

DevOps Sesión 13 (2022-03-23) Ansible

Documentación relacionada

- ./4-Topic 704 Configuration Management
- ./Material Curso Ansible/Curso Ansible 2020.pdf

variables

- ./Material Curso Ansible/Curso Ansible 2020.pdf pag 71
- ./Material Curso Ansible/Clase Ansible variables basicas .txt

```
- name: ensure a list of packages installed
yum:
  name: "{{ packages }}"
vars:
  packages:
    - httpd
    - httpd-tools
    - php
```

plantillas jinja2

- ./Material Curso Ansible/DO407-AUTOMATION WITH ANSIBLE I.pdf pag 82

- /etc/ansible/playbook-resueltos/host.j2:

```
{{ miip }} {{ ansible_hostname }} {{ ansible_fqdn }}
```

- ; playbook_sample_variables-ejemplo1.yml

```
---
- name : Crear un fichero con variables
  hosts: clientes
  remote_user: root
  vars:
```

```

- miip: "1.2.3.4"
tasks:
- name: Crear fichero hosts
  template: src=hosts.j2 dest=/tmp/hosts
...

```

```
ansible clientes -a "cat /tmp/hosts"
```

```
ansible-playbook -e miip=192.168.1.50 playbook_sample_variables-ejemplo1.yml
```

ejemplo

[; /etc/ansible/templates/index.html.j2](http://etc/ansible/templates/index.html.j2)

```

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
    <title>Curso de D0407-AUTOMATION WITH ANSIBLE I</title>
    <style type="text/css" media="screen">
      * {
        margin: 0px 0px 0px 0px;
        padding: 0px 0px 0px 0px;
      }

      body, html {
        padding: 3px 3px 3px 3px;

        background-color: #D8DBE2;

        font-family: Verdana, sans-serif;
        font-size: 11pt;
        text-align: center;
      }

      div.main_page {
        position: relative;
        display: table;

        width: 800px;

        margin-bottom: 3px;
        margin-left: auto;
        margin-right: auto;
        padding: 0px 0px 0px 0px;

        border-width: 2px;
        border-color: #212738;
        border-style: solid;

        background-color: #FFFFFF;

```

```
    text-align: center;
}

div.page_header {
    height: 99px;
    width: 100%;

    background-color: #F5F6F7;
}

div.page_header span {
    margin: 15px 0px 0px 50px;

    font-size: 180%;
    font-weight: bold;
}

div.page_header img {
    margin: 3px 0px 0px 40px;

    border: 0px 0px 0px;
}

div.table_of_contents {
    clear: left;

    min-width: 200px;

    margin: 3px 3px 3px 3px;

    background-color: #FFFFFF;

    text-align: left;
}

div.table_of_contents_item {
    clear: left;

    width: 100%;

    margin: 4px 0px 0px 0px;

    background-color: #FFFFFF;

    color: #000000;
    text-align: left;
}

div.table_of_contents_item a {
    margin: 6px 0px 0px 6px;
}

div.content_section {
    margin: 3px 3px 3px 3px;
```

```
        background-color: #FFFFFF;

        text-align: left;
    }

    div.content_section_text {
        padding: 4px 8px 4px 8px;

        color: #000000;
        font-size: 100%;
    }

    div.content_section_text pre {
        margin: 8px 0px 8px 0px;
        padding: 8px 8px 8px 8px;

        border-width: 1px;
        border-style: dotted;
        border-color: #000000;

        background-color: #F5F6F7;

        font-style: italic;
    }

    div.content_section_text p {
        margin-bottom: 6px;
    }

    div.content_section_text ul, div.content_section_text li {
        padding: 4px 8px 4px 16px;
    }

    div.section_header {
        padding: 3px 6px 3px 6px;

        background-color: #8E9CB2;

        color: #FFFFFF;
        font-weight: bold;
        font-size: 112%;
        text-align: center;
    }

    div.section_header_red {
        background-color: #CD214F;
    }

    div.section_header_grey {
        background-color: #9F9386;
    }

    .floating_element {
        position: relative;
        float: left;
    }
```

```

div.table_of_contents_item a,
div.content_section_text a {
    text-decoration: none;
    font-weight: bold;
}

div.table_of_contents_item a:link,
div.table_of_contents_item a:visited,
div.table_of_contents_item a:active {
    color: #000000;
}

div.table_of_contents_item a:hover {
    background-color: #000000;

    color: #FFFFFF;
}

div.content_section_text a:link,
div.content_section_text a:visited,
div.content_section_text a:active {
    background-color: #DCDFE6;

    color: #000000;
}

div.content_section_text a:hover {
    background-color: #000000;

    color: #DCDFE6;
}

div.validator {
}
</style>
</head>
<body>
    <div class="main_page">
        <div class="page_header floating_element">

            <a href="https://imgbb.com/"></a>
            </div>
            <div class="content_section floating_element">

                <div class="section_header section_header_red">
                    <div id="about"></div>
                    Curso de D0407-AUTOMATION WITH ANSIBLE I
                </div>
                <div class="content_section_text">
                    {% if ansible_distribution == "CentOS" %}

                        <p>
                            Esta es la página de bienvenida predeterminada para probar el correcto
                            funcionamiento del servidor Apache2 después de la instalación en los sistemas

```

{{ ansible_distribution_version }}. Se basa en la página equivalente en centos. Si puede leer esta página, significa que el servidor HTTP Apache instalado en este sitio funciona correctamente. Debe reemplazar este archivo (ubicado en /var/www/html/index.html) antes de continuar operando su servidor HTTP.

El usuario de configuración de este sitio web es ansible. El servidor desde donde se muestra este contenido es {{ ansible_hostname }} con la ip {{ ansible_default_ipv4.address }} por el puerto 80. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

```
</p>
{% endif %}

</div>
<div class="section_header">
  <div id="changes"></div>
  Datos del usuario {{ usuario }}
</div>
<div class="content_section_text">
  <p>
    <ul>
      <li> Hostname: {{ ansible_hostname }} </li>
      <li> IP V4: {{ ansible_default_ipv4.address }} </li>
      <li> DNS Servers: {{ ansible_dns.nameservers }} </li>
      <li> Kernel version: {{ ansible_kernel }} </li>
      <li> Centos distribution: {{ ansible_distribution_version }} </li>
      <li> Total de memoria: {{ ansible_memtotal_mb }} MBs </li>
      <li> The current free memory is: {{ ansible_memfree_mb }} MBs
</li>
      <li> Today's date is: {{ ansible_date_time.date }}. </li>
    </ul>
  </p>

  <pre>/etc/apache2/
|-- apache2.conf
|   `-- ports.conf
|-- mods-enabled
|   | -- *.load
|   `-- *.conf
|-- conf-enabled
|   `-- *.conf
|-- sites-enabled
|   `-- *.conf
  </pre>
  <ul>
    <li>
      <tt>apache2.conf</tt> is the main configuration
      file. It puts the pieces together by including all
      remaining configuration
      files when starting up the web server.
    </li>
    <li>
      <tt>ports.conf</tt> is always included from the
```

the listening ports for the main configuration file. It is used to determine incoming connections, and this file can be customized anytime.

- Configuration files in the `mods-enabled/`, `conf-enabled/` and `sites-enabled/` directories contain particular configuration snippets which manage modules, global configuration fragments, or virtual host configurations, respectively.
- They are activated by symlinking available configuration files from their respective `*-available/` counterparts. These should be managed by using our helpers


```

a2enmod,
a2dismod,
a2ensite,
a2dissite

```

 and


```

a2enconf,
a2disconf

```

 . See their respective man pages for detailed information.
- The binary is called `apache2`. Due to the use of environment variables, in the default configuration, `apache2` needs to be started/stopped with `/etc/init.d/apache2` or `apache2ctl`. **Calling `/usr/bin/apache2` directly will not work** with the default configuration.

```

    </div>

    <div class="section_header">
        <div id="docroot"></div>
        Document Roots
    </div>

    <div class="content_section_text">
        <p>
            By default, Ubuntu does not allow access through the web
browser to
            <em>any</em> file apart of those located in <tt>/var/www</tt>,
            <a
href="http://httpd.apache.org/docs/2.4/mod/mod_userdir.html">public_html</a>
            directories (when enabled) and <tt>/usr/share</tt> (for web
            applications). If your site is using a web document root
            located elsewhere (such as in <tt>/srv</tt>) you may need to
whitelist your
            document root directory in <tt>/etc/apache2/apache2.conf</tt>.
        </p>
        <p>
            The default Ubuntu document root is <tt>/var/www/html</tt>.
You
            can make your own virtual hosts under /var/www. This is
different
            to previous releases which provides better security out of the
box.
        </p>
    </div>

    <div class="section_header">
        <div id="bugs"></div>
        Reporting Problems
    </div>
    <div class="content_section_text">
        <p>
            Please use the <tt>ubuntu-bug</tt> tool to report bugs in the
            Apache2 package with Ubuntu. However, check <a
href="https://bugs.launchpad.net/ubuntu/+source/apache2">existing
            bug reports</a> before reporting a new bug.
        </p>
        <p>
            Please report bugs specific to modules (such as PHP and
others)
            to respective packages, not to the web server itself.
        </p>
    </div>

    </div>
</div>
<div class="validator">
    <p>
        <a href="http://validator.w3.org/check?uri=referer"></a>
    </p>

```



```
</div>
</body>
</html>
```

```
- hosts: clientes
  remote_user: root
  vars:
    system_owner: usuario@example.com
    usuario: Usuario-Berto
  tasks:
    - template:
        src: /etc/ansible/templates/index.html.j2
        dest: /var/www/html/index.html
        owner: root
        group: root
        mode: 0644
    - name: httpd is running and enabled
      service:
        name: httpd
        state: restarted
```

- listado de variables (ansible_facts):

```
ansible clientes -m setup | grep ansible_
```

- https://docs.ansible.com/ansible/latest/user_guide/playbooks_vars_facts.html

roles

- ./Material Curso Ansible/Curso Ansible 2020.pdf pag 95
- ./Material Curso Ansible/DO407-AUTOMATION WITH ANSIBLE I.pdf pag 117
- ./Material Curso Ansible/

Los roles permiten organizar los playbooks y separarlos en ficheros más pequeños. Los roles proporcionan a Ansible una forma de utilizar tareas, handlers y variables desde archivos externos. Los archivos estáticos y las plantillas también se pueden asociar y hacer referencia mediante un rol.

- estructura
 - defaults
 - main.yml
 - files
 - handlers
 - main.yml
 - meta
 - main.yml
 - tasks
 - main.yml
 - templates
 - tests
 - inventory

- test.yml
- vars
 - main.yml
- README.md

ansible galaxy

- ./Material Curso Ansible/Curso Ansible 2020.pdf pag 207
- ./Material Curso Ansible/DO407-AUTOMATION WITH ANSIBLE I.pdf pag 108
- <https://galaxy.ansible.com>

- <https://galaxy.ansible.com/zaxos/tomcat-ansible-role>

```
ansible-galaxy role --help
ansible-galaxy install zaxos.tomcat-ansible-role
ansible-galaxy list
ansible-galaxy init
```

; playbook-tomcat.yml

```
---
- hosts: clientes
  user: root
  become: true
  vars:
    tomcat_version: 8.5.23
    tomcat_permissions_production: True
    tomcat_users:
      - username: "tomcat"
        password: "t3mpp@ssw0rd"
        roles: "tomcat,admin,manager,manager-gui"
      - username: "exampleuser"
        password: "us3rp@ssw0rd"
        roles: "tomcat"
  roles:
    - role: zaxos.tomcat-ansible-role
...
```

- ./Material Curso Ansible/roles ansible para laboratorios/docker-wp-jm-ansible

- usar ansible para personalizar un docker-compose.yml que se lanzará en los ndoos destino

- ./Material Curso Ansible/roles ansible para laboratorios/password-role

windows

- ./Material Curso Ansible/Ansible-Windows-winrm/
- ./Material Curso Ansible/Ansible-Vmware-vSphere/
- ./Material Curso Ansible/Curso Ansible 2020.pdf pag
- ./Material Curso Ansible/DO407-AUTOMATION WITH ANSIBLE I.pdf pag
- https://docs.ansible.com/ansible/2.9/modules/list_of_windows_modules.html
- ./Material Curso Ansible/Ansible-Windows-winrm/Configure ansible-windows.txt

- WinRM (protocolo en máquinas Windows desde W2012)
 - https/5986, http/5985
 - .NET 4.0:

```
Get-ChildItem 'HKLM:\SOFTWARE\Microsoft\NET Framework Setup\NDP' -Recurse
| Get-ItemProperty -Name version -EA 0 | Where { $_.PSChildName -Match
'^(?!S)\p{L}'} | Select PSChildName, version
```

- script ejecutar máquina windows para permitir conexión:
<https://github.com/ansible/ansible/blob/devel/examples/scripts/ConfigureRemotingForAnsible.ps1>
- Dependencia master ansible:

```
yum install python2-winrm.noarch -y
```

- [;/etc/ansible/hosts](#)

```
...
[win]
192.168.1.46

[win:vars]
ansible_user=Administrador
ansible_password=Password,013
ansible_connection=winrm
ansible_winrm_server_cert_validation=ignore
ansible_become_method=runas
ansible_become_user=Administrador
...
```

chocolatey

- «apt» para Windows
- <https://chocolatey.org/>
- <https://boxstarter.org>

ansible vault

- ./Material Curso Ansible/Curso Ansible 2020.pdf pag 226
- ./Material Curso Ansible/DO407-AUTOMATION WITH ANSIBLE I.pdf pag 127
- ./Material Curso Ansible/Introduccion Ansible.txt línea 168

- Cifrar playbooks
- `ansible-vault`
 - `encrypt`
 - `decrypt`
 - `edit`
 - `view`
 - `encrypt_string`: solo encripta una cadena que se puede usar en una variable del `.yaml`
- `ansible-playbook`
 - `--ask-vault-pass`
 - `--vault-password-file`: contraseña en texto plano dentro de un fichero (en el master)

Extra

- <https://image.ibb.co/>
- kubernetes: <https://galaxy.ansible.com/kubernetes/core>

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