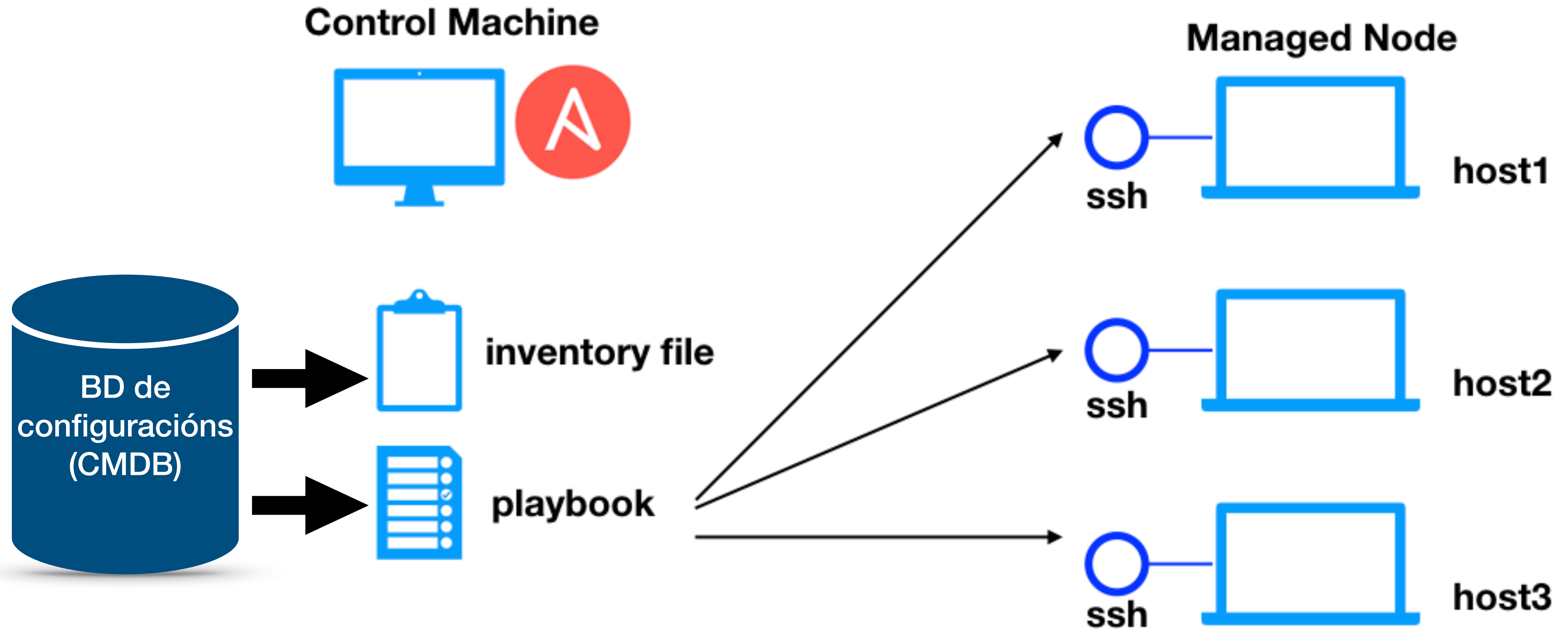


Xestión da Configuración

Con Ansible

Ansible como Xestor de Configuraciones



Instalación de Ansible

En sistemas Linux / WSL

Requerimientos:

Python3, PIP, SSH

Instalación:

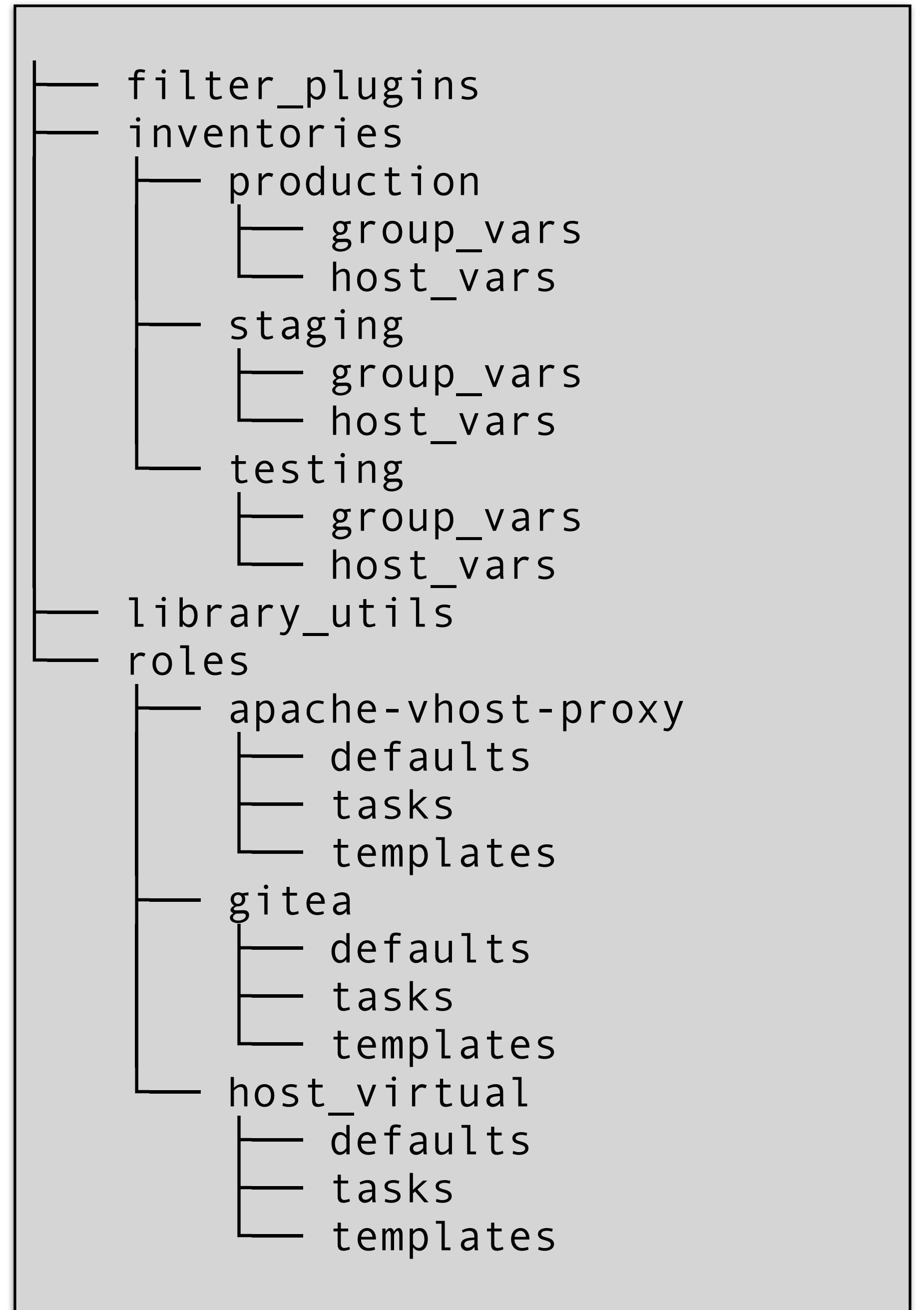
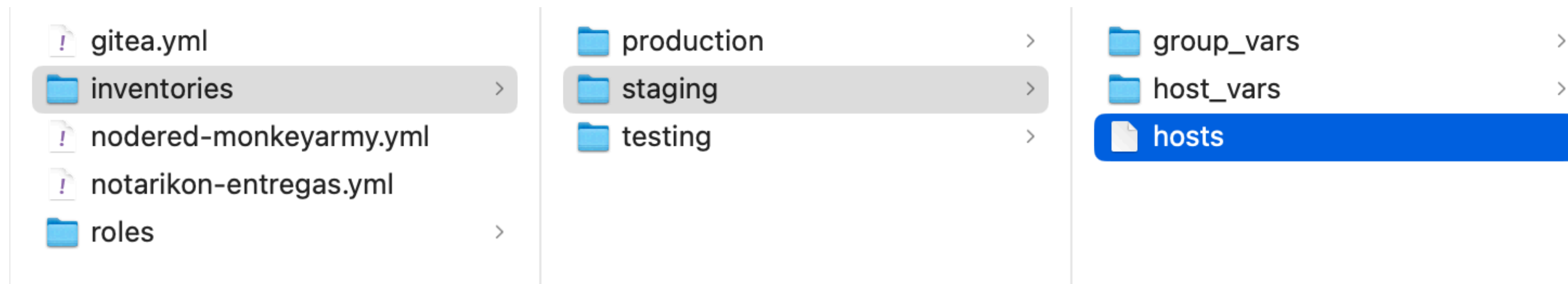
```
python3 -m pip install --user ansible
```

Confirmación da instalación:

```
ansible --version
```

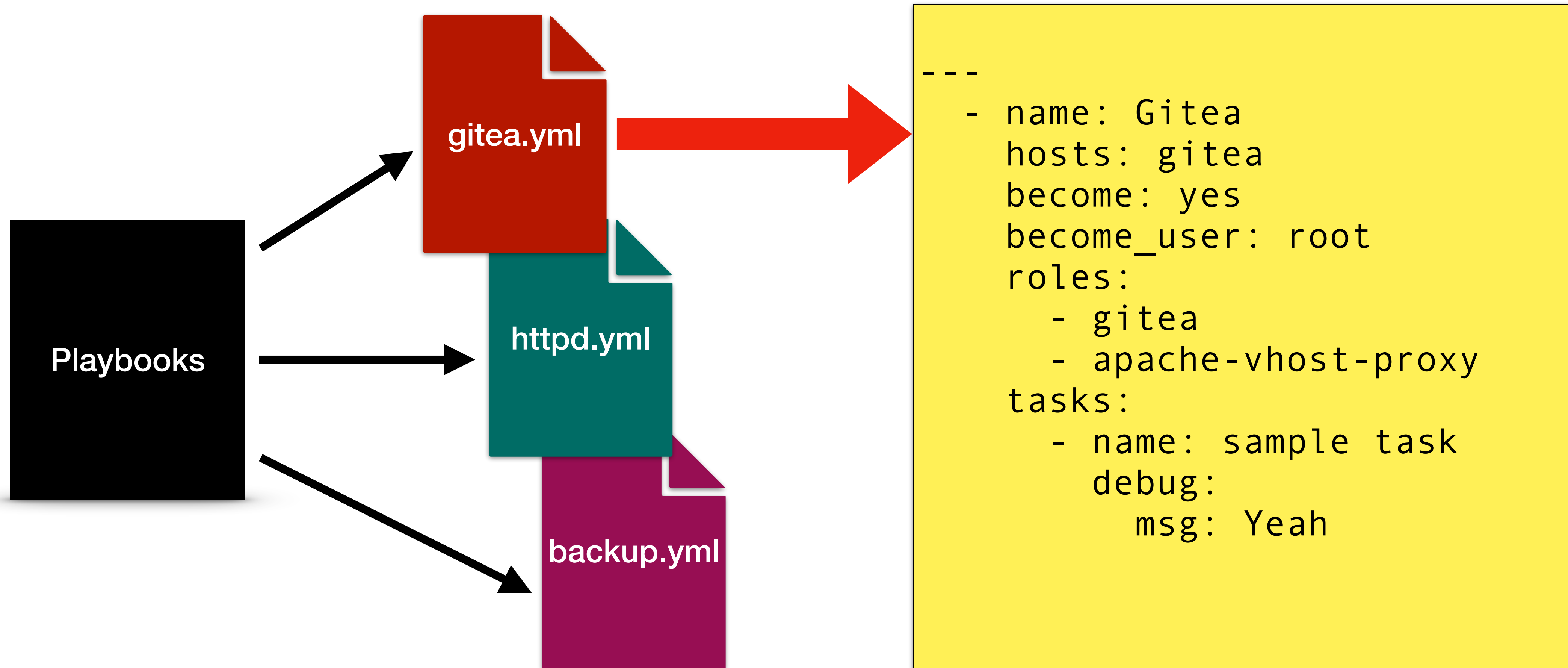
Estrutura recomendada de cartafoles

Recomendase seguir esta estrutura



Playbooks

Ficheiros YML que se atopan no cartafol raíz “.” desta estrutura



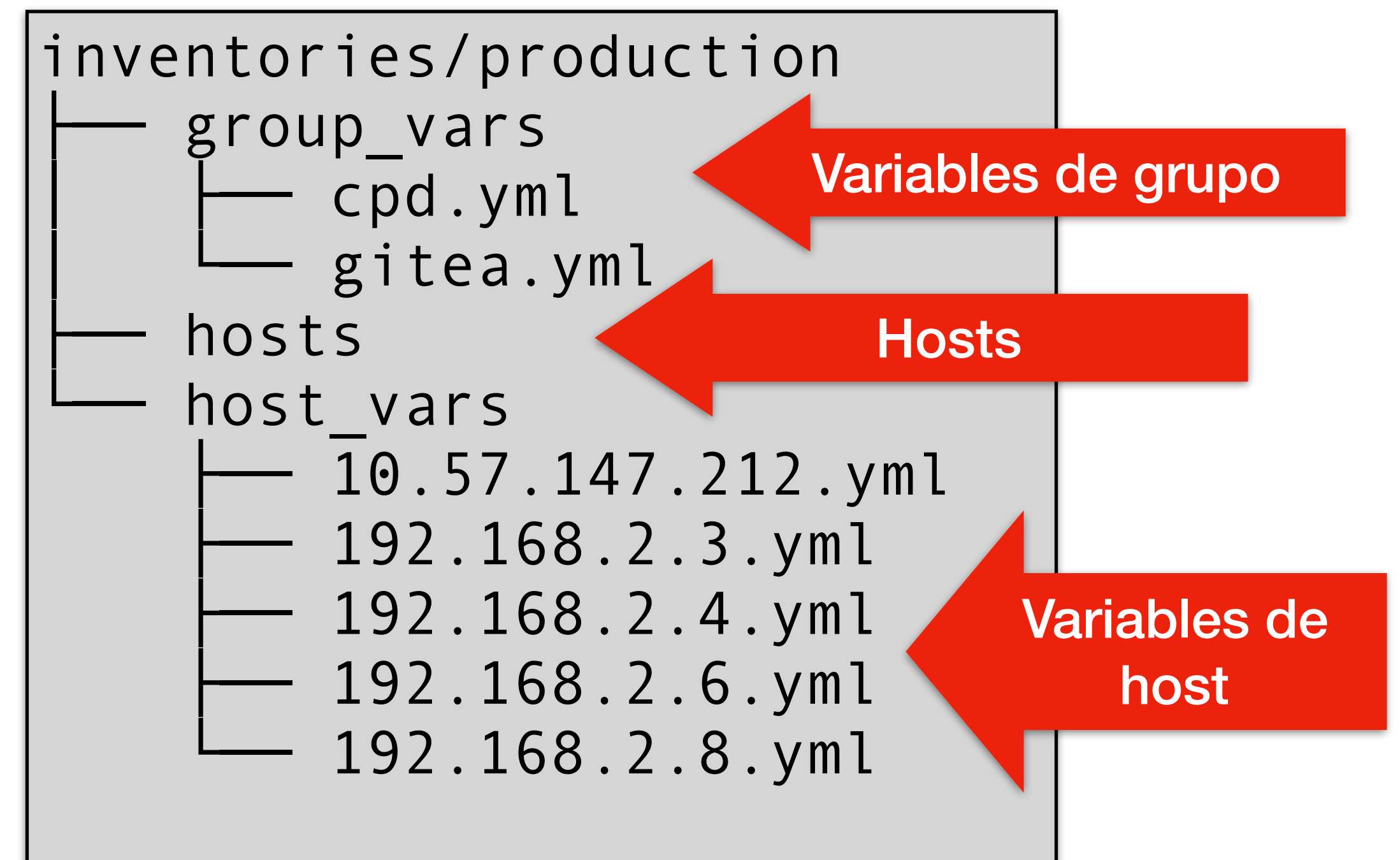
Inventarios

Bases de datos de hosts e configuraciones

Contido:

- Enumeración de hosts
- Variables xerais de cada grupo de hosts
- Variables específicas de cada host

As variables poden ir cifradas con Ansible Vault.



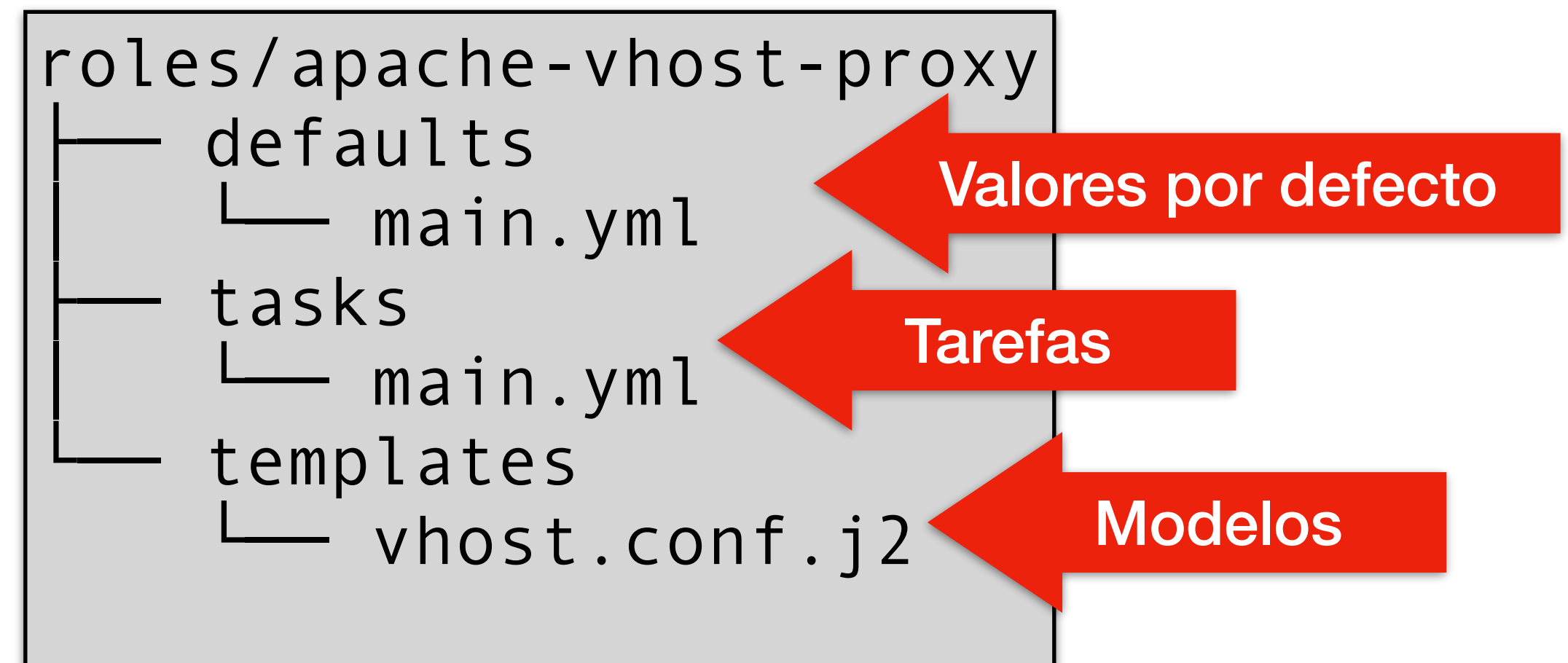
Roles

Configuracións aplicables ós hosts dun inventario

Dentro de roles atópanse os cartafoles de cada rol.


Cada rol contén:

- Modelos
- Tarefas
- Valores por defecto para algunhas variables



Modelos

- Ficheiros co sistema de plantillas Jinja2
- As marcas `{{...}}` substitúense polo valor que teñan as variables no momento de executar os playbooks.



```
<VirtualHost {{domain}}:80
    ServerName {{domain}}

    #LogLevel info ssl:warn

    ErrorLog ${APACHE_LOG_DIR}/error.log
    CustomLog ${APACHE_LOG_DIR}/access.log combined
</VirtualHost>
```


Tarefas

- Formato YAML
- Indican as tarefas a levar a cabo para executar o rol
- As marcas `{{...}}` substitúense polo valor das variables indicadas
- Hai moitos tipos de tarefas; véxase documentación de Ansible
- Dependendo da tarefa, levará uns parámetros ou outros
- A execución é secuencial

```
---
- name: "Install required packages"
  apt:
    name: apache2
    state: present
- name: "Virtual host para {{domain}}"
  template:
    dest: "/etc/apache2/sites-available/{{domain}}.conf"
    src: vhost.conf.j2
    backup: yes
    force: yes
- name: "Enable modules"
  command:
    cmd: "a2enmod proxy proxy_http rewrite ssl"
- name: "Enable site"
  command:
    cmd: "a2ensite {{domain}}.conf"
- name: "Reload Apache"
  service:
    name: apache2
    state: reloaded
```

Valores por defecto

- Formato YAML
- Valores por defecto para algunas variables

```
---  
certificate_file: /etc/ssl/certs/ssl-cert-snakeoil.pem  
certificate_key_file: /etc/ssl/private/ssl-cert-snakeoil.key  
app_port: 3000  
extra_parameters: ''  
websocket_endpoint: false
```

Variables

- Aplícanse sobre os modelos e as tarefas de roles e playbooks
- Superpóñense ós valores por defecto
- Ficheiros de variables en formato YAML
- Recoméndase o cifrado con Ansible Vault

```
gitea_internal_token: 'xxxxxxx'  
gitea_secret_key: 'xxxxxxx'  
db_name: 'gitea'  
db_user: 'gitea'  
db_pass: 'xxxyyyzzz'  
lfs_jwt_secret: 'xxxxxxxxx'  
app_url: 'https://gitea.example.com'  
domain: 'gitea.example.com'  
certificate_file: '/etc/letsencrypt/live/gitea.example.com/fullchain.pem'  
certificate_key_file: '/etc/letsencrypt/live/gitea.example.com/privkey.pem'
```

Execución dun playbook

Obxectivo: as máquinas xestionadas deben acadar o estado especificado

```
[root@rhel-8 ansible]# ansible-playbook httpd.yml --check
PLAY [install and start Apache web server] *****
TASK [Gathering Facts] *****
ok: [173.82.115.165]
TASK [install httpd] *****
changed: [173.82.115.165]
TASK [Start Apache web server] *****
changed: [173.82.115.165]
PLAY RECAP *****
173.82.115.165      : ok=3    changed=2    unreachable=0    failed=0    skipped=0    rescued=0
ignored=0
```

Comandos útiles

Listaxe de hosts dun inventario

ansible-inventory --graph -i *inventario* --ask-vault-pass

```
ansible-inventory --graph -i inventories/production/hosts --ask-vault-pass
```

Consulta de variables cifradas

ansible-vault view *ficheiro.yml*

```
ansible-vault view inventories/production/group-vars/cpd.yml
```

Edición de variables cifradas

ansible-vault edit *ficheiro.yml*

```
ansible-vault edit inventories/production/group-vars/cpd.yml
```

Execución dun playbook

ansible -i *inventario* --ask-vault-pass *playbook.yml*

```
ansible-playbook -i inventories/production/hosts --ask-vault-pass gitea.yml
```