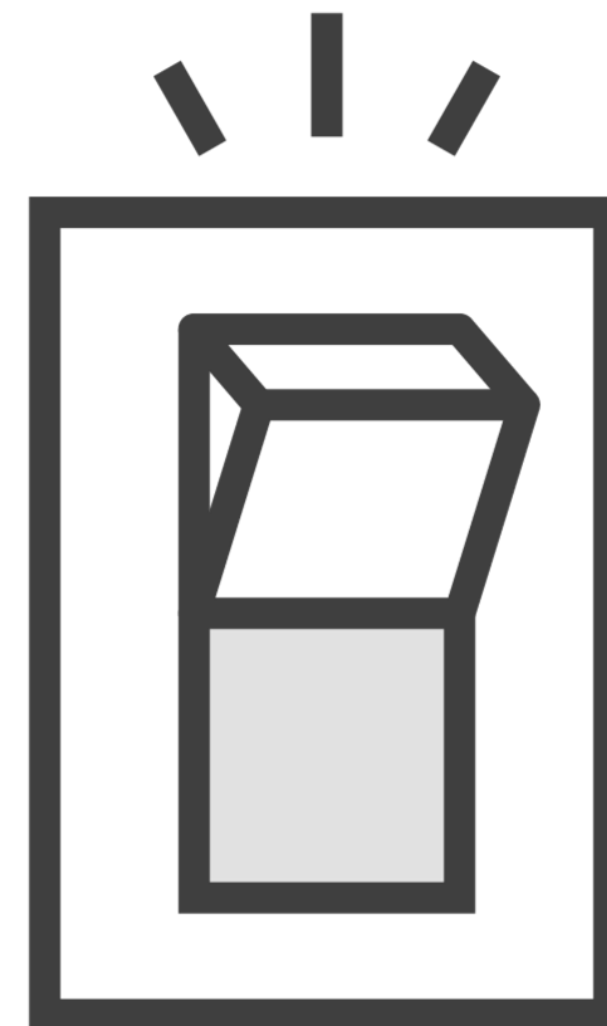
Rocky2



Security Alert



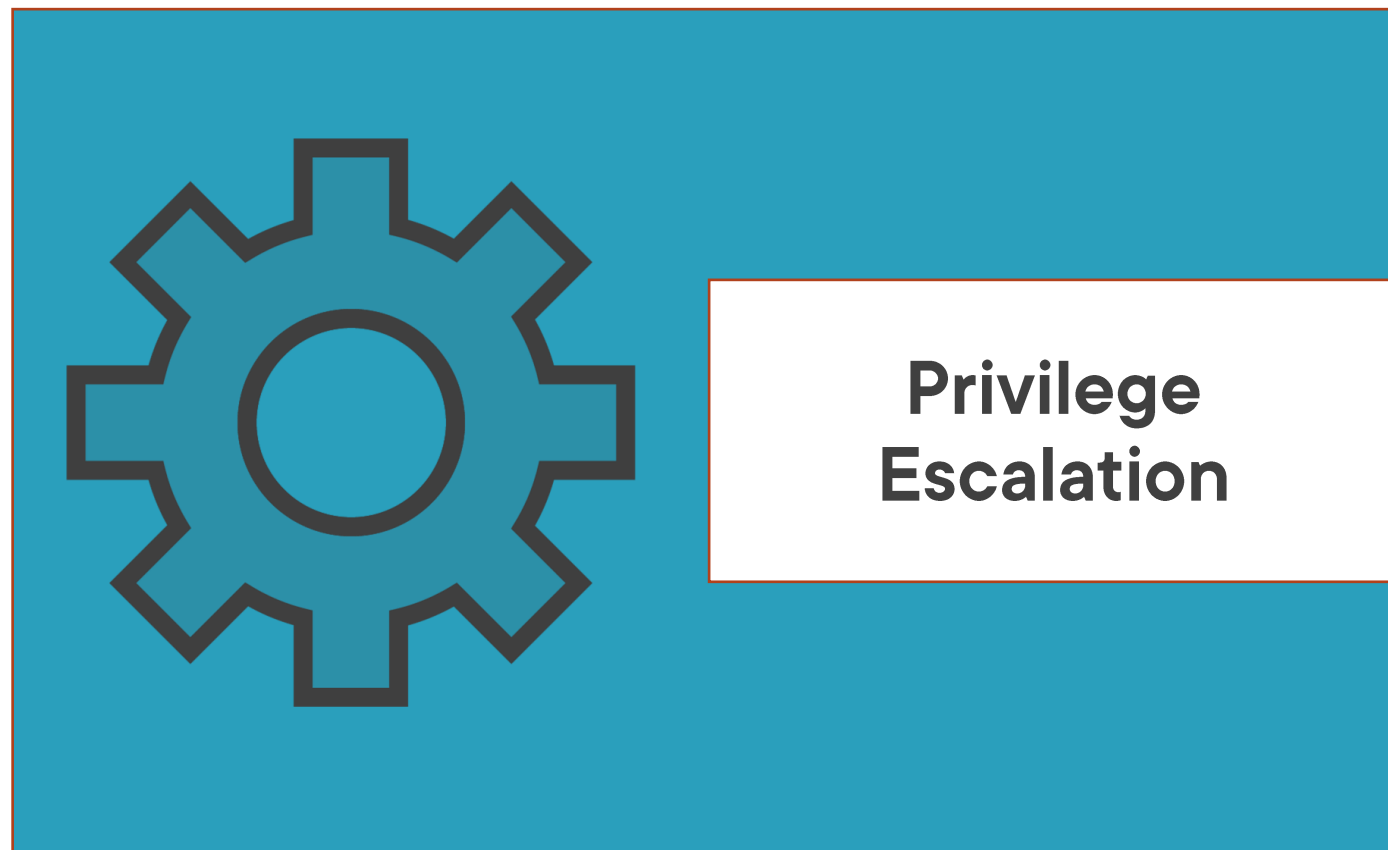
SSH configuration



Become=true as standard



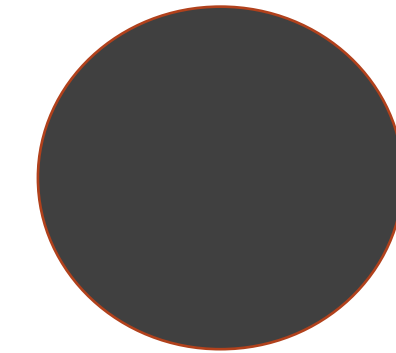
Ansible Controller



Permission denied



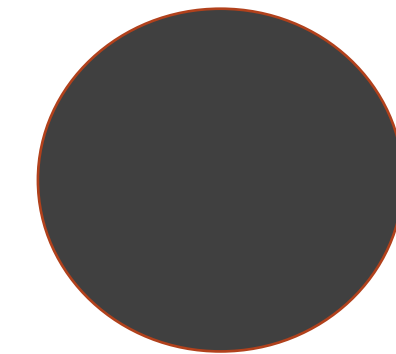
Ubuntu



Become: yes



Rocky1



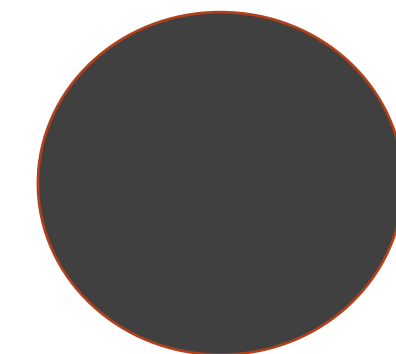
Execution



Become: yes



Rocky2



Execution



Demo



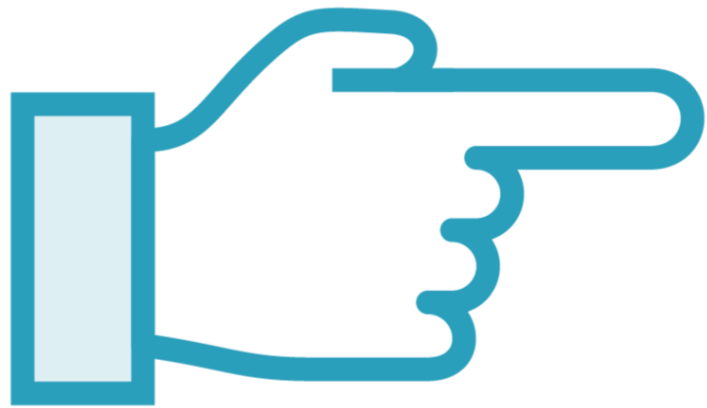
Privilege escalation for playbooks and play execution

Different escalation commands

Prepare hosts and managed privilege escalation



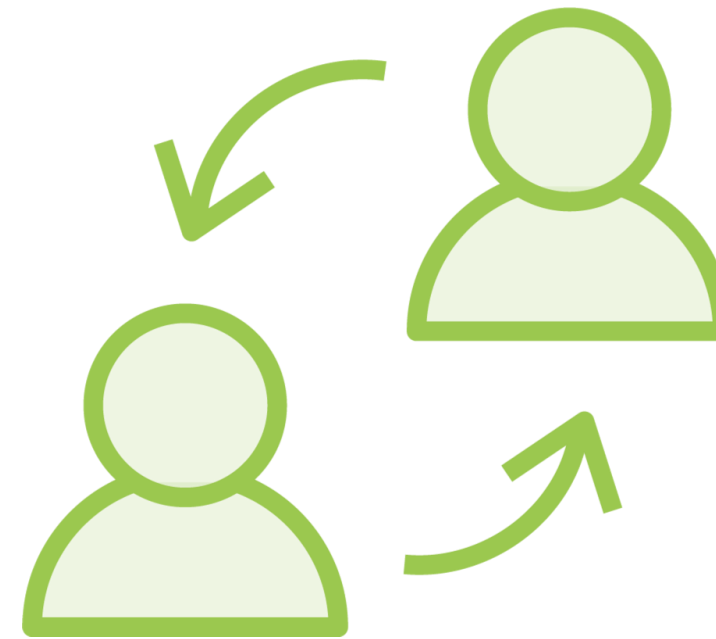
The Ansible Inventory



**Informing
Ansible**



**Inventory
highlights**



**Inventory
grouping**



**Inventory
types**

Ansible Modules



Highlighting Ansible modules

Extending Ansible modules

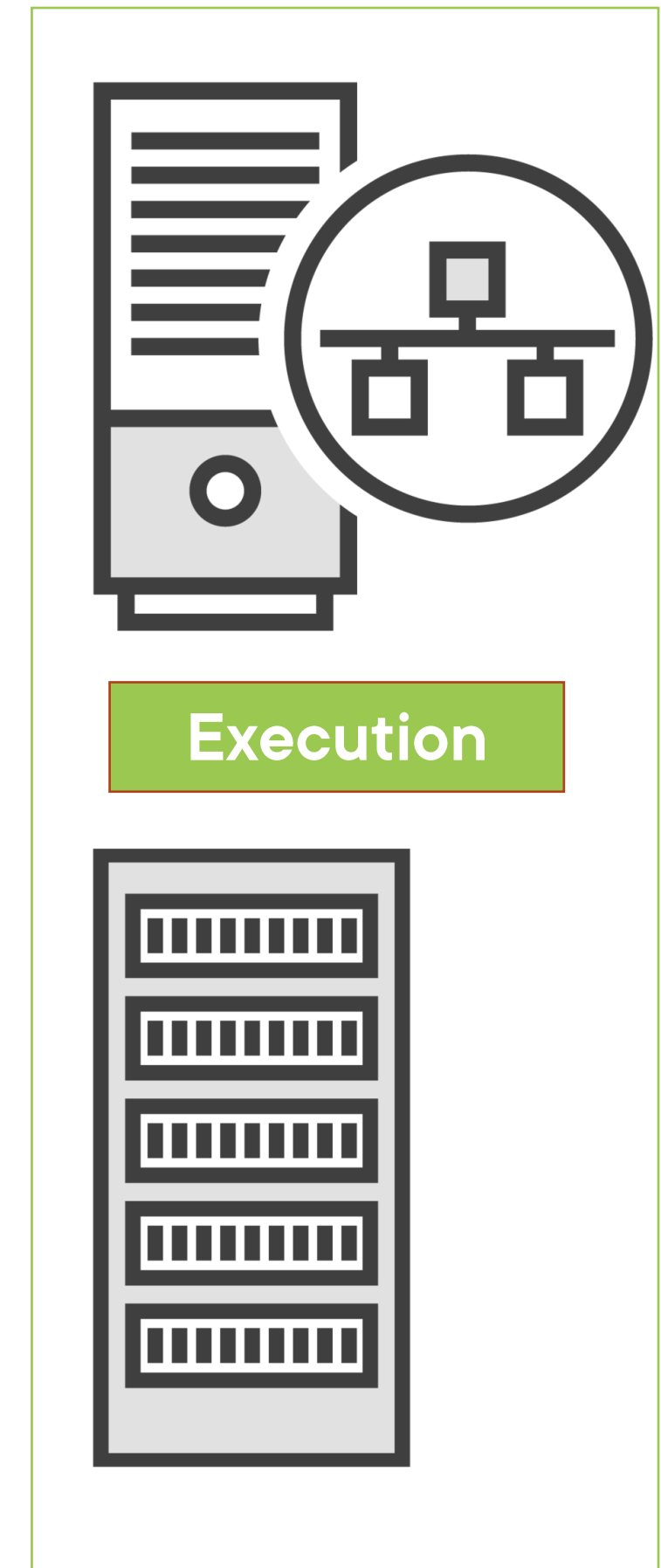
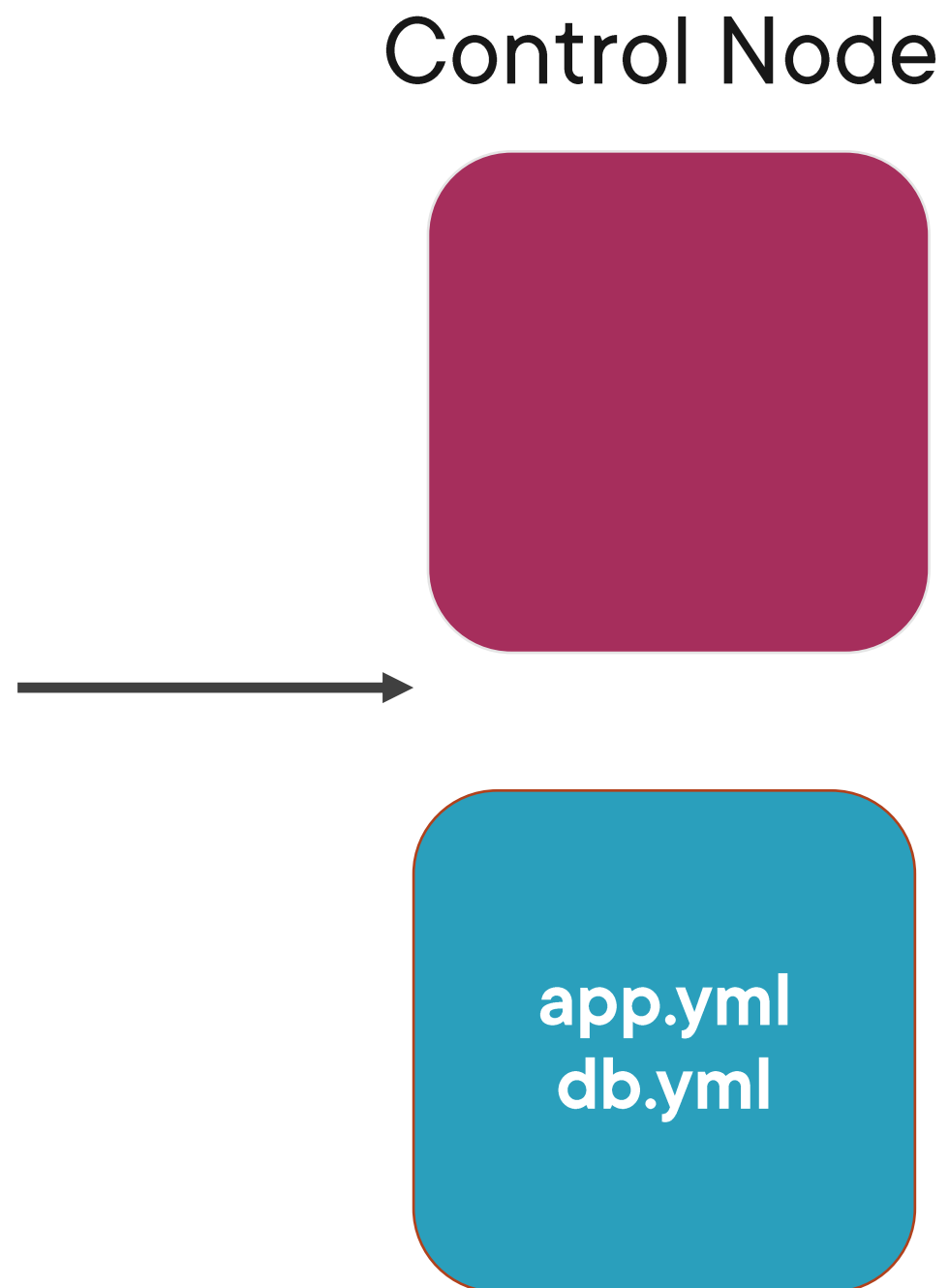
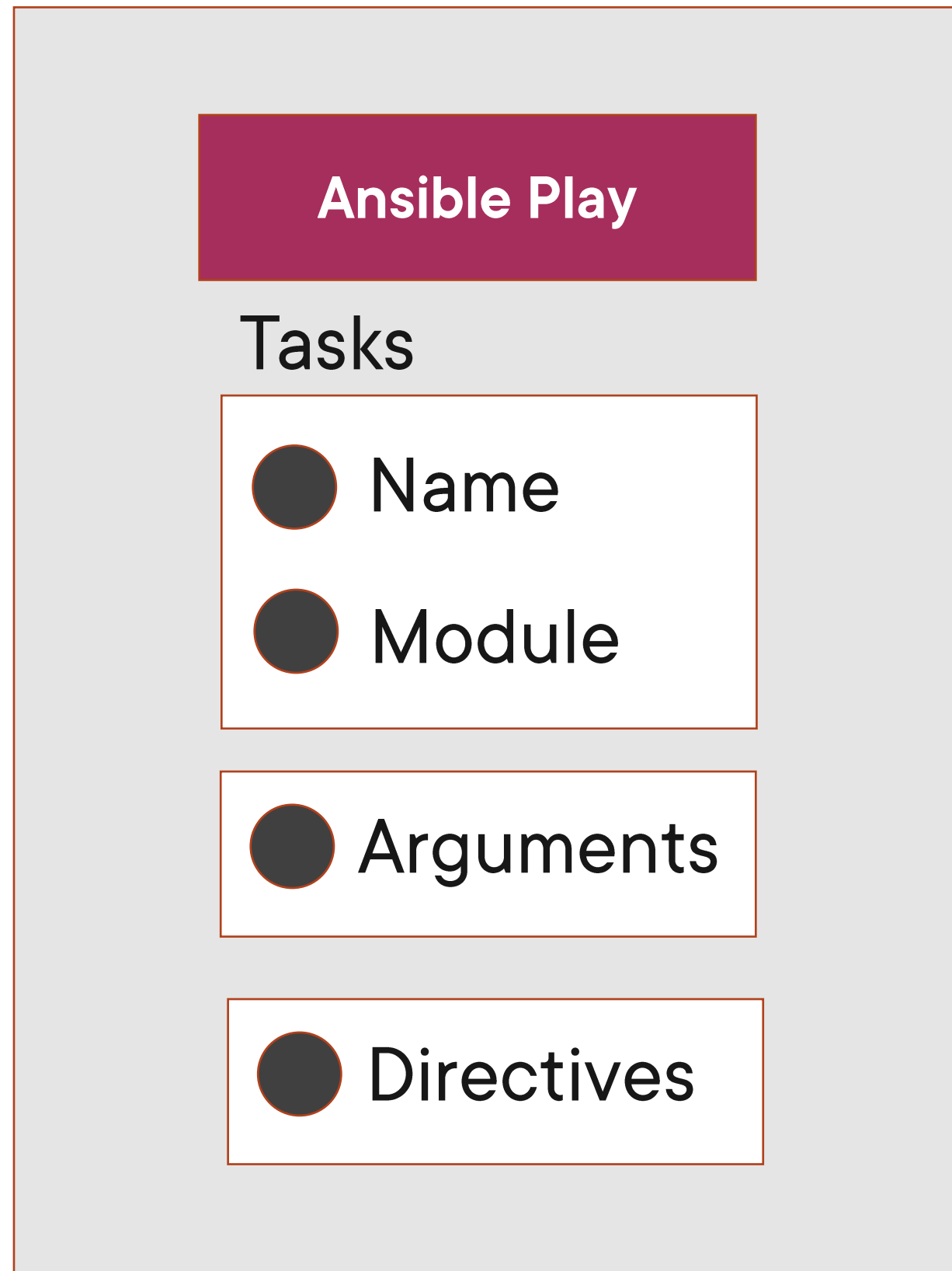
The different types of modules

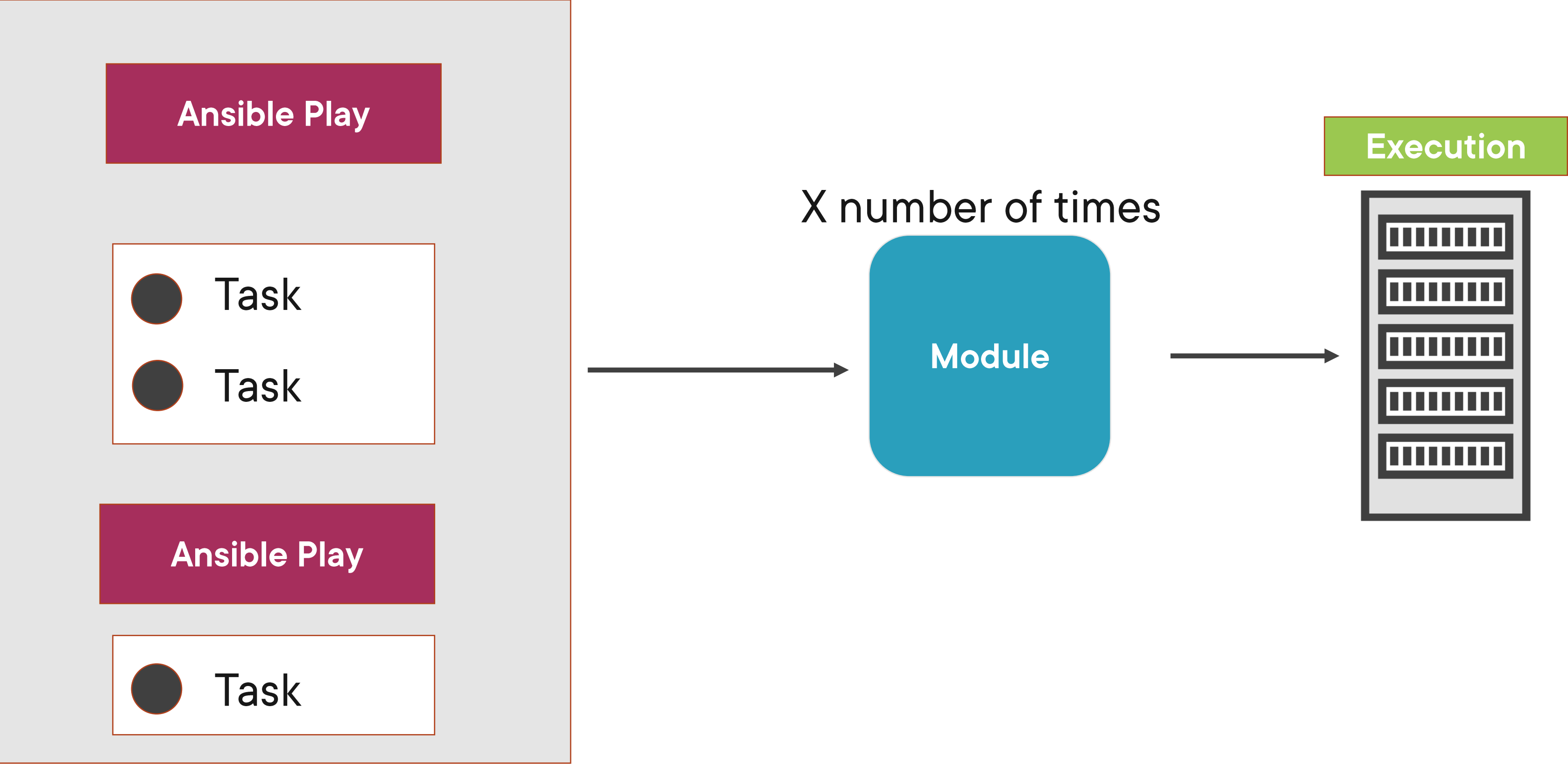
Debug module

Idempotency

Ah hoc commands and playbooks

What am I automating?





Demo



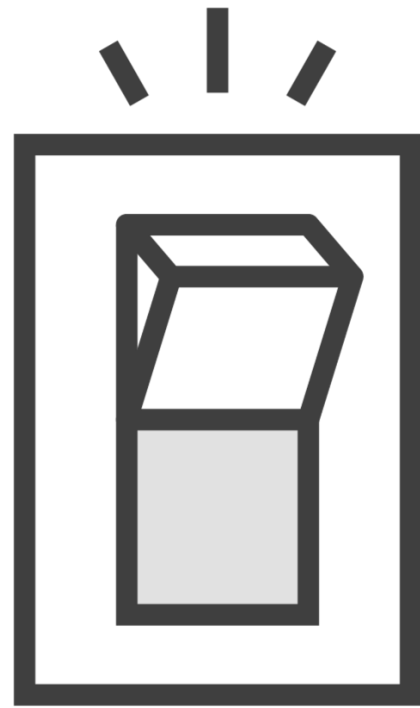
Ansible config

Ad hoc command

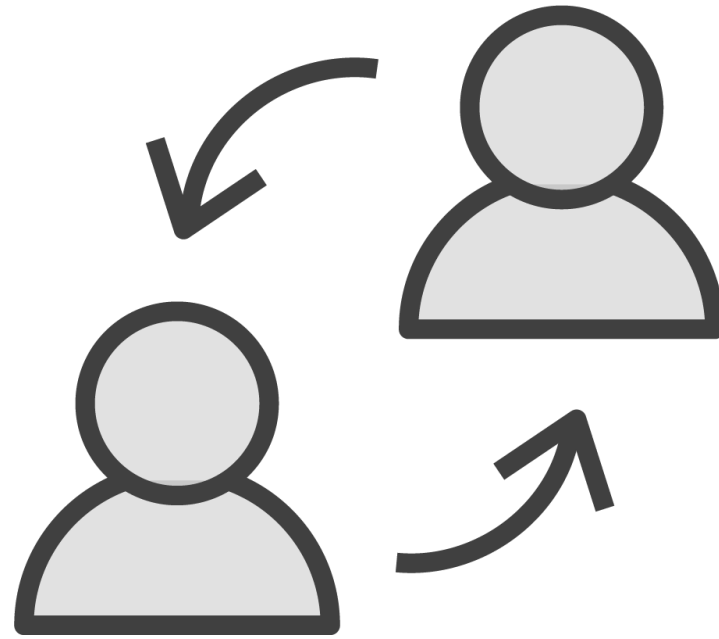
State management



The Ansible Playbook



Multiple plays



**Task and task
lists**



**Task
execution**



Host failures

Demo



Playbooks and automation

Hosts and variables

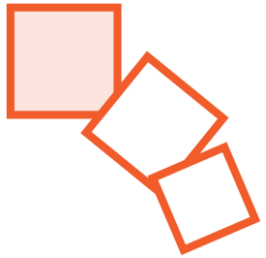
YAML and indentation



Ansible Benefits



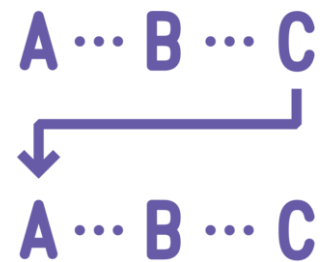
Easy-to-read syntax



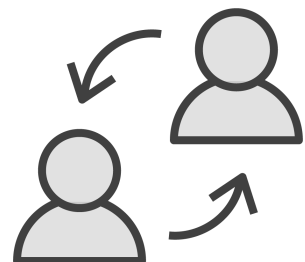
Ansible scales up and down



Ansible roles



Ansible plugins



The new feature of collections



Module Summary



Challenging landscape

Ansible architecture and components

Best practices

Main building blocks

Demos!

