

PRAKTIKUM DESAIN DAN MANAJEMEN JARINGAN KOMPUTER

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A. Mainin Ansible

1. Menampilkan list file.

```
rizky@rizky-VirtualBox:~$ cd /etc/ansible
rizky@rizky-VirtualBox:/etc/ansible$ ls
ansible.cfg  hosts
```

2. Edit file.

```
# uncomment this to disable SSH key host checking
host_key_checking = False
```

B. Bikin Ansible Inventory

3. Router CSR.
4. Download SSH key.

```
Successfully built gdown scandir
Installing collected packages: backports.functools-lru-cache, soupsieve, beauti
rizky@rizky-VirtualBox:~$ gdown 1497KqiuWByTdirRngSyCck7QJzaYehMX
Downloading...
From: https://drive.google.com/uc?id=1497KqiuWByTdirRngSyCck7QJzaYehMX
To: /home/rizky/csr8000.pem
100%|#####| 1.68k/1.68k [00:00<00:00, 12.7MB/s]
```

5. Membuat file Ansible Inventory.

```
[routers]
ec2-54-255-248-79.ap-southeast-1.compute.amazonaws.com
[routers:vars]
ansible_user=ec2-user
ansible_connection=network_cli
ansible_network_os=ios
ansible_port=22
```

C. Mengeksekusi Ad-Hoc Command

6. Menjalankan perintah ping.

```
rizky@rizky-VirtualBox:~$ ansible routers -m ping --private-key=csr8000.pem
[DEPRECATION WARNING]: Distribution Ubuntu 20.04 on host ec2-54-255-248-79.ap-southeast-1.compute.amazonaws.com should use /usr/bin/python3, but is using /usr/bin/python for backward compatibility with prior Ansible releases. A future Ansible release will default to using the discovered platform python for this host. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information. This feature will be removed in version 2.12. Deprecation warnings can be disabled by setting deprecation_warnings=False in ansible.cfg.
ec2-54-255-248-79.ap-southeast-1.compute.amazonaws.com | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python"
  },
  "changed": false,
  "ping": "pong"
}
```

7. Menjalankan perintah.

```
interface brief" --private-key=csr8000.pem
[DEPRECATION WARNING]: Distribution Ubuntu 20.04 on host ec2-54-255-248-79.ap-southeast-1.compute.amazonaws.com should use /usr/bin/python3, but is using /usr/bin/python for backward compatibility with prior Ansible releases. A future Ansible release will default to using the discovered platform python for this host. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information. This feature will be removed in version 2.12. Deprecation warnings can be disabled by setting deprecation_warnings=False in ansible.cfg.
ec2-54-255-248-79.ap-southeast-1.compute.amazonaws.com | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python"
  },
  "changed": false,
  "stdout": [
    "Interface          IP-Address      OK? Method Status
Protocol\nGigabitEthernet1  172.31.35.182  YES DHCP    up
up      \nVirtualPortGroup0    192.168.35.101 YES NVRAM    up
up"
  ],
  "stdout_lines": [
    [
      "Interface          IP-Address      OK? Method Status
Protocol",
      "GigabitEthernet1  172.31.35.182  YES DHCP    up
up      ",
      "VirtualPortGroup0    192.168.35.101 YES NVRAM    up
up"
    ]
  ]
}
```

D. Membuat Ansible Playbook

8. Membuat playbook1_aliyah.yml.

```
rizky@rizky-VirtualBox: ~
GNU nano 4.8      playbook1_aliyah.yml
name: Playbook 1 - aliyah
connection: network_cli
gather_facts: false
hosts: routers
tasks:
  - name: Get config for iOS devices
    ios_facts:
      gather_subset: all
  - name: Display config
    debug:
      msg: "Hostname is {{ ansible_net_hostname }} and OS {{ ansible_net_ver
```

9. Menjalankan playbook1_aliyah.yml.

```
PLAY [Playbook 1 - aliyah] *****
*

TASK [Get config for ios devices] *****
*
[WARNING]: default value for 'gather_subset' will be changed to 'min' from
'!config' v2.11 onwards
[DEPRECATION WARNING]: Distribution Ubuntu 20.04 on host ec2-54-255-248-79.ap-
southeast-1.compute.amazonaws.com should use /usr/bin/python3, but is using
/usr/bin/python for backward compatibility with prior Ansible releases. A
future Ansible release will default to using the discovered platform python for
this host. See https://docs.ansible.com/ansible/2.9/reference_appendices/inter-
preter_discovery.html for more information. This feature will be removed in
version 2.12. Deprecation warnings can be disabled by setting
deprecation_warnings=False in ansible.cfg.
ok: [ec2-54-255-248-79.ap-southeast-1.compute.amazonaws.com]

TASK [Display config] *****
*
ok: [ec2-54-255-248-79.ap-southeast-1.compute.amazonaws.com] => {
  "msg": "Hostname is DarmawanHanif_2206819054 and OS 17.14.01a"
}

PLAY RECAP *****
*
ec2-54-255-248-79.ap-southeast-1.compute.amazonaws.com : ok=2    changed=0    u
nreachable=0    failed=0    skipped=0    rescued=0    ignored=0
```

10. Membuat Ansible playbook2_aliyah.yml.

```
GNU nano 4.8      playbook2_aliyah.yml      Modified
name: Playbook 2 - aliyah
connection: network_cli
gather_facts: false
hosts: routers
become: yes
vars:
  new: "aliyah-2206024682"

tasks:
  - name: Change hostname
    hostname:
      name: "{{ new }}"

  - name: Configure MOTD banner from file
    ios_banner:
      banner: motd
      text: "{{ lookup('file', './motd.cfg') }}"
      state: present

  - name: Display hostname
    debug:
      msg: "Hostname = {{ ansible_hostname }}"

  - name: Read MOTD banner
    ios_command:
      commands:
        - show banner motd
      register: banner

  - name: Display MOTD banner
    debug:
      msg: "Banner MOTD = {{ banner }}"
```

Terdapat beberapa tugas/*task* yang didefinisikan dalam Playbook. Tugas ini mencakup perubahan *hostname* perangkat, konfigurasi *banner* MOTD, serta menampilkan hasil perubahan.

Isi file motd.cfg:

```
GNU nano 4.8      motd.cfg
aliyah-2206024682
```

11. Menjalankan playbook2_aliyah.yml.

```
rlzky@rlzky-VirtualBox:~$ ansible-playbook playbook2_aliyah.yml --private-key=c
sr8000.pem

PLAY [Playbook 2 - aliyah] *****

TASK [Change hostname] *****
[DEPRECATION WARNING]: Distribution Ubuntu 20.04 on host ec2-54-255-248-79.ap-
southeast-1.compute.amazonaws.com should use /usr/bin/python3, but is using
/usr/bin/python for backward compatibility with prior Ansible releases. A
future Ansible release will default to using the discovered platform python for
this host. See https://docs.ansible.com/ansible/2.9/reference_appendices/inter
preter_discovery.html for more information. This feature will be removed in
version 2.12. Deprecation warnings can be disabled by setting
deprecation_warnings=False in ansible.cfg.
ok: [ec2-54-255-248-79.ap-southeast-1.compute.amazonaws.com]

TASK [Copy file MOTD banner from file] *****
* UbuntuSoftware
changed: [ec2-54-255-248-79.ap-southeast-1.compute.amazonaws.com]

TASK [Display hostname] *****
ok: [ec2-54-255-248-79.ap-southeast-1.compute.amazonaws.com] => {
  "msg": "Hostname = aliyah-2206024682"
}

TASK [Read MOTD banner] *****
ok: [ec2-54-255-248-79.ap-southeast-1.compute.amazonaws.com]

TASK [Display MOTD banner] *****
ok: [ec2-54-255-248-79.ap-southeast-1.compute.amazonaws.com] => {
  "msg": "Banner MOTD = {'stdout_lines': [['aliyah-2206024682']], 'changed':
False, 'stdout': ['aliyah-2206024682'], 'failed': False}"
}

P Help ECAP *****
ec2-54-255-248-79.ap-southeast-1.compute.amazonaws.com : ok=5    changed=1  u
nreachable=0    failed=0    skipped=0    rescued=0    ignored=0
```

E. Pelajaran yang bisa dipetik dari praktikum kali ini adalah...

- Dalam praktikum ini, digunakan router CSR (*Cloud Services Router*) milik AWS, sehingga membangun koneksi SSH adalah langkah yang wajib karena CSR berjalan pada instance EC2 (*Elastic Compute Cloud*) yang dioperasikan di lingkungan cloud AWS.
- Penggunaan Playbook milik Ansible memberikan keuntungan karena konfigurasi perangkat dapat dilakukan dengan bebas dan dapat disesuaikan dengan kebutuhan.
- Karena Playbook sensitif terhadap indentasi, maka saat menuliskan instruksi ke dalam file Playbook, harus benar-benar teliti terhadap tanda baca dan spasi.