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Ansible

-- Make it so

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Overview

What is Ansible and why is it different?

Using Ansible Interactively

What is Ansible Tower?

	AIX	*BSD	HP-UX	Linux	OS X	Solaris	Windows	Others
Ansible	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes[92]
Bcfg2	Partial[93]	Yes[94]	No	Yes[95]	Partial[96]	Yes	No	No
CFEngine	Yes	Yes[94]	Yes	Yes	No	Yes	Partial	Yes[97]
cdist		Yes		Yes	Yes		No	
Chef	Yes[98]	Yes	Yes	Yes	Yes	Yes	Yes[99]	Yes
ISconf	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Juju				Yes				
Local ConFiGuration system (LCFG)	No	No	No	Partial[100]	Partial[101]	Partial[102]	No	No
OCS Inventory NG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Open pc server integration (Opsi)	No	No	No	Yes	No	No	Yes	No
PIKT	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes[103]
Puppet	Yes	Yes	Yes	Yes	Partial	Yes	Yes	Yes
Quattor	No	No	No	Yes	Partial[104]	Yes	No	No
Radmind	Yes	Yes[94][105][106]	No	Yes	Yes	Yes	Yes	No
Rex		Yes		Yes	Yes[107]	Yes	Yes[107]	No
Rudder	Yes	Partial[108]	No	Yes	Partial[108]	Partial[109]	Yes	Yes[110]
Rundeck	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
SmartFrog	No[111]	No[111]	Yes	Yes	Yes	Yes	Yes	No[111]
Salt	Yes	Yes	Partial[112]	Yes[113]	Yes	Yes[114]	Yes	Partial[112]
Spacewalk	No[115]	No	No	Yes[116]	No	Yes[117]	No	No
STAF	Yes[118]	Yes[119]	Yes[120]	Yes[121]	Yes[122]	Yes[123]	Yes[124]	Yes[125]
Synctool	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes[126]
Vagrant				Yes	Yes		Yes	

SIMPLE

Human readable automation

No special coding skills needed

Get productive quickly

POWERFUL

App deployment

Configuration management

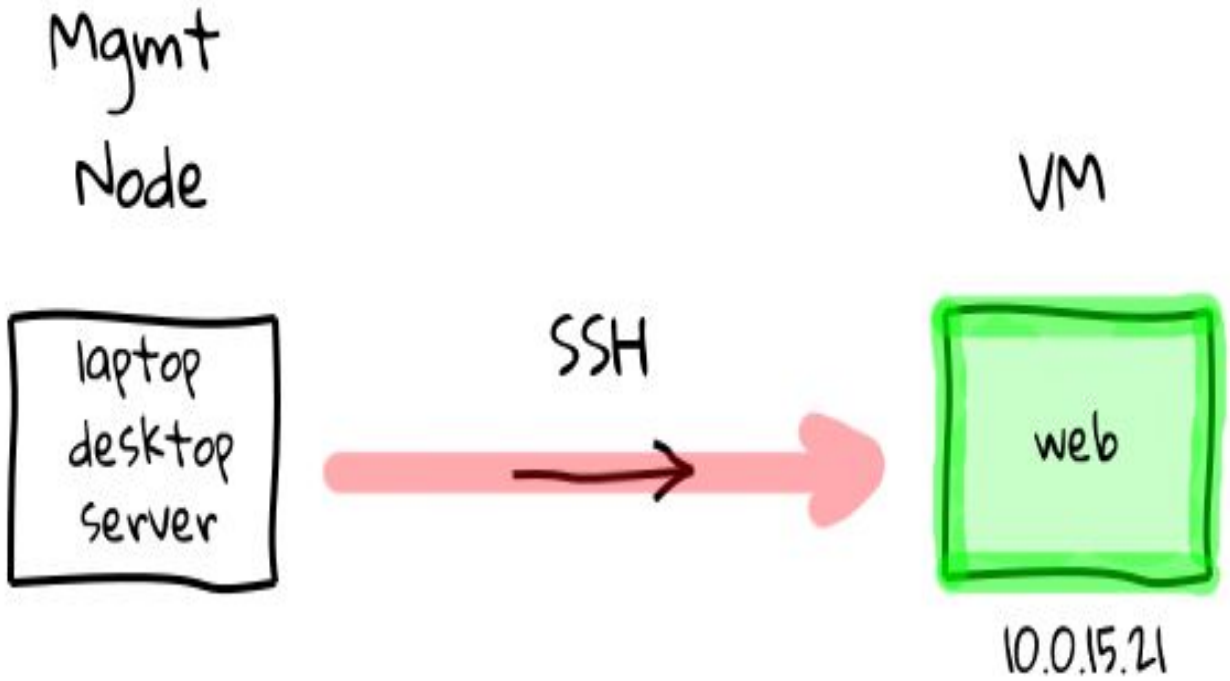
Orchestrate the app lifecycle

AGENTLESS

Uses OpenSSH & WinRM

No agents to exploit or update

More efficient & more secure



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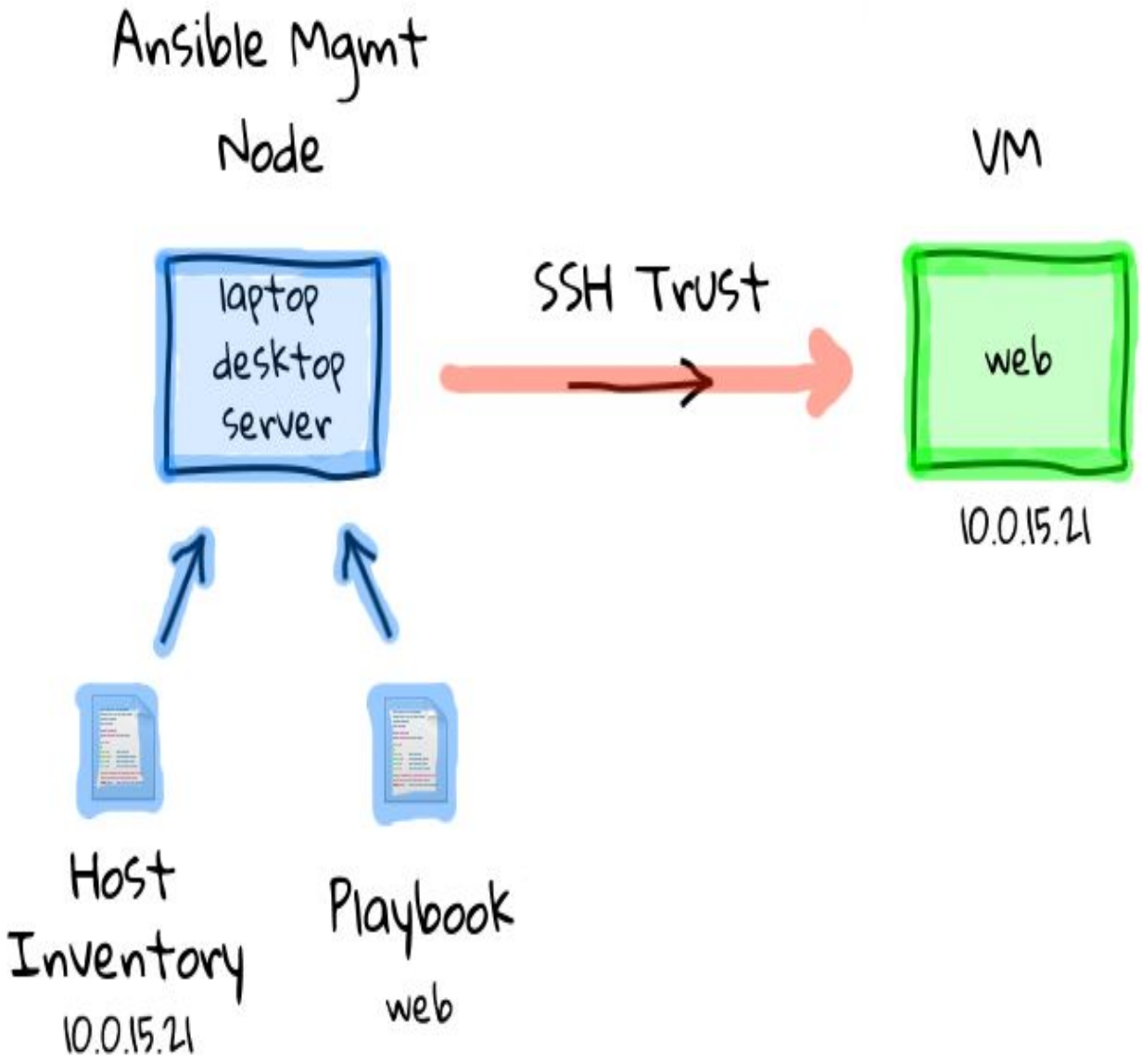

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Host Inventory file example

```
[web]

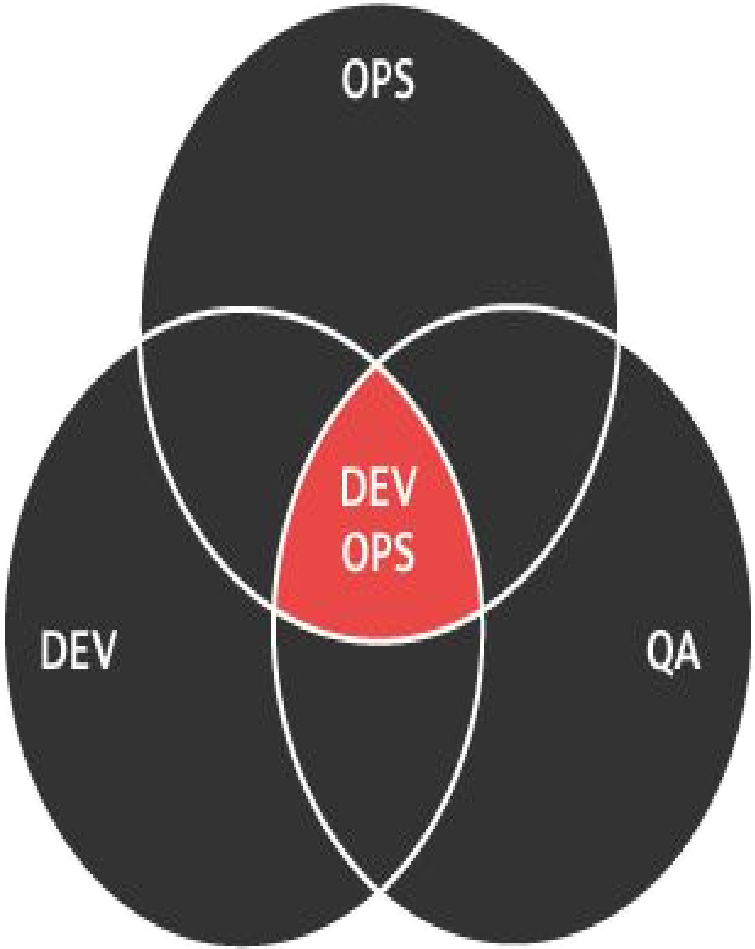
foo.example.com

bar.example.com


[dbservers]

one.example.com

two.example.com
```



PLAYBOOK EXAMPLE

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```
---
- name: install and start apache
  hosts: web
  vars:
    http_port: 80
    max_clients: 200
  remote_user: root

  tasks:
  - name: install httpd
    yum: pkg=httpd state=latest
  - name: write the apache config file
    template: src=/srv/httpd.j2 dest=/etc/httpd.conf
  - name: start httpd
    service: name=httpd state=running
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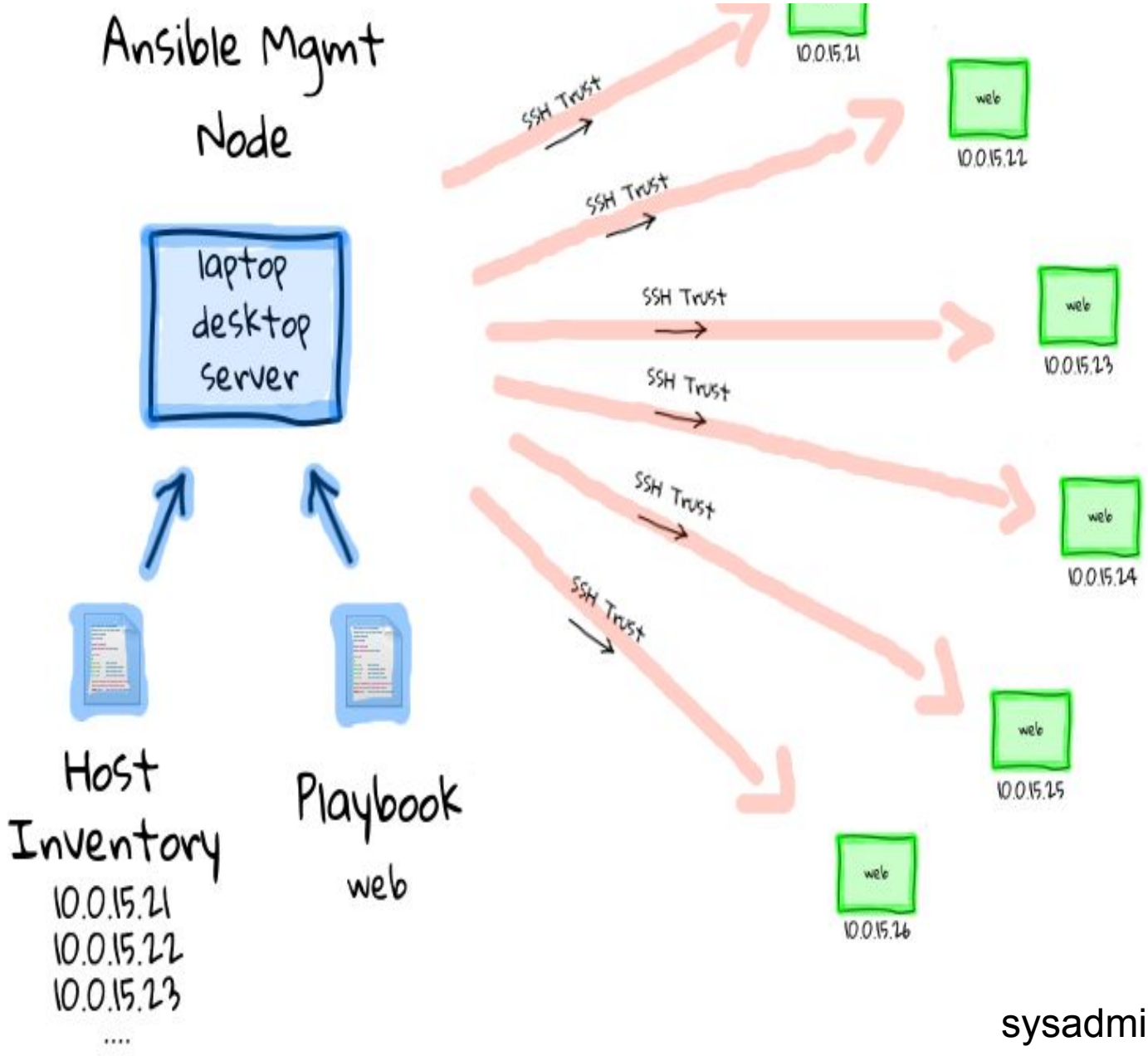

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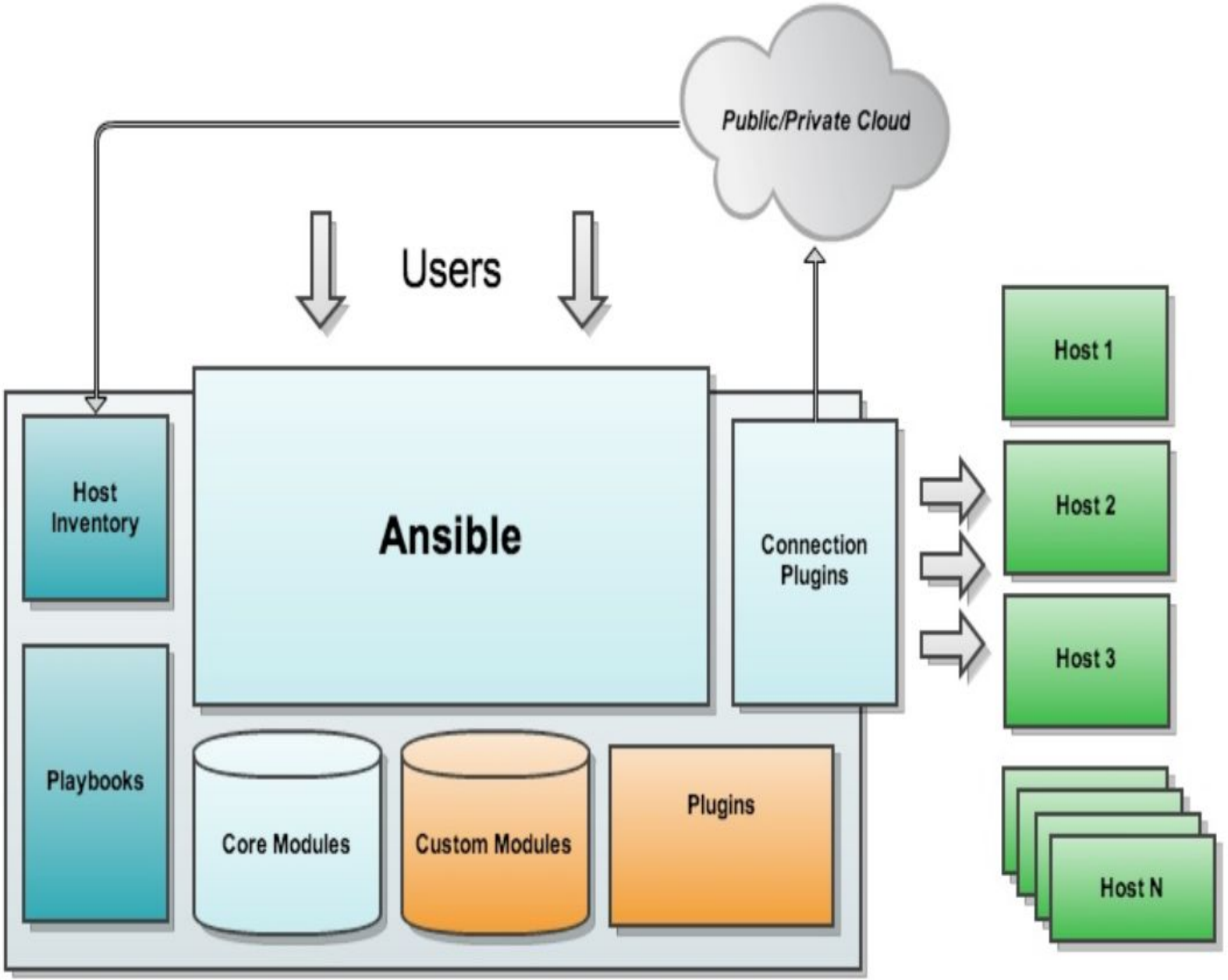
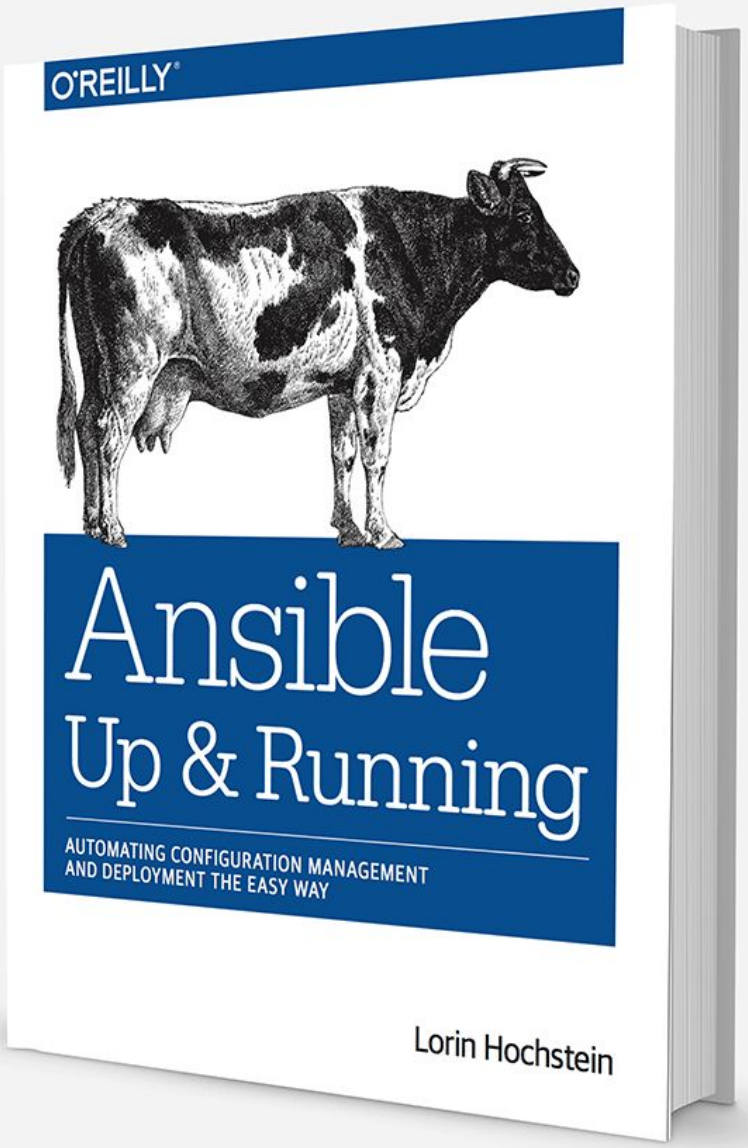


COMMUNITY

THE MOST POPULAR OPEN-SOURCE AUTOMATION COMMUNITY ON GITHUB

- 13,000+ stars & 4,000+ forks on GitHub
- 2000+ GitHub Contributors
- Over 450 modules shipped with Ansible
- New contributors added every day
- 1200+ users on IRC channel
- Top 10 open source projects in 2014
- Ansible Galaxy: over 18,000 subscribers
- 250,000+ downloads a month
- AnsibleFests in NYC, SF, London



Stupid powerful shell commands

File Transfers

Copy files from manager to servers (utilizes SCP)

$ ansible webservers -m copy -a "src=/etc/hosts dest=/tmp/hosts"

Changing ownership and permissions

$ ansible webservers -m file -a "dest=/srv/foo/b.txt mode=755 owner=miked group=miked"

Removing files from servers

$ ansible webservers -m file -a "dest=/path/to/c state=absent"

Managing Packages

Install package acme

$ ansible webservers -m yum -a "name=acme state=present"

Update package to latest version

$ ansible webservers -m yum -a "name=acme state=latest"

Removing package

$ ansible webservers -m yum -a "name=acme state=absent"

Managing services

Start Apache

$ ansible webservers -m service -a "name=httpd state=started"

Restart Apache

$ ansible webservers -m service -a "name=httpd state=restarted"

Stop Apache

$ ansible webservers -m service -a "name=httpd state=stopped"

Parallelism and shell commands

Reboots all web servers (10 in parallel)
$ ansible webservers -a "/sbin/reboot" -f 10

Running commands as a different user
$ ansible webservers -a "/usr/bin/foo" -u username

Have sudo as for a password
$ ansible atlanta -a "/usr/bin/foo" -u username --sudo [--ask-sudo-pass]

Time limited background Operations

Run script in background (30 Min timeout)

$ ansible webserver -B 3600 -P 0 -a "/usr/bin/long_running_operation --do-stuff"

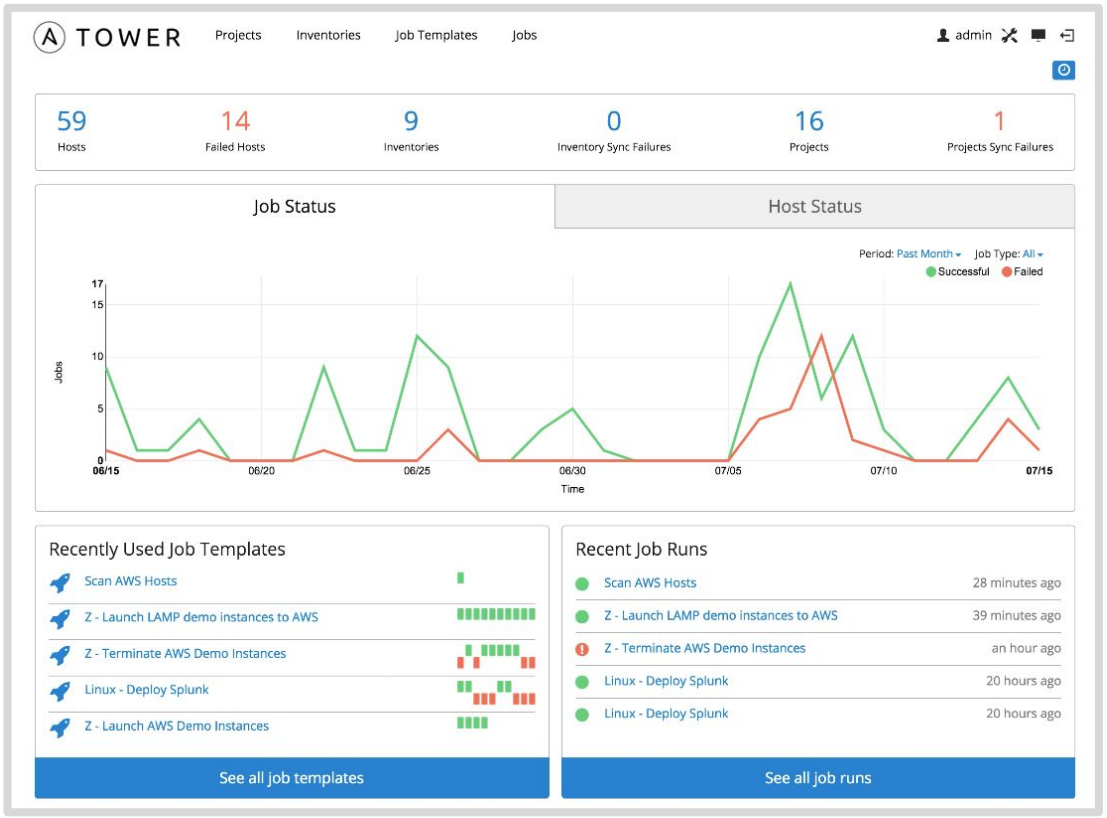
Checking on the status of a previous job

$ ansible web1.example.com -m async_status -a "jid=488359678239.2844"

We can set how often to poll the status (60 seconds)

$ ansible webserver -B 1800 -P 60 -a "/usr/bin/long_running_operation --do-stuff"

WHAT IS ANSIBLE TOWER?



Ansible tower is an **enterprise framework** for controlling, securing and managing your Ansible automation – with a **UI and restful API.**

- **Role-based access control**
- Non-privileged users can **safely deploy** entire applications with **push-button deployments.**
- **Centrally logged,** ensuring **complete auditability and compliance**.

https://fast.wistia.net/embed/iframe/9iw6g0o81c?popover=true

SELECTED ANSIBLE TOWER CUSTOMERS

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Nike	SONOS	verizon	EA	allegiant	vmware
NASA	splunk>	Care.com	SONY	GoPro	JUNIPER NETWORKS
rackspace	NetApp	SAMSUNG	redhat	NEC	GRAINGER
EURONEXT	weight watchers	JPMorgan Chase & Co.	Google	J.CREW	U.S. Department of Homeland Security
DARDEN	bp	Martha Stewart	tbs	Save Mart Supermarkets	American Eagle Outfitters

AUTOMATION = ACCELERATION

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J.CREW

“With Ansible Tower, we just click a button and deploy to production in 5 minutes. It used to take us 5 hours with 6 people sitting in a room, making sure we didn’t do anything wrong (and we usually still had errors). We now deploy to production every other day instead of every 2 weeks, and nobody has to be up at 4am making sure it was done right.”

NEC

“By using Ansible Tower Surveys, we have created a self-service capability that allows our IT guys to provision new cloud customers quickly. Our first 3 customers each took 2 weeks to provision. With Ansible, our next 500 customers took 10 minutes each to provision.”

RIOT GAMES

“We use Ansible to deploy the network configurations to new datacenters for our games. Previously, it would take 4 days worth of work, onsite, to make sure that our networks were configured correctly. With Ansible, I can now configure a datacenter in 4 minutes, remotely.”

PLAYBOOK EXAMPLES

LAMP + HA Proxy + Nagios:

https://github.com/ansible/ansible-examples/tree/master/lamp_haproxy

JBoss Application Server:

https://github.com/ansible/ansible-examples/tree/master/jboss-standalone

RHEL DISA STIG Compliance:

http://www.ansible.com/security-stig

Many more examples at:

- http://galaxy.ansible.com
- https://github.com/ansible/ansible-examples

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GETTING STARTED

Have you used Ansible already? Try Tower for free:
ansible.com/tower-trial

Would you like to learn Ansible? It's easy to get started:
ansible.com/get-started

Want to learn more?
ansible.com/whitepapers

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Questions?


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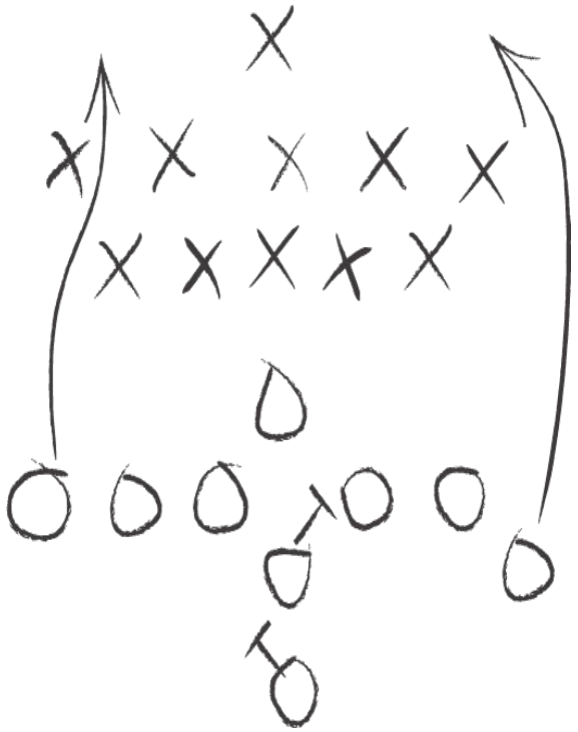
Extra Slides...

The Ansible Playbook



```
---
- hosts: webservers
  vars:
    http_port: 80
  tasks:
  - name: ensure apache is at the latest version
    yum: name=httpd state=latest
  - name: write the apache config file
    template: src=/srv/httpd.j2 dest=/etc/httpd.conf
    notify:
    - restart apache
  - name: ensure apache is running (and enabled)
    service: name=httpd state=started enabled=yes
  handlers:
    - name: restart apache
      service: name=httpd state=restarted
```