

Roles



Aaron Paxson

<http://myteneo.net> | @Neelixx | +Aaron Paxson

Role Examples

Wordpress

MySQL

JBoss

Repository

Server-Common

Build

Current Playbook



ROLE: Builder

- tasks:
- name: install gcc
- name: install jdk
- name: setup git



ROLE: Server-Common

- tasks:
- name: configure SNMP
- name: configure SYSLOG
- name: configure NTP



ROLE: Repo

- tasks:
- name: git
- name: configure
- name: pull latest

Efficient Role Design

BUILD: Compiler/Unit Test Role

Install GCC

Install JDK

Install Unit Testing

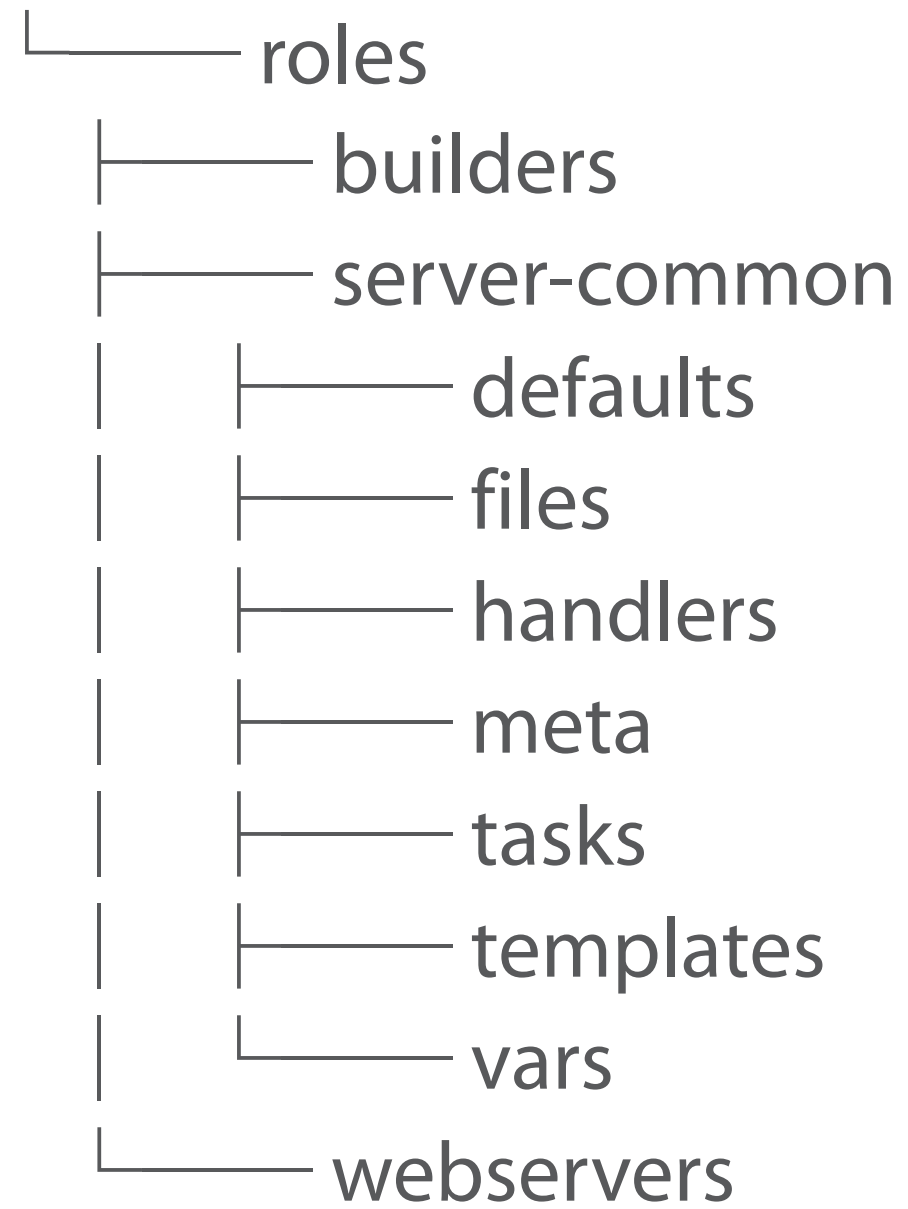
REPO: Code Repository Role

Install Git

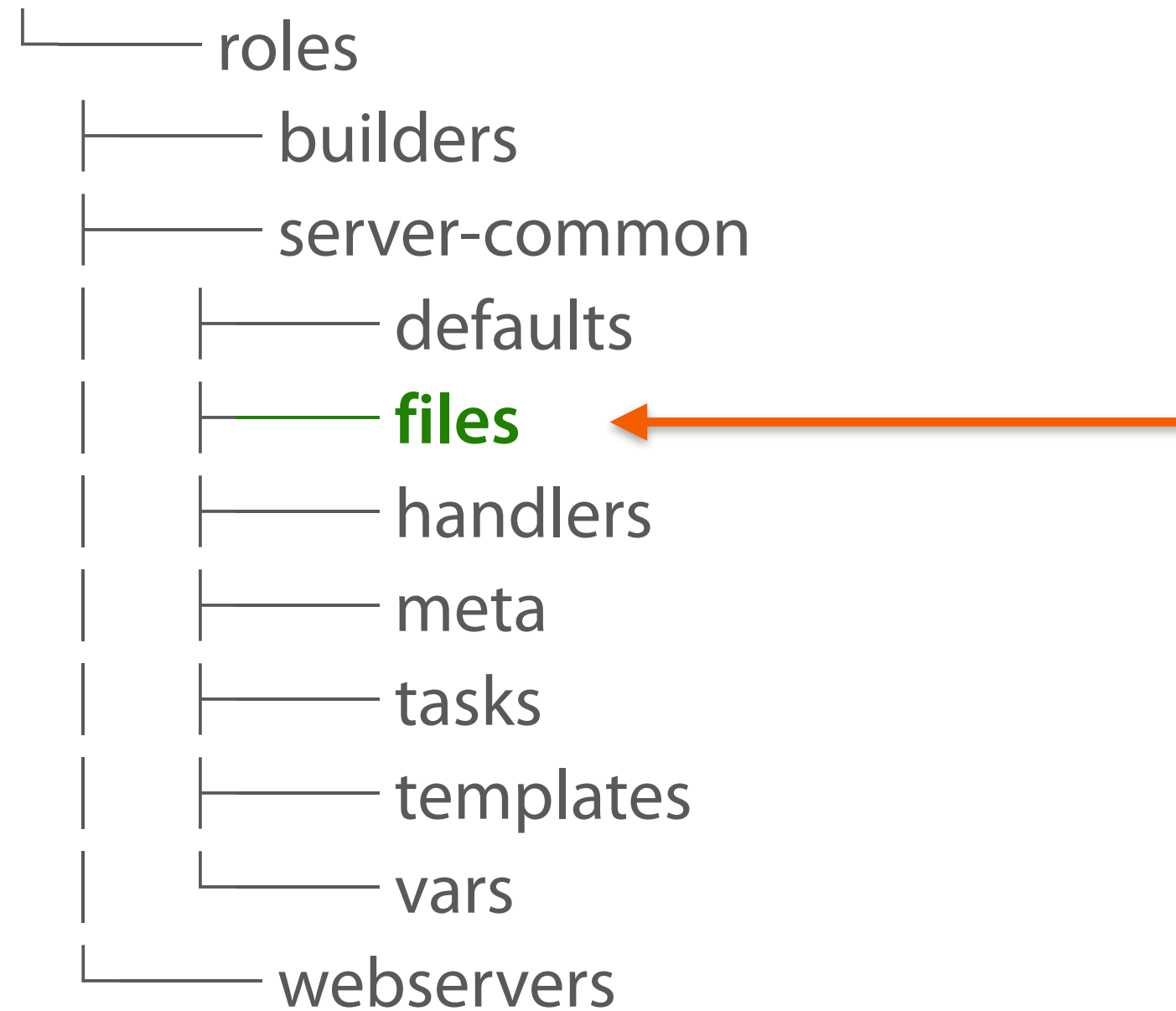
Configure Git

Schedule hourly pulls

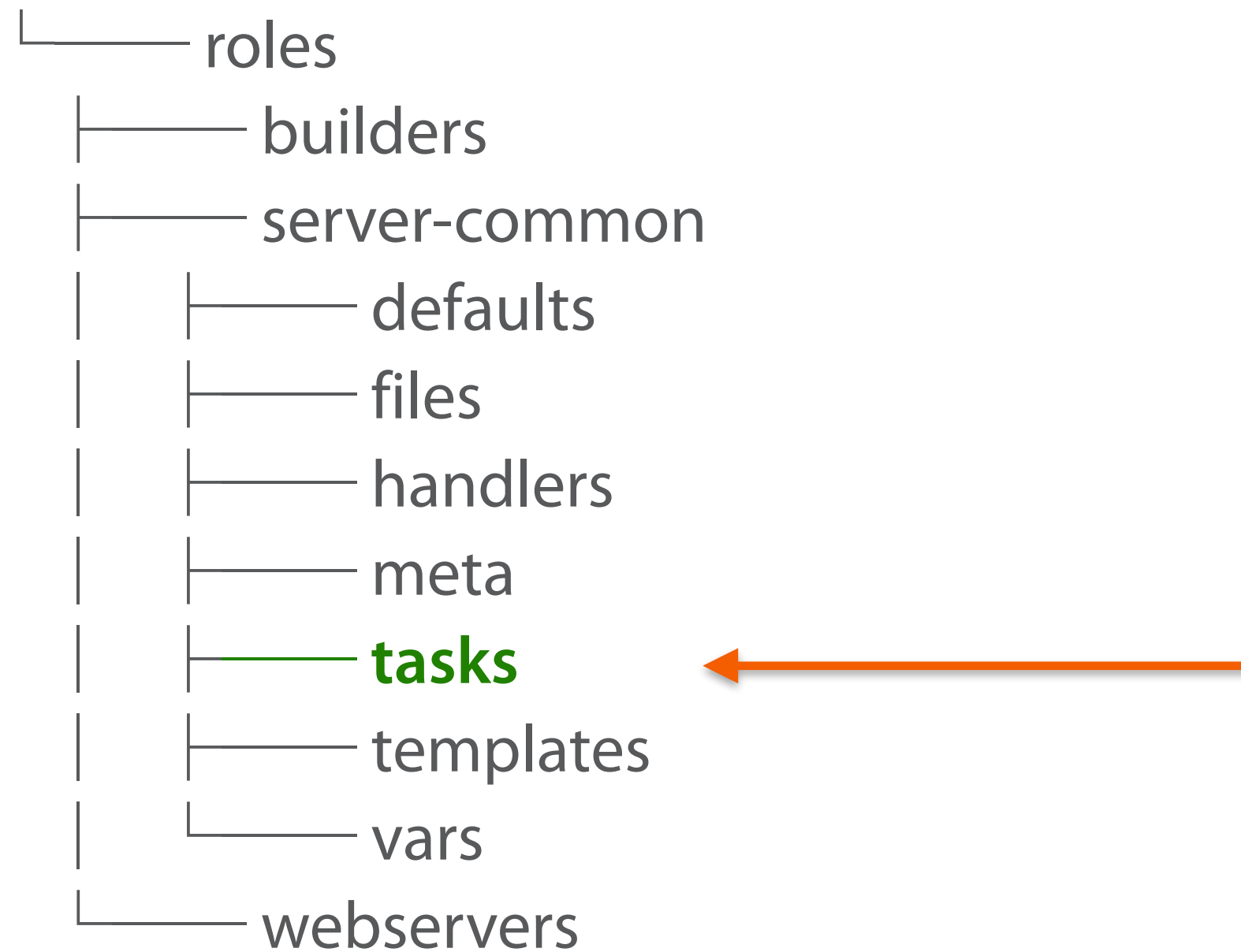
Directory Structure



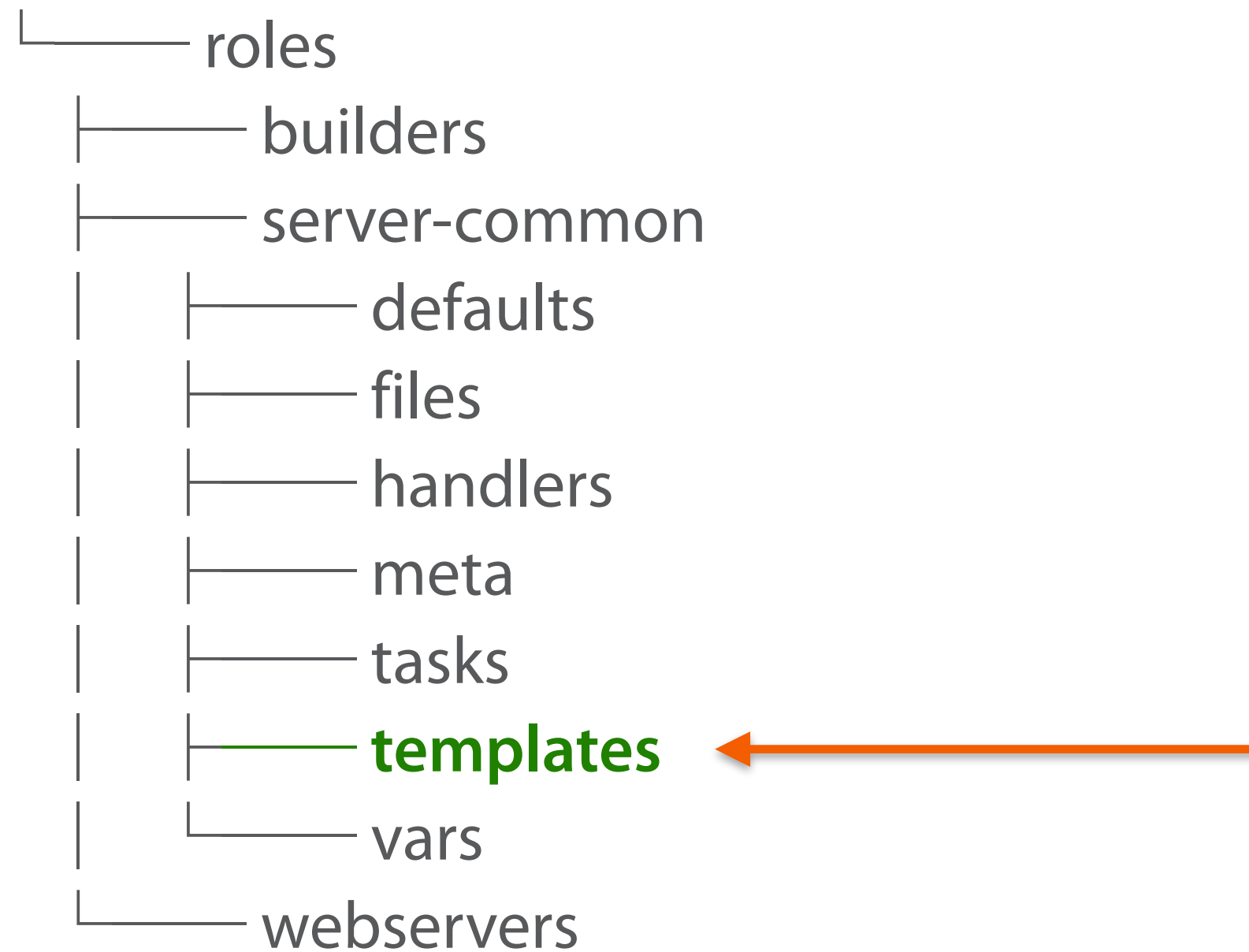
Directory Structure

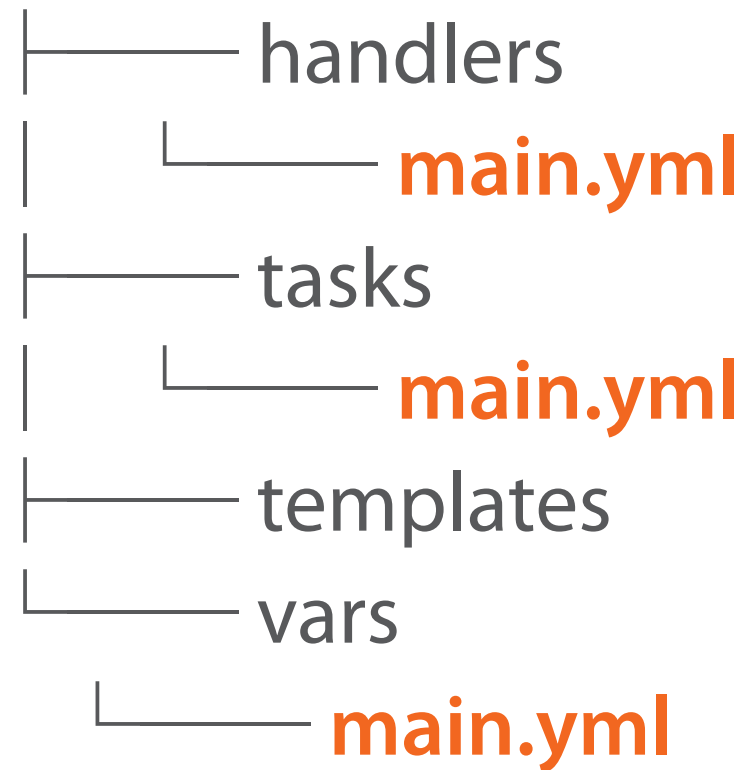


Directory Structure



Directory Structure





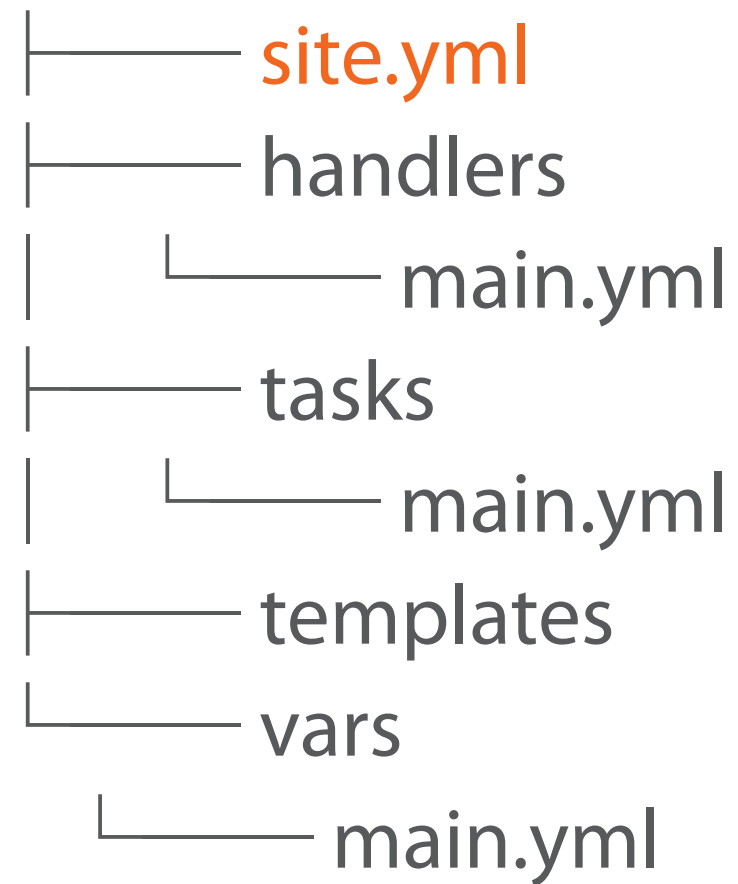
main.yml

Primary file that Ansible looks for

tasks/main.yml

- include: webservers.yml
- include: dbservers.yml

Can add includes to break-up long files



site.yml

Primary file to include entire infrastructure

site.yml

- include: webservers.yml
- include: dbservers.yml

Can add includes to break-up long files

site.yml

```
---  
- include: webservers.yml tags=web  
- include: dbservers.yml tags=db
```

Use tags to define categories within
your playbooks

Tagging Tasks

```
tasks:
```

```
  debug: msg="This will only run on tag 'debug'"
```

```
  tags:
```

```
    - debug
```

```
  debug: msg="You can also use multiple tags"
```

```
  tags:
```

```
    - debug
```

```
    - ubercool
```

Adding Roles to Playbook

- hosts: code-dev

roles:
gather_facts: no

- server-common

builders
tasks:

Build your extra tasks here like

creating users, or deploying a specific config

Pre-tasks and Post-tasks

pre_tasks:

- Executes plays BEFORE roles
 - Use-Cases
 - Setup of maintenance windows
 - Removing servers from Load-balancers
 - Silencing alarms

post_tasks:

- Executes plays AFTER roles
 - Use-Cases
 - Clearing of maintenance windows
 - Adding servers to Load-balancers
 - Enabling Alarms

Adding Pre and Post Tasks

- hosts: webservers

pre_tasks:

- # Remove from load-balancer

roles:

- server-common

- jboss

post_tasks:

- # Add to load-balancer

gather_facts: no

Executing Roles - Basic

Basic execution of
roles:

```
$ ansible-playbook site.yml
```

Executing Roles - Tags

Tagged execution
of roles:

```
$ ansible-playbook site.yml  
  -tags "web"
```

Executing Roles - Tags with Limits

Limited tagged
execution of roles:

```
$ ansible-playbook site.yml  
  -tags "web"  
  -limit atlanta
```

Demo: Build Webserver Role

Define “webserver” role

Define “dbserver” role

Define “common-server” role

Apply roles



Getting Roles

Create your own roles

Perfect for proprietary applications or workflows

Find roles to download

Look for others that had the same requirement and shared their work

Ansible Galaxy

Download



Share



Review



Installing Galaxy Roles

Use username.role

```
$ ansible-galaxy install username.role
```


Installing Galaxy Roles

Use username.role

```
$ ansible-galaxy install apaxson.ultimate
```

Demo: Ansible Galaxy

Browse/Search Ansible Galaxy

Find a Role and install

