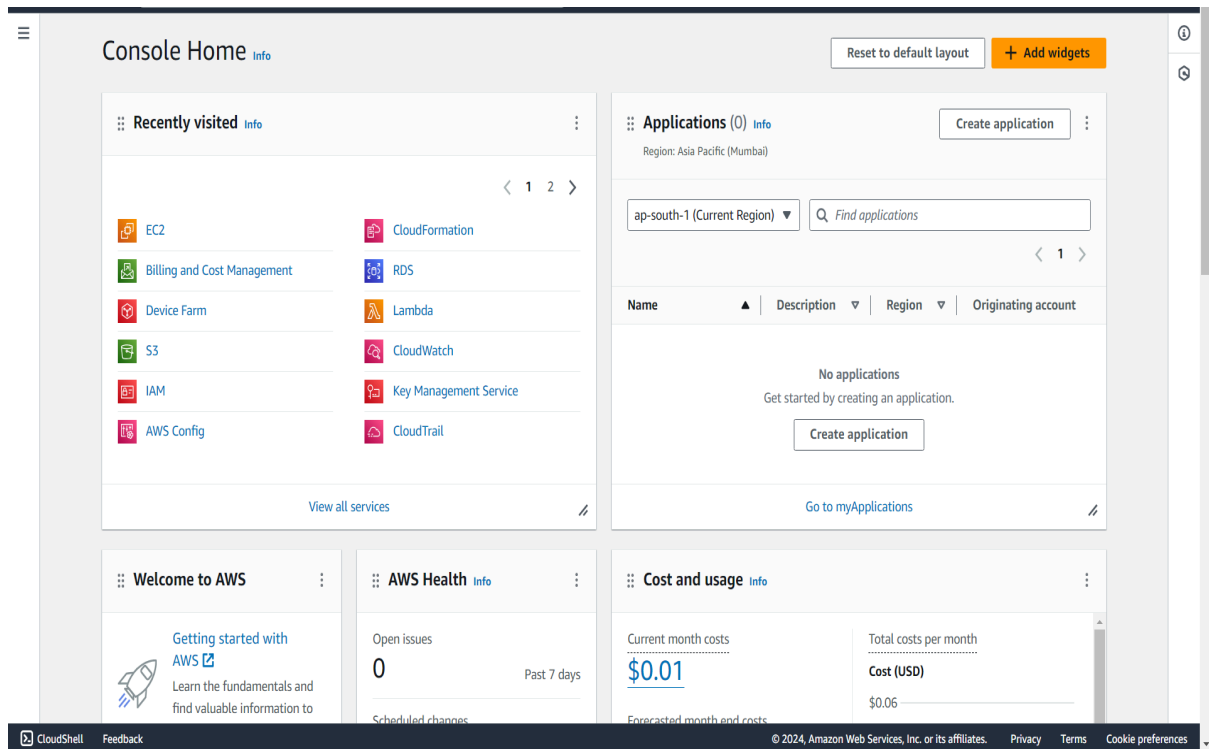
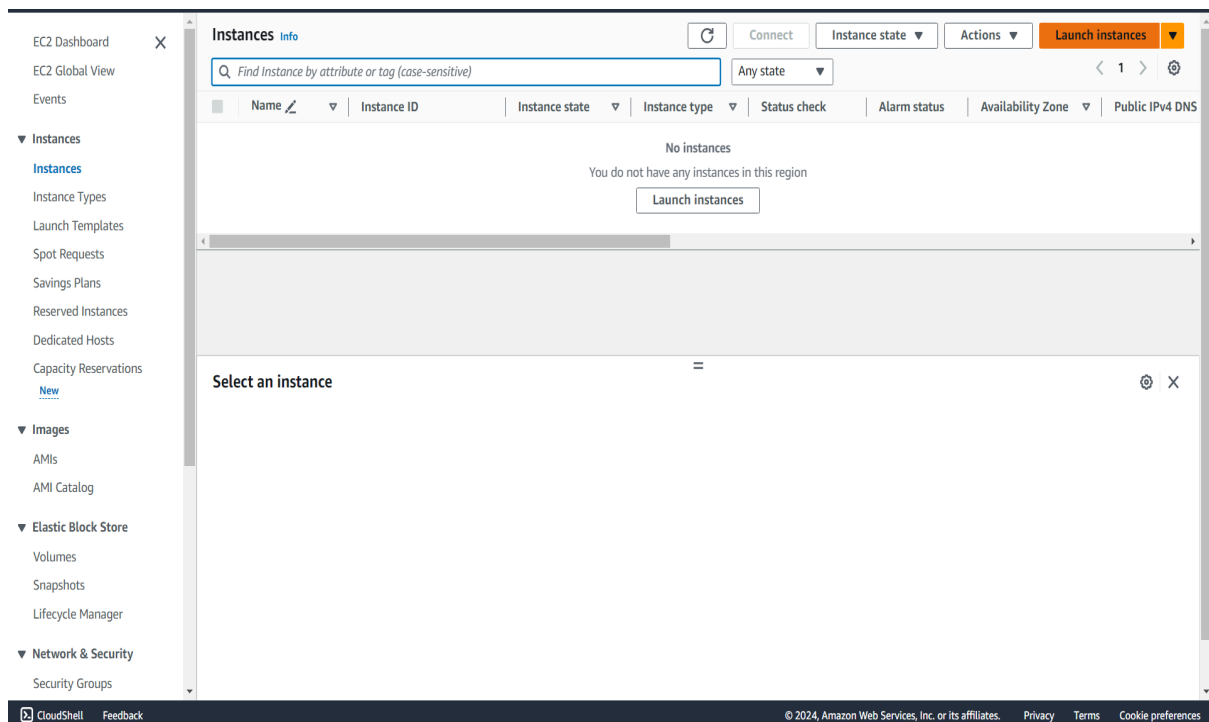


Create a private registry and push any image in that private registry

Step 1: Sign in to aws account



Step 2: Go to 'instances' in the EC2 dashboard and click on 'Launch Instances'



Step 3: Give a name to the instance and select ubuntu os

Launch an instance [Info](#)

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags [Info](#)

Name

tanmayvaj-ec2docker [Add additional tags](#)

▼ Application and OS Images (Amazon Machine Image) [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Q Search our full catalog including 1000s of application and OS images

Recents Quick Start

Amazon Linux

aws

macOS

Mac

Ubuntu

ubuntu

Windows

Microsoft

Red Hat

Red Hat

SUSE Li

SUSE Li

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

▼ Summary

Number of instances [Info](#)

1

Software Image (AMI)

Canonical, Ubuntu, 22.04 LTS, ...[read more](#)

ami-03f4878755434977f

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots,

Cancel [Launch instance](#) [Review commands](#)

Step 4: Select key pair and security group and click on 'Launch Instance'

▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - *required*

tanmayvaj-key [Create new key pair](#)

▼ Network settings [Info](#) [Edit](#)

Network [Info](#)

vpc-0dbe7bc3f6036f9b4

Subnet [Info](#)

No preference (Default subnet in any availability zone)

Auto-assign public IP [Info](#)

Enable

Firewall (security groups) [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☐ Create security group

☒ Select existing security group

Common security groups [Info](#)

Select security groups

sg_tanmayvaj_ec2docker sg-0eeae06dd24e4a332 [X](#)

[Compare security group rules](#)

▼ Summary

Number of instances [Info](#)

1

Software Image (AMI)

Canonical, Ubuntu, 22.04 LTS, ...[read more](#)

ami-03f4878755434977f

Virtual server type (instance type)

t2.micro

Firewall (security group)

sg_tanmayvaj_ec2docker

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots,

Cancel [Launch instance](#) [Review commands](#)

Step 5: Click on the created running instance and click on ‘Connect’

EC2 Dashboard

EC2 Global View

Events

▼ Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

New

▼ Images

AMIs

AMI Catalog

▼ Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

▼ Network & Security

Security Groups

EC2 > Instances > i-07d0fbd09f3d14352

Instance summary for i-07d0fbd09f3d14352 (tanmayvaj-ec2docker) info

Updated less than a minute ago

Connect Instance state Actions

Instance ID	Public IPv4 address	Private IPv4 addresses
i-07d0fbd09f3d14352 (tanmayvaj-ec2docker)	13.201.81.215 Open address	172.31.14.224
IPv6 address	Instance state	Public IPv4 DNS
–	Running	ec2-13-201-81-215.ap-south-1.compute.amazonaws.com Open address
Hostname type	Private IP DNS name (IPv4 only)	Elastic IP addresses
IP name: ip-172-31-14-224.ap-south-1.compute.internal	ip-172-31-14-224.ap-south-1.compute.internal	–
Answer private resource DNS name	Instance type	AWS Compute Optimizer finding
IPv4 (A)	t2.micro	Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto-assigned IP address	VPC ID	Auto Scaling Group name
13.201.81.215 [Public IP]	vpc-0dbe7bc3f6036f9b4	–
IAM Role	Subnet ID	
–	subnet-040e0fac65e6a4617	
IMDSv2		
Required		

Details Status and alarms Monitoring Security Networking Storage Tags

▼ Instance details info

Platform AMI ID Monitoring

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Step 6: Update the instance and install docker

Commands:-

```
$ sudo apt update -y
```

```
$ sudo snap install docker
```

```
Get:17 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [22.1 kB]
Get:18 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [42.1 kB]
Get:19 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [10.1 kB]
Get:20 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [472 B]
Get:21 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [41.7 kB]
Get:22 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [10.5 kB]
Get:23 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 B]
Get:24 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:25 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [24.3 kB]
Get:26 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get:27 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [644 B]
Get:28 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:29 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1161 kB]
Get:30 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [213 kB]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [1401 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [231 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [842 kB]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [161 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [16.8 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.1 kB]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7476 B]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [260 B]
Fetched 29.5 MB in 6s (5368 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
74 packages can be upgraded. Run 'apt list --upgradable' to see them.
docker 24.0.5 from Canonical/ installed
ubuntu@ip-172-31-14-224:~$ sudo docker -v
Docker version 24.0.5, build ced0996
ubuntu@ip-172-31-14-224:~$
```

i-07d0fbd09f3d14352 (tanmayvaj-ec2docker)

PublicIPs: 13.201.81.215 PrivateIPs: 172.31.14.224

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Step 7: Pull 'registry' image from docker hub

Commands:-

```
$ sudo su
```

```
$ docker pull registry
```

```
ubuntu@ip-172-31-14-224:~$ sudo su
root@ip-172-31-14-224:/home/ubuntu# docker pull registry
Using default tag: latest
latest: Pulling from library/registry
619be1103602: Pull complete
2ba4b87859f5: Pull complete
0da701e3b4d6: Pull complete
14ad5d4702c7: Pull complete
d1a4f6454eb2: Pull complete
Digest: sha256:f4e1b878d4bc40a1f65532d68c94defb56aa8c8a1f00e355a206e7f6cc9111
Status: Downloaded newer image for registry:latest
docker.io/library/registry:latest
root@ip-172-31-14-224:/home/ubuntu# docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
registry       latest    a8781fe3b7a2   2 weeks ago    25.4MB
root@ip-172-31-14-224:/home/ubuntu#
```

i-07d0fbd09f3d14352 (tanmayvajj-ec2docker)

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Step 8: Check the exposed port of the registry image

Commands:-

```
$ docker inspect <image_id>
```

```
{
  "DockerVersion": "20.10.23",
  "Author": "",
  "Config": {
    "Hostname": "",
    "Domainname": "",
    "User": "",
    "AttachStdin": false,
    "AttachStdout": false,
    "AttachStderr": false,
    "ExposedPorts": {
      "5000/tcp": {}
    },
    "Tty": false,
    "OpenStdin": false,
    "StdinOnce": false,
    "Env": [
      "PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin"
    ],
    "Cmd": [
      "/etc/docker/registry/config.yml"
    ],
    "Image": "sha256:8023dd94c861a42bf3f7b13ff51177b2f9d3abd218d14460b0cdb3c7cda17666",
    "Volumes": {
      "/var/lib/registry": {}
    },
    "WorkingDir": "",
    "Entrypoint": [
      "/entrypoint.sh"
    ],
    "OnBuild": null,
  },
}
```

i-07d0fbd09f3d14352 (tanmayvajj-ec2docker)

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Step 9: Enable traffic on the ports specified by the image

Edit inbound rules

Inbound rules control the incoming traffic that's allowed to reach the instance.

Inbound rules

Security group rule ID	Type	Protocol	Port range	Source	Description - optional	
sgr-0a5a180084aa671e4	HTTPS	TCP	443	Custom	<div><div></div><div>0.0.0.0/0</div><div></div></div>	Delete
sgr-0213d162e22c3f37e	SSH	TCP	22	Custom	<div><div></div><div>0.0.0.0/0</div><div></div></div>	Delete
sgr-0789daf78edae9f92	HTTP	TCP	80	Custom	<div><div></div><div>0.0.0.0/0</div><div></div></div>	Delete
-	Custom TCP	TCP	5000	Anyw...	<div><div></div><div>0.0.0.0/0</div><div></div></div>	Delete

Add rule

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Step 10: Start the registry container

Command:-

\$ docker run -p 5000:5000 -d registry

root@ip-172-31-14-224:/home/ubuntu# docker run -p 5000:5000 -d registry
3fbccc0d40e3c93e4b53b6fa87b2ec114865d94eb237a555b173fc2fb6c65cb6
root@ip-172-31-14-224:/home/ubuntu#

i-07d0fbd09f3d14352 (tanmayvaj-ec2docker)

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Step 11: Create a Dockerfile and write the following text in it

FROM node:21-alpine

WORKDIR /app

COPY ..

RUN npm install

CMD npm start

```
GNU nano 6.2 Dockerfile *
FROM ubuntu:latest
WORKDIR /app
RUN apt update -y
CMD ["echo", "Hello from tanmayvaij"]

Save modified buffer?
Y Yes
N No [N] Cancel

i-07d0fbd09f3d14352 (tanmayvaij-ec2docker)
PublicIPs: 13.201.81.215 PrivateIPs: 172.31.14.224
```

Step 12: Build image using the dockerfile

Command:-\$ docker build -t tanmayvaijimage .

```
root@ip-172-31-14-224:/home/ubuntu# docker build -t tanmayvaijimage .
[+] Building 13.2s (7/7) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 125B
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load metadata for docker.io/library/ubuntu:latest
=> [1/3] FROM docker.io/library/ubuntu:latest@sha256:f9d633ff6640178c2d0525017174a688e2c1aef28f0a0130b26bd5554491f0da
=> => resolve docker.io/library/ubuntu:latest@sha256:f9d633ff6640178c2d0525017174a688e2c1aef28f0a0130b26bd5554491f0da
=> => sha256:f9d633ff6640178c2d0525017174a688e2c1aef28f0a0130b26bd5554491f0da 1.13kB / 1.13kB
=> => sha256:81bba8d1dde7fc1883b6e95cd46d6c9f4874374f2b360c8db82620b33f6b5ca1 424B / 424B
=> => sha256:3db8720ecbf5f5927d409cc61f9b4f7ffe23283917caaa992f847c4d83338cc1 2.30kB / 2.30kB
=> => sha256:01007420e9b005dc14a8c8b0f996a2ad8e0d44af6c3d01e62f123be14fe48eec7 29.54MB / 29.54MB
=> => extracting sha256:01007420e9b005dc14a8c8b0f996a2ad8e0d44af6c3d01e62f123be14fe48eec7 1.9s
=> [2/3] WORKDIR /app
=> [3/3] RUN apt update -y
=> => exporting to image
=> => exporting layers
=> => writing image sha256:1bb18bcc46ede0clab80d5fc8cc0905febb54d7e766e565de27253e093525c81
=> => naming to docker.io/library/tanmayvaijimage
root@ip-172-31-14-224:/home/ubuntu# docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
tanmayvaijimage     latest         1bb18bcc46ed   24 seconds ago  126MB
registry            latest         a8781fe3b7a2   2 weeks ago    25.4MB
root@ip-172-31-14-224:/home/ubuntu#
```

Step 13: Add the prefix 'localhost:5000' to the created image

Command:-

```
$ docker tag tanmayvaiimage localhost:5000/tanmayvaiimage
```

```
root@ip-172-31-14-224:/home/ubuntu# docker tag tanmayvaiimage localhost:5000/tanmayvaiimage
root@ip-172-31-14-224:/home/ubuntu# docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
tanmayvaiimage	latest	1bb18bcc46ed	About a minute ago	126MB
localhost:5000/tanmayvaiimage	latest	1bb18bcc46ed	About a minute ago	126MB
registry	latest	a8781fe3b7a2	2 weeks ago	25.4MB

```
root@ip-172-31-14-224:/home/ubuntu#
```

i-07d0fbd09f3d14352 (tanmayvaij-ec2docker)

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Step 14: Push the image to the private registry

Command:-

```
$ docker push localhost:5000/tanmayvaiimage
```

```
root@ip-172-31-14-224:/home/ubuntu# docker push localhost:5000/tanmayvaiimage
Using default tag: latest
The push refers to repository [localhost:5000/tanmayvaiimage]
a349496e2bdc: Pushed
f441d3e921ee: Pushed
d101c9453715: Pushed
latest: digest: sha256:a21a9b6aee87ba6249b344cce9586bd17432a77cf23ee123af1625a79513a2bf size: 947
root@ip-172-31-14-224:/home/ubuntu#
```

i-07d0fbd09f3d14352 (tanmayvaij-ec2docker)

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Step 15: Remove all local images

Command:-

```
$ docker image rm -f <image_id>
```

```
root@ip-172-31-14-224:/home/ubuntu# docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
localhost:5000/tanmayvaijimage  latest             1bb18bcc46ed        2 minutes ago      126MB
tanmayvaijimage      latest             1bb18bcc46ed        2 minutes ago      126MB
registry             latest             a8781fe3b7a2        2 weeks ago        25.4MB
root@ip-172-31-14-224:/home/ubuntu# docker image rm -f 1bb18bcc46ed
Untagged: tanmayvaijimage:latest
Untagged: localhost:5000/tanmayvaijimage:latest
Untagged: localhost:5000/tanmayvaijimage@sha256:a21a9b6aee87ba6249b344cce9586bd17432a77cf23eel23af1625a79513a2bf
Deleted: sha256:1bb18bcc46ede0clab80d5fc8cc0905febb54d7e766e565de27253e093525c81
root@ip-172-31-14-224:/home/ubuntu# docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
registry             latest             a8781fe3b7a2        2 weeks ago        25.4MB
root@ip-172-31-14-224:/home/ubuntu#
```

i-07d0fbd09f3d14352 (tanmayvaij-ec2docker)

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Step 16: Pull and run image from the private registry

Command:-

```
$ docker run localhost:5000/tanmayvaijimage
```

```
root@ip-172-31-14-224:/home/ubuntu# docker run localhost:5000/tanmayvaijimage
Unable to find image 'localhost:5000/tanmayvaijimage:latest' locally
latest: Pulling from tanmayvaijimage
d66d6a6a3687: Already exists
4579b582c6f2: Already exists
6fd5613845d0: Already exists
Digest: sha256:a21a9b6aee87ba6249b344cce9586bd17432a77cf23eel23af1625a79513a2bf
Status: Downloaded newer image for localhost:5000/tanmayvaijimage:latest
Hello from tanmayvaij
root@ip-172-31-14-224:/home/ubuntu#
```

i-07d0fbd09f3d14352 (tanmayvaij-ec2docker)

PublicIPs: 13.201.81.215 PrivateIPs: 172.31.14.224

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