ANSIBLE FOR RUBYISTS

SIMPLE IT AUTOMATION

Ansible is a radically simple IT automation engine that automates cloud provisioning, configuration management, application deployment, intra-service orchestration, and many other IT needs.

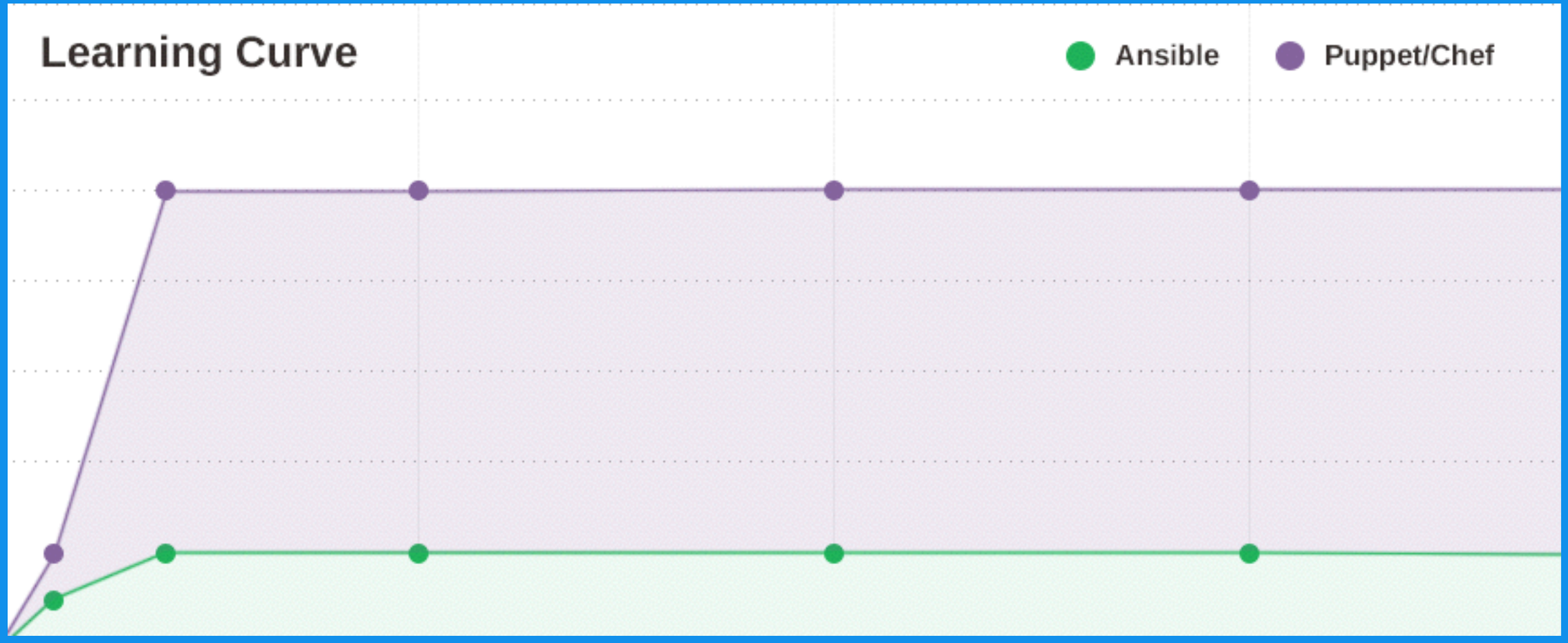
Ansible vs Other configuration management tools

Ansible (20,982 stars)

Chef (4,634 stars)

Puppet (4,323 stars)

Ansible is **easy**!



Ansible vs Other configuration management tools

Ansible works by **pushing** changes to your servers

Requires no extra software to be installed on your servers (no extra deamon to manage) unlike most other configuration management tools

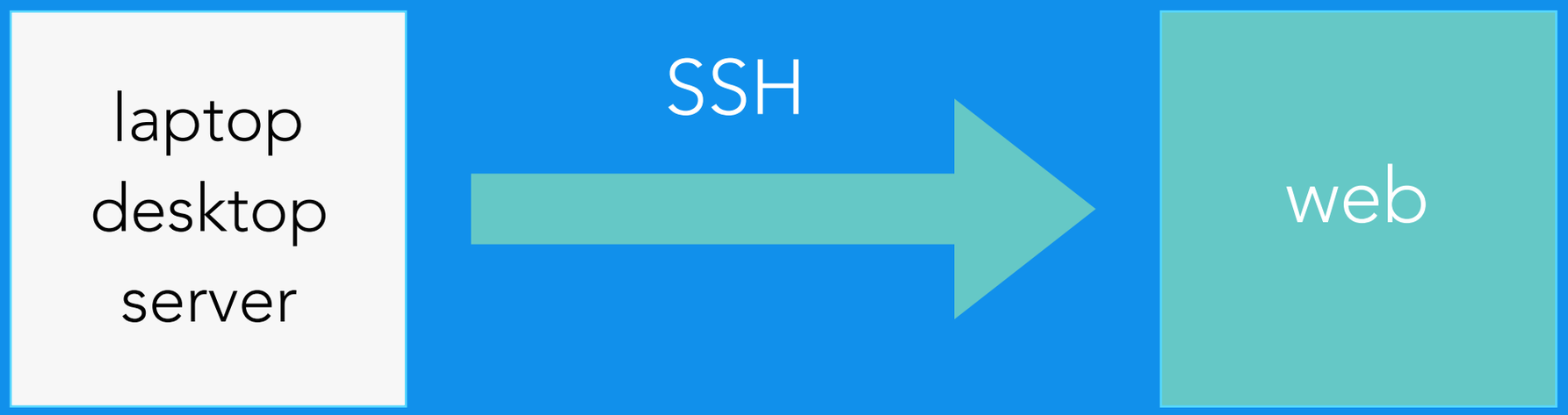
Python and SSH (only dependencies)

Playbook are expressed in **YAML**

Manual provisioning

Mgmt node

Ubuntu/Rails app



Manual provisioning

Mgmt node

laptop
desktop
server

Ubuntu/Rails app

10.0.14.20

How Ansible works?

Puppet has manifests, Chef has cookbooks and Ansible follows these concepts and has Playbooks

In **Ansible** a script is called a **playbook**

A **playbook** describes which **hosts** (remote servers) to configure and an ordered list of **tasks** to perform on those hosts

How Ansible works?

A Playbook

```
---
- name: install and start apache
  hosts: webservers
  user: root

  tasks:

  - name: install httpd
    yum: name=httpd state=latest

  - name: start httpd
    service: name=httpd state=running
```

Playbook | Play | Tasks

ANSIBLE

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Provisioning with Ansible

Ansible Mgmt node

laptop
desktop
server

SSH

Ubuntu/Rails app

web

10.0.14.20

hosts

playbook

How Ansible works

Ansible runs each task in parallel across all hosts

Ansible waits until all hosts have completed a task before moving to the next task

Ansible runs the tasks in the order that you specify them

Ansible Modules

```
---
- hosts: all
  become: true
  tasks:
      - name: Update apt-cache
        apt: update_cache=yes

      - name: Install Vim
        apt: name=vim state=latest
```

Modules are prepackaged scripts that do some action on a host

Modules are **idempotent**

Ansible Modules

apt - installs or removes packages

service - service management

command, shell - remote execution

copy - copy a file from the local machine to the host

file - sets the attribute of a file, symlink or a directory

Ansible Roles

Ansible roles are a higher level of abstraction that can be useful for organizing playbooks

Roles for installing Ruby, Nginx, Postgres, Git, Puma, Passenger, NodeJS…

Ansible Galaxy - online repository of ansible roles

Deployment with Ansible

Ansistrano (Ansible + Capistrano)
ansistrano.deploy/ansistrano.rollback - ansible roles

https://railsbox.io/ - generates ansible playbook for configuring and deploying Rails apps

Ansible learning materials

"**Up and running with Ansible**" - book/paid

"**Ansible for DevOps**" - book/paid

SysadminCasts.com - videos/free

linuxacademy.com - vides/paid

Ansible documentation - web

Material used on the presentation

Puppet, Chef, Ansible graphic
https://www.amon.cx/blog/one-year-with-ansible/
Author: Martin Rusev

Playbook graphic in color taken from the book
“Ansible for AWS” Author: Yan Kurniawan