**Anotações sobre comandos**

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| **Nome** | **Descrição** |
| 01.01-backup-config | Realizar o backup do equipamento utilizando nome fixo configurado no arquivo |
| 01.02-backup-config | Realizar o backup do equipamento utilizando nome fixo configurado na linha de comando.  Verificar comando e parâmetro do comando. |
| 01.03-backup-config | Realizar backup de N switches utilizando os hostnames configurados no arquivo host |
| 02.01-executar-qualquer-comando-show | Executar qualquer comando, consultando o hostname no arquivo host e salvando a saida em pasta. |
| 03.03-limpar\_contador\_interface | Limpar contador de uma interface |
| 04.01-icmp | Executar ping simples, passando o endereço IP no comando ou consultando o IP no arquivo hosts |
| 04.02-icmp-imprime-saida | O mesmo que o anterior, porém imprimindo a saida na tela. |
| 05.01-alterar-hostname | Alterar o hosname do switch, consultando o novo nome no arquivo hosts. |
| 06.01-verificar-se-existe-configuracao | Executar um comando e verificar se existe uma palavra ou comando na saída da execução. |
| 07.01-configure\_interface\_settings | Configurar uma interface com descrição, endereço IP e emitir o comando no shutdown |
| 07.02-configure\_interface\_settings | Emitir o comando shutdown em uma interface |
| 07.03-remover\_interface | Remover uma interface ou uma interface VLAN |
| 08.01-configure\_multiples\_interfaces | Emitir o comando shutdown em muitas interfaces e de muitos switches |
|  |  |
| 09.01-criar-usuario.yaml | Criar usuário |
| 10.01-remover-usuario.yaml | Remover somente um usuario |
| 10.02-remover-somente-usuarios-listados.yaml | Remover sometne os usuarios listados |
| 10.03-remover-todos-usuarios-exceto-admin.yaml | Remover todos os usuarios exceto o usuario admin |
| 10.04-remover-todos-usuarios-exceto-admin-e-listados.yaml | Remover todos os usuarios exceto o usuario admin e os usuarios listados |
| **Fonte:** <https://docs.ansible.com/ansible/latest/collections/cisco/ios/ios_user_module.html#ios-user-module> | |

**Teoria**

Video sobre Ansible - terminar

<https://www.youtube.com/watch?v=OWKPxAgh9DU>

https://blog.ccna.com.br/2020/06/25/introducao-a-automacao-de-redes-com-ansible/

<https://docs.ansible.com/ansible/latest/collections/cisco/ios/ios_config_module.html>

<https://docs.ansible.com/ansible/2.9/modules/ios_config_module.html>

<https://docs.ansible.com/ansible/latest/collections/cisco/ios/ios_config_module.html>

**Ansible**

It can be used to configure and monitor servers and network devices, install software, and

perform more advanced tasks.

Ansible is an automation tool that is capable of automating cloud provisioning, deployment of applications, and configuration management.

An Ansible playbook is a structured sets of instructions

SSH, but NETCONF and REST API interfaces are also supported.

Commercial offer: Ansible Tower

Playbooks are written in YAML,

Managed node: do not need to have Ansible installed

Managed devices can be grouped together by function or location or based on some other feature

As the hostfile grows larger in a bigger environment, it is a best practice to move the variables to dedicated files in group\_vars/ and host\_vars/ folders.

The group\_vars folder would contain files with definitions for variables related to groups of devices, and the host\_vars folder would contain files with definitions of variables related to individual hosts.

Module: Ansible modules are units of parameterized Python code that get executed by Ansible.

SSH to log in to the server, copies the Python code, and runs that code on the server. There is no need to have any Ansible component installed on the managed servers, as the implementation is agentless.

The control host still uses SSH or NETCONF, RESTCONF, SNMP, and other interfaces to connect to the network devices and perform the desired configuration changes

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Vars:

The ansible\_network\_os variable specifies that the type of operating system for this group of

devices is IOS.

ansible\_connection variable: specifies that Ansible should connect to the devices in this group by using network\_cli, which means SSH.

**ios\_command** to send mostly **show** commands to devices running IOS and IOS XE operating systems

**ios\_config** to send **configuration** commands to IOS and IOS XE devices

The hosts keyword specifies which hosts or machines the play will be executed against.

Tasks are executed on the hosts that are defined in the play definition.

Some of the other optional parameters for the ios\_command module are the following:

interval: Specifies the interval of time, in seconds, to wait between retries of the command.

retries: Configures the number of retries for a command before it is considered failed.

wait\_for: Specifies a list of conditions that have to be evaluated against the output of the command. In this example, it could be defined as wait\_for: result[0] contains IOS-XE, which verifies that the output of the show version command contains the value IOS-XE before going further with the execution of the playbook.

$ ansible-playbook -i hosts site.yml -u admin -k

-i option specifies the name of the inventory file

-u option specifies the username

-k option specifies that the user should be asked for the connection password when

the playbook is executed.

Ansible playbooks are written using YAML (Yet Another Markup Language).

YAML files usually begin with a series of three dashes (---) and end with a series of three periods (…).

check the format of YAML files: Go to [www.yamllint.com](http://www.yamllint.com)

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Backup: full backup of show running-config

Opções de backup:

filename: nome do arquivo

dir\_path: caminho

<https://docs.ansible.com/ansible/latest/collections/cisco/ios/ios_config_module.html#return-backup_path>

Habilitar Usar enable mode:

<https://docs.ansible.com/ansible/latest/network/user_guide/platform_ios.html>

[switches-prediletas:vars]

ansible\_network\_os=ios

ansible\_connection=network\_cli

ansible\_user=adwillian

ansible\_password=

ansible\_become\_password=

ansible\_become=yes

ansible\_become\_method=enable

ansible\_python\_interpreter=/usr/bin/python3

**Alterar interpretador para Python 3:**

<https://docs.ansible.com/ansible/latest/reference_appendices/python_3_support.html#:~:text=Ansible%20will%20automatically%20detect%20and,%2Fusr%2Fbin%2Fpython3>

**SSH Login direto - Linux - Cisco**

<https://networklessons.com/uncategorized/ssh-public-key-authentication-cisco-ios/?utm_source=youtube&utm_medium=social&utm_campaign=SSH%20Public%20Key%20Authentication%20on%20Cisco%20IOS>

Escrever tutorial

**SSH Login direto - Windows - Cisco**

<https://www.youtube.com/watch?v=Qr8t8NWTS1Y>

##inventory\_hostname eh herdado do arquivo hosts

#terminar manipulação de usuarios

<https://docs.ansible.com/ansible/latest/collections/cisco/ios/ios_user_module.html#ios-user-module>

Geral IOS:

<https://docs.ansible.com/ansible/latest/collections/cisco/ios/>