

Follow the steps in document and complete the assignment Note: complete the S3 endpoint assignment first and then start this assignment

Overview

Web server (nginx) - Public Instance

App server (Mattermost) - Private Instance

DB server(mysql) - Private Instance

(NOTE : In your private instance there won't be any access to the internet)

1. Download rpm packages using wget in your public instance

<http://dev.mysql.com/get/mysql57-community-release-el7-9.noarch.rpm>

https://dev.mysql.com/get/Downloads/MySQL-5.7/mysql-community-common-5.7.38-1.el7.x86_64.rpm

https://dev.mysql.com/get/Downloads/MySQL-5.7/mysql-community-libs-5.7.38-1.el7.x86_64.rpm

https://dev.mysql.com/get/Downloads/MySQL-5.7/mysql-community-client-5.7.38-1.el7.x86_64.rpm

https://dev.mysql.com/get/Downloads/MySQL-5.7/mysql-community-server-5.7.38-1.el7.x86_64.rpm

2. Use SCP protocol to copy the rpm packages into your private instance and then perform localinstall

Steps to Install my sql in a Private Instance

1. Login to one of your Private Instance

2. Execute the command `sudo yum erase mariadb-libs` (need to remove since it has some conflicts with mysql)

4. Run `sudo yum localinstall` "Provide the rpm file name of community release"

6. Run `sudo yum localinstall` "Provide the rpm file name community-common"

8. Run `sudo yum localinstall` "Provide the rpm file name community libs"

10. Run `sudo yum localinstall` "Provide the rpm file name community client "

12. Run `sudo yum localinstall` "Provide the rpm file name community server "

13. Follow from the step 4 from the mattermost software Installation doc and complete the my sql installation alone

14. Add an Inbound rule in the security group of your private Instance where sql is installed

Steps to Run Mattermost in your Private Instance

1. Login to another private Instance

2. Configure and Run the mattermost server using the mattermost software Installation doc

3. Add an Inbound rule in the security group of your private Instance

Steps to install nginx and configure mattermost in your Public Instance

1. Login to your public Instance

2. Follow the steps from the mattermost software Installation doc for Installing nginx and configuring nginx as a proxy for mattermost

3. Add an Inbound rule in the security group of public instance

You should now successfully launch mattermost server in any browser using your webserver url

`http://your_pub_ip`

Created 3 instances

1st → web-server-nginx → public instance

2nd → DB-server-mysql → private instance

3rd → app-server-mattermost → private instance

<input type="checkbox"/>	web-server-nginx	i-0bd055b6bab...	Running	t2.micro	2/2 checks px	No alarms +	ap-south-1a	-
<input type="checkbox"/>	DB-server-mysql	i-076d0591354...	Running	t2.micro	2/2 checks px	No alarms +	ap-south-1a	-
<input type="checkbox"/>	app-server-mattermost	i-0f566c3dbe7...	Running	t2.micro	2/2 checks px	No alarms +	ap-south-1a	-

Login into a public instance

```
C:\Users\Hp\Downloads>ssh -i "keypair1.pem" ec2-user@13.235.245.130
The authenticity of host '13.235.245.130 (13.235.245.130)' can't be established.
ED25519 key fingerprint is SHA256:gylWresg13Q5S5HtPZcjSqeKY0ai9LoLQQ8eFAar+Q.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '13.235.245.130' (ED25519) to the list of known hosts.
```

```
#_
~\##### Amazon Linux 2023
~~\#####|
~~\###|
~~\#/\_-- https://aws.amazon.com/linux/amazon-linux-2023
      V~! !->
~~~~
    ~~-+--+
        / \
       /m\!
```

Download mysql RPMs

```
[ec2-user@ip-10-0-1-159 ~]$ wget http://dev.mysql.com/get/mysql57-community-release-el7-9.noarch.rpm
--2023-11-11 04:54:41-- http://dev.mysql.com/get/mysql57-community-release-el7-9.noarch.rpm
Resolving dev.mysql.com (dev.mysql.com)... 23.47.234.151, 2600:140f:1e00:4b2::2e31, 2600:140f:1e00:486::2e31
Connecting to dev.mysql.com (dev.mysql.com)|23.47.234.151|:80... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: https://dev.mysql.com/get/mysql57-community-release-el7-9.noarch.rpm [following]
--2023-11-11 04:54:41-- https://dev.mysql.com/get/mysql57-community-release-el7-9.noarch.rpm
Connecting to dev.mysql.com (dev.mysql.com)|23.47.234.151|:443... connected.
HTTP request sent, awaiting response... 302 Moved Temporarily
Location: https://repo.mysql.com/mysql57-community-release-el7-9.noarch.rpm [following]
--2023-11-11 04:54:42-- https://repo.mysql.com/mysql57-community-release-el7-9.noarch.rpm
Resolving repo.mysql.com (repo.mysql.com)... 23.38.57.184, 2600:140f:4:d9a::1d68, 2600:140f:4:d93::1d68
Connecting to repo.mysql.com (repo.mysql.com)|23.38.57.184|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 9224 (9.0K) [application/x-redhat-package-manager]
Saving to: 'mysql57-community-release-el7-9.noarch.rpm'

mysql57-community-release-el7 100%[=====>] 9.01K --.-KB/s in 0s

2023-11-11 04:54:42 (215 MB/s) - 'mysql57-community-release-el7-9.noarch.rpm' saved [9224/9224]

[ec2-user@ip-10-0-1-159 ~]$ |
```

```
[ec2-user@ip-10-0-1-159 ~]$ wget https://dev.mysql.com/get/Downloads/MySQL-5.7/mysql-community-common-5.7.38-1.el7.x86_64.rpm
--2023-11-11 04:55:18-- https://dev.mysql.com/get/Downloads/MySQL-5.7/mysql-community-common-5.7.38-1.el7.x86_64.rpm
Resolving dev.mysql.com (dev.mysql.com)... 23.47.234.151, 2600:140f:1e00:486::2e31, 2600:140f:1e00:4b2::2e31
Connecting to dev.mysql.com (dev.mysql.com)|23.47.234.151|:443... connected.
HTTP request sent, awaiting response... 302 Moved Temporarily
Location: https://cdn.mysql.com/archives/mysql-5.7/mysql-community-common-5.7.38-1.el7.x86_64.rpm [following]
--2023-11-11 04:55:19-- https://cdn.mysql.com/archives/mysql-5.7/mysql-community-common-5.7.38-1.el7.x86_64.rpm
Resolving cdn.mysql.com (cdn.mysql.com)... 23.38.57.184, 2600:140f:1e00:4b2::1d68, 2600:140f:1e00:4aa::1d68
Connecting to cdn.mysql.com (cdn.mysql.com)|23.38.57.184|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 318868 (311K) [application/x-redhat-package-manager]
Saving to: 'mysql-community-common-5.7.38-1.el7.x86_64.rpm'

mysql-community-common-5.7.38 100%[=====>] 311.39K --.-KB/s in 0.004s

2023-11-11 04:55:19 (81.8 MB/s) - 'mysql-community-common-5.7.38-1.el7.x86_64.rpm' saved [318868/318868]

[ec2-user@ip-10-0-1-159 ~]$ |
```

```
[ec2-user@ip-10-0-1-159 ~]$ wget https://dev.mysql.com/get/Downloads/MySQL-5.7/mysql-community-libs-5.7.38-1.el7.x86_64.rpm
--2023-11-11 04:56:38-- https://dev.mysql.com/get/Downloads/MySQL-5.7/mysql-community-libs-5.7.38-1.el7.x86_64.rpm
Resolving dev.mysql.com (dev.mysql.com)... 23.47.234.151, 2600:140f:1e00:4b2::2e31, 2600:140f:1e00:4b2::2e31
Connecting to dev.mysql.com (dev.mysql.com)|23.47.234.151|:443... connected.
HTTP request sent, awaiting response... 302 Moved Temporarily
Location: https://cdn.mysql.com/archives/mysql-5.7/mysql-community-libs-5.7.38-1.el7.x86_64.rpm [following]
--2023-11-11 04:56:38-- https://cdn.mysql.com/archives/mysql-5.7/mysql-community-libs-5.7.38-1.el7.x86_64.rpm
Resolving cdn.mysql.com (cdn.mysql.com)... 23.38.57.184, 2600:140f:1e00:4b2::1d68, 2600:140f:1e00:4aa::1d68
Connecting to cdn.mysql.com (cdn.mysql.com)|23.38.57.184|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 2704332 (2.6M) [application/x-redhat-package-manager]
Saving to: 'mysql-community-libs-5.7.38-1.el7.x86_64.rpm'

mysql-community-libs-5.7.38-1 100%[=====] 2.58M --.-KB/s in 0.04s

2023-11-11 04:56:38 (68.3 MB/s) - 'mysql-community-libs-5.7.38-1.el7.x86_64.rpm' saved [2704332/2704332]

[ec2-user@ip-10-0-1-159 ~]$
```

```
[ec2-user@ip-10-0-1-159 ~]$ wget https://dev.mysql.com/get/Downloads/MySQL-5.7/mysql-community-client-5.7.38-1.el7.x86_64.rpm
--2023-11-11 04:57:14-- https://dev.mysql.com/get/Downloads/MySQL-5.7/mysql-community-client-5.7.38-1.el7.x86_64.rpm
Resolving dev.mysql.com (dev.mysql.com)... 23.47.234.151, 2600:140f:1e00:4b2::2e31, 2600:140f:1e00:4b2::2e31
Connecting to dev.mysql.com (dev.mysql.com)|23.47.234.151|:443... connected.
HTTP request sent, awaiting response... 302 Moved Temporarily
Location: https://cdn.mysql.com/archives/mysql-5.7/mysql-community-client-5.7.38-1.el7.x86_64.rpm [following]
--2023-11-11 04:57:14-- https://cdn.mysql.com/archives/mysql-5.7/mysql-community-client-5.7.38-1.el7.x86_64.rpm
Resolving cdn.mysql.com (cdn.mysql.com)... 23.38.57.184, 2600:140f:1e00:4b2::1d68, 2600:140f:1e00:4aa::1d68
Connecting to cdn.mysql.com (cdn.mysql.com)|23.38.57.184|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 28991900 (28M) [application/x-redhat-package-manager]
Saving to: 'mysql-community-client-5.7.38-1.el7.x86_64.rpm'

mysql-community-client-5.7.38 100%[=====] 27.65M 82.2MB/s in 0.3s

2023-11-11 04:57:15 (82.2 MB/s) - 'mysql-community-client-5.7.38-1.el7.x86_64.rpm' saved [28991900/28991900]

[ec2-user@ip-10-0-1-159 ~]$
```

```
[ec2-user@ip-10-0-1-159 ~]$ wget https://dev.mysql.com/get/Downloads/MySQL-5.7/mysql-community-server-5.7.38-1.el7.x86_64.rpm
--2023-11-11 04:57:55-- https://dev.mysql.com/get/Downloads/MySQL-5.7/mysql-community-server-5.7.38-1.el7.x86_64.rpm
Resolving dev.mysql.com (dev.mysql.com)... 23.47.234.151, 2600:140f:1e00:4b2::2e31, 2600:140f:1e00:4b2::2e31
Connecting to dev.mysql.com (dev.mysql.com)|23.47.234.151|:443... connected.
HTTP request sent, awaiting response... 302 Moved Temporarily
Location: https://cdn.mysql.com/archives/mysql-5.7/mysql-community-server-5.7.38-1.el7.x86_64.rpm [following]
--2023-11-11 04:57:55-- https://cdn.mysql.com/archives/mysql-5.7/mysql-community-server-5.7.38-1.el7.x86_64.rpm
Resolving cdn.mysql.com (cdn.mysql.com)... 23.38.57.184, 2600:140f:1e00:4b2::1d68, 2600:140f:1e00:4aa::1d68
Connecting to cdn.mysql.com (cdn.mysql.com)|23.38.57.184|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 186231736 (178M) [application/x-redhat-package-manager]
Saving to: 'mysql-community-server-5.7.38-1.el7.x86_64.rpm'

mysql-community-server-5.7.38 100%[=====] 177.60M 120MB/s in 1.5s

2023-11-11 04:57:57 (120 MB/s) - 'mysql-community-server-5.7.38-1.el7.x86_64.rpm' saved [186231736/186231736]

[ec2-user@ip-10-0-1-159 ~]$
```

Using scp I have copied them to private instance(DB-server-mysql)

```
[ec2-user@ip-10-0-1-159 ~]$ scp -i keypair1.pem mysql*.rpm ec2-user@10.0.4.246:~
mysql-community-client-5.7.38-1.el7.x86_64.rpm 100% 28MB 135.5MB/s 00:00
mysql-community-common-5.7.38-1.el7.x86_64.rpm 100% 311KB 96.6MB/s 00:00
mysql-community-libs-5.7.38-1.el7.x86_64.rpm 100% 2641KB 145.5MB/s 00:00
mysql-community-server-5.7.38-1.el7.x86_64.rpm 100% 178MB 125.8MB/s 00:01
mysql57-community-release-el7-9.noarch.rpm 100% 9224 12.1MB/s 00:00
[ec2-user@ip-10-0-1-159 ~]$
```

Login into DB-server-mysql instance

```
[ec2-user@ip-10-0-1-159 ~]$ ssh -i keypair1.pem ec2-user@10.0.4.246

#_
~\  ##### Amazon Linux 2023
NN \#####
NN  \#####
NN   \###|
NN    \#/  --> https://aws.amazon.com/linux/amazon-linux-2023
NN     V~'  ' ->
NNN
NN  .-.-.-.-.-
NN  /  /  /  /  /
NN  /m/'

Last login: Sat Nov 11 05:05:13 2023 from 10.0.1.159
[ec2-user@ip-10-0-4-246 ~]$
```

Install mysql

```
[ec2-user@ip-10-0-4-246 ~]$ sudo yum erase mariadb-libs
No match for argument: mariadb-libs
No packages marked for removal.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-10-0-4-246 ~]$ |
```

```
[ec2-user@ip-10-0-4-246 ~]$ sudo yum localinstall mysql57-community-release-el7-9.noarch.rpm
Last metadata expiration check: 0:20:03 ago on Sat Nov 11 04:50:04 2023.
Dependencies resolved.
```

```
Installed:
  mysql57-community-release-el7-9.noarch

Complete!
[ec2-user@ip-10-0-4-246 ~]$ |
```

```
[ec2-user@ip-10-0-4-246 ~]$ sudo yum localinstall mysql-community-common-5.7.38-1.el7.x86_64.rpm
MySQL Connectors Community [====] --- B/s | 0 B --:-- ETA
```

```
Installed:
  mysql-community-common-5.7.38-1.el7.x86_64

Complete!
[ec2-user@ip-10-0-4-246 ~]$ |
```

```
[ec2-user@ip-10-0-4-246 ~]$ sudo yum localinstall mysql-community-libs-5.7.38-1.el7.x86_64.rpm
MySQL Connectors Community [====] 0.0 B/s | 0 B 02:00
```

```
Installed:
  mysql-community-libs-5.7.38-1.el7.x86_64

Complete!
[ec2-user@ip-10-0-4-246 ~]$ |
```

```
Installed:
  mysql-community-client-5.7.38-1.el7.x86_64 ncurses-compat-libs-6.2-4.20200222.amzn2023.0.4.x86_64

Complete!
[ec2-user@ip-10-0-4-246 ~]$ |
```

```
[ec2-user@ip-10-0-4-246 ~]$ sudo yum localinstall mysql-community-server-5.7.38-1.el7.x86_64.rpm
MySQL Connectors Community [====] 0.0 B/s | 0 B 02:00
```

```
Installed:
  libxcrypt-compat-4.4.33-7.amzn2023.x86_64 mysql-community-server-5.7.38-1.el7.x86_64

Complete!
[ec2-user@ip-10-0-4-246 ~]$ |
```

Start the service

```
[ec2-user@ip-10-0-4-246 ~]$ sudo systemctl start mysqld.service
[ec2-user@ip-10-0-4-246 ~]$ |
```

View temporary password

```
[ec2-user@ip-10-0-4-246 ~]$ sudo grep 'temporary password' /var/log/mysqld.log
2023-11-11T05:46:06.626506Z 1 [Note] A temporary password is generated for root@localhost: ;JZUh?#7n:j+
[ec2-user@ip-10-0-4-246 ~]$ |
```

Login into mysql

```
[ec2-user@ip-10-0-4-246 ~]$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.7.38

Copyright (c) 2000, 2022, Oracle and/or its affiliates.

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> |
```

Change password

```
mysql> ALTER USER 'root'@'localhost' IDENTIFIED BY 'Jalikoppa@2002';
Query OK, 0 rows affected (0.00 sec)

mysql> |
```

Create mattermost user

```
mysql> CREATE USER 'mmuser'@'%' IDENTIFIED BY 'Jalikoppa@2002';
Query OK, 0 rows affected (0.01 sec)
```

Grant all privileges

```
mysql> GRANT ALL PRIVILEGES ON *.* TO 'mmuser'@'%';
Query OK, 0 rows affected (0.01 sec)

mysql> exit
Bye
[ec2-user@ip-10-0-4-246 ~]$ |
```

Enable the service

```
[ec2-user@ip-10-0-4-246 ~]$ sudo systemctl enable mysqld
[ec2-user@ip-10-0-4-246 ~]$ |
```

I have installed mattermost in public instance and copied it to app-server-mattermost instance using scp

```
Last login: Sat Nov 11 00:23:12 2023 from 10.0.1.1
[ec2-user@ip-10-0-4-211 ~]$ ls
mattermost
[ec2-user@ip-10-0-4-211 ~]$ |
```

Install nginx in public instance

```
Installed:
  generic-logos-httpd-1:8.0-12.amzn2023.0.3.noarch    gperftools-libs-2.9.1-1.amzn2023.0.2.x86_64    libumind-1.4.0-5.amzn2023.0.2.x86_64    nginx-1:1.24.0-1.amzn2023.0.2.x86_64
  nginx-core-1:1.24.0-1.amzn2023.0.2.x86_64          nginx-filesystem-1:1.24.0-1.amzn2023.0.2.noarch  nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch

Complete!
[ec2-user@ip-10-0-1-159 ~]$ |
```

Configure the mattermost

```

[ec2-user@ip-10-0-4-211 ~]$ sudo mv mattermost /opt
[ec2-user@ip-10-0-4-211 ~]$ sudo mkdir /opt/mattermost/data
[ec2-user@ip-10-0-4-211 ~]$ sudo groupadd mattermost

```

```

[ec2-user@ip-10-0-4-211 mattermost]$ sudo vi /opt/mattermost/config/config.json
[ec2-user@ip-10-0-4-211 mattermost]$ sudo -u mattermost ./bin/mattermost

```

Start mattermost

```

[ec2-user@ip-10-0-4-211 ~]$ sudo systemctl status mattermost
● mattermost.service - Mattermost
   Loaded: loaded (/etc/systemd/system/mattermost.service; enabled; preset: disabled)
   Active: active (running) since Sat 2023-11-11 12:59:14 UTC; 1min 46s ago
     Main PID: 3952 (mattermost)
        Tasks: 4 (limit: 1114)
       Memory: 55.9M
          CPU: 407ms
      CGroup: /system.slice/mattermost.service
              └─3952 /opt/mattermost/bin/mattermost

```

We need to access using public ip

The screenshot shows the AWS Management Console. At the top, there's a table of instances. The instance 'web-server-nginx' is selected. Below the table, the details of this instance are shown, including its public IPv4 address, which is circled in red.

Name	Instance ID	Status	Instance Type	Status Check	Alarm Status	Availability Zone	Public IPv4 DNS
public-instance	i-0835fa1cc2ff...	Stopped	t2.micro	-	No alarms	ap-south-1a	-
private-instance	i-0632cc27053...	Stopped	t2.micro	-	No alarms	ap-south-1a	-
web-server-nginx	i-0bd055b6bab0faf6e	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a	-
DB-server-mysql	i-076d0591354...	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a	-
app-server-mattermost	i-0f566c3dbe7...	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a	-

Instance: i-0bd055b6bab0faf6e (web-server-nginx)

Details | Security | Networking | Storage | Status checks | Monitoring | Tags

Instance summary

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0bd055b6bab0faf6e (web-server-nginx)	3.110.179.107 open address	10.0.1.159
IPv6 address	Instance state	Public IPv4 DNS
-	Running	-

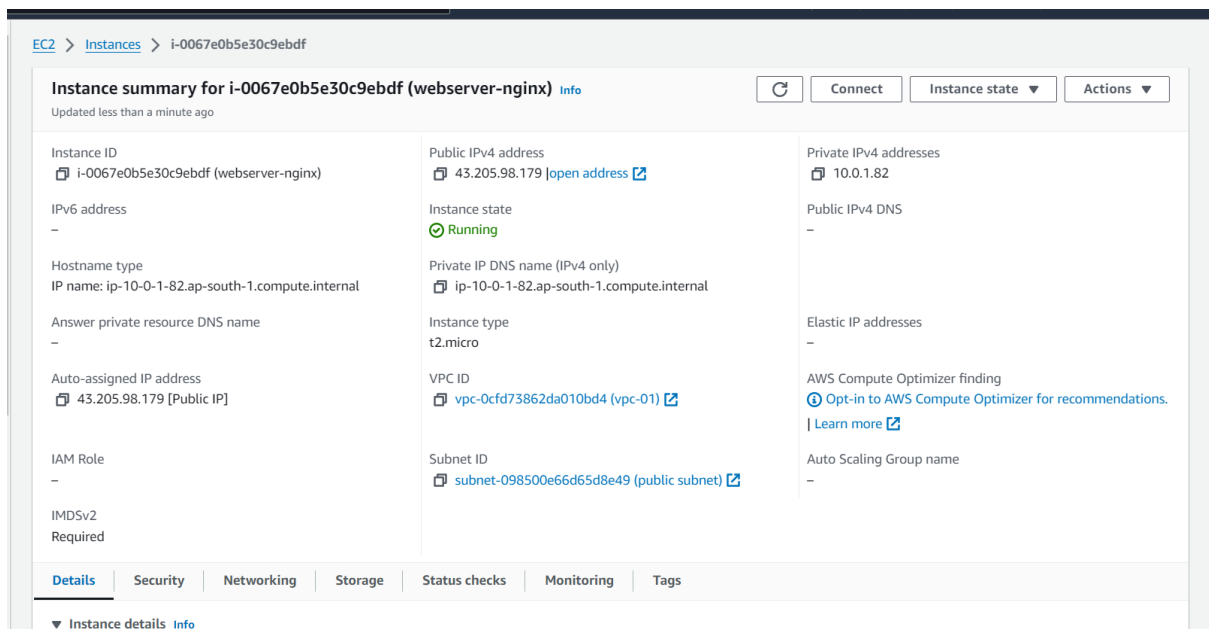
Type ip in browser



I got confusion in the inbound rules before I have corrected and done the below assignment

Continuing the assignment that is asked to be resubmitted

Every time we reboot the instance the ip gets changed
currently my public ip is 43.205.98.179



Type ip in url you will be able to access the mattermost page

Mattermost

← → ↻ Not secure | 43.205.98.179/signup_email

Mattermost

All team communication in one place,
searchable and accessible anywhere

Let's create your account

Already have an account? [Click here to sign in.](#)

What's your email address?

Valid email required for sign-up

Choose your username

You can use lowercase letters, numbers, periods, dashes, and underscores.

Choose your password

[Create Account](#)

By proceeding to create your account and use Mattermost, you agree to our [Terms of Use](#) and [Privacy Policy](#). If you do

Town Square - Gradio: Mattermost

← → ↻ Not secure | 43.205.98.179/gradio/channels/town-square

Preview Mode: Email notifications have not been configured.

Channels

Gradio

Town Square

1 | Add a channel header

Welcome to Mattermost

Let's get up and running.

[▶ Watch overview](#)

- ▶ Take a tour of channels
- ▶ Invite team members to the workspace
- ▶ Download the Desktop and Mobile Apps
- ▶ Complete your profile
- ▶ Visit the System Console to configure your workspace
- ▶ Learn more about Enterprise-level high-security features

[No thanks, I'll figure it out myself](#)

g of Town Square

an Square!

ere that you want everyone to see. Everyone automatically becomes a permanent member of this channel when they join the team.

[Set a Header](#)

Let's add some people to the workspace!

[Invite others to the workspace](#)

Today

2:17 AM

ed the team.

Write to town-square

Help



@divyaj



Set a Custom Status



Online



Away



Do Not Disturb



Disables all notifications



Offline



Profile



Log Out