



a Hewlett Packard
Enterprise company

Aruba Central APIs

Adolfo Bolivar
April 2018

Agenda

- Why APIs?
- Enabling Aruba Central to support APIs
- Getting the Access token and refresh token via APIs
- Aruba Central APIs – Demos:
 - 1. Proactive notifications
 - 2. Guest Access - sessions track

Structured versus Unstructured

- CLI commands and output is unstructured

```
<Sysname> display mac-address
MAC ADDR          VLAN ID   STATE          PORT INDEX          AGING STATE
000f-e201-0101    1         Config static   GigabitEthernet4/0/1 NOAGED

--- 1 mac address(es) found ---
```

```
2930F# show mac-address

Status and Counters - Port Address Table

MAC Address      Port          VLAN
-----
000b86-edcd8c 1             1
348aae-d9ac84 1             1
6cc217-7fe58c 2             1
94b40f-cb75d4 1             1
a0a8cd-6e83c2 1             1
```

Structured versus Unstructured

url → `url = 'http://192.168.1.29/rest/v1/mac-table'`

Send Request → `>>> get_mac = requests.get(url)`

Print it out → `>>> print(get_mac.json())`

```
{'collection_result': {'total_elements_count': 6,
'filtered_elements_count': 6}, 'mac-table': [{'mac_address': '348aae-
d9ac84', 'vlan_id': 1, 'port_id': '1'}, {'mac_address': 'a0a8cd-6e83c2',
'vlan_id': 1, 'port_id': '1'}, {'mac_address': '94b40f-cb75d4',
'vlan_id': 1, 'port_id': '1'}, {'mac_address': '000b86-edcd8c',
'vlan_id': 1, 'port_id': '1'}, {'mac_address': '6cc217-7fe58c',
'vlan_id': 1, 'port_id': '2'}, {'mac_address': '080027-71dce7',
'vlan_id': 1, 'port_id': '2'}], 'uri': '/mac-table'}
```

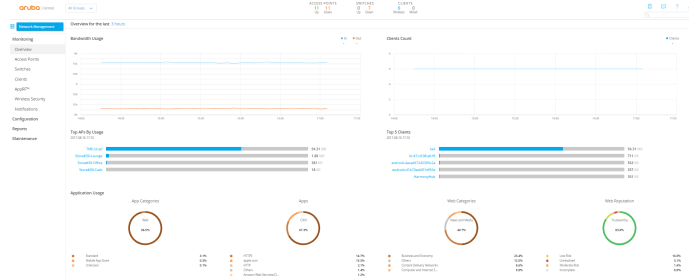
Structured

- With only a little code we can get at the MACs.

```
>>> for x in get_mac.json()['mac-table']:
...     print(x['mac_address'])
...
348aae-d9ac84
a0a8cd-6e83c2
94b40f-cb75d4
000b86-edcd8c
6cc217-7fe58c
080027-71dce7
```



Human Readable

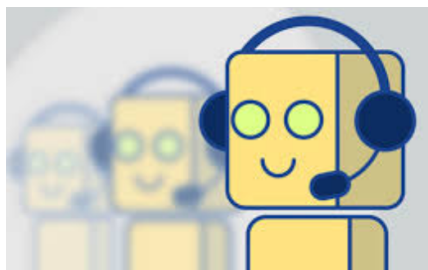
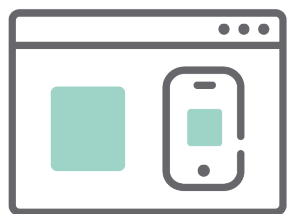


Central



Machine Readable





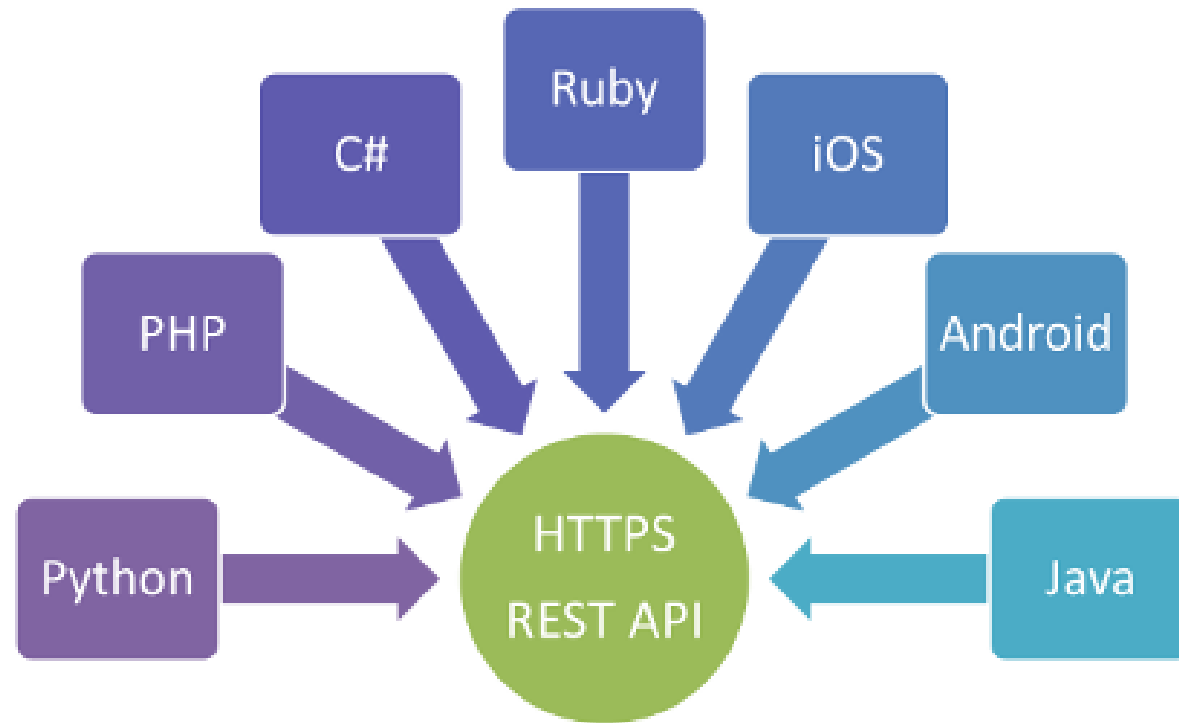
API Gateway

Entry Point to API requests
Security → Threat protection



Central

{REST} API



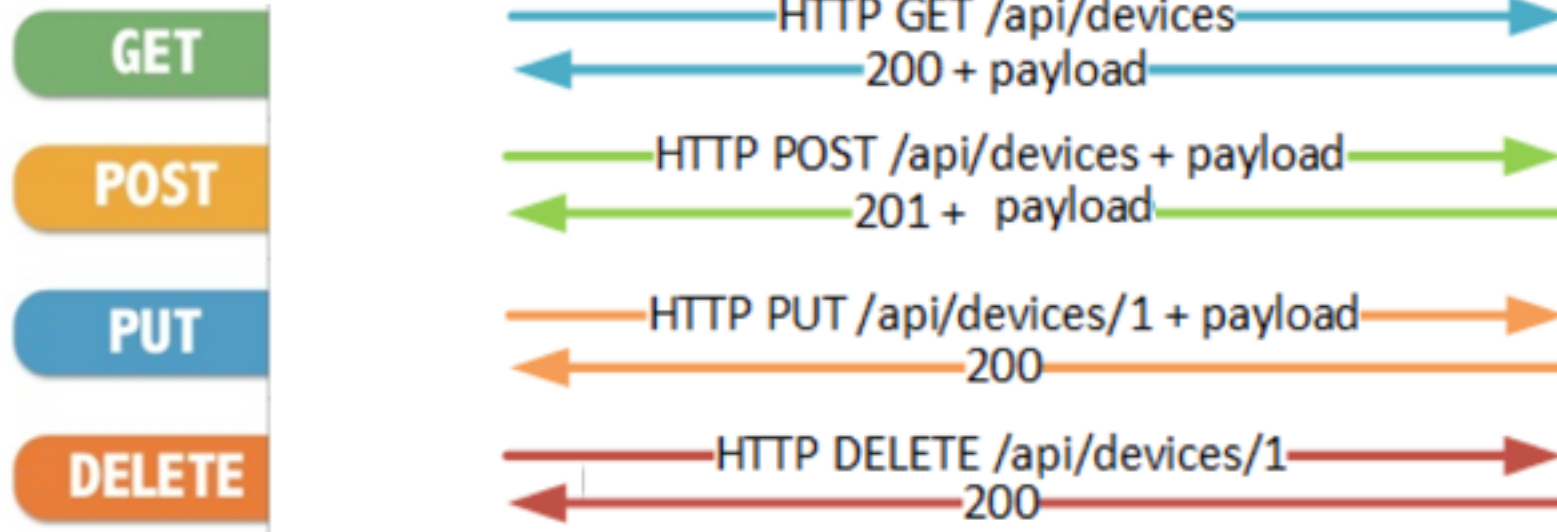
REST API

- ❖ REST is an API that allows clients to perform read/write operations.
- ❖ REST uses HTTP to perform a set of actions:
 - “Create” --> Post
 - “Read” --> Get
 - “Update” --> Put
 - “Delete” --> Delete

methods	
	http://api.co/v2/cars/
GET	List all the cars
POST	Create a new car
PUT	Replace the entire collection with a whole new list of cars
DELETE	Delete all the cars

REST API

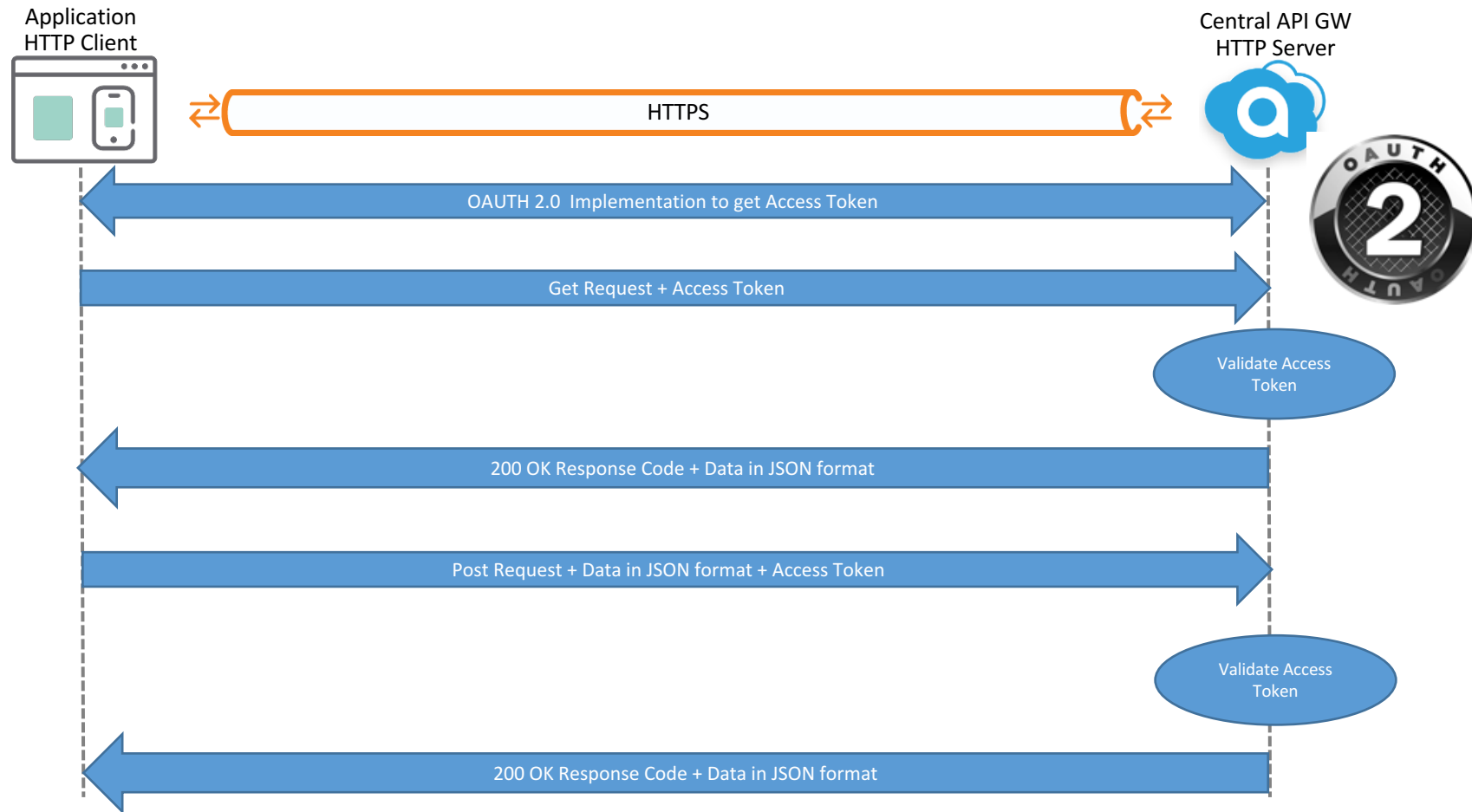
methods



What is JSON?

- { "key" : "value" }
- { "key 1" : "value 1", "key 2" : "value 2" }
- { "name": "John", "age": 30, "car": null }
- {
 "name": "John",
 "age": 30,
 "cars": ["Ford", "BMW", "Fiat"]
}

Overview – API Call







a Hewlett Packard
Enterprise company

Enabling Aruba Central to support APIs


Open a case with TAC support and request to enable API Gateway



aruba Central



CURRENT APP
MAINTENANCE





Search Current App
Find devices, clients and networks

Firmware

Troubleshooting


Audit Trail

API Gateway 




FILTER MAINTENANCE
Casa Bolivar (1 Total Devices | 0 Down APs | 0 Down SWITCHES) ▼



FIRMWARE

Virtual Controllers Switch - MAS Switch - Aruba 

Filter by upgrade status:





Show All ▼

Virtual Controllers Selected: 1 

<input checked="" type="checkbox"/>	VC NAME	APS	FIRMWARE VE...	LATEST AVA...	FIRMWARE CO...	STATUS	
<input checked="" type="checkbox"/>	VC Tenerife	1	6.5.4.4_62887	6.5.4.5_636...	Not Set	 Newer firmware available	

5 10 25 50 100

Per Page

Page: 1/1

Internal Address – Employees & TAC only

Secure | <https://internal-ui.central.arubanetworks.com/frontend/#/APIGATEWAY>

aruba Central

Casa Bolivar (1 Total Devices | 0 Down APs | 0 Down SWITCHES)

Employees Only


API GATEWAY

APIs Authorized Apps & Tokens


All Published APIs

API NAME	DOCUMENTATION	DETAILS
InternalAPI	https://internal-apigw.central.arubanetworks.com/swagger/centr...	Details
ProductionAPI	https://app1-apigw.central.arubanetworks.com/swagger/central/	Details

Authorize a new application

 Central

CURRENT APP MAINTENANCE


 **Search Current App**
Find devices, clients and networks

Firmware

Troubleshooting

Audit Trail

API Gateway

 FILTER MAINTENANCE

Casa Bolivar (1 Total Devices | 0 Down APs | 0 Down SWITCHES) ▼

API GATEWAY

APIs Authorized Apps & Tokens


+


Add Apps & Tokens


Authorized Apps & Tokens

NAME	CLIENT ID	CLIENT SECRET	TOKENS	CREATE...
------	-----------	---------------	--------	-----------

New application: Postman

 Central

 CURRENT APP MAINTENANCE


 **Search Current App**
Find devices, clients and networks

Firmware

Troubleshooting

Audit Trail

API Gateway

 FILTER MAINTENANCE
Casa Bolivar (1 Total Devices | 0 Down APs | 0 Down SWITCHES) ▼

NEW TOKEN

Application Name:

Generate

Cancel

+ Add Apps & Tokens

NAME	CLIENT ID	CLIENT SECRET	TOKENS	CREATE...
------	-----------	---------------	--------	-----------

New application: Postman

aruba Central

CURRENT APP MAINTENANCE

Search Current App
Find devices, clients and networks

Firmware

Troubleshooting

Audit Trail

API Gateway

FILTER MAINTENANCE
Casa Bolivar (1 Total Devices | 0 Down APs | 0 Down SWITCHES) ▼

API GATEWAY

APIs Authorized Apps & Tokens

[+ Add Apps & Tokens](#)

Authorized Apps & Tokens				
NAME	CLIENT ID	CLIENT SECRET	TOKENS	CREATE...
Postman	ESOSWPbqu...	x5q6W7U64...	View To...	3/18/18

5 10 25 50 Per Page

[<<](#) [<](#) [>](#) [>>](#) Page: 1/1

"client_id": clientid

"client_secret": clientsecret

What is an Access Token?

The screenshot shows the Aruba Central web interface. On the left is a sidebar with navigation links: 'aruba Central', 'CURRENT APP MAINTENANCE', 'Search Current App', 'Firmware', 'Troubleshooting', 'Audit Trail', and 'API Gateway'. The main content area is titled 'API GATEWAY' and has a sub-header 'Authorized Apps & Tokens'. Below this is a table with the following columns: NAME, CLIENT ID, CLIENT SECRET, TOKENS, and CREATED AT. The table contains one entry for 'Postman' with a 'View Tokens' link in the 'TOKENS' column. A red circle highlights this link, and a large yellow arrow points down from it. At the bottom of the table, there are pagination controls showing '5', '10', '25', and '50' items per page, and a 'Page: 1/1' indicator.

NAME	CLIENT ID	CLIENT SECRET	TOKENS	CREATED AT
Postman	ESOSW	x5q6	View Tokens	3/18/18

Access Token: string representing an access authorization issued to the client, rather than using the resource owner's credentials directly.

Viewing Access Token

aruba Central

CURRENT APP MAINTENANCE

Search Current App
Find devices, clients and networks

Firmware

Troubleshooting

Audit Trail

API Gateway

FILTER MAINTENANCE Casa Bolivar (1 Total Devices | 1 Down APs | 0 Down SWITCHES)

API GATEWAY

APIs Authorized Apps & Tokens

+ Add Apps & Tokens

NAME	CLIENT ID	CLIENT SECRET	TOKENS	CREATED AT
Postman	ESOSW	x5q6	View Tokens	3/18/18

5 10 25 50 Per Page

Secure | https://internal-ui.central.arubanetworks.com/user_apigw/oauth/crec

```
{  
  "access_token": "g8vEHtsnECE05sJHB2R3fteclsnctvmc",  
  "authenticated_userid": "adolfo.bolivar@hpe.com",  
  "created_at": 1521335316089,  
  "credential_id": "98334eef-",  
  "expires_in": 7200,  
  "id": "22aeb287-af7f-",  
  "refresh_token": "Q2ZgnfA0LQWl1qKQ61YxJKJm9W0CCpom",  
  "scope": "all",  
  "token_type": "bearer"  
}
```

Access token expires in 7200seg/120min/2hrs



What is a Refresh Token?

```
{  
  "access_token": "g8vEHtsnECE05sJHB2R3fteclsnCTvmc",  
  "authenticated_userid": "adolfo.bolivar@hpe.com",  
  "created_at": 1521335316089,  
  "credential_id": "98334eef-df[REDACTED]",  
  "expires_in": 7200,  
  "id": "22aeb287-af7f-4ce[REDACTED]",  
  "refresh_token": "Q2ZgnfA0LQWl1qKQ61YxJKJm9W0CCpom",  
  "scope": "all",  
  "token_type": "bearer"  
}
```

Refresh Token: *special kind of token that can be used to obtain a renewed access token.*
Refresh tokens must be stored securely by an application because they essentially allow a user to remain authenticated forever.

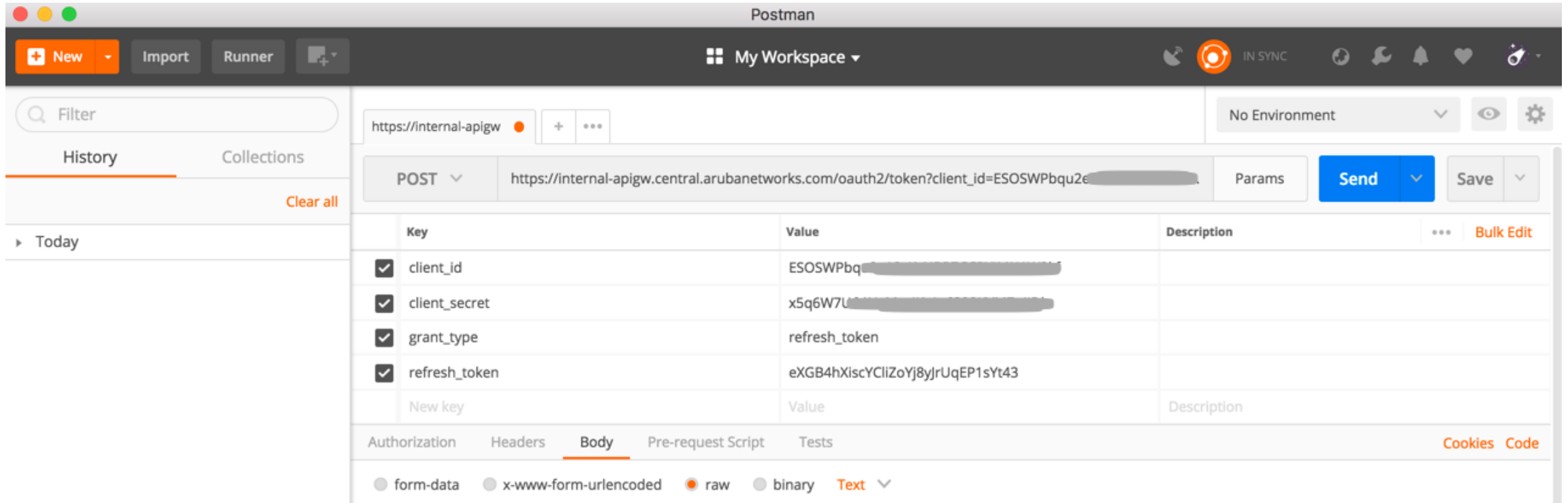
Getting a new Access Token

methods

POST

<https://internal-apigw.central.arubanetworks.com/oauth2/token>

```
params = {  
  "client_id": clientid,  
  "client_secret": clientsecret,  
  "grant_type": "refresh_token",  
  "refresh_token": refresh_token }
```



New Access and Refresh Tokens → Answer from Central



The screenshot shows a web browser's developer console with the 'Body' tab selected. The response is a JSON object containing four fields: 'refresh_token', 'token_type', 'access_token', and 'expires_in'. The 'access_token' field is highlighted in blue. The status bar at the top right indicates a 200 OK status, a response time of 2800 ms, and a size of 341 B.

```
1 {  
2   "refresh_token": "Zr10xjoW8t3i8D2RaSVn2kZWqvFMtdtU",  
3   "token_type": "bearer",  
4   "access_token": "8NlaPTjg4QeUe69kxdS6GEIYJWpm75jj",  
5   "expires_in": 7200  
6 }
```

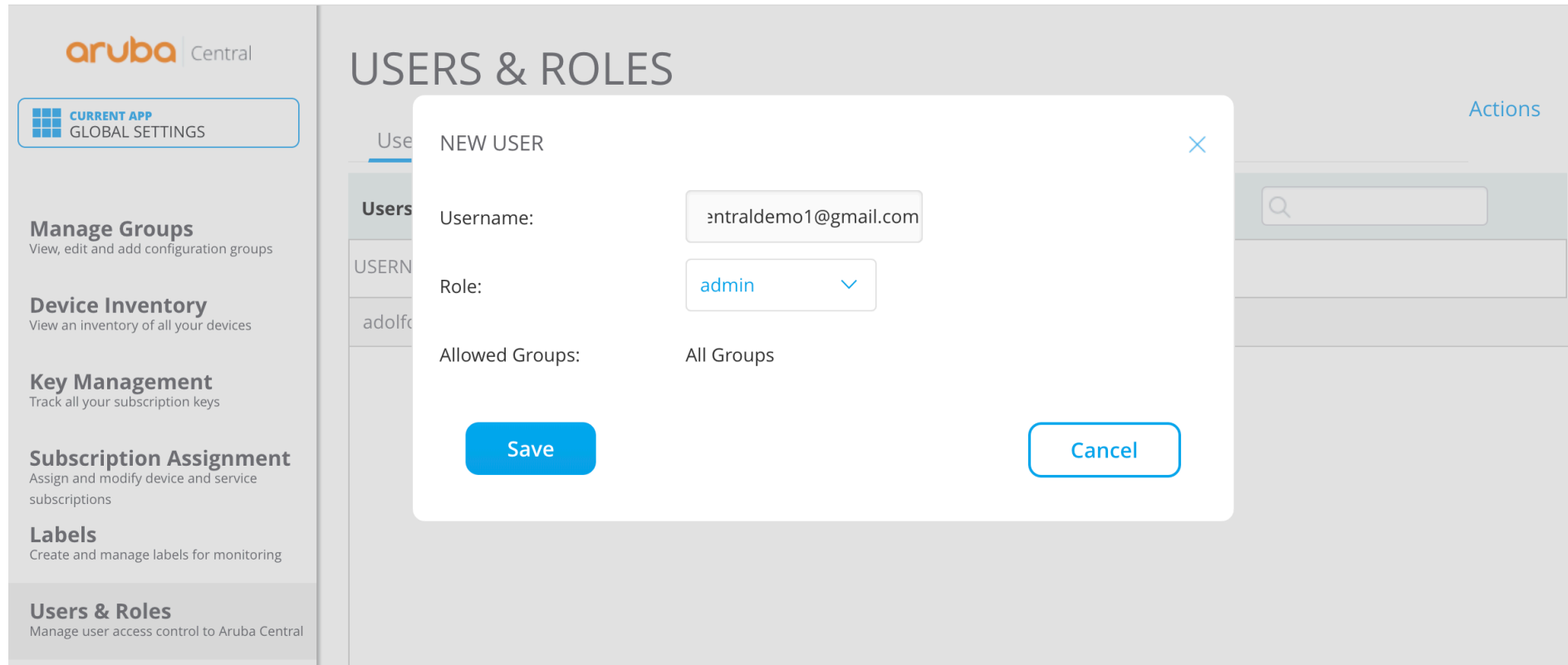
Status: 200 OK Time: 2800 ms Size: 341 B



a Hewlett Packard
Enterprise company

Getting the Access token and refresh token via APIs

Creating a “gmail” admin account





The screenshot displays the Aruba Central web interface. On the left is a sidebar with the 'aruba Central' logo and a menu including 'Manage Groups', 'Device Inventory', 'Key Management', 'Subscription Assignment', 'Labels', and 'Users & Roles'. The main panel is titled 'USERS & ROLES' and features a 'NEW USER' modal dialog. The modal contains the following fields: 'Username' with the value 'centraldemo1@gmail.com', 'Role' with a dropdown menu set to 'admin', and 'Allowed Groups' with the value 'All Groups'. At the bottom of the modal are 'Save' and 'Cancel' buttons. The background interface includes a search bar and an 'Actions' link.

From SEEL - ArubaCentral setup (Internal users)

- 1.Allow all @arubanetworks.com and @hpe.com users.
- 2.Allow only @gmail.com, @outlook.com and @hotmail.com users with string "centraldemo" in the id; e.g., user+centraldemo@gmail.com, mycentraldemoid@hotmail.com etc.

“gmail” admin account added to Central



 CURRENT APP
GLOBAL SETTINGS

Manage Groups
View, edit and add configuration groups

Device Inventory
View an inventory of all your devices



Key Management
Track all your subscription keys

USERS & ROLES

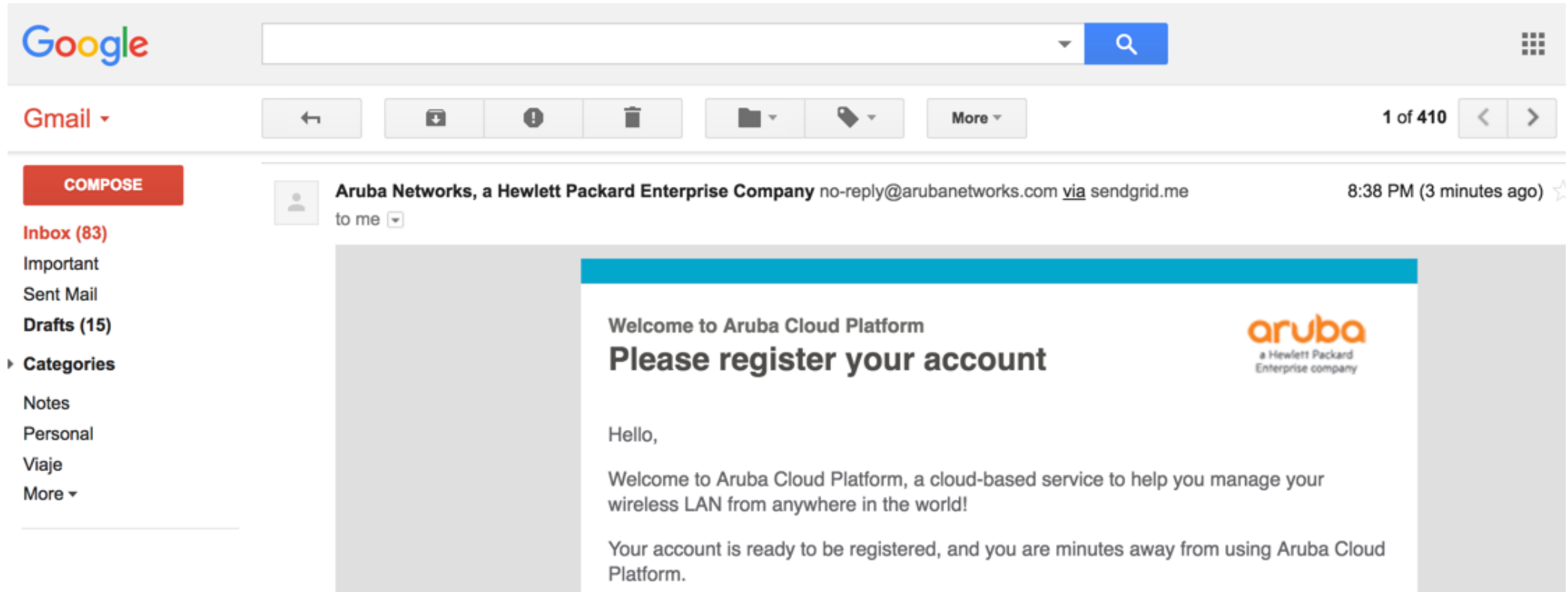
Users Roles

Actions

Users (2)

USERNAME	ROLE	ALLOWED GROUPS
adolfo.bolivar@hpe.com	admin	All Groups  SSO Account
ma[REDACTED]+centraldemo1@gmail.com	admin	All Groups  Local authentication Account

Confirmation email from Central



The screenshot shows a Gmail interface. At the top is the Google search bar. Below it is the Gmail header with the 'Gmail' label and navigation icons. On the left is a sidebar with a 'COMPOSE' button and a list of folders: 'Inbox (83)', 'Important', 'Sent Mail', 'Drafts (15)', and 'Categories' (which includes 'Notes', 'Personal', 'Viaje', and 'More'). The main area displays an email from 'Aruba Networks, a Hewlett Packard Enterprise Company' with the address 'no-reply@arubanetworks.com' and a subject line 'via sendgrid.me'. The email content has a blue header bar and reads: 'Welcome to Aruba Cloud Platform', 'Please register your account', 'Hello,', 'Welcome to Aruba Cloud Platform, a cloud-based service to help you manage your wireless LAN from anywhere in the world!', and 'Your account is ready to be registered, and you are minutes away from using Aruba Cloud Platform.' The Aruba logo is in the top right corner of the email content.

Google

Gmail

COMPOSE

Inbox (83)

Important

Sent Mail

Drafts (15)

Categories

Notes

Personal

Viaje

More

Aruba Networks, a Hewlett Packard Enterprise Company no-reply@arubanetworks.com via sendgrid.me

8:38 PM (3 minutes ago)

Welcome to Aruba Cloud Platform

Please register your account

aruba
a Hewlett Packard
Enterprise company

Hello,

Welcome to Aruba Cloud Platform, a cloud-based service to help you manage your wireless LAN from anywhere in the world!

Your account is ready to be registered, and you are minutes away from using Aruba Cloud Platform.

Get the CSRF token

methods

POST

<https://internal-apigw.central.arubanetworks.com/oauth2/authorize/central/api/login>

```
{
  "username": "marXXXXX+centraldemo1@gmail.com",
  "password": "XXXXXXX"
}
```

POST ▼ [https://internal-apigw.central.arubanetworks.com/oauth2/authorize/central/api/login?client_id=SY9hcfh\[redacted\]](https://internal-apigw.central.arubanetworks.com/oauth2/authorize/central/api/login?client_id=SY9hcfh[redacted]) Params Send ▼ Save ▼

	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	client_id	SY9hcfh[redacted]			
	New key	Value	Description		

Authorization Headers (1) Body ● Pre-request Script Tests Cookies Code

	Key	Value	Description	...	Bulk Edit	Presets ▼
<input checked="" type="checkbox"/>	Content-Type	application/json				
	New key	Value	Description			

Authorization Headers (1) Body ● Pre-request Script Tests Cookies Code

☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary JSON (application/json) ▼

```
1 {
2   "username": "ma[redacted]+centraldemo1@gmail.com",
3   "password": "[redacted]"
4 }
5
```

Get the CSRF token -> Answer from Central

Body Cookies (2) Headers (9) Test Results							Status: 200 OK	Time: 1257 ms	Size: 442 B
Name	Value	Domain	Path	Expires	HTTP	Secure			
session	d6f95f91ab713556_5acccc70.kkwwk	internal-apigw.central.arubanetworks.com	/		true	true			
csrftoken	##8a8aa936d43d	internal-apigw.central.arubanetworks.com	/		false	true			

Session - Cookie: "d6f95f91ab713556_5acccc70.kkwwkBXXXXXXXXXX"
CSRF token: "##8a8aa936d43dXXXXXXXXXX"

Get the Auth token

methods

POST

<https://internal-apigw.central.arubanetworks.com/oauth2/authorize/central/api>

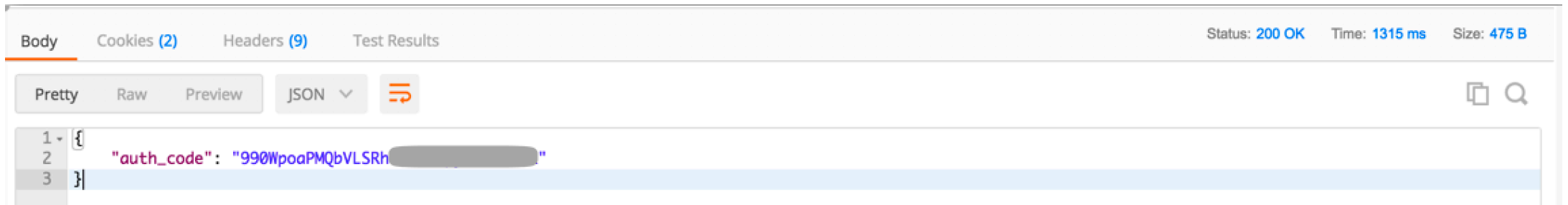
```
{  
  "customer_id": "500xxxx"  
}
```

The screenshot shows a REST client interface with the following configuration:

- Method:** POST
- URL:** `https://internal-apigw.central.arubanetworks.com/oauth2/authorize/central/api?client_id=SY9hcfhOByS6gat2[REDACTED]`
- Params:** Empty
- Buttons:** Send, Save
- Headers (3):**
 - ☒ **client_id**: SY9hcfhOByS6gat2[REDACTED]
 - ☒ **response_type**: code
 - ☒ **scope**: all
- Body:**
 - Form:** New key, Value, Description
 - Headers (3):**
 - ☒ **X-CSRF-TOKEN**: ##86a77b093bc4f[REDACTED]
 - ☒ **Content-Type**: application/json
 - ☒ **Cookie**: 64e1b297fdd71d4[REDACTED]
 - Body:**
 - form-data** (selected): x-www-form-urlencoded, raw, binary
 - JSON (application/json)**:

```
1 {  
2   "customer_id": "50[REDACTED]"  
3 }  
4
```

Get the Auth token -> Answer from Central



Code: "990WpoaPMQbVXXXXXX"

Get the Access token and Refresh token

methods

POST

<https://internal-apigw.central.arubanetworks.com/oauth2/token>

POST

https://internal-apigw.central.arubanetworks.com/oauth2/token?client_id=SY9hcfhOEB[REDACTED]&grant_type=authoriz...

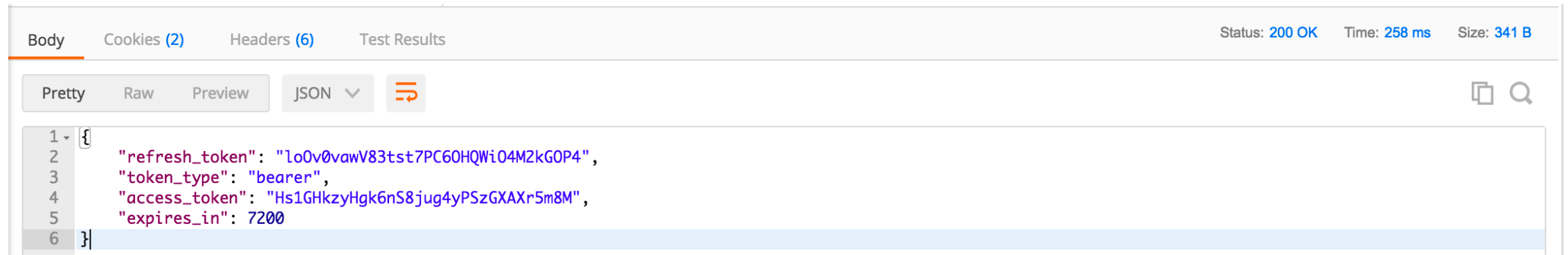
Params

Send

Save

	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	client_id	SY9hcfhOEB[REDACTED]			
<input checked="" type="checkbox"/>	grant_type	authorization_code			
<input checked="" type="checkbox"/>	client_secret	sjYHvlgG7A[REDACTED]			
<input checked="" type="checkbox"/>	code	990WpoaPMQbVLS[REDACTED]			

Get the Access token and Refresh token -> Answer from Central



The screenshot shows the 'Body' tab of a web browser's developer tools. The response is a JSON object with the following fields:

```
1 {  
2   "refresh_token": "lo0v0vawV83tst7PC60HQWi04M2kG0P4",  
3   "token_type": "bearer",  
4   "access_token": "Hs1GHkzyHgk6nS8jug4yPSzGXAXr5m8M",  
5   "expires_in": 7200  
6 }
```

The status bar at the top right indicates: Status: 200 OK, Time: 258 ms, Size: 341 B. The response is displayed in the 'Pretty' view, with a 'JSON' dropdown and a 'Copy' icon visible.



a Hewlett Packard
Enterprise company

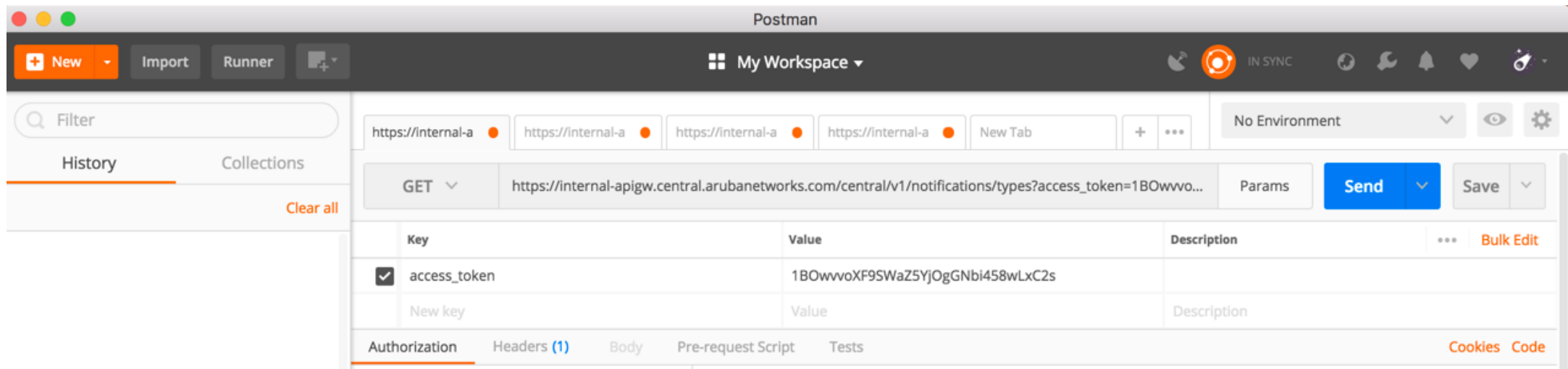
Task: Each time a virtual
controller is disconnected for
+10min, notify via Webhook

List Notifications supported by Central

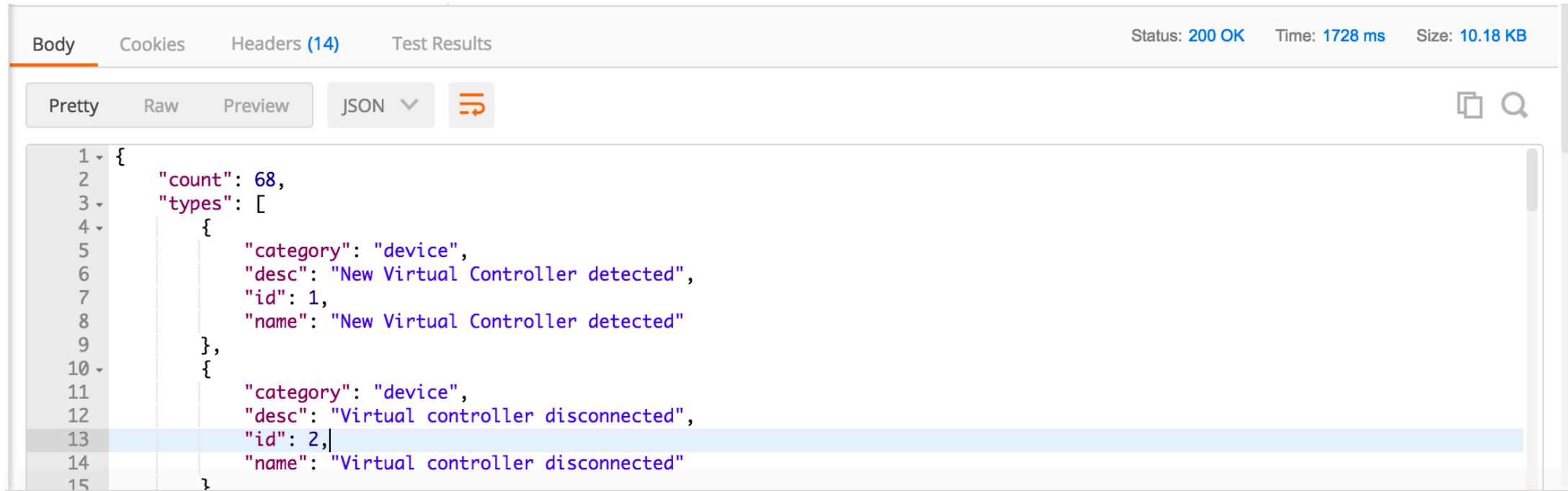
methods

GET

<https://internal-apigw.central.arubanetworks.com/central/v1/notifications/types>



List Notifications → Answer from Central



The screenshot shows a web browser's developer console with the 'Body' tab selected. The status bar at the top indicates 'Status: 200 OK', 'Time: 1728 ms', and 'Size: 10.18 KB'. The JSON response is displayed in a 'Pretty' format, showing a list of notifications. The first notification has an ID of 1 and a description of 'New Virtual Controller detected'. The second notification, which is highlighted with a blue background, has an ID of 2 and a description of 'Virtual controller disconnected'.

```
1 {  
2   "count": 68,  
3   "types": [  
4     {  
5       "category": "device",  
6       "desc": "New Virtual Controller detected",  
7       "id": 1,  
8       "name": "New Virtual Controller detected"  
9     },  
10    {  
11      "category": "device",  
12      "desc": "Virtual controller disconnected",  
13      "id": 2,  
14      "name": "Virtual controller disconnected"  
15    }  
  ]  
}
```

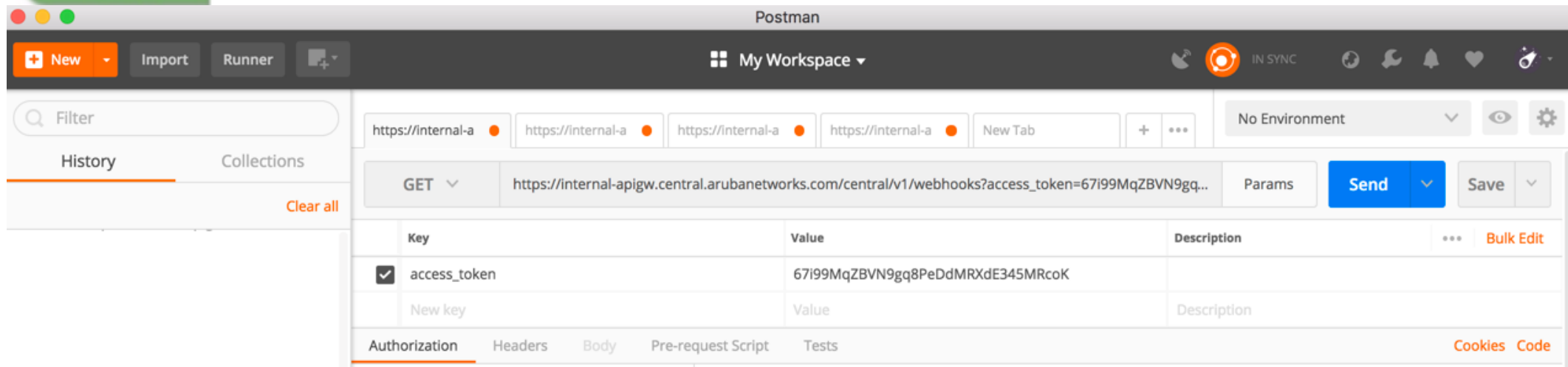
```
{  
  "name": "Virtual controller disconnected"  
},
```

List Webhooks

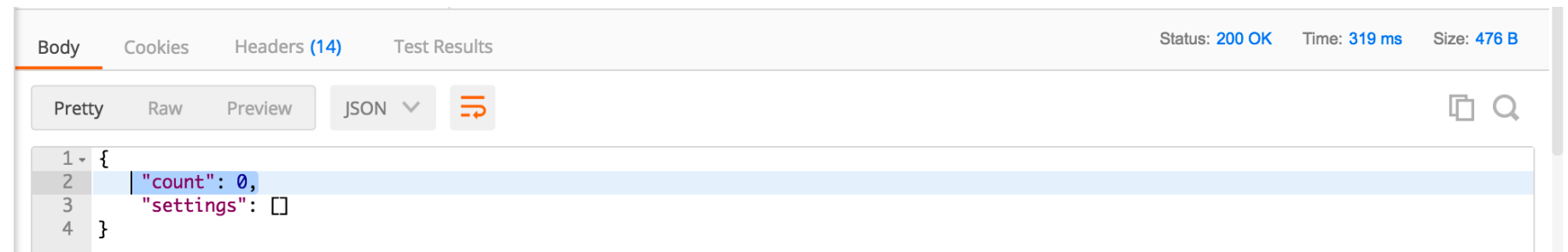
methods

GET

<https://internal-apigw.central.arubanetworks.com/central/v1/webhooks>



Answer from Central



Create Webhook trigger in Built.io

The image illustrates the steps to create a Webhook trigger in Built.io:

- Step 1:** In the workflow editor, click the settings gear icon on the trigger block. A red circle highlights the gear icon, and a red text label "Set trigger to webhook" is shown.
- Step 2:** The "Trigger" menu is displayed, showing various integration options. A red arrow points to the "Webhook" option.
- Step 3:** The "Webhook" configuration panel is shown. The "Webhook URL" field is circled in red and contains the URL `https://runflow.built.io/run/...`. The "Webhook Authentication" toggle is set to "OFF".

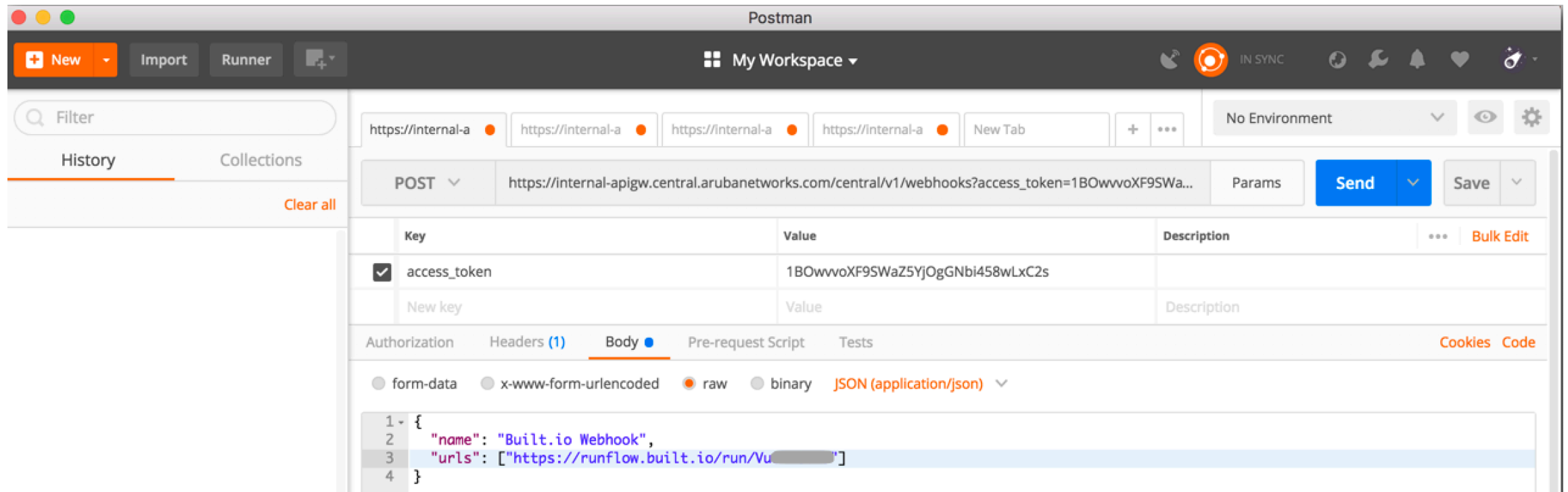
Add a webhook

methods

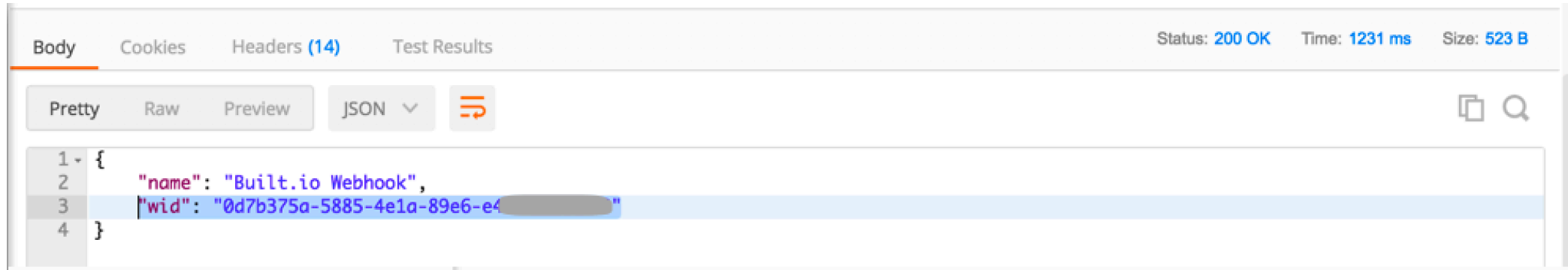
POST

<https://internal-apigw.central.arubanetworks.com/central/v1/webhooks>

```
{
  "name": "Built.io Webhook",
  "urls": ["https://runflow.built.io/run/VuXXXXXXX"]
}
```



Add a webhook → Answer from Central



"wid": "0d7b375a-5885-4e1a-89e6-e4XXXXXXXXXX"

Enable "Virtual controller disconnected" notification/Alert and point it to Webhook

methods

POST

<https://internal-apigw.central.arubanetworks.com/central/v1/notifications/settings>

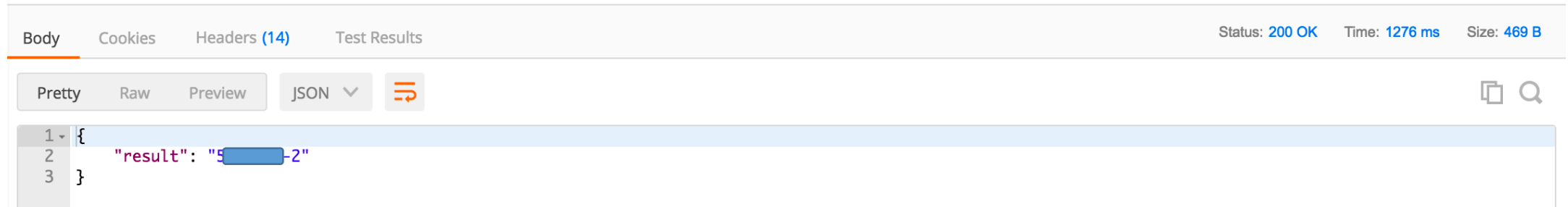
The screenshot shows a REST client interface with the following details:

- Method:** POST
- URL:** `https://internal-apigw.central.arubanetworks.com/central/v1/notifications/settings?access_token=Lt270Mdfhf6WKOfW0QSPj6Ffu8g1Ha1Y`
- Params:** None
- Body:** JSON (application/json)
- JSON Body:**

```
1 {
2   "type": "Virtual controller disconnected",
3   "rules": [
4     {
5       "severity": "Critical",
6       "delivery_options": [
7         "Webhook"
8       ],
9       "emails": [
10      ],
11     ],
12     "webhooks": [
13       "0d7b375a-5885-4e1a-89e6-e...",
14     ],
15     "group": [
16     ],
17     "label": [
18     ],
19     "device_id": [
20     ],
21     "duration": 10,
22     "value": "string"
23   ],
24 },
25 ],
26 "active": true
27 }
```

```
{
  "type": "Virtual controller disconnected",
  "rules": [ { "severity": "Critical",
    "delivery_options": [ "Webhook" ],
    "emails": [ ],
    "webhooks": ["0d7b375a-5885-4e1a-89e6-..."],
    "group": [ ],
    "label": [ ],
    "device_id": [ ],
    "duration": 10,
    "value": "string"
  }
],
  "active": true
}
```

Enable "Virtual controller disconnected" notification/Alert and point it to Webhook → Answer from Central



The screenshot shows a REST client interface with the following details:

- Body** tab is selected.
- Status:** 200 OK
- Time:** 1276 ms
- Size:** 469 B
- View options: Pretty, Raw, Preview (Pretty is selected).
- Format: JSON (dropdown menu).
- JSON body content:

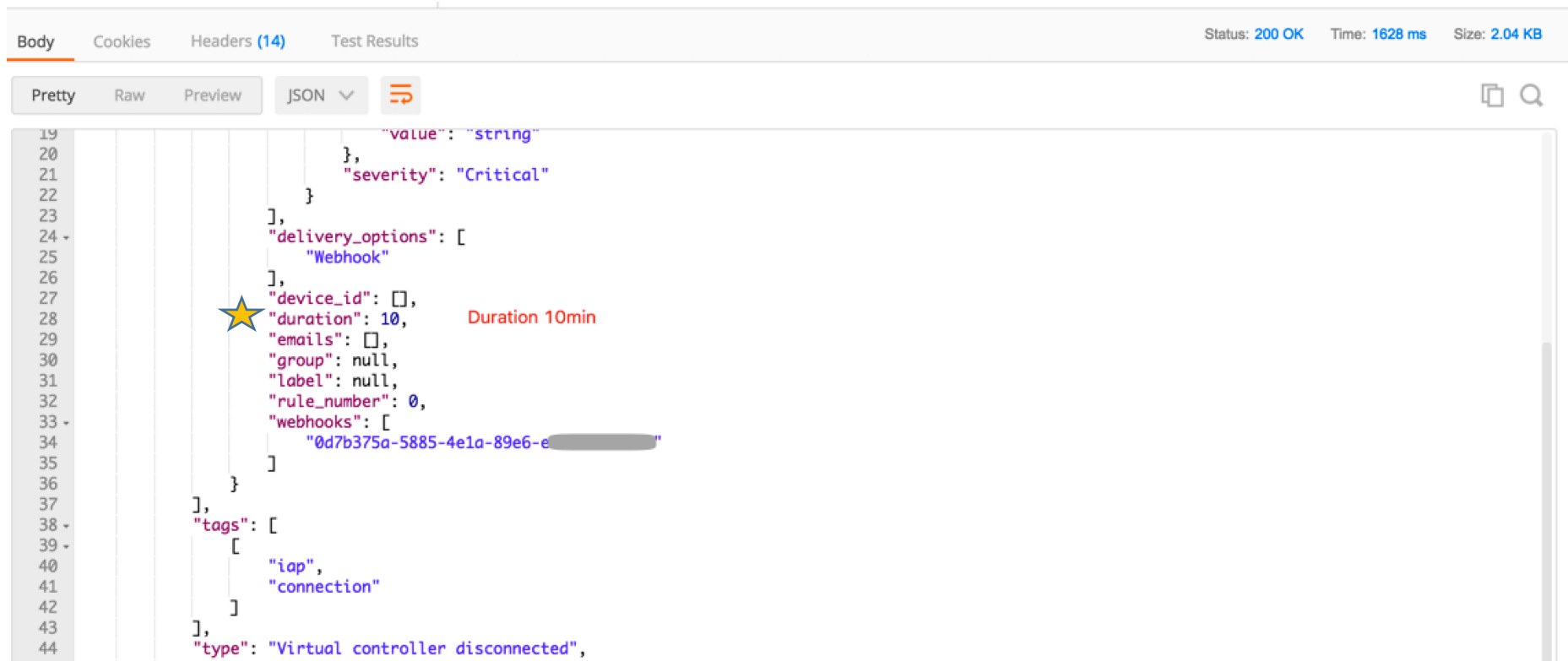
```
1 {  
2   "result": "5-2"  
3 }
```

Check the notification/Alert → Answer from Central

methods

GET

<https://internal-apigw.central.arubanetworks.com/central/v1/notifications/settings>



Body Cookies Headers (14) Test Results Status: 200 OK Time: 1628 ms Size: 2.04 KB

Pretty Raw Preview JSON

```
19      "value": "string"
20    },
21    "severity": "Critical"
22  },
23  ],
24  "delivery_options": [
25    "Webhook"
26  ],
27  "device_id": [],
28  "duration": 10,      Duration 10min
29  "emails": [],
30  "group": null,
31  "label": null,
32  "rule_number": 0,
33  "webhooks": [
34    "0d7b375a-5885-4e1a-89e6-e"
35  ]
36  },
37  ],
38  "tags": [
39    [
40      "iap",
41      "connection"
42    ]
43  ],
44  "type": "Virtual controller disconnected",
```

Disconnect Virtual Controller → After 10 minutes

methods

GET

<https://internal-apigw.central.arubanetworks.com/central/v1/notifications>

https://internal-apigw	https://internal-apigw	https://internal-apigw	https://runflow.built.i	+	...	No Environment	▼	👁	⚙		
GET	https://internal-apigw.central.arubanetworks.com/central/v1/notifications?access_token=pQ0TutH6D7RJ...					Params	Send	▼	Save	▼	
	Key	Value	Description	...							Bulk Edit
<input checked="" type="checkbox"/>	access_token	pQ0TutH6D7RJDvaQhvd9IbVP7C8a12Fz									
	New key	Value	Description								

Answer from Central



```
Body    Cookies    Headers (14)    Test Results    Status: 200 OK    Time: 568 ms    Size: 2.59 KB
Pretty  Raw    Preview    JSON ▼    ⋮
3  "notifications": [
4  {
5      "acknowledged": false,
6      "description": "Virtual Controller with Name VC Tenerife, Version 6.5.4.4_62887 and IP address 192.168.0.2 disconnected",
7      "group_name": "Casa Bolivar",
8      "id": "AWJJhkp",
9      "labels": [
10     {
11         "id": 2,
12         "name": "Insight"
13     }
14 ],
15     "severity": "Critical",
16     "timestamp": 1521651960,
17     "type": "Virtual controller disconnected"
```

Disconnect Virtual Controller → After 10 minutes → Built.io log

<

Webhook Aruba Central

ON

SAVE

LOG

Logger

ACTIONS

ACTIONS

LOGS

Duration
01 sec

Last Run
Mar 21, 2018 12:06:01 PM

Credits Used
1

Container
256 MB

X

CONSOLE

ERROR

March 21, 2018

Time

a0: Logger:

12:06:00 PM

{

"alert_type": "Virtual controller disconnected",

"description": "Virtual Controller with Name VC Tenerife, Version 6.5.4.4_62887 and IP address 192.168.0.2 disconnected",

"timestamp": 1521651960,

"webhook": "0d7b375a-5885-4e1a-8",

"setting_id": "5-2",

"state": "Open",

"nid": 2,

"details": {

"params": [

"VC Tenerife",



a Hewlett Packard
Enterprise company

Task: Guest Access - sessions tracking

Check Guest Portals available

methods

GET

<https://internal-apigw.central.arubanetworks.com/guest/v1/portals>

The screenshot shows the Postman application interface. The top bar includes a 'New' button, 'Import', 'Runner', and 'My Workspace' dropdown. The left sidebar has a 'Filter' search bar and a 'History' tab. The main area displays a GET request to the URL `https://internal-apigw.central.arubanetworks.com/guest/v1/portals?access_token=zLSikgkJlBJ7UJ91hdzzS...`. The 'Params' tab is active, showing a table with one parameter: `access_token` with value `zLSikgkJlBJ7UJ91hdzzSwyl3pMKhTXX`. The bottom bar shows tabs for 'Authorization', 'Headers', 'Body', 'Pre-request Script', and 'Tests'.

Key	Value	Description
<input checked="" type="checkbox"/> access_token	zLSikgkJlBJ7UJ91hdzzSwyl3pMKhTXX	
New key	Value	Description

Buttons: Send, Save, Bulk Edit, Cookies, Code

Guest Portals -> Answer from Aruba Central



The screenshot shows a web browser interface with a JSON response. The status is 200 OK, time is 278 ms, and size is 1.27 KB. The JSON is displayed in a 'Pretty' view. It contains two portal objects. The first object is 'default' and the second is 'Demo Captive Portal'. A yellow arrow points to the ID of the 'Demo Captive Portal'.

```
1 {
2   "portals": [
3     {
4       "auth_type": "Anonymous",
5       "capture_url": "https://nae1.cloudquest.central.arubanetworks.com/portal/scope.cust-5/default/capture",
6       "id": "90746f8c-2a1d-43f1-96f4-9",
7       "is_aruba_cert": false,
8       "is_default": true,
9       "is_editable": true,
10      "is_shared": true,
11      "name": "default",
12      "scope": "scope.cust-5"
13    },
14    {
15      "auth_type": "Username/Password, Self-Registration",
16      "capture_url": "https://nae1.cloudquest.central.arubanetworks.com/portal/scope.cust-95/Demo%20Captive%20Portal/capture",
17      "id": "59bef48b-9d10-472b-aa73-",
18      "is_aruba_cert": false,
19      "is_default": false,
20      "is_editable": true,
21      "is_shared": false,
22      "name": "Demo Captive Portal",
23      "scope": "scope.cust-"
24    }
25  ]
26 }
```

"Demo Captive Portal" : Guest portal ID

Check the sessions associated to the Guest Portal

methods

GET

https://internal-apigw.central.arubanetworks.com/guest/v1/portals/{portal_id}/sessions

[https://internal-apigw.central.arubanetworks.com/guest/v1/portals/59bef48b-9d10-472b-aa73-1\[redacted\]/sessions?access_token=yerXIVLaXXjzSPPxMV7qN2jJbEWpoFP8&ssid_name=Guest&offset=0&sort=%2Baccount_name&limit=100](https://internal-apigw.central.arubanetworks.com/guest/v1/portals/59bef48b-9d10-472b-aa73-1[redacted]/sessions?access_token=yerXIVLaXXjzSPPxMV7qN2jJbEWpoFP8&ssid_name=Guest&offset=0&sort=%2Baccount_name&limit=100)

GET ▾

https://internal-apigw.central.arubanetworks.com/guest/v1/portals/59bef48b-9d10-472b-[redacted]..

Params

Send ▾

Save ▾

	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	access_token	yerXIVLaXXjzSPPxMV7qN2jJbEWpoFP8			
<input checked="" type="checkbox"/>	ssid_name	Guest			
<input checked="" type="checkbox"/>	offset	0			
<input checked="" type="checkbox"/>	sort	%2Baccount_name			
<input checked="" type="checkbox"/>	limit	100			
<input type="checkbox"/>					
	New key	Value	Description		

Authorization

Headers

Body

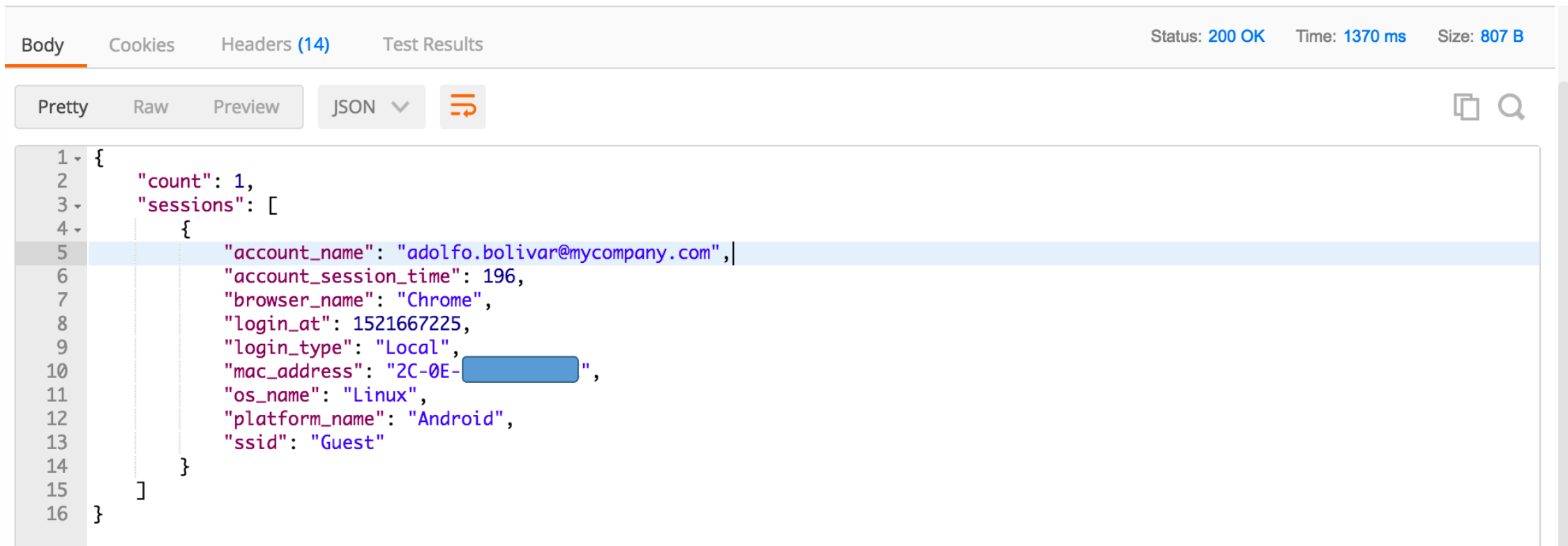
Pre-request Script

Tests

Cookies

Code

Check the sessions associated to the Guest Portal -> Answer from Central



The screenshot displays a web browser's developer tools interface. The 'Body' tab is selected, showing a JSON response. The status bar at the top indicates 'Status: 200 OK', 'Time: 1370 ms', and 'Size: 807 B'. The JSON is formatted in 'Pretty' mode and shows a single session for the user 'adolfo.bolivar@mycompany.com'.

```
1 {
2   "count": 1,
3   "sessions": [
4     {
5       "account_name": "adolfo.bolivar@mycompany.com",
6       "account_session_time": 196,
7       "browser_name": "Chrome",
8       "login_at": 1521667225,
9       "login_type": "Local",
10      "mac_address": "2C-0E-[REDACTED]",
11      "os_name": "Linux",
12      "platform_name": "Android",
13      "ssid": "Guest"
14    }
15  ]
16 }
```

Guest: login date and time




The screenshot shows a web browser's developer tools interface. The 'Body' tab is selected, displaying a JSON response. The JSON structure is as follows:

```
{
  "count": 1,
  "sessions": [
    {
      "account_name": "adolfo.bolivar@mycompany.com",
      "account_session_time": 196,
      "browser_name": "Chrome",
      "login_at": 1521667225
    }
  ]
}
```

The 'login_at' field is highlighted in blue, and a yellow arrow points to it from the right.

“login_at” parameter is in epoch time format <https://www.epochconverter.com/>

Python script to convert the epoch time format to human readable:



```
[>>> import time
[>>> epoch = 1521667225
[>>> time.strftime("%a, %d %b %Y %H:%M:%S %Z", time.localtime(epoch))
'Wed, 21 Mar 2018 16:20:25 -05'
[>>>
```



a Hewlett Packard
Enterprise company

Thanks

References

<http://community.arubanetworks.com/t5/Atmosphere-2017/Moving-beyond-CLI-A-Beginners-Guide-to-Network-Automation-and/gpm-p/297667>

https://arubapedia.arubanetworks.com/arubapedia/index.php/Category:Aruba_Central_TME#API_Basics

<https://tools.ietf.org/html/rfc6750> (Oauth 2.0 RFC)

<http://community.arubanetworks.com/t5/Network-Management/Aruba-Central-API-Gateway-a-report-with-the-list-of-APs-and/m-p/312606>