

LAB2 AWS

Part 1:

Image: amzn2-ami-kernel-5.10-hvm-2.0.20221210.1-x86_64-gp2

EC2 > Instances > i-0b051c5e0f68251e1

Instance summary for i-0b051c5e0f68251e1 (Marwan Aly) Info

Updated less than a minute ago

Connect Instance state Actions

Instance ID i-0b051c5e0f68251e1 (Marwan Aly)	Public IPv4 address 34.207.164.136 open address	Private IPv4 addresses 10.0.0.48
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-34-207-164-136.compute-1.amazonaws.com open address
Hostname type IP name: ip-10-0-0-48.ec2.internal	Private IP DNS name (IPv4 only) ip-10-0-0-48.ec2.internal	Elastic IP addresses -
Answer private resource DNS name IPv4 (A)	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto-assigned IP address 34.207.164.136 [Public IP]	VPC ID vpc-03fbc3240c97e4e53 (Marwan Aly-vpc)	Auto Scaling Group name -
IAM Role -	Subnet ID subnet-0b2ec79b0584d10e1 (Marwan Aly-subnet-public1-us-east-1a)	

← → ↻ ⚠ Not secure | 34.207.164.136

“Hello World from ip-10-0-0-48.ec2.internal”

Get system log Info

When you experience issues with your EC2 instance, reviewing system logs can help you pinpoint the cause.

System log Copy log Download

Review system log for instance i-0b051c5e0f68251e1 as of Fri Dec 23 2022 18:17:51 GMT+0200 (Eastern European Standard Time)

```
Amazon Linux 2
Kernel 5.10.157-139.675.amzn2.x86_64 on an x86_64

ip-10-0-0-48 login: [ 16.597712] cloud-init[3125]: Another app is currently holding the yum lock; waiting for it to exit...
[ 16.607920] cloud-init[3125]: The other application is: yum
[ 16.610823] cloud-init[3125]: Memory : 90 M RSS (202 MB VSZ)
[ 16.624221] cloud-init[3125]: Started: Fri Dec 23 15:53:20 2022 - 00:07 ago
[ 16.637814] cloud-init[3125]: State : Running, pid: 3205
[ 18.608539] cloud-init[3125]: Another app is currently holding the yum lock; waiting for it to exit...
[ 18.611378] cloud-init[3125]: The other application is: yum
[ 18.619191] cloud-init[3125]: Memory : 185 M RSS (478 MB VSZ)
[ 18.626358] cloud-init[3125]: Started: Fri Dec 23 15:53:20 2022 - 00:09 ago
[ 18.637903] cloud-init[3125]: State : Running, pid: 3205
[ 20.602516] cloud-init[3125]: Another app is currently holding the yum lock; waiting for it to exit...
[ 20.612809] cloud-init[3125]: The other application is: yum
[ 20.620349] cloud-init[3125]: Memory : 174 M RSS (466 MB VSZ)
[ 20.630265] cloud-init[3125]: Started: Fri Dec 23 15:53:20 2022 - 00:11 ago
[ 20.639723] cloud-init[3125]: State : Running, pid: 3206
[ 23.676388] cloud-init[3125]: No packages needed for security; 0 packages available
[ 23.682943] cloud-init[3125]: No packages marked for update
```

Get system log [Info](#)

When you experience issues with your EC2 instance, reviewing system logs can help you pinpoint the cause.

System log

Review system log for instance i-0b051c5e0f68251e1 as of Fri Dec 23 2022 18:17:51 GMT+0200 (Eastern European Standard Time)

```
[ 26.916470] cloud-init[3238]: --> Finished Dependency Resolution
[ 26.950004] cloud-init[3238]: Dependencies Resolved
[ 26.956239] cloud-init[3238]: =====
[ 26.964350] cloud-init[3238]: Package           Arch          Version           Repository        Size
[ 26.970906] cloud-init[3238]: =====
[ 26.977245] cloud-init[3238]: Installing:
[ 26.980328] cloud-init[3238]: httpd                x86_64        2.4.54-1.amzn2    amzn2-core       1.4 M
[ 26.986415] cloud-init[3238]: Installing for dependencies:
[ 26.990078] cloud-init[3238]: apr                x86_64        1.7.0-9.amzn2     amzn2-core       122 k
[ 26.995870] cloud-init[3238]: apr-util          x86_64        1.6.1-5.amzn2.0.2 amzn2-core       99 k
[ 27.001955] cloud-init[3238]: apr-util-bdb      x86_64        1.6.1-5.amzn2.0.2 amzn2-core       19 k
[ 27.008052] cloud-init[3238]: generic-logos-httpd noarch       18.0.0-4.amzn2    amzn2-core       19 k
[ 27.014653] cloud-init[3238]: httpd-filesystem noarch       2.4.54-1.amzn2    amzn2-core       24 k
[ 27.020452] cloud-init[3238]: httpd-tools      x86_64        2.4.54-1.amzn2    amzn2-core       88 k
[ 27.027561] cloud-init[3238]: mailcap          noarch       2.1.41-2.amzn2    amzn2-core       31 k
[ 27.034143] cloud-init[3238]: mod_http2        x86_64        1.15.19-1.amzn2.0.1 amzn2-core       149 k
[ 27.041047] cloud-init[3238]: Transaction Summary
[ 27.044731] cloud-init[3238]: =====
[ 27.052316] cloud-init[3238]: Install 1 Package (+8 Dependent packages)
```

EC2 > Instances > i-0b051c5e0f68251e1 > Edit user data

Edit user data [Info](#)

Instance ID






 i-0b051c5e0f68251e1 (Marwan Aly)

Current user data

User data currently associated with this instance

```
#!/bin/bash
yum update -y
yum install -y httpd.x86_64
systemctl start httpd.service
systemctl enable httpd.service
echo "Hello World from $(hostname -f)" > /var/www/html/index.html
```

Details

Security group name  Marwan Aly SG	Security group ID  sg-013b83552ebd8ed7c	Description  Marwan Aly SG created 2022-12-23T13:22:32.613Z	VPC ID  vpc-03fbc3240c97e4e53 🔗
Owner  251794183164	Inbound rules count 2 Permission entries	Outbound rules count 1 Permission entry	

[Inbound rules](#) | [Outbound rules](#) | [Tags](#)

 You can now check network connectivity with Reachability Analyzer

[Run Reachability Analyzer](#)

Inbound rules (2)

Filter security group rules

Part 1:

Image: ubuntu/images/hvm-ssd/ubuntu-jammy-22.04-amd64-server-20221201

EC2 > Instances > i-074aeb1ff3a78dc42

Instance summary for i-074aeb1ff3a78dc42 (lab2part1) Info

Updated less than a minute ago

Connect Instance state Actions

Instance ID i-074aeb1ff3a78dc42 (lab2part1)	Public IPv4 address 35.171.24.110 open address	Private IPv4 addresses 10.0.0.120
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-35-171-24-110.compute-1.amazonaws.com open address
Hostname type IP name: ip-10-0-0-120.ec2.internal	Private IP DNS name (IPv4 only) ip-10-0-0-120.ec2.internal	Elastic IP addresses -
Answer private resource DNS name IPv4 (A)	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto-assigned IP address 35.171.24.110 (Public IP)	VPC ID vpc-03fbc3240c97e4e53 (Marwan Aly-vpc)	Auto Scaling Group name -
IAM Role -	Subnet ID subnet-0b2ec79b0584d10e1 (Marwan Aly-subnet-public1-us-east-1a)	

Details Security Networking Storage Status checks Monitoring Tags

EC2 > Instances > i-074aeb1ff3a78dc42 > Edit user data

Edit user data Info

Instance ID
i-074aeb1ff3a78dc42 (lab2part1)

Current user data
User data currently associated with this instance

```
#!/bin/bash
sudo apt update -y
sudo apt upgrade -y
sudo apt install apache2 -y
sudo ufw allow OpenSSH
sudo ufw allow 'Apache Full'
```

System log

Review system log for instance i-074aeb1f3a78dc42 as of Fri Dec 23 2022 19:27:27 GMT+0200 (Eastern European Standard Time)

```
[ 63.41658] cloud-init[1217]: systemctl restart cloud-init.service
[ 63.453673] cloud-init[1217]: systemctl restart packagekit.service
[ 63.467518] cloud-init[1217]: Service restarts being deferred:
[ 63.476842] cloud-init[1217]: systemctl restart networkd-dispatcher.service
[ 63.482416] cloud-init[1217]: systemctl restart unattended-upgrades.service
[ 63.488443] cloud-init[1217]: No containers need to be restarted.
[ 63.493835] cloud-init[1217]: No user sessions are running outdated binaries.
[ 63.499953] cloud-init[1217]: No VM guests are running outdated hypervisor (qemu) binaries on this host.
[ 64.719292] cloud-init[1217]: WARNING: apt does not have a stable CLI interface. Use with caution in scripts.
[ 64.776010] cloud-init[1217]: Reading package lists...
[ 64.965650] cloud-init[1217]: Building dependency tree...
[ 64.973675] cloud-init[1217]: Reading state information...
[ 65.138747] cloud-init[1217]: The following additional packages will be installed:
[ 65.148782] cloud-init[1217]:   apache2-bin apache2-data apache2-utils bzip2 libapr1 libaprutil1
[ 65.158277] cloud-init[1217]:   libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.3-0 mailcap mime-support
[ 65.166025] cloud-init[1217]:   ssl-cert
[ 65.169579] cloud-init[1217]: Suggested packages:
[ 65.173740] cloud-init[1217]:   apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser
[ 65.180916] cloud-init[1217]:   bzip2-doc
[ 65.602932] cloud-init[1217]: The following NEW packages will be installed:
```

⚠ Not secure | 35.171.24.110



Apache2 Default Page

Ubuntu

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in `/usr/share/doc/apache2/README.Debian.gz`**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the `apache2-doc` package was installed on this server.

The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```
/etc/apache2/
|-- apache2.conf
|   |-- ports.conf
|-- mods-enabled
|   |-- *load
```

Part 2:

vpc-03fbe3240c97e4e53 / Marwan Aly-vpc

Actions

Detailsinfo

VPC ID
vpc-03fbe3240c97e4e53

Tenancy
Default

Default VPC
No

Network Address Usage metrics
Disabled

State
Available

DHCP option set
dopt-0a5b08f69b13f4528

IPv4 CIDR
10.0.0.0/16

Route 53 Resolver DNS Firewall rule groups
-

DNS hostnames
Enabled

Main route table
rtb-06aa3224b35c5a245

IPv6 pool
-

Owner ID
251794183164

DNS resolution
Enabled

Main network ACL
acl-0f39687e709e00518

IPv6 CIDR (Network border group)
-

CIDRs

Flow logs

Tags

CIDRsinfo

Address type	CIDR	Network Border Group	Pool	Status
IPv4	10.0.0.0/16	-	-	Associated

igw-0328935e8fac23a6c / Marwan Aly-igw

Actions

Detailsinfo

Internet gateway ID
igw-0328935e8fac23a6c

State
Attached

VPC ID
vpc-03fbe3240c97e4e53 | Marwan Aly-vpc

Owner
251794183164

Tags

Search tags

Manage tags

< 1 >

Key	Value
Name	Marwan Aly-igw

subnet-0b2ec79b0584d10e1 / Marwan Aly-subnet-public1-us-east-1a

Actions

Details

Subnet ID

subnet-0b2ec79b0584d10e1

Available IPv4 addresses

251

Network border group

us-east-1

Default subnet

No

Customer-owned IPv4 pool

-

IPv6-only

No

DNS64

Disabled

Subnet ARN

arn:aws:ec2:us-east-1:251794183164:subnet/subnet-0b2ec79b0584d10e1

IPv6 CIDR

-

VPC

vpc-03fbc3240c97e4e53 | Marwan Aly-vpc

Auto-assign public IPv4 address

No

Outpost ID

-

Hostname type

IP name

Owner

251794183164

State

Available

Availability Zone

us-east-1a

Route table

rtb-07806812bec716ee | Marwan Aly-rtb-public

Auto-assign IPv6 address

No

IPv4 CIDR reservations

-

Resource name DNS A record

Disabled

IPv4 CIDR

10.0.0.0/24

Availability Zone ID

use1-az2

Network ACL

acl-0f39687e709e00518

Auto-assign customer-owned IPv4 address

No

IPv6 CIDR reservations

-

Resource name DNS AAAA record

Disabled

subnet-0532924adefb693de / lab2part2private

Actions

Details

Subnet ID

subnet-0532924adefb693de

Available IPv4 addresses

250

Network border group

us-east-1

Default subnet

No

Customer-owned IPv4 pool

-

IPv6-only

No

DNS64

Disabled

Subnet ARN

arn:aws:ec2:us-east-1:251794183164:subnet/subnet-0532924adefb693de

IPv6 CIDR

-

VPC

vpc-03fbc3240c97e4e53 | Marwan Aly-vpc

Auto-assign public IPv4 address

No

Outpost ID

-

Hostname type

IP name

Owner

251794183164

State

Available

Availability Zone

us-east-1a

Route table

rtb-0aab7ba527ea1532c | lab2part2RT

Auto-assign IPv6 address

No

IPv4 CIDR reservations

-

Resource name DNS A record

Disabled

IPv4 CIDR

10.0.1.0/24

Availability Zone ID

use1-az2

Network ACL

acl-0f39687e709e00518

Auto-assign customer-owned IPv4 address

No

IPv6 CIDR reservations

-

Resource name DNS AAAA record

Disabled

rtb-0aab7ba527ea1532c / lab2part2RT

You can now check network connectivity with Reachability Analyzer

Run Reachability A

DetailsInfo

Route table ID

rtb-0aab7ba527ea1532c

VPC

vpc-03fbc3240c97e4e53 | Marwan Aly-vpc

Main

No

Owner ID

251794183164

Explicit subnet associations

subnet-0532924adefb693de / lab2part2private

Edge associations

-

Routes

Subnet associations

Edge associations

Route propagation

Tags

Routes (2)

Filter routes

Both

Destination	Target	Status	Propagated
0.0.0.0/0	nat-04abcec4d0dc545c6	Active	No
10.0.0.0/16	local	Active	No

nat-04abcec4d0dc545c6 / lab2part2NAT

Delete

DetailsInfo

<div>NAT gateway ID</div> <div> nat-04abcec4d0dc545c6</div>	<div>Connectivity type</div> <div>Public</div>	<div>State</div> <div> Available</div>	<div>State message</div> <div>Info</div> <div>–</div>
<div>NAT gateway ARN</div> <div> arnaws:ec2:us-east-1:251794183164:natgateway/nat-04abcec4d0dc545c6</div>	<div>Elastic IP address</div> <div>54.147.120.73</div>	<div>Primary private IPv4 address</div> <div> 10.0.0.188</div>	<div>Network interface ID</div> <div> eni-026b965f682d980a0 🔗</div>
<div>VPC</div> <div> vpc-03fbc3240c97e4e53 / Marwan Aly-vpc</div>	<div>Subnet</div> <div> subnet-0b2ec79b0584d10e1 / Marwan Aly-subnet-public1-us-east-1a</div>	<div>Created</div> <div> Friday, December 23, 2022 at 19:53:10 GMT+2</div>	<div>Deleted</div> <div>–</div>

Monitoring

Tags

Instance summary for i-004be0d41a5251bc6 (lab2part2instance) Info



Connect

Instance state ▼

Actions ▼

Updated less than a minute ago

<div>Instance ID</div> <div> i-004be0d41a5251bc6 (lab2part2instance)</div>	<div>Public IPv4 address</div> <div>–</div>	<div>Private IPv4 addresses</div> <div> 10.0.1.124</div>
<div>IPv6 address</div> <div>–</div>	<div>Instance state</div> <div> Running</div>	<div>Public IPv4 DNS</div> <div>–</div>
<div>Hostname type</div> <div>IP name: ip-10-0-1-124.ec2.internal</div>	<div>Private IP DNS name (IPv4 only)</div> <div> ip-10-0-1-124.ec2.internal</div>	
<div>Answer private resource DNS name</div> <div>IPv4 (A)</div>	<div>Instance type</div> <div>t2.micro</div>	<div>Elastic IP addresses</div> <div>–</div>
<div>Auto-assigned IP address</div> <div>–</div>	<div>VPC ID</div> <div> vpc-03fbc3240c97e4e53 (Marwan Aly-vpc) 🔗</div>	<div>AWS Compute Optimizer finding</div> <div> Opt-in to AWS Compute Optimizer for recommendations. Learn more 🔗</div>
<div>IAM Role</div> <div>–</div>	<div>Subnet ID</div> <div> subnet-0532924adefb693de (lab2part2private) 🔗</div>	<div>Auto Scaling Group name</div> <div>–</div>

DetailsSecurityNetworkingStorageStatus checksMonitoringTags

▼ Instance details Info

<div>Platform</div> <div> Amazon Linux (Inferred)</div>	<div>AMI ID</div> <div> ami-0b5eea76982571e91</div>	<div>Monitoring</div> <div>disabled</div>
<div>Platform details</div> <div> Linux/UNIX</div>	<div>AMI name</div> <div> amzn2-ami-kernel-5.10-20221210.1-x86_64-gp2</div>	<div>Termination protection</div> <div>Disabled</div>
<div>Stop protection</div> <div>Disabled</div>	<div>Launch time</div> <div> Fri Dec 23 2022 20:01:53 GMT+0200 (Eastern European)</div>	<div>AMI location</div> <div> amazon/amzn2-ami-kernel-5.10-hvm-2.0.20221210.1-...</div>

System log

Review system log for instance i-004be0d41a5251bc6 as of Fri Dec 23 2022 20:07:40 GMT+0200 (Eastern European Standard Time)



Copy log

Download

```
[ 23.670706] cloud-init[3240]: --> Finished Dependency Resolution
[ 23.702734] cloud-init[3240]: Dependencies Resolved
[ 23.707485] cloud-init[3240]: =====
[ 23.712851] cloud-init[3240]: Package           Arch      Version           Repository        Size
[ 23.717269] cloud-init[3240]: =====
[ 23.721598] cloud-init[3240]: Installing:
[ 23.723439] cloud-init[3240]: httpd                x86_64      2.4.54-1.amzn2    amzn2-core       1.4 M
[ 23.727474] cloud-init[3240]: Installing for dependencies:
[ 23.729888] cloud-init[3240]: apr                  x86_64      1.7.0-9.amzn2     amzn2-core       122 k
[ 23.733609] cloud-init[3240]: apr-util             x86_64      1.6.1-5.amzn2.0.2 amzn2-core       99 k
[ 23.737776] cloud-init[3240]: apr-util-bdb         x86_64      1.6.1-5.amzn2.0.2 amzn2-core       19 k
[ 23.744240] cloud-init[3240]: generic-logos-httpd noarch     18.0.0-4.amzn2    amzn2-core       19 k
[ 23.749802] cloud-init[3240]: httpd-filesystem     noarch     2.4.54-1.amzn2    amzn2-core       24 k
[ 23.754845] cloud-init[3240]: httpd-tools          x86_64      2.4.54-1.amzn2    amzn2-core       88 k
[ 23.759975] cloud-init[3240]: mailcap              noarch     2.1.41-2.amzn2    amzn2-core       31 k
[ 23.764989] cloud-init[3240]: mod_http2            x86_64      1.15.19-1.amzn2.0.1 amzn2-core       149 k
[ 23.770318] cloud-init[3240]: Transaction Summary
[ 23.773825] cloud-init[3240]: =====
[ 23.778709] cloud-init[3240]: Install 1 Package (+8 Dependent packages)
```