

TASK 2:

HOW TO CONNECT AWS TO ANSIBLE?

Step 1: Creating an AWS Account

In this article, we will see how to launch an Amazon Web Services (AWS) Elastic Compute Cloud (EC-2) instance and manage it using Ansible. The first here is to create an AWS account. Do not worry, it has 12 months of free usage for some instances. Luckily, the process that we are going to follow today will ensure that nothing gets charged to your Debit Card.

Step 2: Launching an AWS Instance

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ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#Instances:sort=instancetype

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Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

You do not have any running instances in this region.

First time using EC2? Check out the [Getting Started Guide](#).

Select an instance above

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ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:

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1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 1: Choose an Amazon Machine Image (AMI) [Cancel and Exit](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search for an AMI by entering a search term e.g. "Windows"

Search by Systems Manager parameter

Quick Start

My AMIs

AWS Marketplace

Community AMIs

Amazon Linux Free tier eligible

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0ebc1ac48dfd14136 (64-bit x86) / ami-0d17d97232c08403e (64-bit Arm)

Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras.

Select

64-bit (x86)

64-bit (Arm)

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1. Choose AMI2. Choose Instance Type3. Configure Instance4. Add Storage5. Add Tags6. Configure Security Group7. Review

Step 2: Choose an Instance Type

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes

CancelPreviousReview and LaunchNext: Configure Instance Details

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1. Choose AMI2. Choose Instance Type3. Configure Instance4. Add Storage5. Add Tags6. Configure Security Group7. Review

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances1Launch into Auto Scaling Group

Purchasing option☐ Request Spot instances

Networkvpc-15f8e57d (default)Create new VPC

SubnetNo preference (default subnet in any Availability Zon>Create new subnet

Auto-assign Public IPUse subnet setting (Enable)

Placement group☐ Add instance to placement group

CancelPreviousReview and LaunchNext: Add Storage

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1. Choose AMI2. Choose Instance Type3. Configure Instance4. Add Storage5. Add Tags6. Configure Security Group7. Review

Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/xvda	snap-08d68946ad0e25c23	8	General Purpose S	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypte

Add New Volume

CancelPreviousReview and LaunchNext: Add Tags

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ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:

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1. Choose AMI2. Choose Instance Type3. Configure Instance4. Add Storage5. Add Tags6. Configure Security Group7. Review

Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. A copy of a tag can be applied to volumes, instances or both. Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key	Value	Instances	Volumes
Name	ansible-os	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Add another tag (Up to 50 tags maximum)

CancelPreviousReview and LaunchNext: Configure Security Group

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The image shows two screenshots of the AWS Management Console. The top screenshot is Step 6: Configure Security Group. It shows a table of inbound rules for security group sg-022d22ccade57d756. The bottom screenshot is Step 7: Review Instance details, showing a modal for selecting a key pair.

Step 6: Configure Security Group

example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You

Inbound rules for sg-022d22ccade57d756 (Selected security groups: sg-022d22ccade57d756)

Type	Protocol	Port Range	Source	Description
HTTP	TCP	80	0.0.0.0/0	
HTTP	TCP	80	:::0	
SSH	TCP	22	0.0.0.0/0	
SSH	TCP	22	:::0	
HTTPS	TCP	443	0.0.0.0/0	
HTTPS	TCP	443	:::0	

Step 7: Review Instance details

Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Choose an existing key pair
Select a key pair
mykey1111.pem

☒ I acknowledge that I have access to the selected private key file (mykey1111.pem.pem), and that without this file, I won't be able to log into my instance.

Step 3: Connect Instance with SSH

```
Microsoft Windows [Version 10.0.18362.959]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\user>cd Desktop

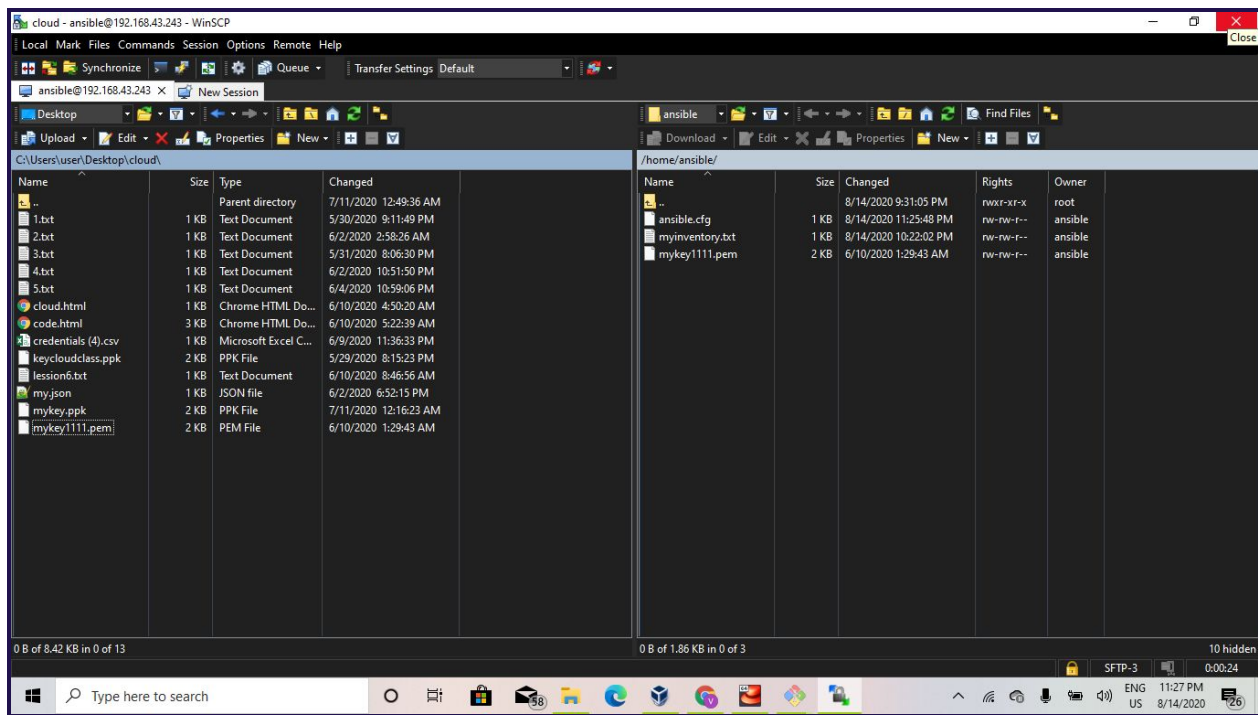
C:\Users\user\Desktop>cd cloud

C:\Users\user\Desktop\cloud>ssh -l ec2-user -i mykey1111.pem 15.207.19.49
The authenticity of host '15.207.19.49 (15.207.19.49)' can't be established.
ECDSA key fingerprint is SHA256:OB0odxXvSJHaKa7I8dX1/WMhe83QjE8CxOC7T/iK5m8.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '15.207.19.49' (ECDSA) to the list of known hosts.

  _ | _ | _ |
  _ | ( _ | /
  _ | \ _ | _ |
    Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
4 package(s) needed for security, out of 8 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-9-48 ~]$ hostname
ip-172-31-9-48.ap-south-1.compute.internal
[ec2-user@ip-172-31-9-48 ~]$
```

Step 4: Copying key-pair using win-scp



Step 4: Configuring host and config file

```
ansible@localhost:~$ ansible-os ansible_host=15.207.19.49 ansible_user=ec2-user  
ansible_ssh_private_key_file=/home/ansible/Desktop/mykey111.pem
```

The information you will need is:

- Name for the instance
- IP Address of your AWS instance(public-ip)
- The user present on your AWS instance (ec2-user)
- Location to your private key (.pem) file

```
ansible@localhost~$  
[defaults]  
host_key_checking = false  
inventory= /home/ansible/myinventory1.txt  
ask_pass = false  
  
[privilege_escalation]  
become = true  
become_method = sudo  
become_user = root  
become_ask_pass = false  
  
~  
~  
~  
~  
~  
~  
~  
~  
~  
~
```

4,16 All

Step 5: Configuring the setting and making public-key to private

```
ansible@localhost:~$ ansible -m ping all
{"msg": "Failed to connect to the host via ssh: Warning: Permanently added '15.207.19.49' (ECDSA) to the list of known hosts.\r\nec2-user@15.207.19.49: Permission denied (publickey,gssapi-keyex,gssapi-with-mic).", "unreachable": true}
[ansible@localhost ~]$ vim ansible.cfg
[ansible@localhost ~]$ vim ansible.cfg
[ansible@localhost ~]$ ansible -m ping all
ansible_ssh_private_key_file=/home/ansible/mykey1111.pem | UNREACHABLE! => {
  "changed": false,
  "msg": "Failed to connect to the host via ssh: ssh: Could not resolve hostname ansible_ssh_private_key_file=/home/ansible/mykey1111.pem: Name or service not known",
  "unreachable": true
}
ec2-instance | UNREACHABLE! => {
  "changed": false,
  "msg": "Failed to connect to the host via ssh: ec2-user@15.207.19.49: Permission denied (publickey,gssapi-keyex,gssapi-with-mic).",
  "unreachable": true
}
[ansible@localhost ~]$ ls
ansible.cfg  myinventory1.txt  myinventory.txt  mykey1111.pem
[ansible@localhost ~]$ vim myinventory1.txt
[ansible@localhost ~]$ ansible -m ping all
```

```
root@localhost:~# cat /etc/sudoers
## systems).
## Syntax:
##
##      user    MACHINE=COMMANDS
##
## The COMMANDS section may have other options added to it.
##
## Allow root to run any commands anywhere
root    ALL=(ALL)    ALL

ansible ALL=(root)    NOPASSWD: ALL

## Allows members of the 'sys' group to run networking, software,
## service management apps and more.
# %sys ALL = NETWORKING, SOFTWARE, SERVICES, STORAGE, DELEGATING, PROCESSES, LOCATE, DRIVERS

## Allows people in group wheel to run all commands
%wheel  ALL=(ALL)    ALL

## Same thing without a password
# %wheel    ALL=(ALL)    NOPASSWD: ALL

## Allows members of the users group to mount and unmount the
## cdrom as root
# %users    ALL=/sbin/mount /mnt/cdrom, /sbin/umount /mnt/cdrom
```

```
sudo chmod 600 /home/ansible/mykey1111.pem
```

```
sudo chmod 755 ~/.ssh
```


Step 6: Run Ansible Ping Module

```
[ansible@localhost ~]$ ansible -m ping all
[WARNING]: Platform linux on host ansible-os is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/reference_a
ppendices/interpreter_discovery.html for more information.
ansible-os | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python"
  },
  "changed": false,
  "ping": "pong"
}
```

```
ansible@localhost:~$ ansible all -m package -a "name=httpd state=present"
[WARNING]: Platform linux on host ansible-os is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/reference_a
ppendices/interpreter_discovery.html for more information.
ansible-os | CHANGED => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python"
  },
  "changed": true,
  "changes": {
    "installed": [
      "httpd"
    ]
  },
  "msg": "",
  "rc": 0,
  "results": [
    "Loaded plugins: extras_suggestions, langpacks, priorities, update-motd\nRes
olving Dependencies\n--> Running transaction check\n--> Package httpd.x86_64 0:2.4.
43-1.amzn2 will be installed\n--> Processing Dependency: httpd-tools = 2.4.43-1.amzn
2 for package: httpd-2.4.43-1.amzn2.x86_64\n--> Processing Dependency: httpd-filesys
tem = 2.4.43-1.amzn2 for package: httpd-2.4.43-1.amzn2.x86_64\n--> Processing Depend
ency: system-logos-httpd for package: httpd-2.4.43-1.amzn2.x86_64\n--> Processing De

7/9 \n Installing : mod_http2-1.15.3-2.amzn2.x86_64
8/9 \n Installing : httpd-2.4.43-1.amzn2.x86_64
9/9 \n Verifying : apr-util-1.6.1-5.amzn2.0.2.x86_64
1/9 \n Verifying : apr-util-bdb-1.6.1-5.amzn2.0.2.x86_64
2/9 \n Verifying : httpd-2.4.43-1.amzn2.x86_64
3/9 \n Verifying : mod_http2-1.15.3-2.amzn2.x86_64
4/9 \n Verifying : httpd-filesystem-2.4.43-1.amzn2.noarch
5/9 \n Verifying : apr-1.6.3-5.amzn2.0.2.x86_64
6/9 \n Verifying : mailcap-2.1.41-2.amzn2.noarch
7/9 \n Verifying : generic-logos-httpd-18.0.0-4.amzn2.noarch
8/9 \n Verifying : httpd-tools-2.4.43-1.amzn2.x86_64
9/9 \n \n Installed:
  httpd.x86_64 0:2.4.43-1.amzn2
  \n \n Dependency Installed:
  apr.x86_64 0:1.6.3-5.amzn2.0.2
  apr-util.x86_64 0:1.6.1-5.amzn2.0.2
  apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2
  generic-logos-httpd.noarch 0:18.0.0-4.amzn2
  httpd-filesystem.noarch 0:2.4.43-1.amzn2
  httpd-tools.x86_64 0:2.4.43-1.amzn2
  mailcap.noarch 0:2.1.41-2.amzn2
  mod_http2.x86_64 0:1.15.3-2.amzn2
  \n \n Complete!\n"
]
}
[ansible@localhost ~]$
```

```
Select ec2-user@ip-172-31-9-48:~  
_ | ( / Amazon Linux 2 AMI  
_ | \ _ | _ |  
  
https://aws.amazon.com/amazon-linux-2/  
4 package(s) needed for security, out of 8 available  
Run "sudo yum update" to apply all updates.  
[ec2-user@ip-172-31-9-48 ~]$ hostname  
ip-172-31-9-48.ap-south-1.compute.internal  
[ec2-user@ip-172-31-9-48 ~]$ Connection reset by 15.207.19.49 port 22  
  
C:\Users\user\Desktop\cloud>ssh -l ec2-user -i mykey1111.pem 15.207.19.49  
Last login: Fri Aug 14 18:55:35 2020 from 223.189.185.168  
Last login: Fri Aug 14 18:55:35 2020 from 223.189.185.168  
  
_ | ( _ | _ )  
_ | ( / Amazon Linux 2 AMI  
_ | \ _ | _ |  
  
https://aws.amazon.com/amazon-linux-2/  
4 package(s) needed for security, out of 8 available  
Run "sudo yum update" to apply all updates.  
[ec2-user@ip-172-31-9-48 ~]$ rpm -q httpd  
httpd-2.4.43-1.amzn2.x86_64  
[ec2-user@ip-172-31-9-48 ~]$
```

Type here to search



ENG 12:26 AM
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