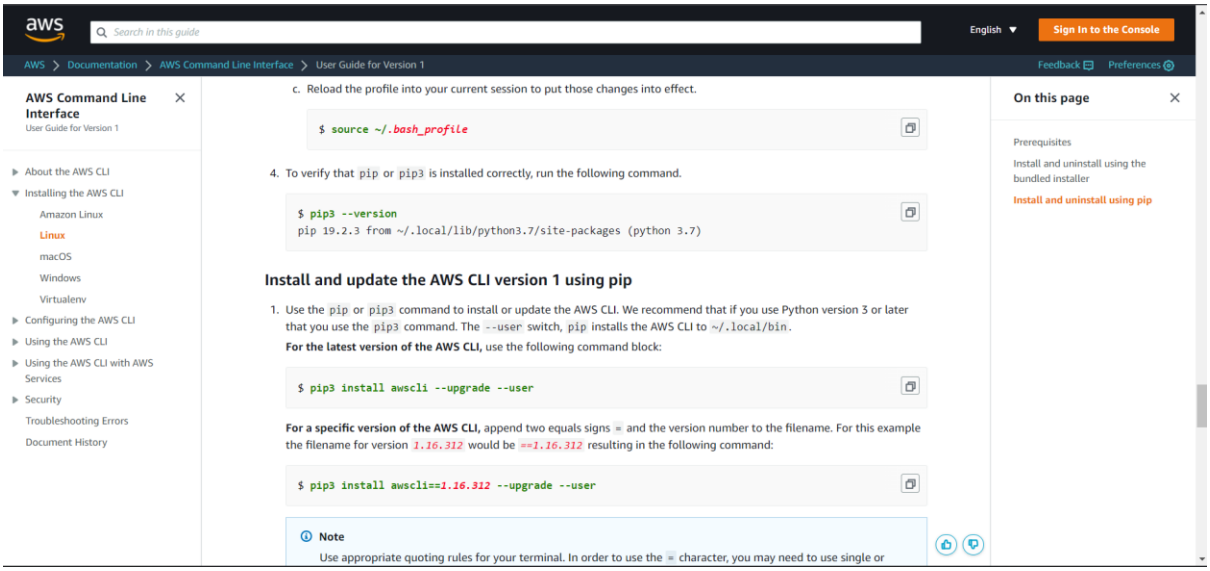
➔ Need python, python-index package, then we can download awscli



➔

https://docs.aws.amazon.com/cli/v1/userguide/install-linux.html

Install PIP

```
ubuntu@ip-172-31-31-164:~$ python3 --version
Python 3.8.10
ubuntu@ip-172-31-31-164:~$ curl -O https://bootstrap.pypa.io/get-pip.py
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100 2596k  100 2596k    0     0  26.4M      0 --:--:-- --:--:-- --:--:-- 26.4M
ubuntu@ip-172-31-31-164:~$
```

```
ubuntu@ip-172-31-31-164:~$ python3 get-pip.py --user
Collecting pip
  Downloading pip-22.0.4-py3-none-any.whl (2.1 MB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 2.1/2.1 MB 27.3 MB/s eta 0:00:00
Collecting wheel
  Downloading wheel-0.37.1-py2.py3-none-any.whl (35 kB)
Installing collected packages: wheel, pip
  WARNING: The script wheel is installed in '/home/ubuntu/.local/bin' which is not on PATH.
  Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.
  WARNING: The scripts pip, pip3 and pip3.8 are installed in '/home/ubuntu/.local/bin' which is not on PATH.
  Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.
Successfully installed pip-22.0.4 wheel-0.37.1
```

export PATH=~/.local/bin:$PATH → **/usr/local/bin**

```
ubuntu@ip-172-31-31-164:~$ export PATH=~/usr/bin:$PATH
ubuntu@ip-172-31-31-164:~$
```

Source- source ~/.bash_profile → **source /etc/profile**

```
2. 54.90.185.194 (ubuntu)
root@ip-172-31-31-164:~# source /etc/profile
root@ip-172-31-31-164:~#
```

Pip –version

```
root@ip-172-31-21-127:~# pip --version
pip 22.0.4 from /usr/local/lib/python3.8/dist-packages/pip (python 3.8)
root@ip-172-31-21-127:~#
```

Intsall awscli { pip3 install awscli --upgrade --user }

```
root@ip-172-31-21-127:~# pip3 install awscli
Collecting awscli
  Downloading awscli-1.22.98-py3-none-any.whl (3.8 MB)
     ---------------------------------------- 3.8/3.8 MB 42.9 MB/s eta 0:00:00
Collecting rsa<4.8,>=3.1.2
  Downloading rsa-4.7.2-py3-none-any.whl (34 kB)
Requirement already satisfied: colorama<0.4.4,>=0.2.5 in /usr/lib/python3/dist-p
ackages (from awscli) (0.4.3)
Collecting s3transfer<0.6.0,>=0.5.0
  Downloading s3transfer-0.5.2-py3-none-any.whl (79 kB)
     ---------------------------------------- 79.5/79.5 KB 9.0 MB/s eta 0:00:00
Collecting docutils<0.16,>=0.10
  Downloading docutils-0.15.2-py3-none-any.whl (547 kB)
     ---------------------------------------- 547.6/547.6 KB 42.5 MB/s eta 0:00:00
Requirement already satisfied: PyYAML<5.5,>=3.10 in /usr/lib/python3/dist-packag
es (from awscli) (5.3.1)
Collecting botocore==1.24.43
  Downloading botocore-1.24.43-py3-none-any.whl (8.7 MB)
     ---------------------------------------- 8.7/8.7 MB 46.9 MB/s eta 0:00:00
Collecting jmespath<2.0.0,>=0.7.1
  Downloading jmespath-1.0.0-py3-none-any.whl (23 kB)
Requirement already satisfied: urllib3<1.27,>=1.25.4 in /usr/lib/python3/dist-pa
ckages (from botocore==1.24.43->awscli) (1.25.8)
Collecting python-dateutil<3.0.0,>=2.1
  Downloading python_dateutil-2.8.2-py2.py3-none-any.whl (247 kB)
     ---------------------------------------- 247.7/247.7 KB 33.5 MB/s eta 0:00:00
Requirement already satisfied: pyasn1>=0.1.3 in /usr/lib/python3/dist-packages (
from rsa<4.8,>=3.1.2->awscli) (0.4.2)
Requirement already satisfied: six>=1.5 in /usr/lib/python3/dist-packages (from
python-dateutil<3.0.0,>=2.1->botocore==1.24.43->awscli) (1.14.0)
Installing collected packages: rsa, python-dateutil, jmespath, docutils, botocor
e, s3transfer, awscli
Successfully installed awscli-1.22.98 botocore-1.24.43 docutils-0.15.2 jmespath-1.0.0 python-dateutil-2.8.2 rsa-4.7.2 s3transfer-0.5.2
WARNING: Running pip as the 'root' user can result in broken permissions and conflicting behaviour with the system package manager. It is recommended to use a
 virtual environment instead: https://pip.pypa.io/warnings/venv
root@ip-172-31-21-127:~#
```

Aws iam help

aws iam list-users

Create s3 full acess role

Attach role to the instance…

To see list os users in table formate

➔ Aws configure → table

```
root@ip-172-31-21-127:~# aws iam list-users
-------------------------------------------------------------------------------------------------------------------------------
|                                                        ListUsers                                                            |
+-----------------------------------------------------------------------------------------------------------------------------+
||                                                         Users                                                             ||
|+-----------------------------------------+----------------------+----------------------+-------+----------------------+-----------+|
||                  Arn                    |      CreateDate      |   PasswordLastUsed   | Path  |        UserId        | UserName  ||
|+-----------------------------------------+----------------------+----------------------+-------+----------------------+-----------+|
||  arn:aws:iam::829912339674:user/jarvis  |  2022-03-21T04:53:21Z |  2022-04-20T02:36:03Z |  /    |  AIDA4COVBKTNOQJBQZZ4K |  jarvis   ||
||  arn:aws:iam::829912339674:user/user1   |  2022-04-12T08:55:41Z |                       |  /    |  AIDA4COVBKTNG2STCWA3A |  user1    ||
|+-----------------------------------------+----------------------+----------------------+-------+----------------------+-----------+|
root@ip-172-31-21-127:~#
```

Aws iam create-user –user-name user2

```
root@ip-172-31-21-127:~# aws iam create-user --user-name user2
-------------------------------------------------------------------------------------------------------
|                                          CreateUser                                                 |
+-----------------------------------------------------------------------------------------------------+
||                                            User                                                   ||
|+-----------------------------------------+---------------------+-------+----------------------+-----------+|
||                Arn                      |      CreateDate     | Path  |        UserId        | UserName  ||
|+-----------------------------------------+---------------------+-------+----------------------+-----------+|
||  arn:aws:iam::829912339674:user/user2   |  2022-04-20T06:00:29Z  |  /    |  AIDA4COVBKTNDZC5GYCPC  |  user2    ||
|+-----------------------------------------+---------------------+-------+----------------------+-----------+|
root@ip-172-31-21-127:~# aws iam list-users
-----------------------------------------------------------------------------------------------------------------------------
|                                                ListUsers                                                                  |
+-------------------------------------------------------------------------------------------------------------------------+
||                                                  Users                                                                  ||
|+-----------------------------------------+---------------------+---------------------+-------+----------------------+-----------+|
||                Arn                      |      CreateDate     |   PasswordLastUsed  | Path  |        UserId        | UserName  ||
|+-----------------------------------------+---------------------+---------------------+-------+----------------------+-----------+|
||  arn:aws:iam::829912339674:user/jarvis  |  2022-03-21T04:53:21Z  |  2022-04-20T02:36:03Z  |  /    |  AIDA4COVBKTNOQJBQZZ4K  |  jarvis   ||
||  arn:aws:iam::829912339674:user/user1   |  2022-04-12T08:55:41Z  |                        |  /    |  AIDA4COVBKTNG2STCWA3A  |  user1    ||
||  arn:aws:iam::829912339674:user/user2   |  2022-04-20T06:00:29Z  |                        |  /    |  AIDA4COVBKTNDZC5GYCPC  |  user2    ||
|+-----------------------------------------+---------------------+---------------------+-------+----------------------+-----------+|
root@ip-172-31-21-127:~#
```

Aws iam create-group - -group-name **AWS_B41**

```
3. 54.172.205.133 (ubuntu)
root@ip-172-31-21-127:~# aws iam create-group --group-name CLOUD-B41
-------------------------------------------------------------------------------------------------------
|                                          CreateGroup                                                |
+-----------------------------------------------------------------------------------------------------+
||                                            Group                                                  ||
|+-----------------------------------------+---------------------+----------------------+------------+--------+|
||                Arn                      |      CreateDate     |        GroupId       | GroupName  | Path   ||
|+-----------------------------------------+---------------------+----------------------+------------+--------+|
||  arn:aws:iam::829912339674:group/CLOUD-B41  |  2022-04-20T06:03:17Z  |  AGPA4COVBKTNGEH66QIAF  |  CLOUD-B41  |  /     ||
|+-----------------------------------------+---------------------+----------------------+------------+--------+|
root@ip-172-31-21-127:~#
```

aws iam list-groups

```
3. 54.172.205.133 (ubuntu)
root@ip-172-31-21-127:~# aws iam list-groups
-------------------------------------------------------------------------------------------------------
|                                          ListGroups                                                 |
+-----------------------------------------------------------------------------------------------------+
||                                            Groups                                                 ||
|+-----------------------------------------+---------------------+----------------------+----------------------+--------+|
||                Arn                      |      CreateDate     |        GroupId       |       GroupName      | Path   ||
|+-----------------------------------------+---------------------+----------------------+----------------------+--------+|
||  arn:aws:iam::829912339674:group/Administrators_Group  |  2022-03-21T05:00:13Z  |  AGPA4COVBKTNFYQBCM3DC  |  Administrators_Group  |  /     ||
||  arn:aws:iam::829912339674:group/CLOUD-B41             |  2022-04-20T06:03:17Z  |  AGPA4COVBKTNGEH66QIAF  |  CLOUD-B41             |  /     ||
|+-----------------------------------------+---------------------+----------------------+----------------------+--------+|
root@ip-172-31-21-127:~# ^C
root@ip-172-31-21-127:~#
```

Aws iam help {HELP}

aws iam add-user-to-group --group-name **CLOUD-B41** - - user-name **user2 → user added**

aws iam list-groups-for-user --user-name user2

```
3. 54.172.205.133 (ubuntu)
root@ip-172-31-21-127:~# aws iam list-groups-for-user --user-name user2
-------------------------------------------------------------------------------------------------------
|                                       ListGroupsForUser                                             |
+-----------------------------------------------------------------------------------------------------+
||                                            Groups                                                 ||
|+-----------------------------------------+---------------------+----------------------+------------+--------+|
||                Arn                      |      CreateDate     |        GroupId       | GroupName  | Path   ||
|+-----------------------------------------+---------------------+----------------------+------------+--------+|
||  arn:aws:iam::829912339674:group/CLOUD-B41  |  2022-04-20T06:03:17Z  |  AGPA4COVBKTNGEH66QIAF  |  CLOUD-B41  |  /     ||
|+-----------------------------------------+---------------------+----------------------+------------+--------+|
root@ip-172-31-21-127:~#
```

Create IAM * full action >>

Step 1: Select Policy Type

A Policy is a container for permissions. The different types of policies you can create are an IAM Policy, an S3 Bucket Policy, an SNS Topic Policy, a VPC Endpoint Policy, and an SQS Queue Policy.

Select Type of Policy IAM Policy

Step 2: Add Statement(s)

A statement is the formal description of a single permission. See a description of elements that you can use in statements.

Effect Allow Deny

AWS Service Amazon S3 All Services ('*')

Use multiple statements to add permissions for more than one service.

Actions -- Select Actions -- All Actions ('*')

Amazon Resource Name (ARN)

ARN should follow the following format: arn:aws:s3:::${BucketName}/${KeyName}.
Use a comma to separate multiple values.

Add Conditions (Optional)

Add Statement

You added the following statements. Click the button below to Generate a policy.

Effect	Action	Resource	Conditions
Allow	*	*	*None*

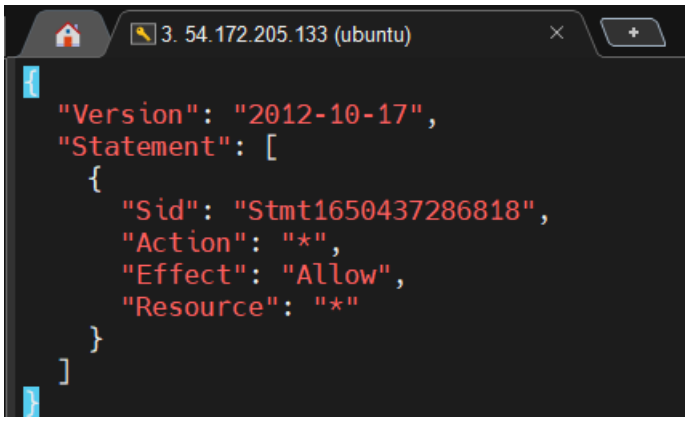
Step 3: Generate Policy

A *policy* is a document (written in the Access Policy Language) that acts as a container for one or more statements.

Generate Policy Start Over

Copy cli and paste in awscli →

Vim policy.py {we can create policy file copy & paste } need json code



How to create policy via aws cli

aws iam create-policy --policy-name jarvis_S3_Full --policy-document file://policy.py

```
root@ip-172-31-21-127:~# vim policy.py
root@ip-172-31-21-127:~# aws iam create-policy --policy-name jarvis_S3_Full --policy-document file://policy.py
-------------------------------------------------------------------------------------
|                                  CreatePolicy                                     |
+-----------------------------------------------------------------------------------+
||                                     Policy                                      ||
|+---------------------------------+-------------------------------------------------+|
||  Arn                            |  arn:aws:iam::829912339674:policy/jarvis_S3_Full  ||
||  AttachmentCount                |  0                                              ||
||  CreateDate                     |  2022-04-20T06:50:22Z                           ||
||  DefaultVersionId               |  v1                                             ||
||  IsAttachable                   |  True                                           ||
||  Path                           |  /                                              ||
||  PermissionsBoundaryUsageCount  |  0                                              ||
||  PolicyId                       |  ANPA4COVBKTNMZVO2Q6A3                          ||
||  PolicyName                     |  jarvis_S3_Full                                 ||
||  UpdateDate                     |  2022-04-20T06:50:22Z                           ||
|+---------------------------------+-------------------------------------------------+|
root@ip-172-31-21-127:~#
```

```
root@ip-172-31-21-127:~# aws iam create-policy --policy-name jarvis_S3_Full --policy-document file://policy.py
-------------------------------------------------------------------------------------
|                                  CreatePolicy                                     |
+-----------------------------------------------------------------------------------+
||                                     Policy                                      ||
|+---------------------------------+-------------------------------------------------+|
||  Arn                            |  arn:aws:iam::829912339674:policy/jarvis_S3_Full  ||
||  AttachmentCount                |  0                                              ||
||  CreateDate                     |  2022-04-20T06:50:22Z                           ||
||  DefaultVersionId               |  v1                                             ||
||  IsAttachable                   |  True                                           ||
||  Path                           |  /                                              ||
||  PermissionsBoundaryUsageCount  |  0                                              ||
||  PolicyId                       |  ANPA4COVBKTNMZVO2Q6A3                          ||
||  PolicyName                     |  jarvis_S3_Full                                 ||
||  UpdateDate                     |  2022-04-20T06:50:22Z                           ||
|+---------------------------------+-------------------------------------------------+|
root@ip-172-31-21-127:~# ^C
root@ip-172-31-21-127:~# aws iam attach-group-policy --group-name CLOUD-B41 --policy-arn arn:aws:iam::829912339674:policy/jarvis_S3_Full
```

……..

aws iam attach-group-policy --group-name CLOUD-B41 --policy-arn arn:aws:iam::829912339674:policy/jarvis_S3_Full

……

…. policy attached to the group, we can on console or cli through

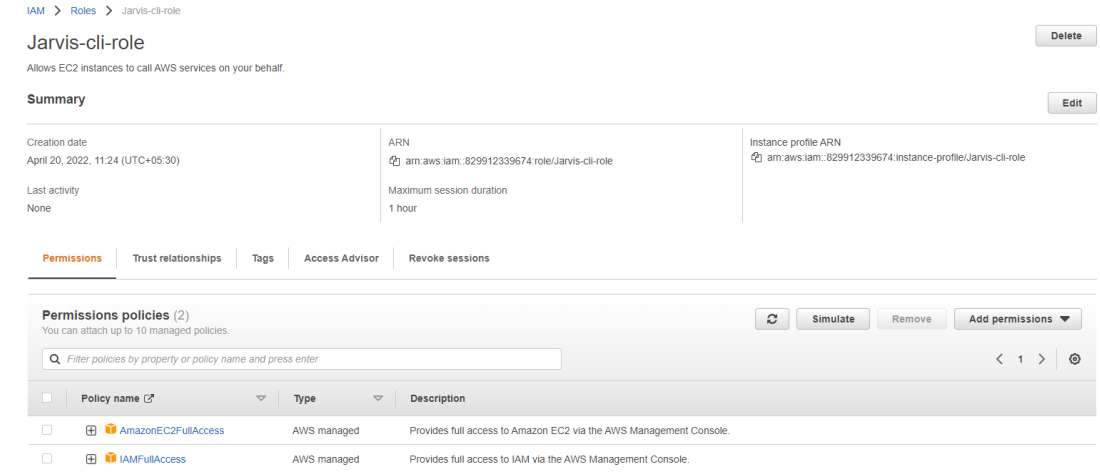
To show attached group policies→

……

aws iam list-attached-group-policies --group-name CLOUD-B41

```
root@ip-172-31-21-127:~# aws iam list-attached-group-policies --group-name CLOUD-B41
-------------------------------------------------------------------------
|                      ListAttachedGroupPolicies                        |
+-----------------------------------------------------------------------+
||                         AttachedPolicies                            ||
|+---------------------------------------------------+-----------------+|
||                     PolicyArn                     |   PolicyName    ||
|+---------------------------------------------------+-----------------+|
||  arn:aws:iam::829912339674:policy/jarvis_S3_Full  |  jarvis_S3_Full ||
|+---------------------------------------------------+-----------------+|
root@ip-172-31-21-127:~# ^C
root@ip-172-31-21-127:~# ^C
root@ip-172-31-21-127:~#
```

1. **Create Instance through aws cli**



➔ **Instance is availability zone specific**

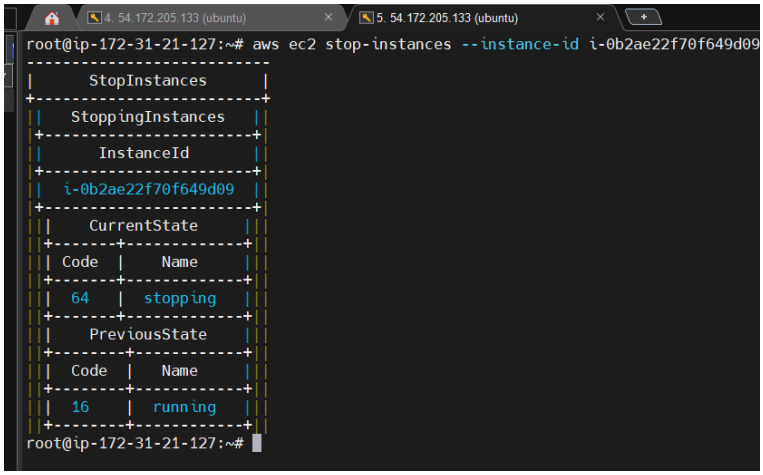
➔ Aws ec2 run-instances **help**

```
root@ip-172-31-21-127:~# aws ec2 run-instances --image-id ami-04505e74c0741db8d --instance-type t2.micro --key-name jarvis_privatekey --security-group-ids sg-
0a32e0d27189d1f22 --count 2 --region us-east-1
-------------------------------------------------------------
|                        RunInstances                       |
+--------------------------+--------------------------------+
|  OwnerId                 |  829912339674                  |
|  ReservationId           |  r-05b52e31d7a6326ab           |
+--------------------------+--------------------------------+
||                         Instances                         ||
|+-----------------------+-----------------------------------+|
||  AmiLaunchIndex       |  0                                ||
||  Architecture         |  x86_64                           ||
||  ClientToken          |  35defc52-c816-4bef-917a-8c53eacfe6ed ||
||  EbsOptimized         |  False                            ||
||  EnaSupport           |  True                             ||
||  Hypervisor           |  xen                              ||
||  ImageId              |  ami-04505e74c0741db8d            ||
||  InstanceId           |  i-0b6ab4a761f037aab              ||
||  InstanceType         |  t2.micro                         ||
||  KeyName              |  jarvis_privatekey                ||
||  LaunchTime           |  2022-04-20T08:46:01.000Z         ||
||  PrivateDnsName       |  ip-172-31-0-98.ec2.internal      ||
||  PrivateIpAddress     |  172.31.0.98                      ||
||  PublicDnsName        |                                   ||
||  RootDeviceName       |  /dev/sda1                        ||
||  RootDeviceType       |  ebs                              ||
||  SourceDestCheck      |  True                             ||
||  StateTransitionReason |                                  ||
||  SubnetId             |  subnet-001bb7822cb76bee3         ||
||  VirtualizationType   |  hvm                              ||
||  VpcId                |  vpc-0d38f6e75bce4c3e6            ||
|+-----------------------+-----------------------------------+|
```

aws ec2 run-instances --image-id ami-04505e74c0741db8d --instance-type t2.micro --key-name jarvis_privatekey --security-group-ids sg-0a32e0d27189d1f22 --count 2 --region us-east-1

➔ **For terminating we have to give instance name**

aws ec2 stop-instances --instance-id i-0b2ae22f70f649d09



aws ec2 terminate-instances --instance-id i-0b2ae22f70f649d09