Cambium Networks™

GUEST ACCESS –ENTERPRISE GOOGLE WORKSPACE INTEGRATION

Version 1.0

Introduction

Now days customer requirement is to integrate guest access portal with third party widely used domain like Azure/Google work space. As many universities, Enterprises are already using AD services from these global providers.

Hence it is need of an hour that our AP should have capability to integrate guest access with them.

This document cover configuration steps, and troubleshooting way for GOOGLE WORKSPACE with the guest access portal.

There are 2 main component configuration involve,
1. Google Workspace domain & admin account.

2. Configure a guest access portal on cnMaestro.

New Users need to create Domain in google workspace.

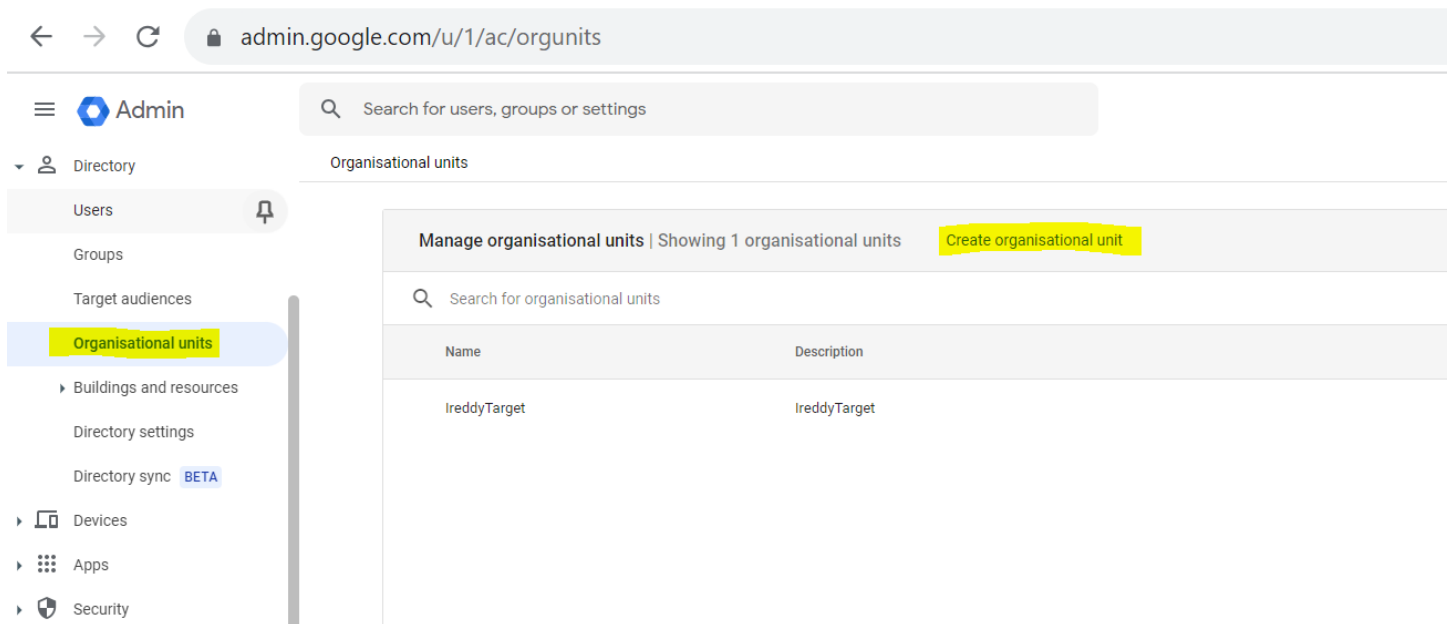Please Visit this page for reference follow simple steps.

[Admin Console   Manage Settings, Users & Devices   Google Workspace.html](#)

Configuration in Google workspace

- Login to https://admin.google.com/ with admin account and carry below steps.

Once u login to portal,

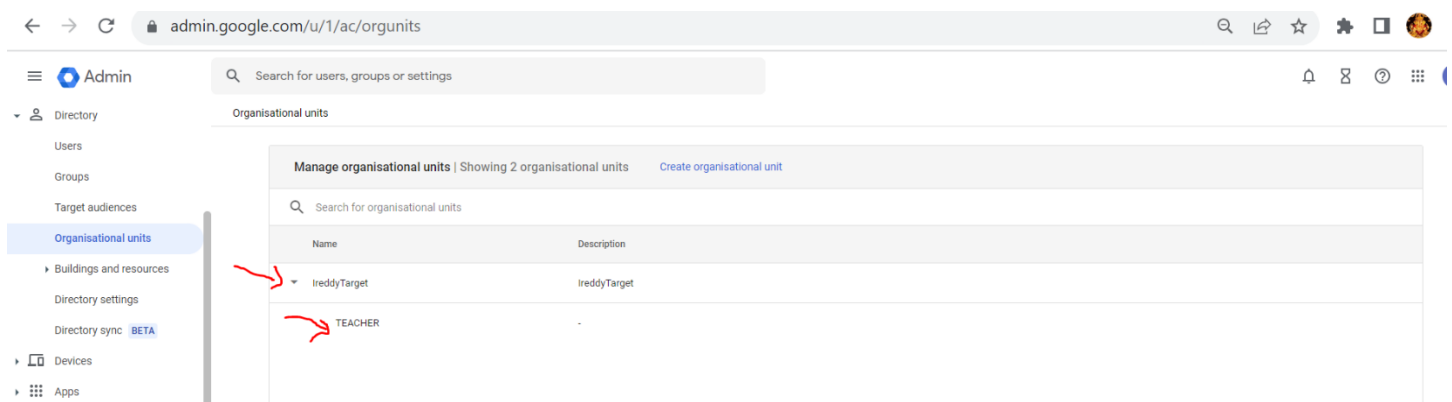1. Create Origination unit. Directory -> Organizational Unit ->Create

DO not forget to create sub organization unit in it. AS only parent organization unit will give assign

[/] root filter id to client post authentication.

1. Create user and assign it to Organization unit.

Directory -> Users - > Create user.

Once user created the same username and password need to be use in guest Portal.

- Configure Guest access portal:

  - Network Services -> Guest Access Portal -> ADD NEW PORTAL
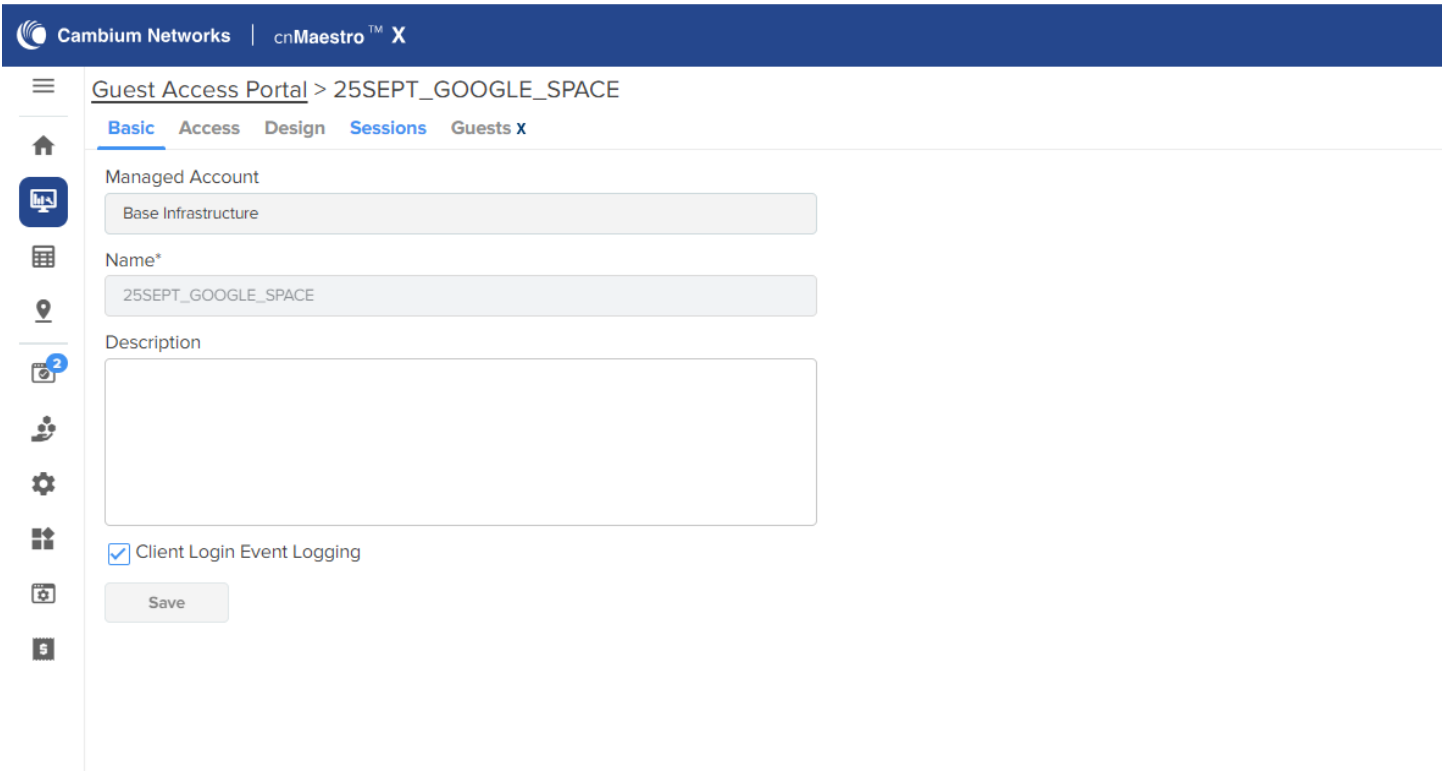
- Guest access -Access -> Google
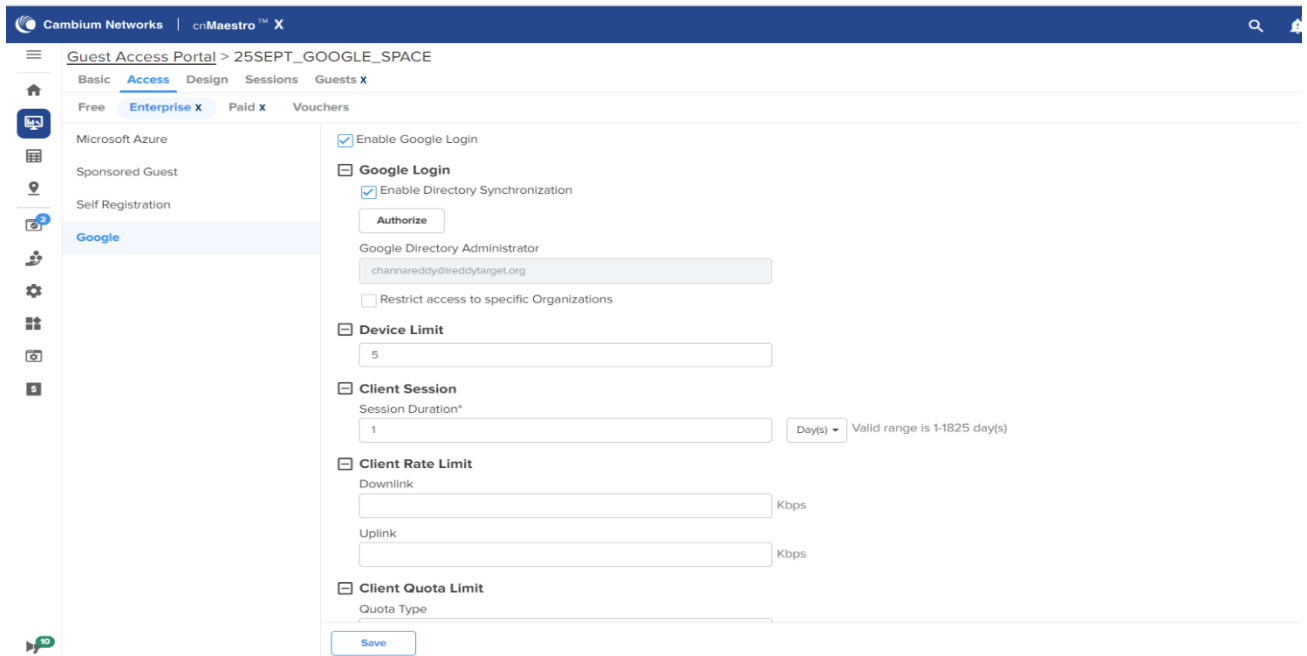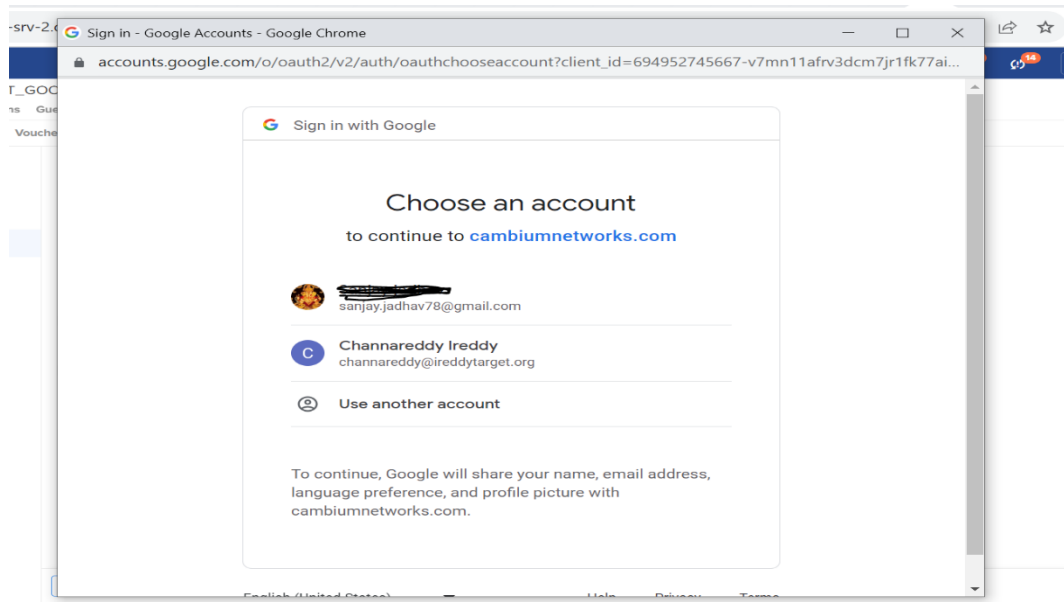
- Enable Google Login.

- Click on Authorize.

  It will redirect to google admin authorization page.

One with Google workspace account, must get authorized.

Once process completes, then account shows as authorized

WLAN CONFIGURATION with User group policy, pushing VLAN id & Access Control Policy for matching Radius Filter id.

AP Groups > GOOGLEWORKSPACETEST

Dashboard   Notifications   **Configuration**   Statistics   Reports **x**   Devices   Clients   Mesh Peers

Basic

Management

Radio

Network

Security

Access Control

Services

User-Defined Overrides

Access Control
☑ Enable Access Control

Access Control Policy
apgrp_acp   ▾   View Rules

User Group Policy

Apply Filter(s)   Add New

Policy Name	RADIUS Filter-ID	Access Control Policy	VLAN	
TEST	TEACHER	test	1000	✏ 🗑

Showing 1 - 1 Total: 1   10 ✔   ‹ Previous   **1**   Next ›

Device Policy

Apply Filter(s)   Add New

Policy Name	Device Class	Device Type	Access Control Policy	

No Data Available

LIVEDEMO.mp4

To view Video demo of authentication process. Please click on ICON.

Troubleshooting

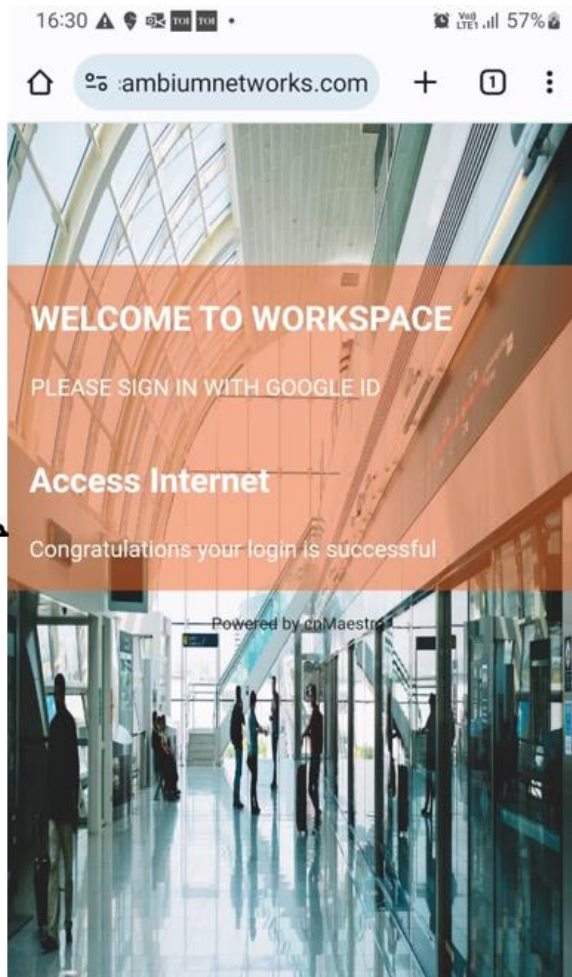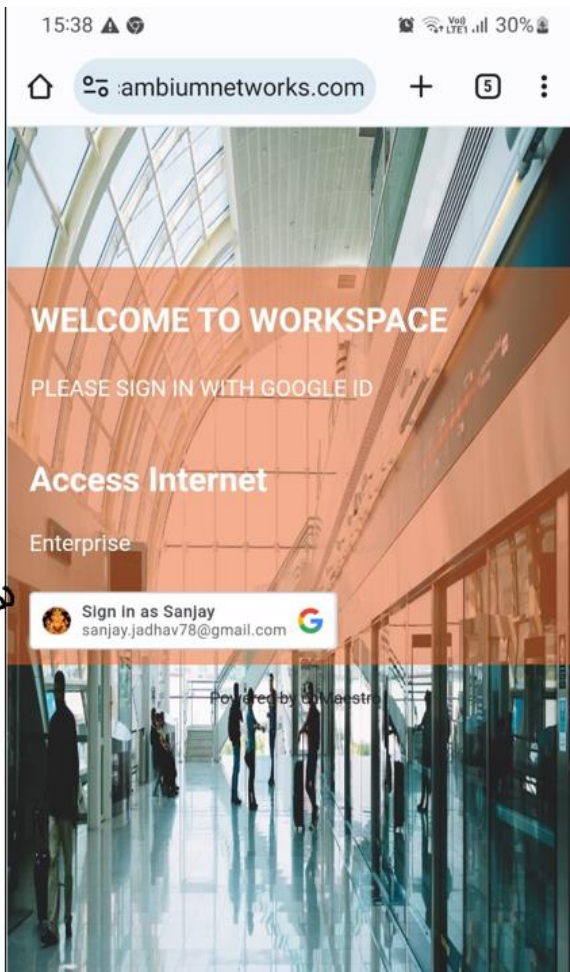To view user session, go to Guest access portal -> {your portal} -> Sessions

- Message from controller to push the filter id.

```
SANJAY-XV2-2-540556(config)#
SANJAY-XV2-2-540556(config)# service show debug-logs device-agent | grep TEACHER
2023-10-18 16:26:58 1182 wifi.c:1756:handle_controller_rsp: JSON Object:[206][{"msgId": 3, "cmac": "34-69-87-90-C3-0F", "status": true, "ssid": "
GOOGLE_TEST", "up": 0, "down": 0, "qType": 0, "qUp": 0, "qDown": 0, "validity": 86400, "accessType": 12, "filterId": "TEACHER", "mType": 1}]
2023-10-18 16:26:58 1182 device-agent.c:2471:callback_websocket: LWS_CALLBACK_CLIENT_RECEIVE Total rx 202 The payload {"msgType":416,"ctrlrPayloa
d":{"msgId":3,"cmac":"34-69-87-90-C3-0F","status":true,"ssid":"GOOGLE_TEST","up":0,"down":0,"qType":0,"qUp":0,"qDown":0,"validity":86400,"accessT
ype":12,"filterId":"TEACHER"}}
SANJAY-XV2-2-540556(config)#
```

```
----------------- /proc/coplane/sta ----------------
Bucket|                 MAC|VLAN|Dynamic VLAN|        IP| DHCP|    Expiry|vap/wlan|ga|drop|        ssid| ifname| cap|      age| mode|st
reams|rx_chains|tx_chains|vlan pool|override dhcp
[   3]|34-69-87-90-C3-0F|1000|          1|    0.0.0.0|false|      0|  0/0  | 1|  0|  GOOGLE_TEST|  wlan0| 5169|     10|  bgn|
   1|    0|    0|        | false
|IPv6:link_ip  :: | site_ip  :: | global_ip  :: |
[   7]|06-5F-E2-F9-58-18|    1|          0| 192.168.11.126|false|      0|  0/0  | 0|  0|  GOOGLE_TEST|  wlan0| 5425|   7137|  bgn|
   1|    0|    0|        | false
|IPv6:link_ip  :: | site_ip  :: | global_ip  :: |
[  29]|6A-04-4B-2D-66-16|    1|          0| 192.168.11.121| true|  79022|  0/0  | 0|  0|  GOOGLE_TEST|  wlan0| 5169|   7379|  bgn|
   1|    0|    0|        | false
|IPv6:link_ip  :: | site_ip  :: | global_ip  :: |
     |38-D5-47-9D-CB-A4|1000|          1|    0.0.0.0|false|      0|  0/0  | 1|  0|  GOOGLE_TEST|  wlan0| 5169|     11|  bgn|
   1|    0|    0|        | false
|IPv6:link ip  :: | site ip  :: | global ip  :: |
```

- VLAN Assignment post authentication success.

- SEESION with group assignment, post authentication success from google workspace.

FILTER STATS

```
Chain wlan-guest-access (1 references)
 pkts bytes target       prot opt in    out      source             destination
   12   720 ACCEPT       tcp  --  *     *        0.0.0.0/0          0.0.0.0/0           tcp dpt:8888
    0     0 ACCEPT       tcp  --  *     *        0.0.0.0/0          0.0.0.0/0           tcp dpt:8890
    0     0 ACCEPT       tcp  --  *     *        0.0.0.0/0          0.0.0.0/0           tcp dpt:880
    0     0 ACCEPT       tcp  --  *     *        0.0.0.0/0          0.0.0.0/0           tcp dpt:8889
  279 17028 ACCEPT       tcp  --  *     *        0.0.0.0/0          0.0.0.0/0           tcp dpt:445
    0     0 ACCEPT       tcp  --  *     *        0.0.0.0/0          0.0.0.0/0           tcp dpt:444
/ #
```

```
/ # clish
SANJAY-XV2-2-540556(config)# show filter-statistics
Global Filter List statistics
        Name              Precedence Type Layer State Packets Bytes
------------------- ------ ----- ----- ------------------- -------------
Air-cleaner-Arp.1             1    deny  2     on     0       0
Air-cleaner-Dhcp.1            2    deny  2     on     8       2892
Air-cleaner-Dhcp.2            3    deny  2     on     0       0
Air-cleaner-Bcast.1           4    allow 2     on     8       224
Air-cleaner-Bcast.2           5    allow 2     on     0       0
Air-cleaner-Bcast.3           6    allow 2     on     4       2304
Air-cleaner-Bcast.4           7    allow 2     on     0       0
Air-cleaner-Bcast.5           8    deny  2     on     40      4304
Air-cleaner-mDNS.1            9    allow 2     on     652     79372
Air-cleaner-Mcast.1          10    deny  2     on     1224    96936

Filter List 1 statistics test
        Name              Precedence Type Layer State Packets Bytes
------------------- ------ ----- ----- ------------------- -------------
test                          1    allow 3     on     50043 43000000

SANJAY-XV2-2-540556(config)#
```

White Listed Domains:

1. accounts.google.*

2. *.googleapis.com

3. www.airport.us

4. www.itools.info

5. qa-us-east-1-wic-2.cloud.cambiumnetworks.com

6. cnmaestro-assets.cloud.cambiumnetworks.com

7. apis.google.com

8. www.google.com

9. captive.apple.com

10. *.googleusercontent.com

11. play.google.com

12. www.ibook.info

13. www.appleiphonecell.com

14. connectivitycheck.android.com

15. cnmaestro-test-assets.cloud.cambiumnetworks.com

16. *.gstatic.com

17. clients3.google.com

18. www.thinkdifferent.us

Observation

- UPDATE IN ACCESS POLICY is not dynamic, although changes get saved in cnmaestro but did not push to AP, need to workaround as making changes in another parameter in AP group and then sync the configuration.
- RATE LIMIT Parameter is not getting applied.

Rule list

/ # iptables -L

Chain INPUT (policy ACCEPT)

target	prot opt source	destination	
ACCEPT	all -- anywhere	anywhere	
ACCEPT	all -- anywhere	anywhere	state RELATED,ESTABLISHED
ACCEPT	tcp -- anywhere	anywhere	tcp dpt:ssh
ACCEPT	tcp -- anywhere	anywhere	tcp dpt:89
ACCEPT	tcp -- anywhere	anywhere	tcp dpt:475
ACCEPT	tcp -- anywhere	anywhere	tcp dpt:telnet
ACCEPT	icmp -- anywhere	anywhere	
ACCEPT	udp -- anywhere	anywhere	udp dpt:snmp

ACCEPT   udp -- anywhere   anywhere   udp spts:bootps:bootpc dpts:bootps:bootpc

ACCEPT   udp -- anywhere   anywhere   udp dpt:domain

ACCEPT   udp -- anywhere   anywhere   udp spt:domain

ACCEPT   udp -- anywhere   anywhere   udp dpt:3799

ACCEPT   udp -- anywhere   anywhere   udp dpt:12321

ACCEPT   udp -- anywhere   anywhere   udp dpt:22610

wlan-guest-access all -- anywhere   anywhere ========= not seeing any RATE LIMIT paremeter

- Timing in output shown in command

service show guest portal is abrupt

```
cnMaestro Connection Stats:
cnMaestro connection Status                                : Up
Device registered with cnMaestro controller               : Yes
Device cnMaestro last connection up status received at     : 1970-01-01 00:02:26
Device cnMaestro last connection down status received at   : 1970-01-01 00:01:42
Device cnMaestro last registration sent at                 : 1970-01-01 00:02:26
Device cnMaestro last registration reply seen at           : 1970-01-01 00:02:26
Device cnMaestro last key update seen at                   : 1970-01-01 00:02:26
Device cnMaestro registration retry timer running status   : No
Device cnMaestro registration retry timer retry interval   : 63 seconds
Device cnMaestro registration retry count                  : 0
Device cnMaestro rekey retry timer running status          : Yes
Device cnMaestro rekey retry timer retry interval          : 46805 seconds
Device cnMaestro rekey retry count                         : 0
```