

AWS LAB 3

1- make architecture same as screenshot (where two ec2 in public are working as reverse proxy to point to internal load blancer which forward traffic to two private instances having apache downloaded on it)

1- Create VPC , Subnets and Route Tables

The screenshot displays the AWS Management Console interface for a VPC named 'vpc-071d8248c8fdeac5a / Rshdan-vpc'. The left sidebar shows the navigation menu with categories like 'Virtual private cloud', 'Security', and 'PrivateLink and Lattice'. The main content area is divided into 'Details' and 'Resource map' sections.

Details:

- VPC ID:** vpc-071d8248c8fdeac5a
- State:** Available
- Block Public Access:** Off
- DNS hostnames:** Enabled
- DNS resolution:** Enabled
- Tenancy:** default
- DHCP option set:** dopt-03e51bcd9766071b
- Main network ACL:** acl-0cecd6e7de10fe04
- Default VPC:** No
- IPv4 CIDR:** 10.0.0.0/16
- Main route table:** rtb-0af402c1db2259e9e
- IPv6 CIDR:** -
- IPv6 pool:** -
- Owner ID:** 021891619360
- Network Address Usage metrics:** Disabled
- Route 53 Resolver DNS Firewall rule groups:** -

Resource map:

- VPC:** Rshdan-vpc
- Subnets (4):**
 - eu-west-1a:**
 - Rshdan-subnet-public1-eu-west-1a
 - Rshdan-subnet-private1-eu-west-1a
 - eu-west-1b:**
 - Rshdan-subnet-public2-eu-west-1b
 - Rshdan-subnet-private2-eu-west-1b
- Route tables (4):**
 - Rshdan-rtb-private1-eu-west-1a
 - Rshdan-rtb-public
 - rtb-0af402c1db2259e9e
 - Rshdan-rtb-private2-eu-west-1b
- Network connections (4):**
 - Rshdan-igw
 - Rshdan-public1
 - Rshdan-public2
 - Rshdan-vpc-e-s3

2- Create 2 Public EC2s and Private EC2s

Instance summary for i-06a44731897604559 (Rshdan) [Info](#)

Updated less than a minute ago

Instance ID

i-06a44731897604559

IPv6 address

-

Hostname type

IP name: ip-10-0-12-90.eu-west-1.compute.internal

Answer private resource DNS name

-

Auto-assigned IP address

3.252.79.132 [Public IP]

IAM Role

-

IMDSv2

Required

Operator

-

Public IPv4 address

3.252.79.132 | [open address](#)

Instance state

Running

Private IP DNS name (IPv4 only)

ip-10-0-12-90.eu-west-1.compute.internal

Instance type

t2.micro

VPC ID

vpc-071d8248c8fdeac5a (Rshdan-vpc)

Subnet ID

subnet-04ec598d793bd6c15 (Rshdan-subnet-public1-eu-west-1a)

Instance ARN

arn:aws:ec2:eu-west-1:021891619360:instance/i-06a44731897604559

Private IPv4 addresses

10.0.12.90

Public IPv4 DNS

ec2-3-252-79-132.eu-west-1.compute.amazonaws.com | [open address](#)

Elastic IP addresses

-

AWS Compute Optimizer finding

[Opt-in to AWS Compute Optimizer for recommendations.](#) | [Learn more](#)

Auto Scaling Group name

Rshdan-auto-scalingGroup

Managed

false

Details

Status and alarms

Monitoring

Security

Networking

Storage

Tags

▼ Instance details [Info](#)

Instance summary for i-0f594dfde042b1078 (Rshdan) [Info](#)

Updated less than a minute ago

Instance ID

i-0f594dfde042b1078

IPv6 address

-

Hostname type

IP name: ip-10-0-23-230.eu-west-1.compute.internal

Answer private resource DNS name

-

Auto-assigned IP address

34.241.42.65 [Public IP]

IAM Role

AmazonSSMRoleForInstancesQuickSetup

IMDSv2

Required

Operator

-

Public IPv4 address

34.241.42.65 | [open address](#)

Instance state

Running

Private IP DNS name (IPv4 only)

ip-10-0-23-230.eu-west-1.compute.internal

Instance type

t2.micro

VPC ID

vpc-071d8248c8fdeac5a (Rshdan-vpc)

Subnet ID

subnet-01be9321994162604 (Rshdan-subnet-public2-eu-west-1b)

Instance ARN

arn:aws:ec2:eu-west-1:021891619360:instance/i-0f594dfde042b1078

Private IPv4 addresses

10.0.23.230

Public IPv4 DNS

ec2-34-241-42-65.eu-west-1.compute.amazonaws.com | [open address](#)

Elastic IP addresses

-

AWS Compute Optimizer finding

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Auto Scaling Group name

-

Managed

false

Details

Status and alarms

Monitoring

Security

Networking

Storage

Tags

Instance summary for i-07a200595cc9726b9 (Rshdan-private) [Info](#)

Updated less than a minute ago

Instance ID

[i-07a200595cc9726b9](#)

IPv6 address

-

Hostname type

IP name: ip-10-0-131-198.eu-west-1.compute.internal

Answer private resource DNS name

-

Auto-assigned IP address

-

IAM Role

[AmazonSSMRoleForInstancesQuickSetup](#)

IMDSv2

Required

Operator

-

Public IPv4 address

-

Instance state

Running

Private IP DNS name (IPv4 only)

[ip-10-0-131-198.eu-west-1.compute.internal](#)

Instance type

t2.micro

VPC ID

[vpc-071d8248c8fdeac5a \(Rshdan-vpc\)](#)

Subnet ID

[subnet-0617d0baf4a36d5 \(Rshdan-subnet-private1-eu-west-1a\)](#)

Instance ARN

[arn:aws:ec2:eu-west-1:021891619360:instance/i-07a200595cc9726b9](#)

Private IPv4 addresses

[10.0.131.198](#)

Public IPv4 DNS

-

Elastic IP addresses

-

AWS Compute Optimizer finding

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Auto Scaling Group name

-

Managed

false

Details

Status and alarms

Monitoring

Security

Networking

Storage

Tags

Instance summary for i-0224e5602cc9a70c8 (Rshdan-private2) [Info](#)

Updated less than a minute ago

Instance ID

[i-0224e5602cc9a70c8](#)

IPv6 address

-

Hostname type

IP name: ip-10-0-147-18.eu-west-1.compute.internal

Answer private resource DNS name

-

Auto-assigned IP address

-

IAM Role

-

IMDSv2

Required

Operator

-

Public IPv4 address

-

Instance state

Running

Private IP DNS name (IPv4 only)

[ip-10-0-147-18.eu-west-1.compute.internal](#)

Instance type

t2.micro

VPC ID

[vpc-071d8248c8fdeac5a \(Rshdan-vpc\)](#)

Subnet ID

[subnet-0b8d235d32c0578c9 \(Rshdan-subnet-private2-eu-west-1b\)](#)

Instance ARN

[arn:aws:ec2:eu-west-1:021891619360:instance/i-0224e5602cc9a70c8](#)

Private IPv4 addresses

[10.0.147.18](#)

Public IPv4 DNS

-

Elastic IP addresses

-

AWS Compute Optimizer finding

[Opt-in to AWS Compute Optimizer for recommendations.](#) [Learn more](#)

Auto Scaling Group name

-

Managed

false

Details

Status and alarms

Monitoring

Security

Networking

Storage

Tags

▼ Instance details [Info](#)

3- Create 2 NAT Gateways and an Elastic IP

nat-0620d7ec1e71fd398 / Rshdan-public1

Actions ▾

Details			
NAT gateway ID nat-0620d7ec1e71fd398	Connectivity type Public	State Available	State message Info -
NAT gateway ARN arn:aws:ec2:eu-west-1:021891619360:natgateway/nat-0620d7ec1e71fd398	Primary public IPv4 address 46.51.158.120	Primary private IPv4 address 10.0.9.128	Primary network interface ID eni-08445ee3192571846 🔗
VPC vpc-071d8248c8fdeac5a / Rshdan-vpc	Subnet subnet-04ec598d793bd6c15 / Rshdan-subnet-public1-eu-west-1a	Created 📅 Friday, May 2, 2025 at 10:08:11 GMT+3	Deleted -

[Secondary IPv4 addresses](#) | [Monitoring](#) | [Tags](#)

Secondary IPv4 addresses			
<div><div><div>🔍 Search</div></div></div>			
<div><div><div><div>Private IPv4 address</div><div>▼</div></div><div><div>Network interface ID</div><div>▼</div></div><div><div>Status</div><div>▼</div></div><div><div>Failure message</div><div>▼</div></div></div></div>			
Secondary IPv4 addresses are not available for this nat gateway.			

nat-02bd16f16d0713260 / Rshdan-public2

Actions ▾

Details			
NAT gateway ID nat-02bd16f16d0713260	Connectivity type Public	State Available	State message Info -
NAT gateway ARN arn:aws:ec2:eu-west-1:021891619360:natgateway/nat-02bd16f16d0713260	Primary public IPv4 address 54.246.57.195	Primary private IPv4 address 10.0.23.199	Primary network interface ID eni-0dabb1cc5c79dbb2c 🔗
VPC vpc-071d8248c8fdeac5a / Rshdan-vpc	Subnet subnet-01be9321994162604 / Rshdan-subnet-public2-eu-west-1b	Created 📅 Friday, May 2, 2025 at 11:12:51 GMT+3	Deleted -

[Secondary IPv4 addresses](#) | [Monitoring](#) | [Tags](#)

Secondary IPv4 addresses			
<div><div><div>🔍 Search</div></div></div>			
<div><div><div><div>Private IPv4 address</div><div>▼</div></div><div><div>Network interface ID</div><div>▼</div></div><div><div>Status</div><div>▼</div></div><div><div>Failure message</div><div>▼</div></div></div></div>			
Secondary IPv4 addresses are not available for this nat gateway.			

4- Modify Route Tables for Private Subnets

rtb-0fc8164a9c1994a55 / Rshdan-rtb-private1-eu-west-1a

Actions ▾

Details Info

Route table ID

rtb-0fc8164a9c1994a55

VPC

vpc-071d8248c8fdeac5a | Rshdan-vpc

Main

No

Owner ID

021891619360

Explicit subnet associations

subnet-0617d0bafaf4a36d5 / Rshdan-subnet-private1-eu-west-1a

Edge associations

-

Routes

Subnet associations

Edge associations

Route propagation

Tags

Routes (3)

Both ▾

Edit routes

Destination ▾	Target ▾	Status ▾	Propagated ▾
pl-6da54004	vpce-07982b6341122c33d	Active	No
0.0.0.0/0	nat-0620d7ec1e71fd398	Active	No
10.0.0.0/16	local	Active	No

rtb-0af77d0699e941f88 / Rshdan-rtb-private2-eu-west-1b

Actions ▾

Details Info

Route table ID

rtb-0af77d0699e941f88

VPC

vpc-071d8248c8fdeac5a | Rshdan-vpc

Main

No

Owner ID

021891619360

Explicit subnet associations

subnet-0b8d235d32c0578c9 / Rshdan-subnet-private2-eu-west-1b

Edge associations

-

Routes

Subnet associations

Edge associations

Route propagation

Tags

Routes (3)

Both ▾

Edit routes

Destination ▾	Target ▾	Status ▾	Propagated ▾
pl-6da54004	vpce-07982b6341122c33d	Active	No
0.0.0.0/0	nat-02bd16f16d0713260	Active	No
10.0.0.0/16	local	Active	No

5- Access Public Instances and Install NGINX

```
ubuntu@ip-10-0-23-230:~$ sudo systemctl status nginx
• nginx.service - A high performance web server and a reverse proxy server
  Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: enabled)
  Active: active (running) since Fri 2025-05-02 09:25:41 UTC; 5h 0min ago
    Docs: man:nginx(8)
  Process: 9628 ExecStartPre=/usr/sbin/nginx -t -q -g daemon on; master_process on; (code=exited, status=0)
  Process: 9630 ExecStart=/usr/sbin/nginx -g daemon on; master_process on; (code=exited, status=0)
 Main PID: 9631 (nginx)
   Tasks: 2 (limit: 1129)
  Memory: 2.8M (peak: 3.0M)
     CPU: 490ms
  CGroup: /system.slice/nginx.service
          └─9631 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"
             └─9632 "nginx: worker process"

May 02 09:25:41 ip-10-0-23-230 systemd[1]: Starting nginx.service - A high performance web server and a reverse proxy server:
May 02 09:25:41 ip-10-0-23-230 systemd[1]: Started nginx.service - A high performance web server and a reverse proxy server:
lines 1-16/16 (END)
```

```
ubuntu@ip-10-0-9-37:~$ sudo systemctl status nginx
• nginx.service - A high performance web server and a reverse proxy server
  Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: enabled)
  Active: active (running) since Fri 2025-05-02 13:54:44 UTC; 33min ago
    Docs: man:nginx(8)
  Process: 529 ExecStartPre=/usr/sbin/nginx -t -q -g daemon on; master_process on; (code=exited, status=0)
  Process: 585 ExecStart=/usr/sbin/nginx -g daemon on; master_process on; (code=exited, status=0)
 Main PID: 613 (nginx)
   Tasks: 2 (limit: 1129)
  Memory: 3.1M (peak: 3.4M)
     CPU: 73ms
  CGroup: /system.slice/nginx.service
          └─613 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"
             └─616 "nginx: worker process"

May 02 13:54:43 ip-10-0-9-37 systemd[1]: Starting nginx.service - A high performance web server and a reverse proxy server:
May 02 13:54:44 ip-10-0-9-37 systemd[1]: Started nginx.service - A high performance web server and a reverse proxy server:
lines 1-16/16 (END)
```

6- Access Public Instances and copy my key to access Private Instances inside Public Instances, then install Apache2

```
ubuntu@ip-10-0-147-18:~$ ssh -i Rshdan_key.pem ubuntu@10.0.147.18
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-1024-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Fri May  2 14:30:07 UTC 2025

System load:  0.0               Processes:            109
Usage of /:   30.6% of 6.71GB   Users logged in:     0
Memory usage: 25%              IPv4 address for enX0: 10.0.147.18
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

82 updates can be applied immediately.
38 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

ubuntu@ip-10-0-147-18:~$ sudo systemctl status apache2
Warning: The unit file, source configuration file or drop-ins of apache2.service changed on disk. R>
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: enabled)
   Active: active (running) since Fri 2025-05-02 08:15:16 UTC; 6h ago
     Docs: https://httpd.apache.org/docs/2.4/
    Main PID: 2512 (apache2)
      Tasks: 55 (limit: 1129)
    Memory: 11.6M (peak: 11.9M)
       CPU: 3.429s
    CGroup: /system.slice/apache2.service
           └─2512 /usr/sbin/apache2 -k start
             └─2515 /usr/sbin/apache2 -k start
               └─2516 /usr/sbin/apache2 -k start

May 02 08:15:16 ip-10-0-147-18 systemd[1]: Starting apache2.service - The Apache HTTP Server...
May 02 08:15:16 ip-10-0-147-18 systemd[1]: Started apache2.service - The Apache HTTP Server.
lines 1-16/16 (END)
```

For Second Private Instance

```
ubuntu@ip-10-0-9-37:~$ ssh -i Rshdan_key.pem ubuntu@10.0.131.198
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-1027-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Fri May  2 14:32:35 UTC 2025

System load:  0.0                Processes:    107
Usage of /:   37.7% of 6.71GB    Users logged in:  0
Memory usage: 24%               IPv4 address for enx0: 10.0.131.198
Swap usage:   0%

 * Ubuntu Pro delivers the most comprehensive open source security and
   compliance features.

   https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.
```

```
ubuntu@ip-10-0-131-198:~$ sudo systemctl status apache2
Warning: The unit file, source configuration file or drop-ins of apache2.service changed on disk. R
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: enabled)
   Active: active (running) since Fri 2025-05-02 13:59:23 UTC; 35min ago
     Docs: https://httpd.apache.org/docs/2.4/
   Main PID: 542 (apache2)
    Tasks: 55 (limit: 1129)
   Memory: 13.6M (peak: 13.9M)
      CPU: 409ms
   CGroup: /system.slice/apache2.service
           └─542 /usr/sbin/apache2 -k start
             └─544 /usr/sbin/apache2 -k start
               └─545 /usr/sbin/apache2 -k start

May 02 13:59:23 ip-10-0-131-198 systemd[1]: Starting apache2.service - The Apache HTTP Server...
May 02 13:59:23 ip-10-0-131-198 systemd[1]: Started apache2.service - The Apache HTTP Server.
lines 1-16/16 (END)
```


Create external and internal Load Balancer & Create Target Groups for Public Instances and Private Instances

Rshdan-aragetGroup

Actions

Details

am:aws:elasticloadbalancing:eu-west-1:021891619360:targetgroup/Rshdan-aragetGroup/17efcf0fb7a21027

Target type

Instance

Protocol : Port

HTTP: 80

Protocol version

HTTP1

VPC

vpc-071d8248c8fdeac5a

IP address type

IPv4

Load balancer

Rshdan-internet-loadBalancer

2

Total targets

2

Healthy

0

Unhealthy

0

Unused

0

Initial

0

Draining

Distribution of targets by Availability Zone (AZ)

Select values in this table to see corresponding filters applied to the Registered targets table below.

Targets

Monitoring

Health checks

Attributes

Tags

Registered targets (2)

Info

Anomaly mitigation: Not applicable

Deregister

Register targets

Target groups route requests to individual registered targets using the protocol and port number specified. Health checks are performed on all registered targets according to the target group's health check settings. Anomaly detection is automatically applied to HTTP/HTTPS target groups with at least 3 healthy targets.

Filter targets

	Instance ID	Name	Port	Zone	Health status	Health status details	Administrative o...	Override details	Launch...	Anomaly
<input type="checkbox"/>	i-0F594dfde042b1078	Rshdan	80	eu-west-1b (eu...	Healthy	-	No override	No override is curre...	May 2, 20...	Normal
<input type="checkbox"/>	i-014890c4951e1b8d8	Rshdan	80	eu-west-1a (eu...	Healthy	-	No override	No override is curre...	May 2, 20...	Normal

Rshdan-internet-loadBalancer

Actions

Details

Load balancer type

Application

Status

Active

VPC

vpc-071d8248c8fdeac5a

Load balancer IP address type

IPv4

Scheme

Internet-facing

Hosted zone

Z3201ZXQLNTSW2

Availability Zones

subnet-04ec598d793bd6c15 eu-west-1a (euw1-az2)

Date created

May 2, 2025, 08:31 (UTC+03:00)

Load balancer ARN

am:aws:elasticloadbalancing:eu-west-1:021891619360:loadbalancer/app/Rshdan-internet-loadBalancer/cdf3dbc3d897475

DNS name info

Rshdan-internet-loadBalancer-808379217.eu-west-1.elb.amazonaws.com (A Record)

Listeners and rules

Network mapping

Resource map

Security

Monitoring

Integrations

Attributes

Capacity

Tags

Listeners and rules (1)

Info

Manage rules

Manage listener

Add listener

A listener checks for connection requests on its configured protocol and port. Traffic received by the listener is routed according to the default action and any additional rules.

Filter listeners

	Protocol:Port	Default action	Rules	ARN	Security policy	Default SSL/TLS certificate	mTLS	Trust stor
<input type="checkbox"/>	HTTP:80	<div>Forward to target group<ul style="list-style-type: none">Rshdan-aragetGroup: 1 (100%)Target group stickiness: Off</div>	1 rule	ARN	Not applicable	Not applicable	Not applicable	Not applic

Rshdan-internal-tg

Actions

Details

arn:aws:elasticloadbalancing:eu-west-1:021891619360:targetgroup/Rshdan-internal-tg/dc1075766e5d76fb

Target type

Instance

IP address type

IPv4

Protocol : Port

HTTP: 80

Protocol version

HTTP1

VPC

vpc-071d8248c8fdeac5a

2

Total targets

2

Healthy

0

Unhealthy

0

Unused

0

Initial

0

Draining

0

Anomalous

Distribution of targets by Availability Zone (AZ)

Select values in this table to see corresponding filters applied to the Registered targets table below.

Targets

Monitoring

Health checks

Attributes

Tags

Registered targets (2)

Anomaly mitigation: Not applicable

Deregister

Register targets

Filter targets

< 1 >

<input type="checkbox"/>	Instance ID	Name	Port	Zone	Health status	Health status details	Admini...	Override...	Launch ...	Anomaly detection...
<input type="checkbox"/>	i-0224e5602cc9a70c8	Rshdan-private2	80	eu-west-1b (eu...	Healthy	-	No override.	No overrid...	May 2, 20...	Normal
<input type="checkbox"/>	i-07a200595cc9726b9	Rshdan-private	80	eu-west-1a (eu...	Healthy	-	No override.	No overrid...	May 2, 20...	Normal

Rshdan-nternal-loadBalancer

Actions

Details

Load balancer type

Application

Scheme

Internal

Status

Active

Hosted zone

Z32O12XQLNTSW2

VPC

vpc-071d8248c8fdeac5a

Load balancer IP address type

IPv4

Availability Zones

subnet-0b8d235d32c0578c9

eu-west-1b (euw1-az3)

subnet-0617d0bafaf4a36d5

eu-west-1a (euw1-az2)

Date created

May 2, 2025, 09:39 (UTC+03:00)

Load balancer ARN

arn:aws:elasticloadbalancing:eu-west-1:021891619360:loadbalancer/app/Rshdan-nternal-loadBalancer/76c5f38861f1f4be

DNS name

internal-Rshdan-nternal-loadBalancer-562428756.eu-west-1.elb.amazonaws.com (A Record)

Listeners and rules

Network mapping

Resource map

Security

Monitoring

Integrations

Attributes

Capacity

Tags

Listeners and rules (1)

Manage rules

Manage listener

Add listener

Filter listeners

< 1 >

<input type="checkbox"/>	Protocol:Port	Default action	Rules	ARN	Security policy	Default SSL/TLS certificate	mTLS	Trust store
<input type="checkbox"/>	HTTP:80	<div>Forward to target group<ul style="list-style-type: none">Rshdan-internal-tg: 1 (100%)Target group stickiness: Off</div>	1 rule	ARN	Not applicable	Not applicable	Not applicable	Not applic

now I can access DNS for load balancer to show nginx page
but that I do not want. I want nginx as reverse proxy so we modify nginx configurations in
Two Public Instances

Modify nginx configurations in Two Public Instances


My NGINX Configurations

```
server {  
  
    listen 80;  
  
    server_name _;  
  
  
    location / {  
  
        proxy_pass http://internal-Rshdan-nternal-loadBalancer-562428756.eu-west-  
1.elb.amazonaws.com;  
  
        proxy_set_header Host $host;  
  
        proxy_set_header X-Real-IP $remote_addr;  
  
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;  
  
    }  
  
}  
  
~  
  
~
```

Not secure

rshdan-internet-loadbalancer-808379217.eu-west-1.elb.amazonaws.com

Login | Ain Shams U...Course: General Cre...Online Courses - Le...in (4) Feed | LinkedInabdelrhmanatef87 (...Google Drive - مملاني(45) Discord | 45!...https://chat.openai... (DevSecOps-NTI-4...



Ubuntu

Apache2 Default Page

server two 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
|   |-- *.conf
|-- conf-enabled
|   |-- *.conf
|-- sites-enabled
|   |-- *.conf
|
```

- `apache2.conf` is the main configuration file. It puts the pieces together by including all remaining configuration files when starting up the web server.
- `ports.conf` is always included from the main configuration file. It is used to determine the listening ports for incoming connections, and this file can be customized anytime.
- Configuration files in the `mods-enabled/`, `conf-enabled/` and `sites-enabled/` directories contain particular configuration snippets which manage modules, global configuration fragments, or virtual host configurations, respectively.
- They are activated by symlinking available configuration files from their respective `*-available/` counterparts. These should be managed by using our helpers `a2enmod`, `a2dismod`, `a2ensite`,



Ubuntu

Apache2 Default Page

server one 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  
|   |-- *.conf  
|-- conf-enabled  
|   |-- *.conf  
|-- sites-enabled  
|   |-- *.conf
```

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- They are activated by symlinking available configuration files from their respective `*-available/` counterparts. These should be managed by using our helpers `a2enmod`, `a2dismod`, `a2ensite`,

2- make autoscaling group and scale out based on any policy and prove it's working

1- Create Launch Template

Rshdan-template-public-a (lt-072c8640ae1f19b6f)

ActionsDelete template

Launch template details

Launch template ID
lt-072c8640ae1f19b6f

Launch template name
Rshdan-template-public-a

Default version
1

Owner
arn:aws:iam::021891619360:user/rshdan

Details

Versions

Template tags

Launch template version details

ActionsDelete template version

Version
1 (Default)

Description
-

Date created
2025-05-02T12:23:53.000Z

Created by
arn:aws:iam::021891619360:user/rshdan

Instance details

Storage

Resource tags

Network interfaces

Advanced details

AMI ID
ami-0df368112825f8d8f

Instance type
t2.micro

Availability Zone
-

Key pair name
Rshdan_key

Security groups
-

Security group IDs
sg-07e2048e70c46a9df

2- Create Auto Scaling Group

Rshdan-auto-scalingGroup

Edit

Rshdan-auto-scalingGroup Capacity overview

arn:aws:autoscaling:eu-west-1:021891619360:autoScalingGroup:3d214ac9-0799-4ddd-b79a-70246e984c72:autoScalingGroupName/Rshdan-auto-scalingGroup

Desired capacity
1

Scaling limits (Min - Max)
1 - 5

Desired capacity type
Units (number of instances)

Status
-

Date created
Fri May 02 2025 15:28:11 GMT+0300 (Eastern European Summer Time)

Details

Integrations - new

Automatic scaling

Instance management

Instance refresh

Activity

Monitoring

Launch template

Edit

Launch template
lt-072c8640ae1f19b6f
Rshdan-template-public-a

AMI ID
ami-0df368112825f8d8f

Instance type
t2.micro

Owner
arn:aws:iam::021891619360:user/rshdan

Version
Default

Security groups
-

Security group IDs
sg-07e2048e70c46a9df

Create time
Fri May 02 2025 15:23:53 GMT+0300 (Eastern European Summer Time)

Description
-

Storage (volumes)
/dev/sda1

Key pair name
Rshdan_key

Request Spot Instances
No

View details in the launch template console

Network

Availability Zones

eu-west-1a

Subnet ID

subnet-04ec598d793bd6c15

Availability Zone distribution

Balanced best effort

Edit

Instance type requirements

Your Auto Scaling group adheres to the launch template for purchase option and instance type.

Edit

Load balancing and VPC Lattice options have moved to the new integrations tab.

View integrations tab

Health checks

Health check type

EC2

Health check grace period

300

Edit

Instance maintenance policy

Replacement behavior

No policy

Min healthy percentage

-

Max healthy percentage

-

Edit

Capacity Reservation preference

Preference

Capacity Reservation IDs

Resource Groups

Edit

Test Auto Scaling in AWS Console

```
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-10-0-9-37:~$ stress --cpu 3 --timeout 300
stress: info: [11245] dispatching hogs: 3 cpu, 0 io, 0 vm, 0 hdd
```

```
MiB Mem : 957.4 total, 163.3 free, 406.2 used, 578.0 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used, 551.2 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
11246	ubuntu	20	0	3620	384	384	R	33.6	0.0	0:37.21	stress
11247	ubuntu	20	0	3620	384	384	R	33.2	0.0	0:37.20	stress
11248	ubuntu	20	0	3620	384	384	R	33.2	0.0	0:37.21	stress
1	root	20	0	22540	13824	9728	S	0.0	1.4	0:03.66	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kthreadd
3	root	20	0	0	0	0	S	0.0	0.0	0:00.00	pool_workqueue_release
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-rcu_g
5	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-rcu_p
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-slub_
7	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-netns
10	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/0:0H-events_highpri
12	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-mm_pe
13	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_rude_kthread
14	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_trace_kthread
15	root	20	0	0	0	0	S	0.0	0.0	0:00.28	ksoftirqd/0
16	root	20	0	0	0	0	I	0.0	0.0	0:00.43	rcu_sched

Activity history (2)

🔍 *Filter activity history*

Status	Description	Cause	Start time
Successful	Launching a new EC2 instance: i-01d232f48a0c3ca77	At 2025-05-02T12:28:11Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 2. At 2025-05-02T12:28:13Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 2.	2025 May 02, 03:21+03:00
Successful	Launching a new EC2 instance: i-05f95e8fa1e051932	At 2025-05-02T12:28:11Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 2. At 2025-05-02T12:28:13Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 2.	2025 May 02, 03:21+03:00

Instances (1/7) [info](#)

Last updated less than a minute ago [Refresh](#) [Connect](#) [Instance state](#) [Actions](#) [Launch instances](#)

Find Instance by attribute or tag (case-sensitive)

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
<input checked="" type="checkbox"/>	Rshdan-private	i-07a200595cc9726b9	Running	t2.micro	2/2 checks passed	View alarms	eu-west-1a	-	-	-
<input type="checkbox"/>	Rshdan	i-06a44731897604559	Terminated	t2.micro	-	View alarms	eu-west-1a	-	-	-
<input type="checkbox"/>	Rshdan	i-014890c4951e18d88	Running	t2.micro	2/2 checks passed	View alarms	eu-west-1a	ec2-34-252-117-38.eu-...	34.252.117.38	-
<input type="checkbox"/>	Rshdan	i-05f95e8fa1e051932	Terminated	t2.micro	-	View alarms	eu-west-1a	-	-	-
<input type="checkbox"/>	Rshdan	i-07fc8a721a5378b65	Running	t2.micro	2/2 checks passed	View alarms	eu-west-1a	ec2-3-249-148-72.eu-w...	3.249.148.72	-
<input type="checkbox"/>	Rshdan-private2	i-0224e5602cc9a70c8	Running	t2.micro	2/2 checks passed	View alarms	eu-west-1b	-	-	-
<input type="checkbox"/>	Rshdan	i-0f594dfde042b1078	Running	t2.micro	2/2 checks passed	View alarms	eu-west-1b	ec2-34-241-42-65.eu-w...	34.241.42.65	-

- Fleet Manager

The screenshot displays the AWS Fleet Manager console in the eu-west-1 region. At the top, a navigation bar includes 'Systems Manager', 'Fleet Manager', and 'Managed nodes'. Below this, the 'Fleet Manager' section is active, showing a message about unmanaged Amazon EC2 instances and a button to 'Configure Default Host Management'. The main content area, titled 'Managed Nodes (4)', contains a search bar and a table of managed nodes. The table has columns for Node ID, Node state, Name, Platform type, Operating system, Resource type, Source ID, Ping status, Agent version, Image ID, and EC2 instance. Four nodes are listed, all in a 'Running' state, with names 'Rshdan', 'Rshdan', 'Rshdan-private', and 'Rshdan'. Each node is an 'EC2 instance' with a 'Source ID' of '-'. The 'Ping status' for all nodes is 'Online'. The 'Agent version' is '3.3.987.0' for all. The 'Image ID' is 'ami-0df368112...' for all. The 'EC2 instance' column provides links to 'Open EC2 in...'. At the bottom of the screenshot, the Windows taskbar is visible, showing the time as 4:39 PM on 4/20/2025.

Managed Nodes (4)

Node ID	Node state	Name	Platform type	Operating system	Resource type	Source ID	Ping status	Agent version	Image ID	EC2 instance
i-014890c4951...	Running	Rshdan	Linux	Ubuntu	EC2 instance	-	Online	3.3.987.0	ami-0df368112...	Open EC2 in...
i-05f95e8fa1e0...	Running	Rshdan	Linux	Ubuntu	EC2 instance	-	Online	3.3.987.0	ami-0df368112...	Open EC2 in...
i-07a200595cc9...	Running	Rshdan-private	Linux	Ubuntu	EC2 instance	-	Online	3.3.987.0	ami-0df368112...	Open EC2 in...
i-0f594dfde042...	Running	Rshdan	Linux	Ubuntu	EC2 instance	-	Online	3.3.987.0	ami-0df368112...	Open EC2 in...

3- Run Patch Manager

AWS

Services

Search

[Alt+5]

Europe (Ireland)

rshdan @ 0218-9161-9360

AWS Systems Manager

Review node insights

Explore nodes

Diagnose and remediate

Just-in-time node access New

Settings

▼ Node Tools

Compliance

Distributor

Fleet Manager

Hybrid Activations

Inventory

Patch Manager

Run Command

Session Manager

State Manager

▼ Change Management Tools

Automation

Change Calendar

Change Manager

Documents

Maintenance Windows

Quick Setup

AWS-PatchNowAssociation

Association ID
2b3e4c87-0a54-4478-abc0-8bdc0ff320fe

Execution ID
7102aeef-b08b-4a25-b217-c9594a48b0a5

Status
Success


Operation
Install

Reboot option
RebootIfNeeded

Targets
InstanceIds: 4

Summary
Success=4

Scan/Install operation summary



Succeeded

Pending

Skipped

Succeeded

Failed

Application Tools

CloudShell

Feedback

Type here to search

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27°C

5:07 PM

5/2/2025