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with a passion in automation

Working mostly for Startups

often with

startersquad

Ansible

A push model
to avoid architectural overhead

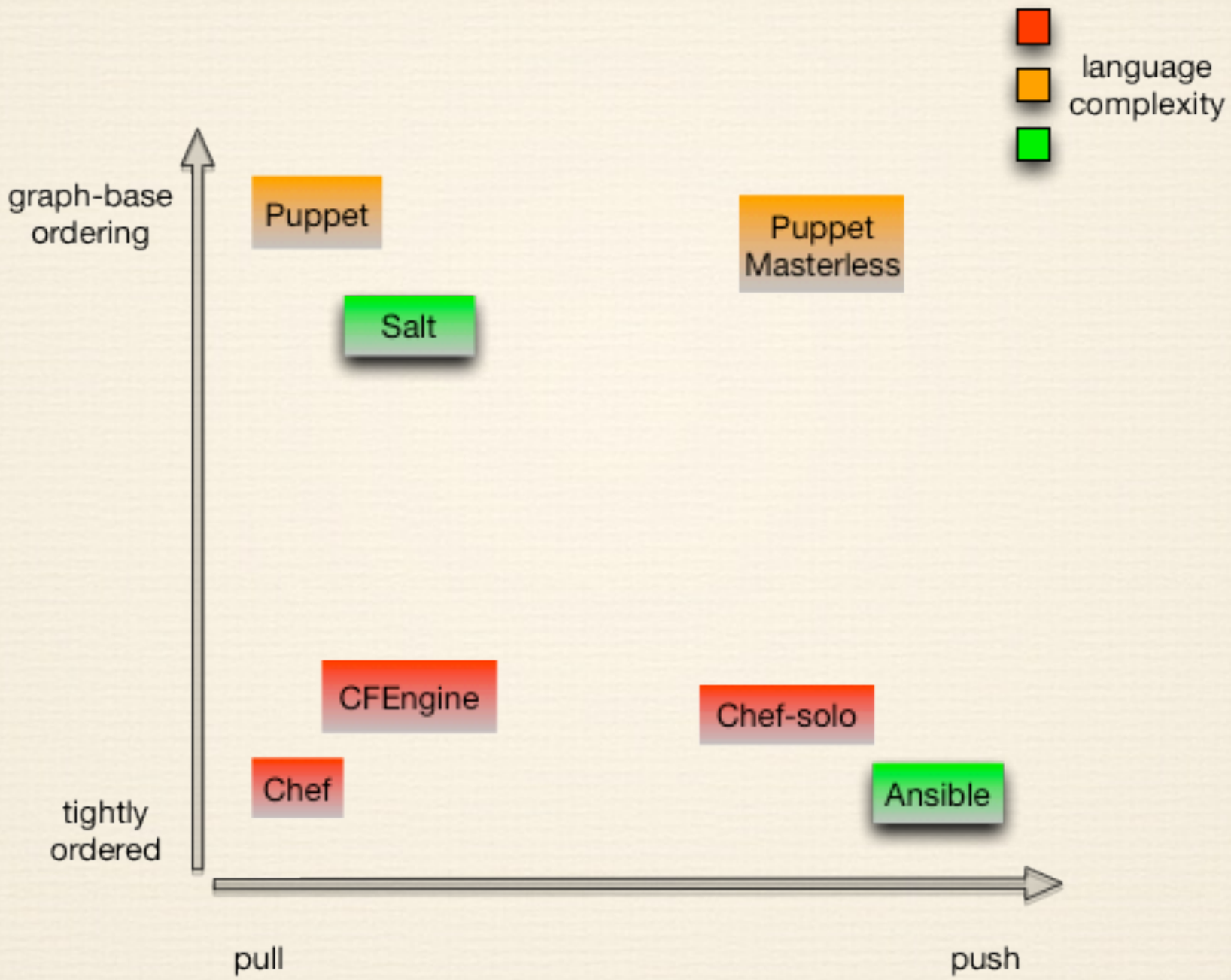
A tool that combines

- Ad hoc task execution
- Configuration management
- Multi-node software deployment

Main characteristics

- Agentless: manages nodes over SSH
- Modular: shipped with a module library
- Uses YAML to describe systems
- Requires only Python ≥ 2.4

Tools' diversity



Pros for not having Agents

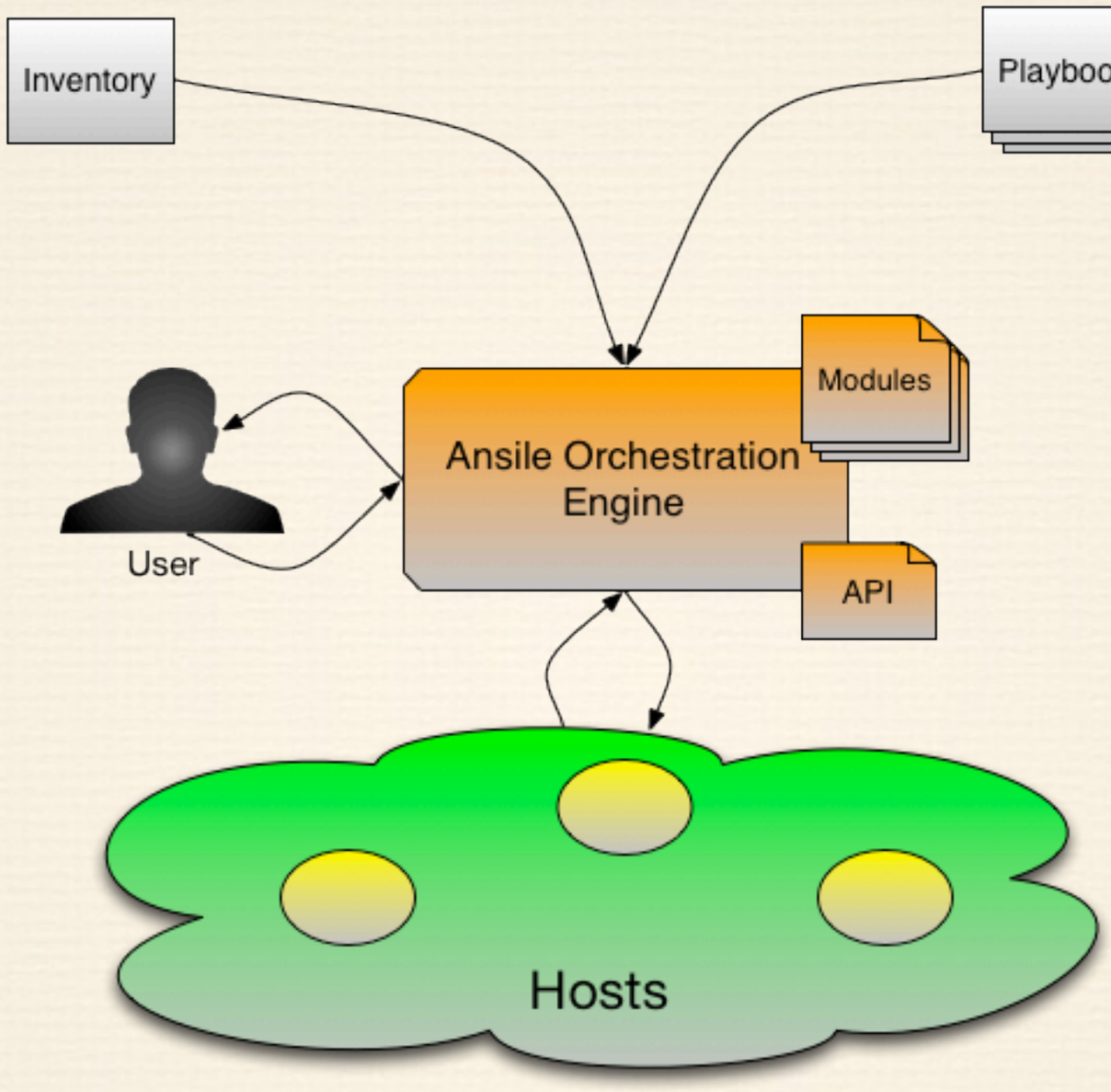
- Zero bootstrapping
- Avoid server and agent compatibility problems
- Avoid ‘thundering herd’
- No daemons -> Improved resource utilization

Security

- Ansible has a very low attack surface
  - Just relying on SSH
- Log in remotely as any user account
- Credential segregation

hosts:

```
[webservers]
vm1
vm2
vm3
```



site.yml:

```
---
- hosts: webservers
  user: tiziano

  tasks:
  - name: What is it?
    command: uname -a
```

$ ansible-playbook -i hosts site.yml

Ansible Modules

- Programs that can control system resources or execute system commands
- Modules are packaged with arguments and transferred to the host machine
- Ansible executes and removes them in one action
- The result is sent back in JSON

What else Ansible offers?

Tasks
Conditionals
Handlers

Variables
Templates

...

Ansible Roles

```
roles/
    common/               # this hierarchy represents a "role"
        tasks/            #
            main.yml      #  <-- tasks file can include smaller files if warranted
        handlers/         #
            main.yml      #  <-- handlers file
        templates/        #  <-- files for use with the template resource
            ntp.conf.j2   #  <------- templates end in .j2
        files/            #
            bar.txt       #  <-- files for use with the copy resource
            foo.sh        #  <-- script files for use with the script resource
        vars/             #
            main.yml      #  <-- variables associated with this role
```

Continuous Deployment

Release early, release often

Shorter feedback cycles

The Continuous Integration system will invoke an Ansible playbook upon a successful build.

Prudentia®

CLI for deployment based mostly on Ansible

Bring **simplicity** and **prudence** when dealing with multiple IaaS providers

Thanks!

All the resources used in this presentation are available here:

https://github.com/TizianoPerrucci/devops-ansible