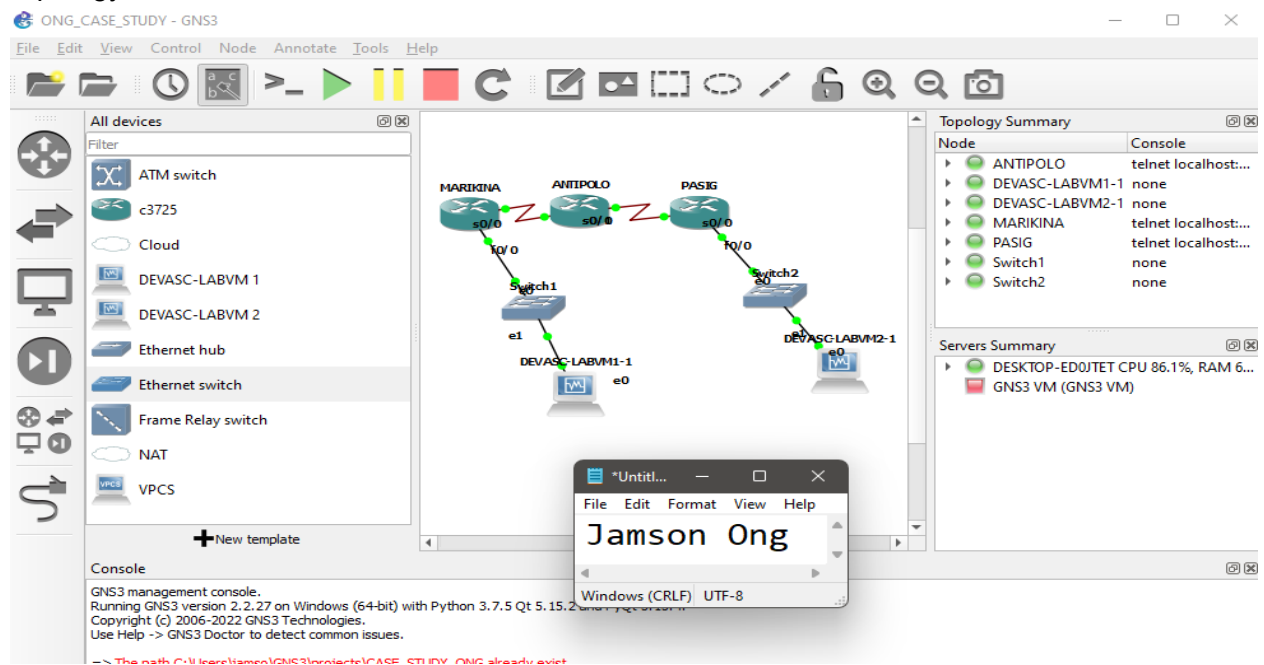


Topology

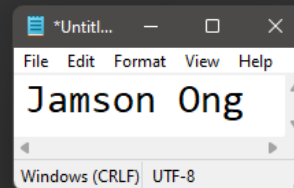


Show running configuration of the three routers

MARIKINA Router:

```
Building configuration...  
[OK]  
MARIKINA(config-router)#do show run  
Building configuration...  
  
Current configuration : 1908 bytes  
!  
version 12.4  
service timestamps debug datetime msec  
service timestamps log datetime msec  
no service password-encryption  
!  
hostname MARIKINA  
!  
boot-start-marker  
boot-end-marker  
!  
!  
no aaa new-model  
memory-size iomem 5  
no ip icmp rate-limit unreachable  
ip cef  
!  
!  
!  
no ip domain lookup  
ip domain name www.abc.com  
!  
multilink bundle-name authenticated  
!  
!
```

```
!
username cisco privilege 15 password 0 cisco123
archive
 log config
  hidekeys
!
!
!
ip tcp synwait-time 5
ip ssh version 2
!
!
!
interface FastEthernet0/0
 ip address 192.168.1.1 255.255.255.0
 duplex auto
 speed auto
!
interface Serial0/0
 ip address 10.0.0.1 255.255.255.252
 clock rate 2000000
!
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
!
interface Serial0/1
 no ip address
 shutdown
 clock rate 2000000
!
interface Serial0/2
 no ip address
 shutdown
 clock rate 2000000
!
interface FastEthernet1/0
 no ip address
 shutdown
 duplex auto
 speed auto
!
interface Serial2/0
 no ip address
 shutdown
 serial restart-delay 0
!
interface Serial2/1
 no ip address
 shutdown
 serial restart-delay 0
!
interface Serial2/2
 no ip address
 shutdown
```



MARIKINA x ANTIPOLLO PASIG +

```
speed auto
!
interface Serial0/1
no ip address
shutdown
clock rate 2000000
!
interface Serial0/2
no ip address
shutdown
clock rate 2000000
!
interface FastEthernet1/0
no ip address
shutdown
duplex auto
speed auto
!
interface Serial2/0
no ip address
shutdown
serial restart-delay 0
!
interface Serial2/1
no ip address
shutdown
serial restart-delay 0
!
interface Serial2/2
no ip address
shutdown
serial restart-delay 0
!
interface Serial2/3
no ip address
shutdown
serial restart-delay 0
!
router ospf 100
log-adjacency-changes
passive-interface FastEthernet0/0
network 10.0.0.0 0.0.0.3 area 0
network 192.168.1.0 0.0.0.255 area 0
!
router rip
version 2
passive-interface FastEthernet0/0
network 10.0.0.0
network 192.168.1.0
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
no cdp log mismatch duplex
!
!
!
```

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Jamson Ong
Windows (CRLF) UTF-8

```
control-plane
```

```
!
```

```
!
```

```
!
```

```
!
```

```
!
```

```
!
```

```
!
```

```
!
```

```
line con 0
```

```
exec-timeout 0 0
```

```
privilege level 15
```

```
logging synchronous
```

```
line aux 0
```

```
exec-timeout 0 0
```

```
privilege level 15
```

```
logging synchronous
```

```
line vty 0 4
```

```
login local
```

```
transport input ssh
```

```
line vty 5 15
```

```
login local
```

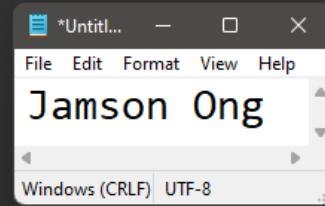
```
transport input ssh
```

```
!
```

```
!
```

```
end
```

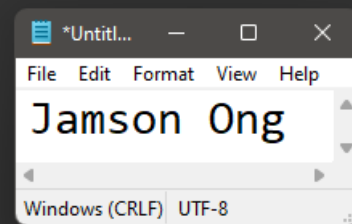
```
MARIKINA(config-router)#
```



ANTIPOLO Router:

```
ANTIPOLO#show run
Building configuration...

Current configuration : 1926 bytes
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname ANTIPOL0
!
boot-start-marker
boot-end-marker
!
!
no aaa new-model
memory-size iomem 5
no ip icmp rate-limit unreachable
ip cef
!
!
!
!
no ip domain lookup
ip domain name www.abc.com
!
multilink bundle-name authenticated
!
!
!
!
!
!
!
!
!
!
```



```
username cisco privilege 15 password 0 cisco123
archive
log config
  hidekeys
```

```
ip tcp synwait-time 5
ip ssh version 2
```

```
interface FastEthernet0/0
no ip address
shutdown
duplex auto
speed auto
```

```
interface Serial0/0
ip address 10.0.0.2 255.255.255.252
clock rate 2000000
```

```
interface FastEthernet0/1
no ip address
shutdown
duplex auto
speed auto
```

```
interface Serial0/1
ip address 10.0.0.5 255.255.255.252
ip access-group ACL-PC1 in
clock rate 2000000
```

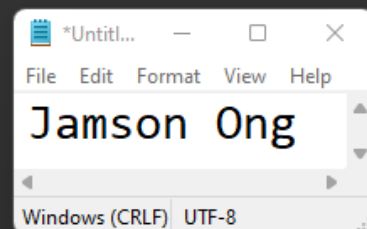
```
interface Serial0/2
no ip address
shutdown
clock rate 2000000
```

```
interface FastEthernet1/0
no ip address
shutdown
duplex auto
speed auto
```

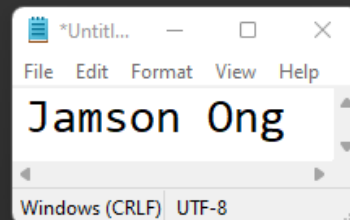
```
interface Serial2/0
no ip address
shutdown
serial restart-delay 0
```

```
interface Serial2/1
no ip address
shutdown
serial restart-delay 0
```

```
interface Serial2/2
no ip address
shutdown
serial restart-delay 0
```



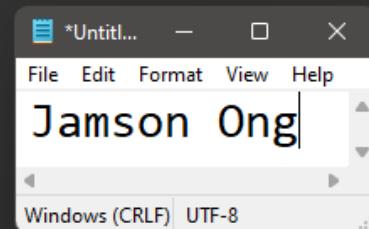
```
!
interface Serial2/3
 no ip address
 shutdown
 serial restart-delay 0
!
router ospf 100
 log-adjacency-changes
 network 10.0.0.0 0.0.0.3 area 0
 network 10.0.0.4 0.0.0.3 area 0
!
router rip
 version 2
 network 10.0.0.0
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
ip access-list extended ACL-PC1
 deny icmp host 192.168.2.2 any
 permit ip any any
!
no cdp log mismatch duplex
!
!
!
!
!
!
control-plane
!
!
!
!
!
!
!
!
line con 0
 exec-timeout 0 0
 privilege level 15
 logging synchronous
line aux 0
 exec-timeout 0 0
 privilege level 15
 logging synchronous
line vty 0 4
 login local
 transport input ssh
line vty 5 15
 login local
 transport input ssh
!
!
end
```



PASIG Router:

```
PASIG(config-router)#do copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
PASIG(config-router)#do show run
Building configuration...

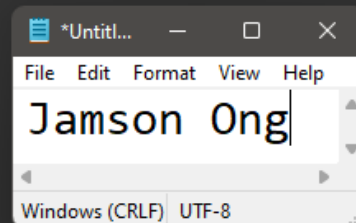
Current configuration : 1832 bytes
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname PASIG
!
boot-start-marker
boot-end-marker
!
!
no aaa new-model
memory-size iomem 5
no ip icmp rate-limit unreachable
ip cef
!
!
!
!
no ip domain lookup
ip domain name www.abc.com
!
multilink bundle-name authenticated
!
!
!
!
!
!
!
!
!
!
```



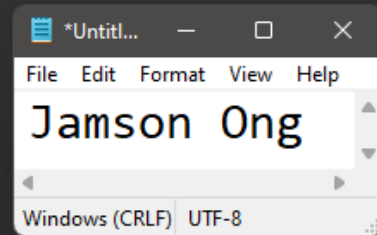

```

username cisco privilege 15 password 0 cisco123
archive
 log config
  hidekeys
!
ip tcp synwait-time 5
ip ssh version 2
!
interface FastEthernet0/0
 ip address 192.168.2.1 255.255.255.0
 duplex auto
 speed auto
!
interface Serial0/0
 ip address 10.0.0.6 255.255.255.252
 clock rate 2000000
!
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
!
interface Serial0/1
 no ip address
 shutdown
 clock rate 2000000
!
interface Serial0/2
 no ip address
 shutdown
 clock rate 2000000
!
interface FastEthernet1/0
 no ip address
 shutdown
 duplex auto
 speed auto
!
interface Serial2/0
 no ip address
 shutdown
 serial restart-delay 0
!
interface Serial2/1
 no ip address
 shutdown
 serial restart-delay 0
!

```



```
!  
interface Serial2/2  
 no ip address  
 shutdown  
 serial restart-delay 0  
!  
interface Serial2/3  
 no ip address  
 shutdown  
 serial restart-delay 0  
!  
router ospf 100  
 log-adjacency-changes  
 network 10.0.0.4 0.0.0.3 area 0  
!  
router rip  
 version 2  
 passive-interface FastEthernet0/0  
 network 10.0.0.0  
 network 192.168.2.0  
!  
ip forward-protocol nd  
!  
!  
no ip http server  
no ip http secure-server  
!  
no cdp log mismatch duplex  
!  
!  
!  
!
```



```

interface Serial2/3
no ip address
shutdown
serial restart-delay 0

outer ospf 100
log-adjacency-changes
network 10.0.0.4 0.0.0.3 area 0

outer rip
version 2
passive-interface FastEthernet0/0
network 10.0.0.0
network 192.168.2.0

p forward-protocol nd

o ip http server
o ip http secure-server

o cdp log mismatch duplex

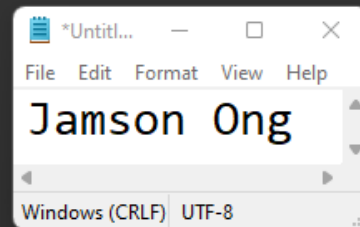
ontrol-plane

ine con 0
exec-timeout 0 0
privilege level 15
logging synchronous
ine aux 0
exec-timeout 0 0
privilege level 15
logging synchronous
ine vty 0 4
login local
transport input ssh
ine vty 5 15
login local
transport input ssh

nd

ASIG(config-router)#

```



Ansible.cfg file

ansible.cfg X

! check_ip.yaml

! configure_osp

ansible.cfg

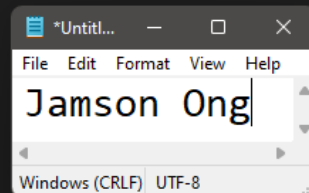
```
1 [defaults]
2 #Use local hosts file in this folder
3 inventory=./hosts
4 host_key_checking = False
5 # Don't worry about RSA Fingerprints
6 retry_files_enabled = False # Do not creat
7 deprecation_warnings = False # Do not show
8
```

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File Edit Format View Help

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Check_ip.yaml file

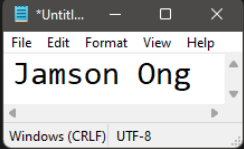
```
! check_ip.yaml
1  ---
2  - name: check ip address
3    hosts: routers
4    gather_facts: false
5    connection: local
6    vars:
7      cli:
8        username: cisco
9        password: cisco123
10
11   tasks:
12     - name: print ip interfaces
13       ios_command:
14         provider: "{{ cli }}"
15         commands:
16           - show ip interface brief
17       register: config
18
19     - name: SAVE OUTPUT TO ./iosconfig/
20       copy:
21         content: "{{config.stdout[0]}}"
22         dest: "iosconfig/showip{{inventory_hostname}}.txt"
```



Output:

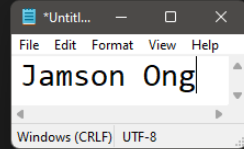
```
iosconfig > showipMARIKINA.txt
```

	Interface	IP-Address	OK?	Method	Status	Protocol
1	FastEthernet0/0	192.168.1.1	YES	manual	up	up
2	Serial0/0	10.0.0.1	YES	manual	up	up
3	FastEthernet0/1	unassigned	YES	unset	administratively down	down
4	Serial0/1	unassigned	YES	unset	administratively down	down
5	Serial0/2	unassigned	YES	unset	administratively down	down
6	FastEthernet1/0	unassigned	YES	unset	administratively down	down
7	Serial2/0	unassigned	YES	unset	administratively down	down
8	Serial2/1	unassigned	YES	unset	administratively down	down
9	Serial2/2	unassigned	YES	unset	administratively down	down
10	Serial2/3	unassigned	YES	unset	administratively down	down

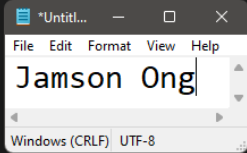


```
iosconfig > showipPASIG.txt
```

	Interface	IP-Address	OK?	Method	Status	Protocol
1	FastEthernet0/0	unassigned	YES	unset	administratively down	down
2	Serial0/0	10.0.0.6	YES	manual	up	up
3	FastEthernet0/1	unassigned	YES	unset	administratively down	down
4	Serial0/1	unassigned	YES	unset	administratively down	down
5	Serial0/2	unassigned	YES	unset	administratively down	down
6	FastEthernet1/0	unassigned	YES	unset	administratively down	down
7	Serial2/0	unassigned	YES	unset	administratively down	down
8	Serial2/1	unassigned	YES	unset	administratively down	down
9	Serial2/2	unassigned	YES	unset	administratively down	down
10	Serial2/3	unassigned	YES	unset	administratively down	down

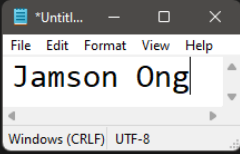


```
iosconfig > showipANTIPOLO.txt
1  Interface          IP-Address      OK? Method Status      Protocol
2  FastEthernet0/0    unassigned      YES unset    administratively down down
3  Serial0/0          10.0.0.2        YES manual    up          up
4  FastEthernet0/1    unassigned      YES unset    administratively down down
5  Serial0/1          10.0.0.5        YES manual    up          up
6  Serial0/2          unassigned      YES unset    administratively down down
7  FastEthernet1/0    unassigned      YES unset    administratively down down
8  Serial2/0          unassigned      YES unset    administratively down down
9  Serial2/1          unassigned      YES unset    administratively down down
10 Serial2/2          unassigned      YES unset    administratively down down
11 Serial2/3          unassigned      YES unset    administratively down down
```



Configure_ospf.yaml file

```
! configure_ospf.yaml
1  ---
2  - name: Configure Single Area OSPF
3    hosts: routers
4    gather_facts: false
5    connection: local
6    vars:
7      cli:
8        username: cisco
9        password: cisco123
10
11    tasks:
12      - name: Configure OSPF for PASIG
13        when: ansible_host == "10.0.0.6"
14        ios_config:
15          provider: "{{ cli }}"
16          parents: router ospf 100
17          lines:
18            - network 10.0.0.4 0.0.0.3 area 0
19
20
21      - name: Configure OSPF for MARIKINA
22        when: ansible_host == "192.168.1.1"
23        ios_config:
24          provider: "{{ cli }}"
25          parents: router ospf 100
26          lines:
27            - network 10.0.0.0 0.0.0.3 area 0
28            - network 192.168.1.0 0.0.0.255 area 0
```

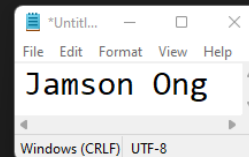


```
- name: Configure OSPF for ANTIPOLO
  when: ansible_host == "10.0.0.2"
  ios_config:
    provider: "{{ cli }}"
    parents: router ospf 100
    lines:
      - network 10.0.0.0 0.0.0.3 area 0
      - network 10.0.0.4 0.0.0.3 area 0

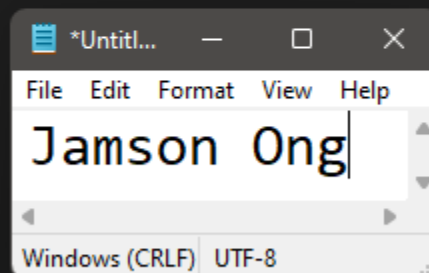
- name: print ip route
  ios_command:
    provider: "{{ cli }}"
    commands:
      - show running-config
  register: config

- name: SAVE OUTPUT TO ./iosconfig/
  copy:
    content: "{{config.stdout[0]}}"
    dest: "iosconfig/showrun{{inventory_hostname}}.txt"

- name: Save Configuration
  ios_config:
    provider: "{{ cli }}"
    lines:
      - do write
```

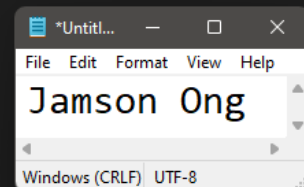


```
- name: Save Configuration
  ios_config:
    provider: "{{ cli }}"
    lines:
      - do write
```



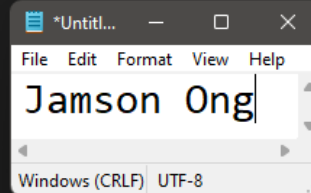
Output:

```
iosconfig > ≡ showrunMARIKINA.txt
 1  Building configuration...
 2
 3  Current configuration : 1908 bytes
 4  !
 5  version 12.4
 6  service timestamps debug datetime msec
 7  service timestamps log datetime msec
 8  no service password-encryption
 9  !
10  hostname MARIKINA
11  !
12  boot-start-marker
13  boot-end-marker
14  !
15  !
16  no aaa new-model
17  memory-size iomem 5
18  no ip icmp rate-limit unreachable
19  ip cef
20  !
21  !
22  !
23  !
24  no ip domain lookup
25  ip domain name www.abc.com
26  !
27  multilink bundle-name authenticated
28  !
```



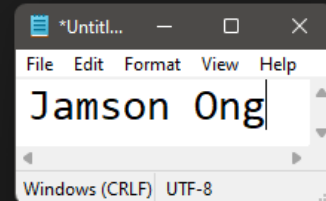
Building configuration...

```
Current configuration : 1811 bytes
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname ANTIPOL0
!
boot-start-marker
boot-end-marker
!
!
no aaa new-model
memory-size iomem 5
no ip icmp rate-limit unreachable
ip cef
!
!
!
!
no ip domain lookup
ip domain name www.abc.com
!
multilink bundle-name authenticated
!
```



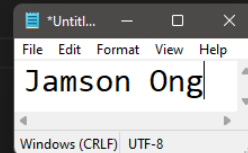
iosconfig > ≡ showrunPASIG.txt

```
1 Building configuration...
2
3 Current configuration : 1763 bytes
4 !
5 version 12.4
6 service timestamps debug datetime msec
7 service timestamps log datetime msec
8 no service password-encryption
9 !
10 hostname PASIG
11 !
12 boot-start-marker
13 boot-end-marker
14 !
15 !
16 no aaa new-model
17 memory-size iomem 5
18 no ip icmp rate-limit unreachable
19 ip cef
20 !
21 !
22 !
23 !
24 no ip domain lookup
25 ip domain name www.abc.com
26 !
27 multilink bundle-name authenticated
28 !
```

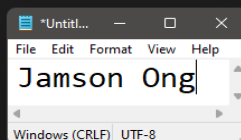


Configure_acl.yaml File

```
! configure_acl.yaml
1  ---
2
3  - name: Configure Standard ACL
4    hosts: ANTIPOL0
5    gather_facts: false
6    connection: local
7    vars:
8      cli:
9        username: cisco
10       password: cisco123
11
12    tasks:
13      - name: Deny only PC2 network
14        ios_config:
15          provider: "{{ cli }}"
16          lines:
17            - 10 deny icmp host 192.168.2.2 any
18            - 20 permit ip any any
19          parents: ip access-list extended ACL-PC1
20          #before: no ip access-list extended ACL-ANTIPOL0
21
22      - name: Apply in S0/1
23        ios_config:
24          provider: "{{ cli }}"
25          parents: interface s0/1
26          lines:
27            - ip access-group ACL-PC1 in
28
```

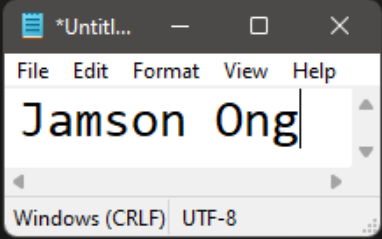


```
29      - name: Save Configuration
30        ios_config:
31          provider: "{{ cli }}"
32          lines:
33            - do write
34
35      - name: print ip route
36        ios_command:
37          provider: "{{ cli }}"
38          commands:
39            - show ip access-lists
40          register: config
41
42      - name: SAVE OUTPUT TO ./iosconfig/
43        copy:
44          content: "{{ config.stdout[0] }}"
45          dest: "iosconfig/show_ip_accesslists_ANTIPOL0{{ inventory_hostname }}.txt"
```



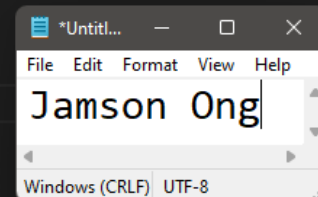
Output:

```
iosconfig > ≡ show_ip_accesslists_ANTIPOLO.txt
1  Extended IP access list ACL-PC1
2      10 deny icmp host 192.168.2.2 any
3      20 permit ip any any (1 match)
```



Testbed.yml file

```
devices:
  MARIKINA:
    connections:
      cli:
        ip: 192.168.1.1
        protocol: ssh
    credentials:
      default:
        password: '%ENC{w5PDos0Uw5fDosKQwpbCmA==}'
        username: cisco
      enable:
        password: '%ASK{'
    os: iosxe
    type: iosxe
  ANTIPOL0:
    connections:
      cli:
        ip: 10.0.0.2
        protocol: ssh
    credentials:
      default:
        password: '%ENC{w5PDos0Uw5fDosKQwpbCmA==}'
        username: cisco
      enable:
        password: '%ASK{'
    os: iosxe
    type: iosxe
  PASIG:
```



PASIG:

connections:

cli:

ip: 10.0.0.6

protocol: ssh

credentials:

default:

password: '%ENC{w5PDos0Uw5fDosKQwpbCmA==}'

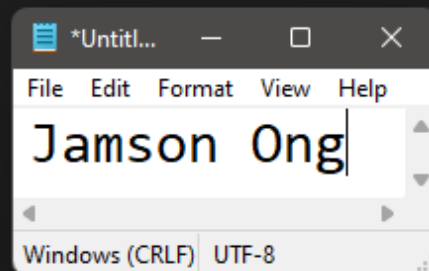
username: cisco

enable:

password: '%ASK{'

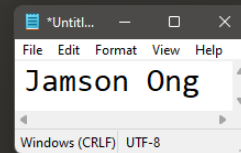
os: iosxe

type: iosxe



Output:

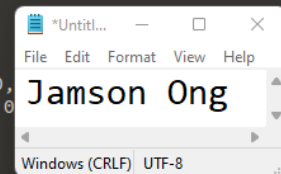
```
devasc@labvm:~/labs/devnet-src/ansible/routing/pyats$ genie parse "show ip interface brief" --testbed-file yml/testbed.yml
Enter enable password for device MARIKINA:
Enter enable password for device ANTIPOLLO:
Enter enable password for device PASIG:
0%| 0/1 [00:00<?, ?it/s]{
"interface": {
  "FastEthernet0/0": {
    "interface_is_ok": "YES",
    "ip_address": "192.168.1.1",
    "method": "manual",
    "protocol": "up",
    "status": "up"
  },
  "FastEthernet0/1": {
    "interface_is_ok": "YES",
    "ip_address": "unassigned",
    "method": "unset",
    "protocol": "down",
    "status": "administratively down"
  },
  "FastEthernet1/0": {
    "interface_is_ok": "YES",
    "ip_address": "unassigned",
    "method": "unset",
    "protocol": "down",
    "status": "administratively down"
  },
  "Serial0/0": {
    "interface_is_ok": "YES",
    "ip_address": "10.0.0.1",
    "method": "manual",
    "protocol": "up",
    "status": "up"
  },
  "Serial0/1": {
    "interface_is_ok": "YES",
    "ip_address": "unassigned",
    "method": "unset",
    "protocol": "down",
    "status": "administratively down"
  },
  "Serial0/2": {
    "interface_is_ok": "YES",
    "ip_address": "unassigned",
    "method": "unset",
    "protocol": "down",
    "status": "administratively down"
  }
}
```



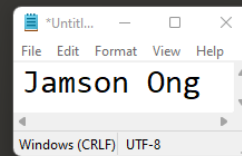

```
},
"Serial2/0": {
  "interface_is_ok": "YES",
  "ip_address": "unassigned",
  "method": "unset",
  "protocol": "down",
  "status": "administratively down"
},
"Serial2/1": {
  "interface_is_ok": "YES",
  "ip_address": "unassigned",
  "method": "unset",
  "protocol": "down",
  "status": "administratively down"
},
"Serial2/2": {
  "interface_is_ok": "YES",
  "ip_address": "unassigned",
  "method": "unset",
  "protocol": "down",
  "status": "administratively down"
},
"Serial2/3": {
  "interface_is_ok": "YES",
  "ip_address": "unassigned",
  "method": "unset",
  "protocol": "down",
  "status": "administratively down"
}
}

00%| 1/1 [00:00<00:00,
0%| 0/1 [00:00<00:00,

"interface": {
  "FastEthernet0/0": {
    "interface_is_ok": "YES",
    "ip_address": "unassigned",
    "method": "manual",
    "protocol": "down",
    "status": "administratively down"
  }
}
```



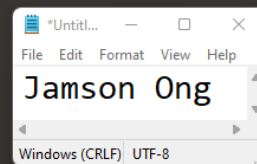
```
},
"FastEthernet0/1": {
  "interface_is_ok": "YES",
  "ip_address": "unassigned",
  "method": "manual",
  "protocol": "down",
  "status": "administratively down"
},
"FastEthernet1/0": {
  "interface_is_ok": "YES",
  "ip_address": "unassigned",
  "method": "manual",
  "protocol": "down",
  "status": "administratively down"
},
"Serial0/0": {
  "interface_is_ok": "YES",
  "ip_address": "10.0.0.2",
  "method": "manual",
  "protocol": "up",
  "status": "up"
},
"Serial0/1": {
  "interface_is_ok": "YES",
  "ip_address": "10.0.0.5",
  "method": "manual",
  "protocol": "up",
  "status": "up"
},
"Serial0/2": {
  "interface_is_ok": "YES",
  "ip_address": "unassigned",
  "method": "manual",
  "protocol": "down",
  "status": "administratively down"
},
"Serial2/0": {
  "interface_is_ok": "YES",
  "ip_address": "unassigned",
  "method": "manual",
  "protocol": "down",
  "status": "administratively down"
},
"Serial2/1": {
  "interface_is_ok": "YES",
  "ip_address": "unassigned",
```



```
    "Serial2/1": {
      "interface_is_ok": "YES",
      "ip_address": "unassigned",
      "method": "manual",
      "protocol": "down",
      "status": "administratively down"
    },
    "Serial2/2": {
      "interface_is_ok": "YES",
      "ip_address": "unassigned",
      "method": "manual",
      "protocol": "down",
      "status": "administratively down"
    },
    "Serial2/3": {
      "interface_is_ok": "YES",
      "ip_address": "unassigned",
      "method": "manual",
      "protocol": "down",
      "status": "administratively down"
    }
  }
}
```

```
00%| 1/1 [00:00<00:00, 2.43it/s]
0%| 0/1 [00:00<?, ?it/s]{
```

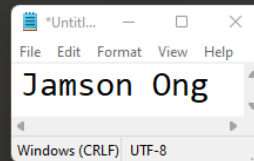
```
"interface": {
  "FastEthernet0/0": {
    "interface_is_ok": "YES",
    "ip_address": "192.168.2.1",
    "method": "manual",
    "protocol": "up",
    "status": "up"
  },
  "FastEthernet0/1": {
    "interface_is_ok": "YES",
    "ip_address": "unassigned",
    "method": "unset",
    "protocol": "down",
    "status": "administratively down"
  },
  "FastEthernet1/0": {
    "interface_is_ok": "YES",
    "ip_address": "unassigned",
    "method": "unset",
    "protocol": "down",
    "status": "administratively down"
  },
  "Serial0/0": {
```



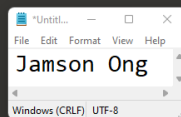
```
    status: up
  },
  "Serial0/1": {
    "interface_is_ok": "YES",
    "ip_address": "unassigned",
    "method": "unset",
    "protocol": "down",
    "status": "administratively down"
  },
  "Serial0/2": {
    "interface_is_ok": "YES",
    "ip_address": "unassigned",
    "method": "unset",
    "protocol": "down",
    "status": "administratively down"
  },
  "Serial2/0": {
    "interface_is_ok": "YES",
    "ip_address": "unassigned",
    "method": "unset",
    "protocol": "down",
    "status": "administratively down"
  },
  "Serial2/1": {
    "interface_is_ok": "YES",
    "ip_address": "unassigned",
    "method": "unset",
    "protocol": "down",
    "status": "administratively down"
  },
  "Serial2/2": {
    "interface_is_ok": "YES",
    "ip_address": "unassigned",
    "method": "unset",
    "protocol": "down",
    "status": "administratively down"
  },
  "Serial2/3": {
    "interface_is_ok": "YES",
    "ip_address": "unassigned",
    "method": "unset",
    "protocol": "down",
    "status": "administratively down"
  }
}
```

00%| 1/1 [00:00<00:00, 2.37it/s]

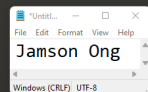
evasc@labvm:~/labs/devnet-src/ansible/routing/pyats\$



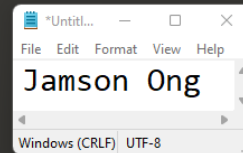

```
0%|
[
  "vrf": {
    "default": {
      "address_family": {
        "ipv4": {
          "routes": {
            "10.0.0.0/30": {
              "active": true,
              "next_hop": {
                "outgoing_interface": {
                  "Serial0/0": {
                    "outgoing_interface": "Serial0/0"
                  }
                }
              },
              "route": "10.0.0.0/30",
              "source_protocol": "connected",
              "source_protocol_codes": "C"
            },
            "10.0.0.4/30": {
              "active": true,
              "next_hop": {
                "outgoing_interface": {
                  "Serial0/1": {
                    "outgoing_interface": "Serial0/1"
                  }
                }
              },
              "route": "10.0.0.4/30",
              "source_protocol": "connected",
              "source_protocol_codes": "C"
            },
            "192.168.1.0/24": {
              "active": true,
              "metric": 74,
              "next_hop": {
                "next_hop_list": {
                  "1": {
                    "index": 1,
                    "next_hop": "10.0.0.1",
                    "outgoing_interface": "Serial0/0",
                    "updated": "04:28:02"
                  }
                }
              },
              "route": "192.168.1.0/24",
              "route_preference": 110,
              "source_protocol": "ospf",
              "source_protocol_codes": "O"
            },
            "192.168.2.0/24": {
              "active": true,
              "metric": 1,
              "next_hop": {
                "next_hop_list": {
                  "1": {
                    "index": 1,
                    "next_hop": "10.0.0.6",
                    "outgoing_interface": "Serial0/1",
                    "updated": "00:00:24"
                  }
                }
              },
              "route": "192.168.2.0/24",
              "route_preference": 120,
              "source_protocol": "rip",
              "source_protocol_codes": "R"
            }
          }
        }
      }
    }
  }
]
0%|
```




```
190%|
0%|
[
  "vrf": {
    "default": {
      "address_family": {
        "ipv4": {
          "routes": {
            "10.0.0.0/30": {
              "active": true,
              "next_hop": {
                "outgoing_interface": {
                  "Serial0/0": {
                    "outgoing_interface": "Serial0/0"
                  }
                }
              },
              "route": "10.0.0.0/30",
              "source_protocol": "connected",
              "source_protocol_codes": "C"
            },
            "10.0.0.4/30": {
              "active": true,
              "next_hop": {
                "outgoing_interface": {
                  "Serial0/1": {
                    "outgoing_interface": "Serial0/1"
                  }
                }
              },
              "route": "10.0.0.4/30",
              "source_protocol": "connected",
              "source_protocol_codes": "C"
            },
            "192.168.1.0/24": {
              "active": true,
              "metric": 74,
              "next_hop": {
                "next_hop_list": {
                  "1": {
                    "index": 1,
                    "next_hop": "10.0.0.1",
                    "outgoing_interface": "Serial0/0",
                    "updated": "04:28:02"
                  }
                }
              },
              "route": "192.168.1.0/24",
              "route_preference": 110,
              "source_protocol": "ospf",
              "source_protocol_codes": "O"
            },
            "192.168.2.0/24": {
              "active": true,
              "metric": 1,
              "next_hop": {
                "next_hop_list": {
                  "1": {
                    "index": 1,
                    "next_hop": "10.0.0.6",
                    "outgoing_interface": "Serial0/1",
                    "updated": "00:00:24"
                  }
                }
              },
              "route": "192.168.2.0/24",
              "route_preference": 120,
              "source_protocol": "rip",
              "source_protocol_codes": "R"
            }
          }
        }
      }
    }
  }
]
190%|
0%|
```



```
{
  "vrf": {
    "default": {
      "address_family": {
        "ipv4": {
          "routes": {
            "10.0.0.0/30": {
              "active": true,
              "metric": 128,
              "next_hop": {
                "next_hop_list": {
                  "1": {
                    "index": 1,
                    "next_hop": "10.0.0.5",
                    "outgoing_interface": "Serial0/0",
                    "updated": "04:28:05"
                  }
                }
              },
              "route": "10.0.0.0/30",
              "route_preference": 110,
              "source_protocol": "ospf",
              "source_protocol_codes": "0"
            },
            "10.0.0.4/30": {
              "active": true,
              "next_hop": {
                "outgoing_interface": {
                  "Serial0/0": {
                    "outgoing_interface": "Serial0/0"
                  }
                }
              },
              "route": "10.0.0.4/30",
              "source_protocol": "connected",
              "source_protocol_codes": "C"
            },
            "192.168.1.0/24": {
              "active": true,
              "metric": 138,
              "next_hop": {
                "next_hop_list": {
                  "1": {
                    "index": 1,
                    "next_hop": "10.0.0.5",
                    "outgoing_interface": "Serial0/0",
                    "updated": "04:27:55"
                  }
                }
              }
            }
          }
        }
      }
    }
  }
}
```



A screenshot of a Windows Notepad window. The title bar shows the file name as '*Untitled...' and standard window controls. The menu bar includes 'File', 'Edit', 'Format', 'View', and 'Help'. The text 'Jamson Ong' is entered in the main editing area. The status bar at the bottom indicates 'Windows (CRLF)' and 'UTF-8' encoding.


```
devasc@labvm:~/labs/devnet-src/ansible/routing/pyats$ gentle parse "show ip ospf neighbor" --testbed-file yaml/testbed.yml
Enter enable password for device NARIKINA:
Enter enable password for device ANTIPOLLO:
Enter enable password for device PASIG:
0% | 0/1 [00:00<, ?lt/s]

{
  "interfaces": {
    "Serial0/0": {
      "neighbors": {
        "10.0.0.5": {
          "address": "10.0.0.2",
          "dead_time": "00:00:38",
          "priority": 0,
          "state": "FULL/ -"
        }
      }
    }
  }
}
100% | 1/1 [00:00=00:00, 1.42lt/s]
0% | 0/1 [00:00<, ?lt/s]

{
  "interfaces": {
    "Serial0/0": {
      "neighbors": {
        "192.168.1.1": {
          "address": "10.0.0.1",
          "dead_time": "00:00:32",
          "priority": 0,
          "state": "FULL/ -"
        }
      }
    },
    "Serial0/1": {
      "neighbors": {
        "10.0.0.6": {
          "address": "10.0.0.6",
          "dead_time": "00:00:34",
          "priority": 0,
          "state": "FULL/ -"
        }
      }
    }
  }
}
100% | 1/1 [00:00=00:00, 2.46lt/s]
0% | 0/1 [00:00<, ?lt/s]

{
  "interfaces": {
    "Serial0/0": {
      "neighbors": {
        "10.0.0.5": {
          "address": "10.0.0.5",
          "dead_time": "00:00:37",
          "priority": 0,
          "state": "FULL/ -"
        }
      }
    }
  }
}
100% | 1/1 [00:00=00:00, 2.67lt/s]

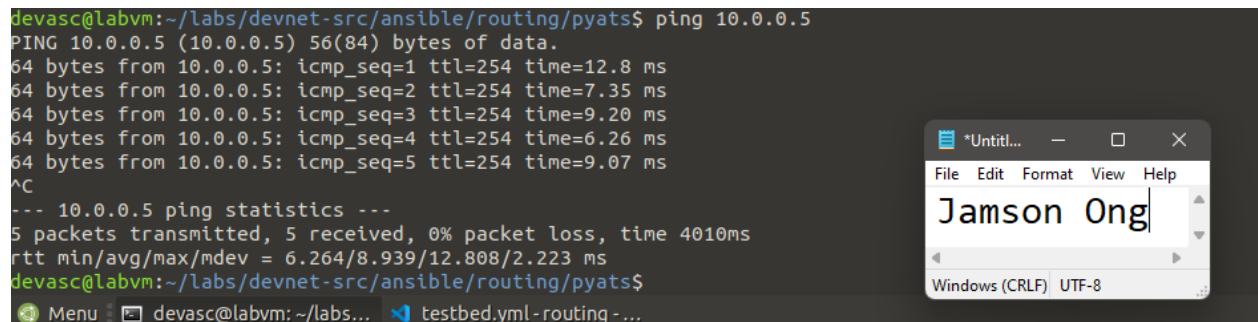
devasc@labvm:~/labs/devnet-src/ansible/routing/pyats$
```

Pings

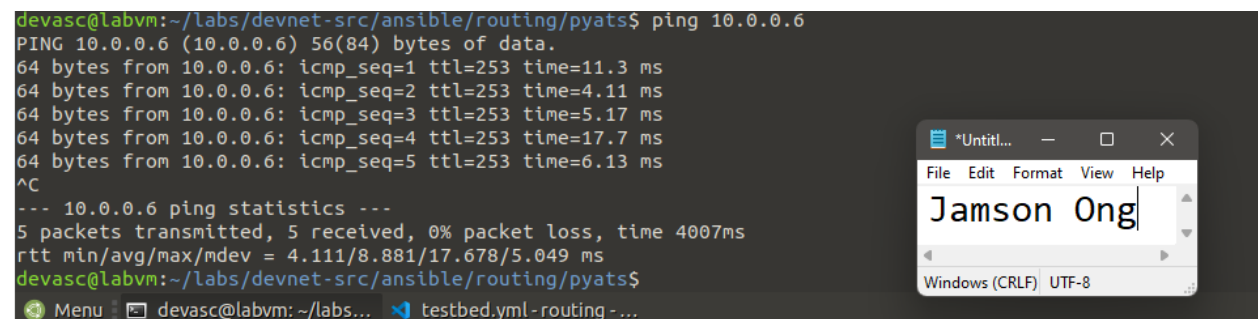
```
devasc@labvm:~/labs/devnet-src/ansible/routing/pyats$ ping 192.168.1.1
PING 192.168.1.1 (192.168.1.1) 56(84) bytes of data.
64 bytes from 192.168.1.1: icmp_seq=1 ttl=255 time=12.8 ms
64 bytes from 192.168.1.1: icmp_seq=2 ttl=255 time=3.00 ms
64 bytes from 192.168.1.1: icmp_seq=3 ttl=255 time=4.08 ms
64 bytes from 192.168.1.1: icmp_seq=4 ttl=255 time=7.12 ms
^C
--- 192.168.1.1 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3011ms
rtt min/avg/max/mdev = 3.004/6.751/12.797/3.802 ms
devasc@labvm:~/labs/devnet-src/ansible/routing/pyats$
```

```
devasc@labvm:~/labs/devnet-src/ansible/routing/pyats$ ping 10.0.0.1
PING 10.0.0.1 (10.0.0.1) 56(84) bytes of data.
64 bytes from 10.0.0.1: icmp_seq=1 ttl=255 time=5.50 ms
64 bytes from 10.0.0.1: icmp_seq=2 ttl=255 time=12.1 ms
64 bytes from 10.0.0.1: icmp_seq=3 ttl=255 time=5.41 ms
64 bytes from 10.0.0.1: icmp_seq=4 ttl=255 time=11.1 ms
64 bytes from 10.0.0.1: icmp_seq=5 ttl=255 time=9.47 ms
^C
--- 10.0.0.1 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4009ms
rtt min/avg/max/mdev = 5.412/8.710/12.100/2.786 ms
devasc@labvm:~/labs/devnet-src/ansible/routing/pyats$
```

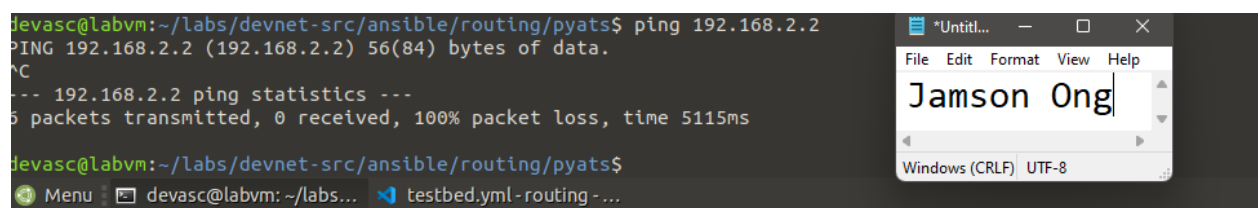
```
devasc@labvm:~/labs/devnet-src/ansible/routing/pyats$ ping 10.0.0.5
PING 10.0.0.5 (10.0.0.5) 56(84) bytes of data.
64 bytes from 10.0.0.5: icmp_seq=1 ttl=254 time=12.8 ms
64 bytes from 10.0.0.5: icmp_seq=2 ttl=254 time=7.35 ms
64 bytes from 10.0.0.5: icmp_seq=3 ttl=254 time=9.20 ms
64 bytes from 10.0.0.5: icmp_seq=4 ttl=254 time=6.26 ms
64 bytes from 10.0.0.5: icmp_seq=5 ttl=254 time=9.07 ms
^C
--- 10.0.0.5 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4010ms
rtt min/avg/max/mdev = 6.264/8.939/12.808/2.223 ms
devasc@labvm:~/labs/devnet-src/ansible/routing/pyats$
```



```
devasc@labvm:~/labs/devnet-src/ansible/routing/pyats$ ping 10.0.0.6
PING 10.0.0.6 (10.0.0.6) 56(84) bytes of data.
64 bytes from 10.0.0.6: icmp_seq=1 ttl=253 time=11.3 ms
64 bytes from 10.0.0.6: icmp_seq=2 ttl=253 time=4.11 ms
64 bytes from 10.0.0.6: icmp_seq=3 ttl=253 time=5.17 ms
64 bytes from 10.0.0.6: icmp_seq=4 ttl=253 time=17.7 ms
64 bytes from 10.0.0.6: icmp_seq=5 ttl=253 time=6.13 ms
^C
--- 10.0.0.6 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4007ms
rtt min/avg/max/mdev = 4.111/8.881/17.678/5.049 ms
devasc@labvm:~/labs/devnet-src/ansible/routing/pyats$
```



```
devasc@labvm:~/labs/devnet-src/ansible/routing/pyats$ ping 192.168.2.2
PING 192.168.2.2 (192.168.2.2) 56(84) bytes of data.
^C
--- 192.168.2.2 ping statistics ---
5 packets transmitted, 0 received, 100% packet loss, time 5115ms
devasc@labvm:~/labs/devnet-src/ansible/routing/pyats$
```



SSH:

```
devasc@labvm:~/labs/devnet-src/ansible/routing/pyats$ ssh cisco@192.168.1.1
Warning: Permanently added '192.168.1.1' (RSA) to the list of known hosts.
Password:
ARIKINA#
```

