Ansible

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Who Am I?

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What are we doing?

- High level overview of Ansible
- Setting up really basic playbooks (and running them)
- Talking over some more advanced concepts
- Silently judging the presenter
What is Ansible?

• Set of tools to automate your infrastructure
• Allows you to manage configurations
• Allows you to orchestrate your deployments
But ... Why?

- Version history, testing, static analysis
- Highly duplicable, make changes everywhere
- Smaller debug surface area
- Idempotence, abstraction, and encapsulation
- Cross platform, templating, and variables
Pregame

• Ansible installed on MACOSX
  • Install Xcode if you haven’t already
  • `sudo easy_install pip`
  • `sudo easy_install ansible --quiet`
    • Need to create `/etc/ansible` directory

• Spun up Ubuntu 14.04 instance on AWS
  • Allow access on port 80
  • Setup SSH keys
  • Install ansible on image: `sudo apt-get install ansible`
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<th>Inventory</th>
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Building Blocks: Inventory

- List of systems in your infrastructure
- What you want Ansible to act on
- Can be generated dynamically
Building Blocks : Modules

Inventory
Modules
Building Blocks: Modules

- Ansible ships with a module library
- Good for running ad-hoc commands
- 1,137 module at last check
  - nginx, apache2, apt, yum, digital ocean, AWS, JunOS, NetApp, OpenStack, and many others
- Extensible - you can write your own if you’d like!
Building Blocks: Tasks

Tasks

Inventory

Modules
Building Blocks : Tasks

• Run ad-hoc commands against inventory
• Default module is the command module
Building Blocks: Plays and Playbooks

- Playbooks
- Plays
- Tasks
- Inventory
- Modules
Building Blocks: Plays and Playbooks

- Easily extensible
- Safer – harder to fat-finger an execution
- Version control and teamwork
And? ...

• Let’s run some playbooks!
Building Blocks: Roles

- Roles
- Playbooks
- Plays
- Tasks
- Inventory
- Modules
Building Blocks: Roles

- A way to organize your playbooks
- What if I need different playbooks for teams?
- Encapsulates areas of concern
  - Load variables, tasks, and handlers
ansible-galaxy

• Website of external roles other people have contributed
• Similar to Puppet Forge, Chef Supermarket
• Use ansible-galaxy to create your own roles
Templates

- Use the `template` module
- Use Jinja2 syntax http://jinja.pocoo.org/docs/2.9/
- Allows for variable substitution and logic
Name Virtual Host *: 80

{% for vhost in apache_vhosts %}
<Virtual Host *: 80>
    ServerName {{ vhost.servername }}
    DocumentRoot {{ vhost.documentroot }}
    {% if vhost.serveradmin is defined %}
        ServerAdmin {{ vhost.serveradmin }}
    {% endif %}
    <Directory "{{ vhost.documentroot }}">
        AllowOverride All
        Options -Indexes FollowSymLinks
        Order allow, deny
        Allow from all
    </Directory>
</Virtual Host>
{% endfor %}
ansible-vault

- Encrypts sensitive data
- Allows sensitive data to be distributed / checked in
- You’ll need to distribute the secret with your team
Thanks!

- http://docs.ansible.com/ansible/intro.html
- https://galaxy.ansible.com/