



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.

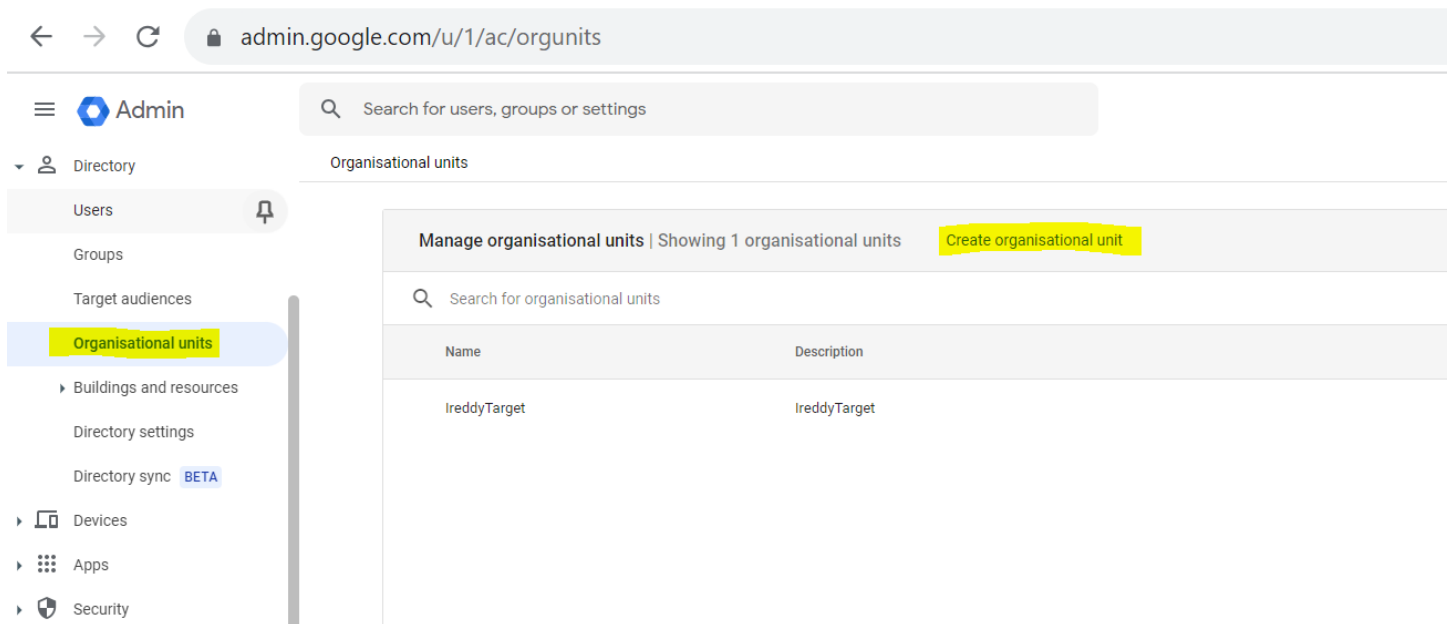
[Admin Console Manage Settings, Users & Devices Google Workspace.html](#)

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

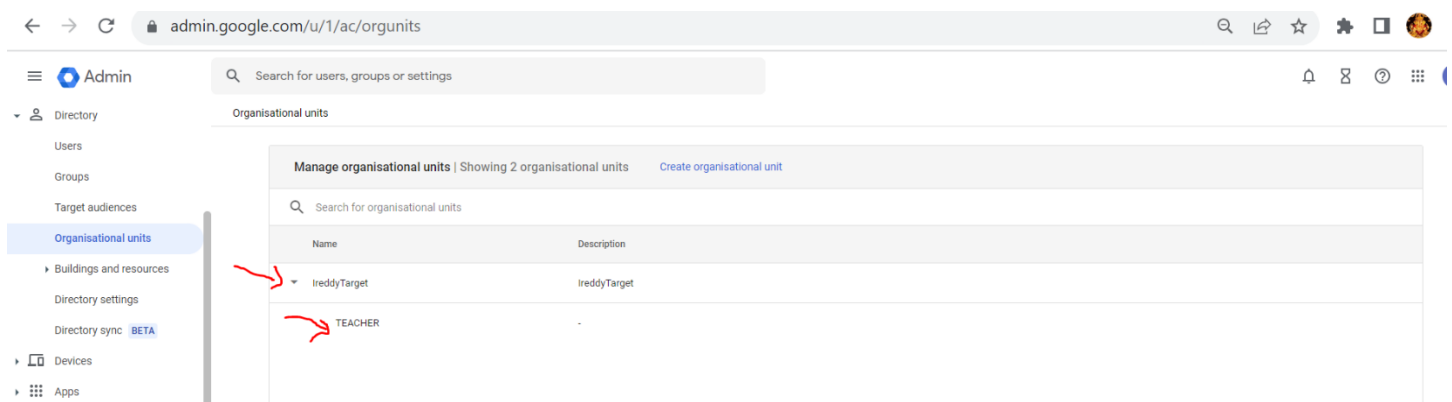


The screenshot shows the Google Admin console interface. The left sidebar is expanded to 'Directory' > 'Organisational units'. The main content area is titled 'Manage organisational units | Showing 1 organisational units' and includes a 'Create organisational unit' button. A search bar is present above a table with the following data:

Name	Description
IreddyTarget	IreddyTarget

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.



The screenshot shows the Google Admin console interface with two organizational units listed. Red arrows point to the 'IreddyTarget' and 'TEACHER' rows in the table. The table data is as follows:

Name	Description
IreddyTarget	IreddyTarget
TEACHER	-

1. Create user and assign it to Organization unit.

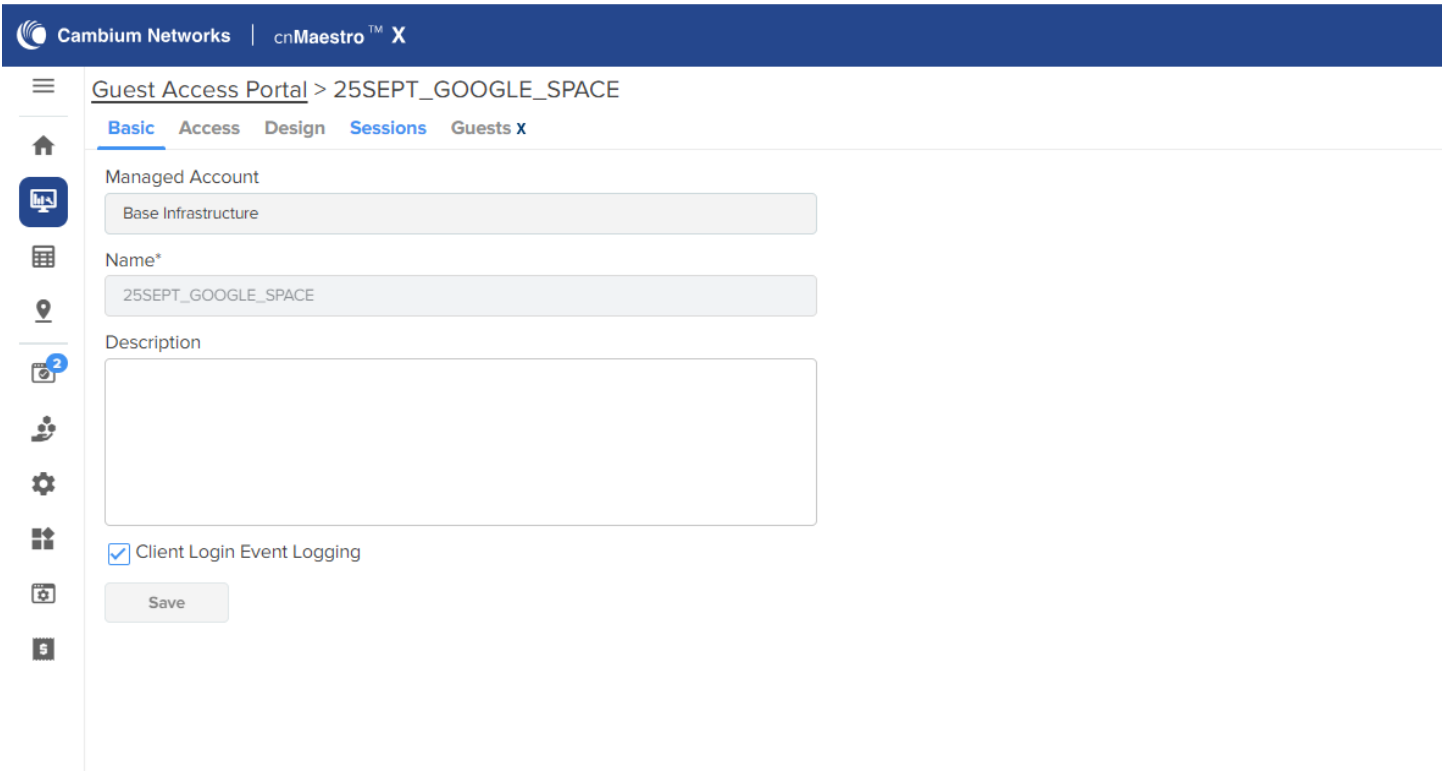
Directory -> Users -> Create user.

The screenshot shows the Google Admin console interface for managing users. The left sidebar contains navigation options such as Directory, Users, Groups, Target audiences, Organisational units, Buildings and resources, Directory settings, Directory sync (BETA), Devices, Apps, Security, Reporting, Billing, Account, and Rules. The main content area is titled 'Users' and includes a search bar and a list of users. The 'Add new user' button is highlighted in yellow. The user list table is as follows:

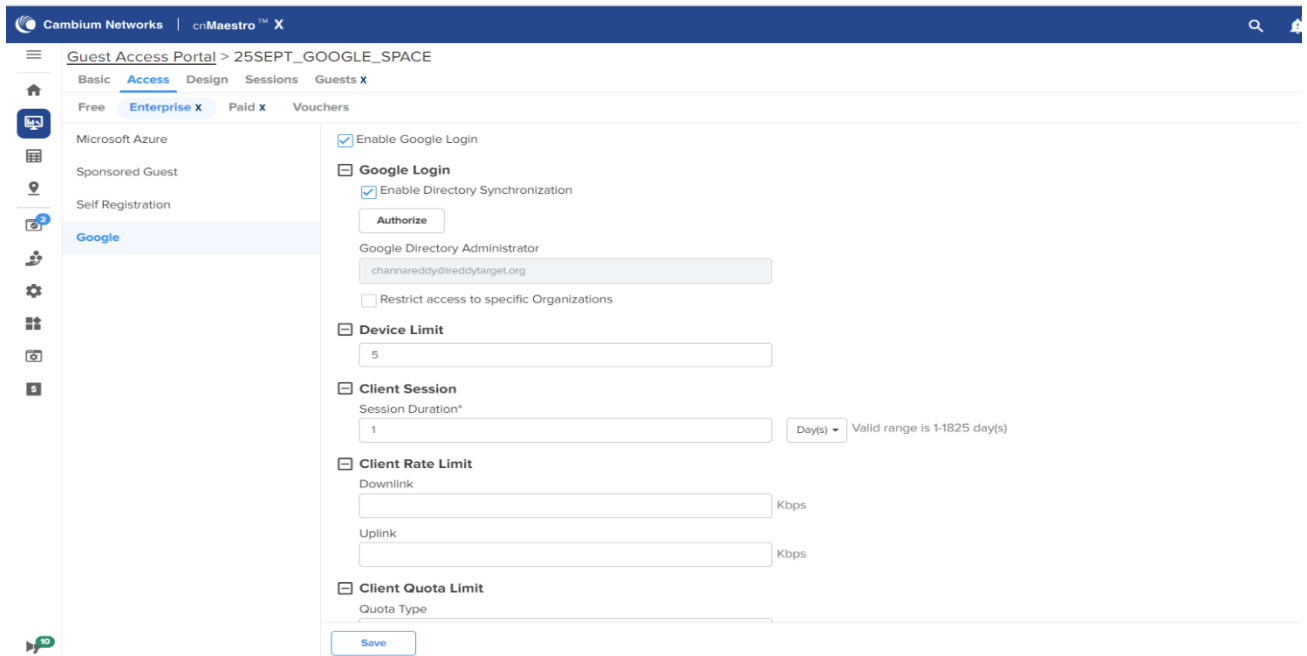
<input type="checkbox"/>	Name ↑	Email	Status	Last sign-in	Email usage
<input type="checkbox"/>	Aditi Ireddy	aditi@ireddytarget.org	Automatically suspended (2...	2 weeks ago	0 GB
<input type="checkbox"/>	Channareddy Ireddy	channareddy@ireddytarget...	Active	36 minutes ago	0 GB
<input type="checkbox"/>	Sanjay Jadhav	sanjay@ireddytarget.org	Active	4 minutes ago	0 GB
<input type="checkbox"/>	Vijay Yadav	vijay@ireddytarget.org	Automatically suspended (2...	2 weeks ago	0 GB
<input type="checkbox"/>	Vijesh Kumar	vijesh@ireddytarget.org	Automatically suspended (2...	2 weeks ago	0 GB

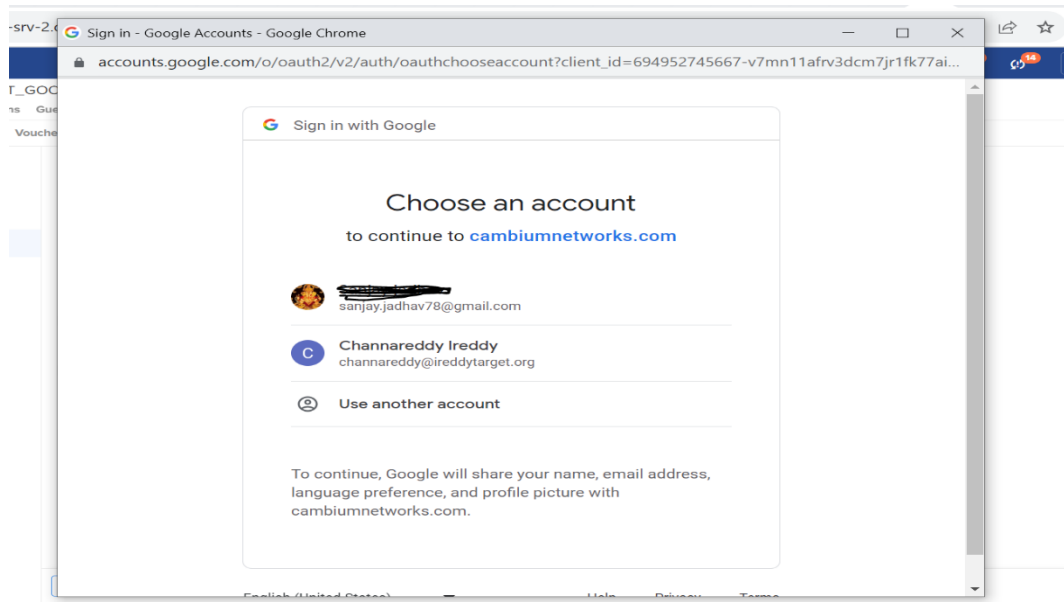
Once user created the same username and password need to be use in guest Portal.

- 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

Guest Access Portal > 25SEPT_GOOGLE_SPACE

Basic **Access** Design Sessions Guests x

Free **Enterprise x** Paid x Vouchers

Microsoft Azure

Sponsored Guest

Self Registration

Google

Enable Google Login

Google Login

Enable Directory Synchronization

Authorize

Google Directory Administrator

channareddy@reddytarget.org

Restrict access to specific Organizations

Device Limit

5

Client Session

Session Duration*

1 Day(s) Valid range is 1-1825 day(s)

Client Rate Limit

Downlink

Kbps

Uplink

Kbps

Client Quota Limit

Quota Type

Save

Cambium Networks | cnMaestro™ X

WLANs > GOOGLEWORKSPACE

Configuration Devices

WLAN

AAA Servers

Guest Access

Access Control

Passpoint

ePSK

Basic Settings

Enable

Portal Mode

Internal Access Point External Hotspot cnMaestro

Guest Portal Name

25SEPT_GOOGLE_SPACE

Advanced Settings

Whitelist

Captive Portal Bypass User Agent

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	

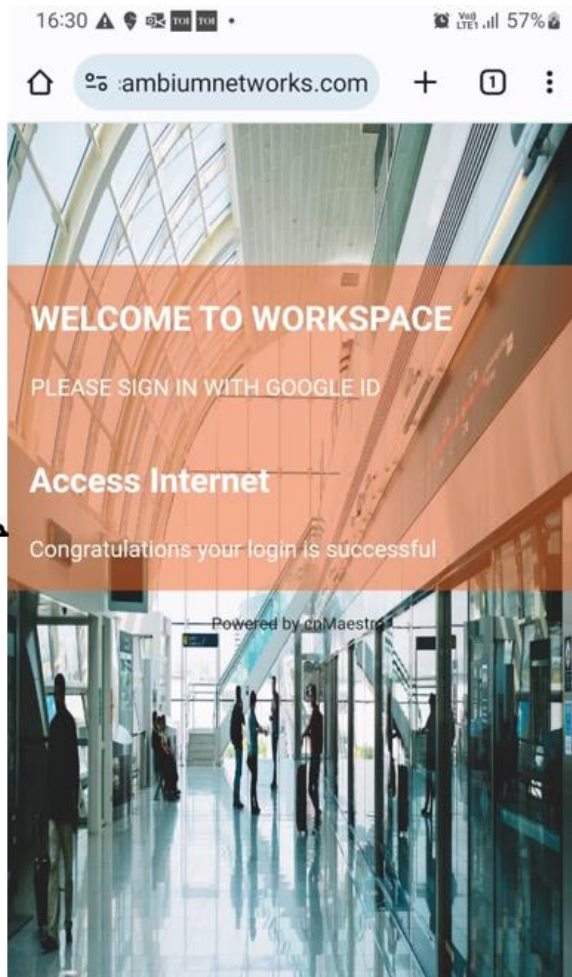
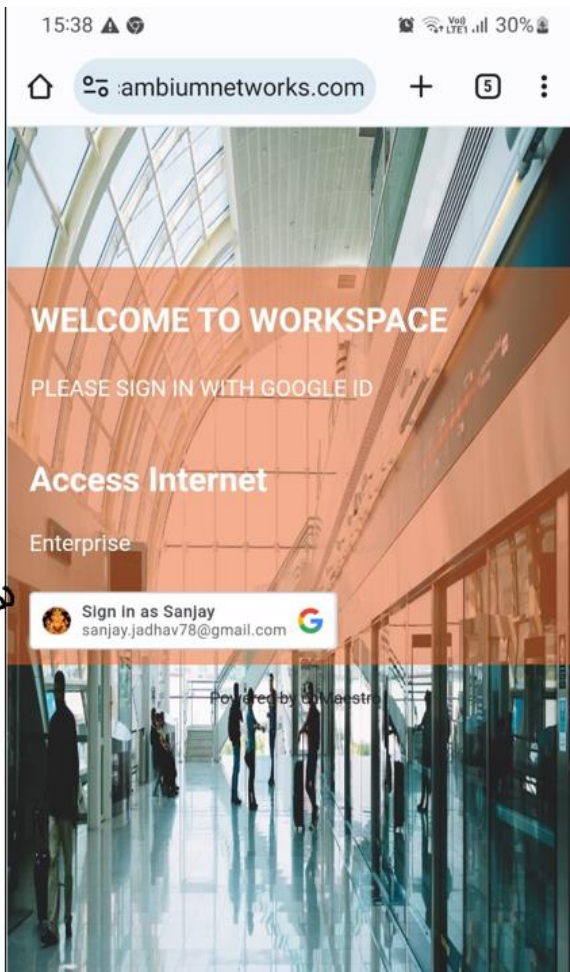
Showing 1 - 1 Total: 1 10 < Previous 1 Next >

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

Client MAC	Access Type	WLAN	Access Point	Remaining Time	Voucher Code	Disconnect
<input type="checkbox"/> 26-24-58-58-BD-84	GoogleDomainDirectory	GOOGLE_TEST	30.CB.C7.54.05.56	23h 58m 35s		<input type="button" value="Disconnect"/>

Client MAC	Portal	Access Type	WLAN	Access Point	Voucher Code	Login Time	Email	Mobile Number
<input type="checkbox"/> 26-24-58-58-BD-84	25SEPT_GOOGLE_SPACE	GoogleDomainDirectory	GOOGLE_TEST	30.CB.C7.54.05.56		16 Oct 2023, 04:29 PM	sanjay@ireddytarget.org	

- 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,"ctrlrPayload":{"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"}]}]
SANJAY-XV2-2-540556(config)#
```

```
----- /proc/coplane/sta -----
Bucket|      MAC|VLAN|Dynamic VLAN|      IP| DHCP|      Expiry|vap|wlan|gal|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|      | false|
|IPv6:link ip :: | site_ip :: | global_ip :: |
[ 7]|06-5F-E2-F9-58-18|1|      | 192.168.11.126|false|      |      |      |      |      |      |      |      |      |      |
| 1| 0| 0|      | false|
|IPv6:link ip :: | site_ip :: | global_ip :: |
[ 29]|6A-04-4B-2D-66-16|1|      | 192.168.11.121|true| 79022|      |      |      |      |      |      |      |      |      |
| 1| 0| 0|      | false| | | | | | | | | | |
|IPv6:link ip :: | site_ip :: | global_ip :: |
|38-D5-47-9D-CB-A4|1000|      |      |      |      |      |      |      |      |      |      |      |      |      |
| 1| 0| 0|      | false|
|IPv6:link ip :: | site_ip :: | global_ip :: |
```

- VLAN Assignment post authentication success.
- SESSION with group assignment, post authentication success from google workspace.

Sessions and Login Events Paid Transactions **Users X**

Email	Group	Registered Devices
<input type="checkbox"/> _sanjay@ireddytarget.org	TEACHER	2

Showing 1 - 1 Total: 1 10 < Previous 1 Next >

FILTER STATS

```
Chain wlan-guest-access (1 references)
pkts bytes target prot opt in out source destination tcp dpt:8888
 12 720 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 parameter

- 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
```