

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

The screenshot shows the AWS Command Line Interface User Guide for Version 1 on the AWS website. The left sidebar contains a navigation menu with links to 'About the AWS CLI', 'Installing the AWS CLI' (selected), 'Configuring the AWS CLI', 'Using the AWS CLI', 'Using the AWS CLI with AWS Services', 'Security', 'Troubleshooting Errors', and 'Document History'. The main content area is titled 'Install and update the AWS CLI version 1 using pip'. It includes a list of prerequisites, a note about using the pip or pip3 command, and a series of terminal commands for installation and verification. The commands shown are: `$ source ~/.bash_profile`, `$ pip3 --version`, `$ pip3 install awscli --upgrade --user`, and `$ pip3 install awscli==1.16.312 --upgrade --user`. A note at the bottom states: 'Use appropriate quoting rules for your terminal. In order to use the = character, you may need to use single or double quotes.'

<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/bin

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

Source- source ~/.bash_profile

```
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:~#
```

Install 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-packages (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)
    547.0/547.0 KB 42.5 MB/s eta 0:00:00
Requirement already satisfied: PyYAML<5.5,>=3.10 in /usr/lib/python3/dist-packages (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-packages (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, botocore, 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 access role

Attach role to the instance...

To see list of users in table format

➔ 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	/	AIDA4C0VBKTN0QJ8QZ74K	jarvis
arn:aws:iam::829912339674:user/user1	2022-04-12T08:55:41Z		/	AIDA4C0VBKTN62STCWA3A	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	/	AIDA4C0VBKTNDC5GYCPC	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	/	AIDA4C0VBKTN0QJBQZZ4K	jarvis
arn:aws:iam::829912339674:user/user1	2022-04-12T08:55:41Z		/	AIDA4C0VBKTN2STCWA3A	user1
arn:aws:iam::829912339674:user/user2	2022-04-20T06:00:29Z		/	AIDA4C0VBKTNDC5GYCPC	user2

```
root@ip-172-31-21-127:~#
```

Aws iam create-group - -group-name AWS_B41

```
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	AGPA4C0VBKTN6EH66QIAF	CLOUD-B41	/

```
root@ip-172-31-21-127:~#
```

aws iam list-groups

```
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	AGPA4C0VBKTNFYQB3CM3DC	Administrators_Group	/
arn:aws:iam::829912339674:group/CLOUD-B41	2022-04-20T06:03:17Z	AGPA4C0VBKTN6EH66QIAF	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 abhi → user added

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

```
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	AGPA4C0VBKTN6EH66QIAF	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

```
"Version": "2012-10-17",
"Statement": [
  {
    "Sid": "Stmt1650437286818",
    "Action": "*",
    "Effect": "Allow",
    "Resource": "*"
  }
]
```

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 | ANPA4C0VBKTNMZV02Q6A3 |
| 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 | ANPA4C0VBKTNMZV02Q6A3 |
| 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

IAM > Roles > Jarvis-cli-role

Jarvis-cli-role

Allows EC2 instances to call AWS services on your behalf.

Summary

Creation date April 20, 2022, 11:24 (UTC+05:30)	ARN arn:aws:iam:829912339674:role/Jarvis-cli-role	Instance profile ARN arn:aws:iam:829912339674:instance-profile/Jarvis-cli-role
Last activity None	Maximum session duration 1 hour	

Permissions Trust relationships Tags Access Advisor Revoke sessions

Permissions policies (2)

You can attach up to 10 managed policies.

Filter policies by property or policy name and press enter

<input type="checkbox"/>	Policy name	Type	Description
<input type="checkbox"/>	AmazonEC2FullAccess	AWS managed	Provides full access to Amazon EC2 via the AWS Management Console.
<input type="checkbox"/>	IAMFullAccess	AWS managed	Provides full access to IAM via the AWS Management Console.

➔ 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	subnet-001bb7822cb76bee3
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
```

```
root@ip-172-31-21-127:~# aws ec2 stop-instances --instance-id i-0b2ae22f70f649d09
```

StopInstances	
StoppingInstances	
+-----+-----+	
InstanceId	
+-----+-----+	
i-0b2ae22f70f649d09	
+-----+-----+	
CurrentState	
+-----+-----+	
Code	Name
+-----+-----+	+-----+-----+
64	stopping
+-----+-----+	+-----+-----+
PreviousState	
+-----+-----+	
Code	Name
+-----+-----+	+-----+-----+
16	running
+-----+-----+	+-----+-----+

```
root@ip-172-31-21-127:~#
```

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

```
root@ip-172-31-21-127:~# aws ec2 terminate-instances --instance-id i-0b2ae22f70f649d09
-----+-----
| TerminateInstances |
+-----+-----+
| TerminatingInstances |
+-----+-----+
| InstanceId |
+-----+-----+
| i-0b2ae22f70f649d09 |
+-----+-----+
| CurrentState |
+-----+-----+
| Code | Name |
+-----+-----+
| 48 | terminated |
+-----+-----+
| PreviousState |
+-----+-----+
| Code | Name |
+-----+-----+
| 80 | stopped |
+-----+-----+
root@ip-172-31-21-127:~#
```