

Abstract

When working with a large AWS environment, customers often add and remove accounts on a regular basis. The collection via Forward Networks does not account for these regular changes, as we require an interactive python script to be run to create the appropriate credentials and generate the file needed for the app. This document outlines the **fwd_aws_provision** script needed to generate new credentials and updates to Forward Enterprise on a regular basis.

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Requirements

- Script is python3 - must be run in an environment that has python3 (linux or windows)
- First run via the docker script must have been completed (see Forward Enterprise AWS account setup documentation)
- Admin credentials must be available and saved to **fwd_setup.csv**
- User must have credentials to post API to Forward Enterprise (or API key). This is stored in a file called **creds.txt** that should have appropriate access controls
- This script will delete and re-create the cloud setup in Forward. A backup of the original .json file is recommended.
- The script can be run as often as desired, and will output a new .json file each time to show the updates in accounts.

Setup

Obtain the **fwd_aws_provision** script from here:

https://drive.google.com/file/d/1RHRAOn5mS1IsZspYLEApL5IUEbPswxQZ/view?usp=share_link

Install the python3 prerequisites as listed in the **requirements.txt** document:

```
Craigs-MacBook-Pro:src craigjohnson$ more requirements.txt
boto3==1.17.91
botocore==1.20.91
jmespath==0.10.0
python-dateutil==2.8.1
s3transfer==0.4.2
six==1.16.0
urllib3==1.26.5
Craigs-MacBook-Pro:src craigjohnson$
```

Create a file called **creds.txt** with the Forward Enterprise username and password, one per line. An API key may also be used:

```
PS /home/craig> more creds.txt
nq26-uw7w3-mt6i
aep5btq6zeqeow75v5ccvkeo5usdlejj
```

Create a file called **regions.txt** with all of the AWS regions you wish to collect from, one per line:

```
Craigs-MacBook-Pro:src craigjohnson$ more regions.txt
us-east-1
us-east-2
us-west-1
us-west-2
ap-south-1
ap-northeast-1
ap-northeast-2
ap-northeast-3
ap-southeast-1
ap-southeast-2
ca-central-1
eu-central-1
eu-west-1
eu-west-2
eu-west-3
eu-north-1
sa-east-1
```

Modify the beginning of **definitions.py** with appropriate Forward Enterprise app information:

```
FWD_ACCOUNT_ID = '453418124061'  
  
APPHOST = "fwd.app"  
  
NETWORKID = "154820"  
  
SETUPID = "aws_collect"  
  
FWD_SETUP_CSV = "fwd_setup.csv"  
  
REGIONS = "regions.txt"  
  
[APPCREDS = "creds.txt"
```

APPHOST = The Forward Enterprise instance (leave fwd.app for SaaS, change to hostname for on-prem)

NETWORKID = The network ID used in Forward for this network (retrieve from address bar)

SETUPID = The name of the AWS identifier used (leave as default, or modify if multiple copies of the script are needed)

Usage

Depending on whether you are using Forward's account ID or your own IAM role, the script is executed in two ways:

Using Forward's IAM:

python3 fwd_aws_provision.py setup -e Org:<orgID>

(retrieve your Org ID from adding an AWS account through the UI):

Add a cloud setup

Policy

Access type

Access

Regions

Connection

Cloud-based virtualized devices

Summary

In AWS: Grant read-only access to Forward Enterprise

See the [Forward Documentation](#) for more details

- In the left navigation bar, select the **Roles** section and click **Create role**.
- Select **Another AWS account** as trusted entity type and enter:
Account ID:
- Select the **Require external ID** check box and enter:
External ID:
- Click **Next: Permissions** to proceed.
- Search for the new policy and select it.
Policy:
- Click **Next: Tags** to proceed.
- Add optional tags and click on **Next: Review** to proceed.
- Enter a unique **Role name** and click **Create role**.
- A new role will be displayed in the table. Click on the **Role name** column to go to its summary.

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Cancel

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Using your Org's IAM

python3 fwd_aws_provision.py setup -a <AWS Account number>

Where AWS account number is the management account created

This script will also output **fwd_accounts_data.json** for future reference.

Conclusion

Please forward any questions/enhancements ideas to craigjohnson@forwardnetworks.com