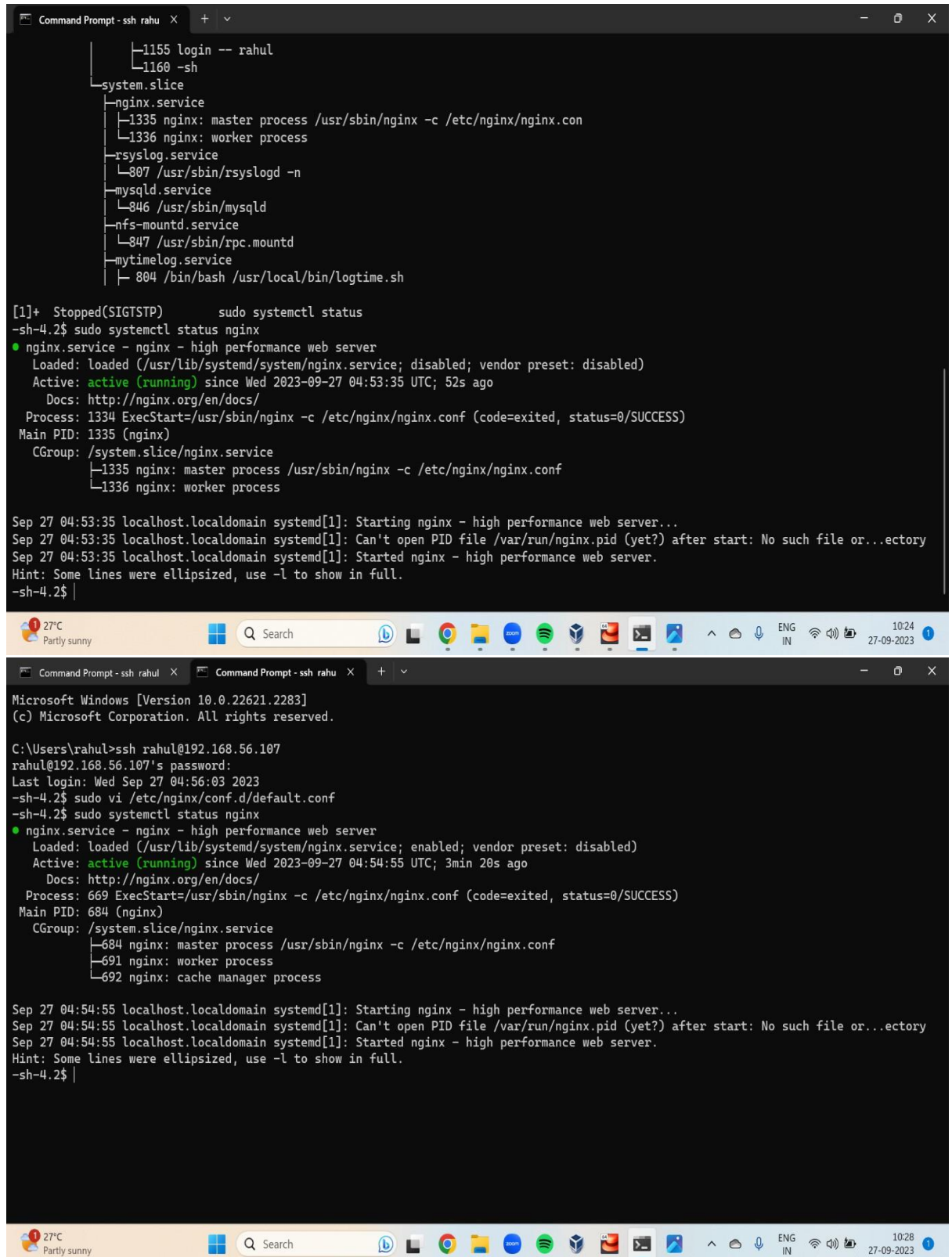


Load Balancer

1. Have two virtual Box machines. Lets say VM1 and VM2
2. Run Nginx on 80 port in both the machines



The image displays two terminal windows from a Windows environment, connected via SSH to a Linux machine. The top window shows the system's service status for Nginx, which is active and running. The bottom window shows the user editing the Nginx configuration file and then checking the service status again, which remains active and running.

```
Command Prompt - ssh rahu x + v
├─1155 login -- rahul
├─1160 -sh
└─system.slice
    ├─nginx.service
    │   ├─1335 nginx: master process /usr/sbin/nginx -c /etc/nginx/nginx.conf
    │   └─1336 nginx: worker process
    ├─rsyslog.service
    │   └─807 /usr/sbin/rsyslogd -n
    ├─mysqld.service
    │   └─846 /usr/sbin/mysqld
    ├─nfs-mountd.service
    │   └─847 /usr/sbin/rpc.mountd
    └─mytimelog.service
        └─804 /bin/bash /usr/local/bin/logtime.sh

[1]+  Stopped(SIGTSTP)      sudo systemctl status
-sh-4.2$ sudo systemctl status nginx
● nginx.service - nginx - high performance web server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; disabled; vendor preset: disabled)
   Active: active (running) since Wed 2023-09-27 04:53:35 UTC; 52s ago
     Docs: http://nginx.org/en/docs/
   Process: 1334 ExecStart=/usr/sbin/nginx -c /etc/nginx/nginx.conf (code=exited, status=0/SUCCESS)
   Main PID: 1335 (nginx)
   CGroup: /system.slice/nginx.service
           └─1335 nginx: master process /usr/sbin/nginx -c /etc/nginx/nginx.conf
             └─1336 nginx: worker process

Sep 27 04:53:35 localhost.localdomain systemd[1]: Starting nginx - high performance web server...
Sep 27 04:53:35 localhost.localdomain systemd[1]: Can't open PID file /var/run/nginx.pid (yet?) after start: No such file or...ectory
Sep 27 04:53:35 localhost.localdomain systemd[1]: Started nginx - high performance web server.
Hint: Some lines were ellipsized, use -l to show in full.
-sh-4.2$ |

Microsoft Windows [Version 10.0.22621.2283]
(c) Microsoft Corporation. All rights reserved.

C:\Users\rahul>ssh rahul@192.168.56.107
rahul@192.168.56.107's password:
Last login: Wed Sep 27 04:56:03 2023
-sh-4.2$ sudo vi /etc/nginx/conf.d/default.conf
-sh-4.2$ sudo systemctl status nginx
● nginx.service - nginx - high performance web server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; vendor preset: disabled)
   Active: active (running) since Wed 2023-09-27 04:54:55 UTC; 3min 20s ago
     Docs: http://nginx.org/en/docs/
   Process: 669 ExecStart=/usr/sbin/nginx -c /etc/nginx/nginx.conf (code=exited, status=0/SUCCESS)
   Main PID: 684 (nginx)
   CGroup: /system.slice/nginx.service
           └─684 nginx: master process /usr/sbin/nginx -c /etc/nginx/nginx.conf
             └─691 nginx: worker process
               └─692 nginx: cache manager process

Sep 27 04:54:55 localhost.localdomain systemd[1]: Starting nginx - high performance web server...
Sep 27 04:54:55 localhost.localdomain systemd[1]: Can't open PID file /var/run/nginx.pid (yet?) after start: No such file or...ectory
Sep 27 04:54:55 localhost.localdomain systemd[1]: Started nginx - high performance web server.
Hint: Some lines were ellipsized, use -l to show in full.
-sh-4.2$ |
```

3. Run Mattermost on 8065 port in both the machines

```
Command Prompt - ssh rahu X + v
Microsoft Windows [Version 10.0.22621.2361]
(c) Microsoft Corporation. All rights reserved.

C:\Users\rahu>ssh rahu@192.168.56.101
rahu@192.168.56.101's password:
Last login: Thu Sep 28 07:23:45 2023
-sh-4.2$ sudo systemctl status mattermost
● mattermost.service - Mattermost
   Loaded: loaded (/etc/systemd/system/mattermost.service; enabled; vendor preset: disabled)
   Active: active (running) since Thu 2023-09-28 07:23:37 UTC; 45s ago
   Main PID: 804 (mattermost)
   CGroup: /system.slice/mattermost.service
           └─ 804 /opt/mattermost/bin/mattermost
              └─ 1108 plugins/com.mattermost.plugin-channel-export/server/dist/plugin-linux-amd64
                 └─ 1113 plugins/com.mattermost.nps/server/dist/plugin-linux-amd64
                    └─ 1118 plugins/com.mattermost.apps/server/dist/plugin-linux-amd64
                       └─ 1123 plugins/playbooks/server/dist/plugin-linux-amd64
                          └─ 1128 plugins/focalboard/server/dist/plugin-linux-amd64

Sep 28 07:23:37 localhost.localdomain mattermost[804]: {"timestamp":"2023-09-28 07:23:37.265 Z","level":"info","msg":"Plugin ...pps"}
Sep 28 07:23:37 localhost.localdomain mattermost[804]: {"timestamp":"2023-09-28 07:23:37.482 Z","level":"info","msg":"Initial...ons"}
Sep 28 07:23:37 localhost.localdomain mattermost[804]: {"timestamp":"2023-09-28 07:23:37.485 Z","level":"info","msg":"Initial...ons"}
Sep 28 07:23:37 localhost.localdomain mattermost[804]: {"timestamp":"2023-09-28 07:23:37.487 Z","level":"info","msg":"Initial...ger"}
Sep 28 07:23:37 localhost.localdomain mattermost[804]: {"timestamp":"2023-09-28 07:23:37.513 Z","level":"info","msg":"Server...ard"}
Sep 28 07:23:37 localhost.localdomain mattermost[804]: {"timestamp":"2023-09-28 07:23:37.569 Z","level":"error","msg":"Mail s...rue"}
Sep 28 07:23:37 localhost.localdomain mattermost[804]: {"timestamp":"2023-09-28 07:23:37.576 Z","level":"info","msg":"Startin...209"}
Sep 28 07:23:37 localhost.localdomain systemd[1]: Started Mattermost.
Sep 28 07:23:37 localhost.localdomain mattermost[804]: {"timestamp":"2023-09-28 07:23:37.585 Z","level":"info","msg":"Server ...065"}
Sep 28 07:23:37 localhost.localdomain mattermost[804]: {"timestamp":"2023-09-28 07:23:37.586 Z","level":"info","msg":"Sending...130"}
Hint: Some lines were ellipsized, use -l to show in full.
-sh-4.2$
```

```
Command Prompt - ssh rahu X + v
(c) Microsoft Corporation. All rights reserved.

C:\Users\rahu>ssh rahu@192.168.56.107
rahu@192.168.56.107's password:
Last login: Thu Sep 28 07:10:46 2023
-sh-4.2$ sudo vi /opt/mattermost/config/config.json
-sh-4.2$ sudo systemctl restart mattermost
-sh-4.2$ sudo systemctl status mattermost
● mattermost.service - Mattermost
   Loaded: loaded (/etc/systemd/system/mattermost.service; enabled; vendor preset: disabled)
   Active: active (running) since Thu 2023-09-28 07:12:24 UTC; 40s ago
   Main PID: 1025 (mattermost)
   CGroup: /system.slice/mattermost.service
           └─ 1025 /opt/mattermost/bin/mattermost
              └─ 1064 plugins/com.mattermost.apps/server/dist/plugin-linux-amd64
                 └─ 1067 plugins/com.mattermost.nps/server/dist/plugin-linux-amd64
                    └─ 1074 plugins/com.mattermost.plugin-channel-export/server/dist/plugin-linux-amd64
                       └─ 1079 plugins/playbooks/server/dist/plugin-linux-amd64
                          └─ 1085 plugins/focalboard/server/dist/plugin-linux-amd64

Sep 28 07:12:24 localhost.localdomain mattermost[1025]: {"timestamp":"2023-09-28 07:12:24.015 Z","level":"info","msg":"Plugin...pps"}
Sep 28 07:12:24 localhost.localdomain mattermost[1025]: {"timestamp":"2023-09-28 07:12:24.378 Z","level":"info","msg":"Initia...ons"}
Sep 28 07:12:24 localhost.localdomain mattermost[1025]: {"timestamp":"2023-09-28 07:12:24.386 Z","level":"info","msg":"Initia...ons"}
Sep 28 07:12:24 localhost.localdomain mattermost[1025]: {"timestamp":"2023-09-28 07:12:24.387 Z","level":"info","msg":"Initia...ger"}
Sep 28 07:12:24 localhost.localdomain mattermost[1025]: {"timestamp":"2023-09-28 07:12:24.420 Z","level":"info","msg":"Server...ard"}
Sep 28 07:12:24 localhost.localdomain mattermost[1025]: {"timestamp":"2023-09-28 07:12:24.472 Z","level":"error","msg":"Mail ...rue"}
Sep 28 07:12:24 localhost.localdomain mattermost[1025]: {"timestamp":"2023-09-28 07:12:24.478 Z","level":"info","msg":"Starti...209"}
Sep 28 07:12:24 localhost.localdomain mattermost[1025]: {"timestamp":"2023-09-28 07:12:24.493 Z","level":"info","msg":"Server...065"}
Sep 28 07:12:24 localhost.localdomain mattermost[1025]: {"timestamp":"2023-09-28 07:12:24.493 Z","level":"info","msg":"Sendin...130"}
Sep 28 07:12:24 localhost.localdomain systemd[1]: Started Mattermost.
Hint: Some lines were ellipsized, use -l to show in full.
-sh-4.2$
```

4. Run MySql only in first machine (VM1)

```

Command Prompt - ssh rahu X  Command Prompt - ssh rahul X  +  +  +
le-web-app-title" content="Mattermost" /><meta name="apple-mobile-web-app-capable" content="yes" /><meta name="apple-mobile-web-app-s
tatus-bar-style" content="default" /><link rel="apple-touch-icon" sizes="76x76" href="/static/icon_76x76.png" /><link rel="apple-touc
h-icon" sizes="72x72" href="/static/icon_72x72.png" /><link rel="apple-touch-icon" sizes="60x60" href="/static/icon_60x60.png" /><lin
k rel="apple-touch-icon" sizes="57x57" href="/static/icon_57x57.png" /><link rel="apple-touch-icon" sizes="152x152" href="/static/ico
n_152x152.png" /><link rel="apple-touch-icon" sizes="144x144" href="/static/icon_144x144.png" /><link rel="apple-touch-icon" sizes="1
20x120" href="/static/icon_120x120.png" /><link rel="manifest" href="/static/manifest.json" /></head><body class="font--open_sans ena
ble-animations"><div id="root"><div class="error-screen"><h2>Cannot connect to Mattermost</h2><hr/><p>We're having trouble connecting
to Mattermost. If refreshing this page (Ctrl+R or Command+R) does not work, please verify that your computer is connected to the int
ernet.</p></div><div class="loading-screen" style="position:relative"><div class="loading_content"><div class="round round-1"><
/div><div class="round round-2"></div><div class="round round-3"></div></div></div></div><div id="root-portal"></div></noscript>To use
Mattermost, please enable JavaScript.</noscript></body></html>-sh-4.2$ cd
-sh-4.2$ ls
mmcert.pem mm.pem
-sh-4.2$ ls -l
total 8
-rw-r--r--. 1 root root 1220 Sep  7 21:23 mmcert.pem
-rw-r--r--. 1 root root 1704 Sep  7 21:23 mm.pem
-sh-4.2$ sudo systemctl start mysqld
-sh-4.2$ sudo systemctl status mysqld
● mysqld.service - MySQL Server
   Loaded: loaded (/usr/lib/systemd/system/mysqld.service; enabled; vendor preset: disabled)
   Active: active (running) since Wed 2023-09-27 04:42:50 UTC; 1h 27min ago
     Docs: man:mysqld(8)
           http://dev.mysql.com/doc/refman/en/using-systemd.html
   Main PID: 846 (mysqld)
   Status: "Server is operational"
   CGroup: /system.slice/mysqld.service
           └─846 /usr/sbin/mysqld

Sep 27 04:42:45 localhost.localdomain systemd[1]: Starting MySQL Server...
Sep 27 04:42:50 localhost.localdomain systemd[1]: Started MySQL Server.
-sh-4.2$ |

```

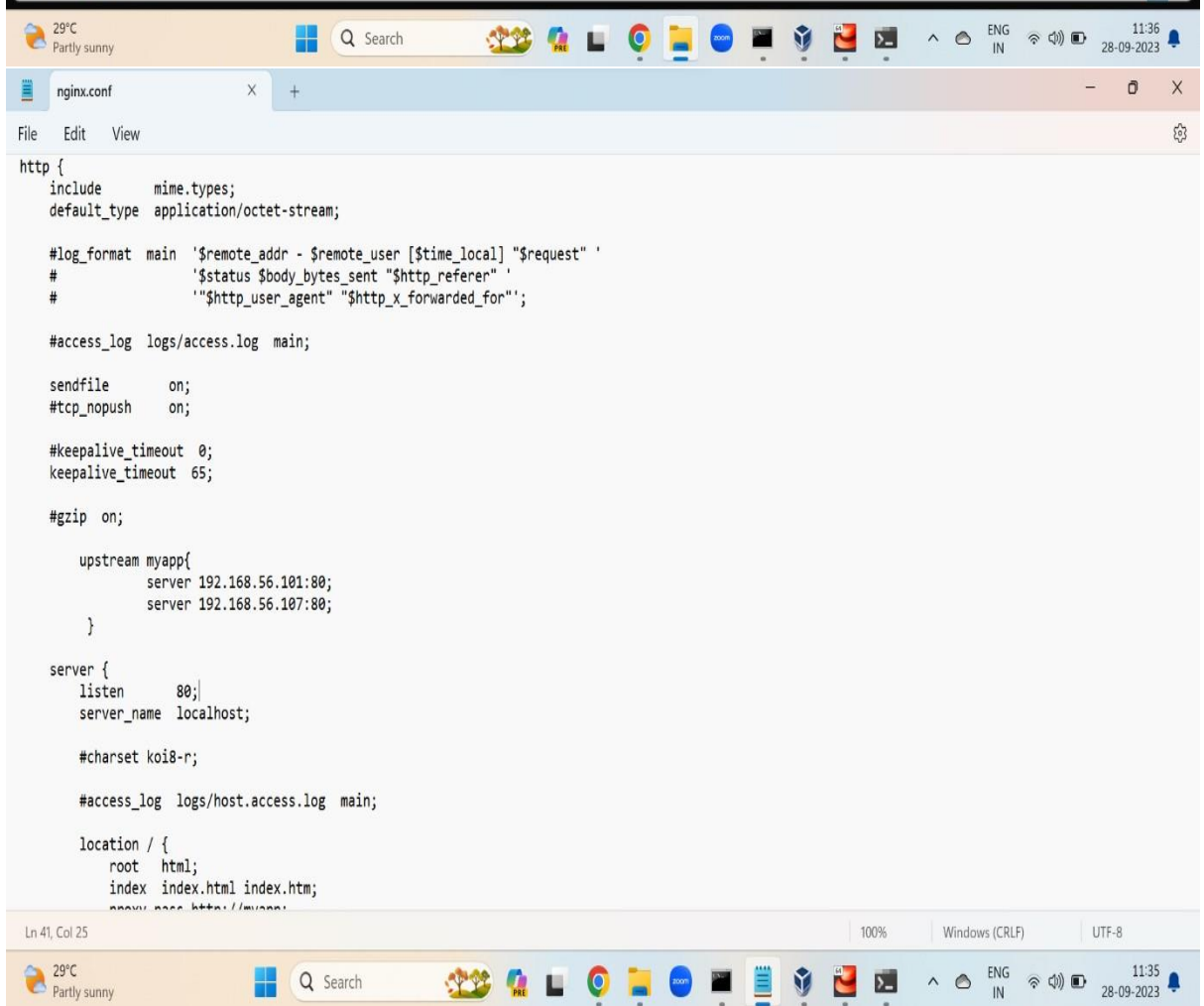
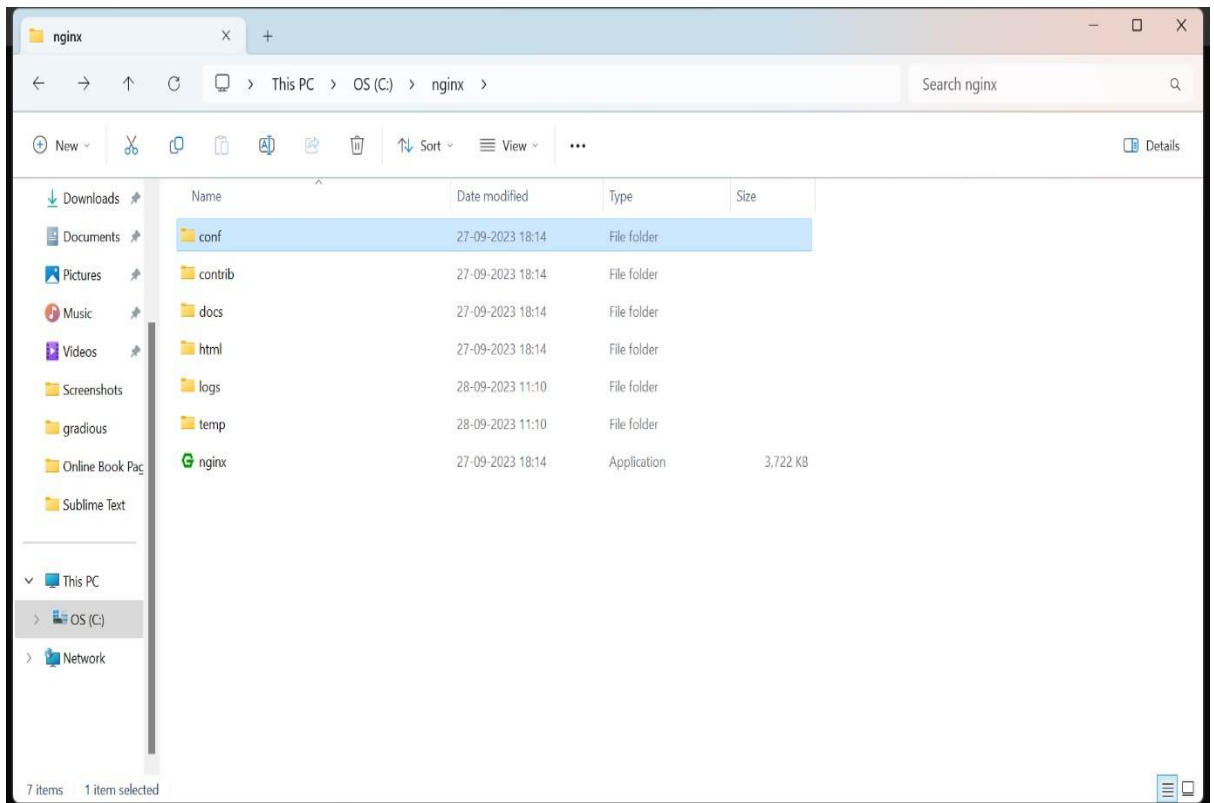
5. Change Mattermost config in VM2 to point to VM1 MySQL

```

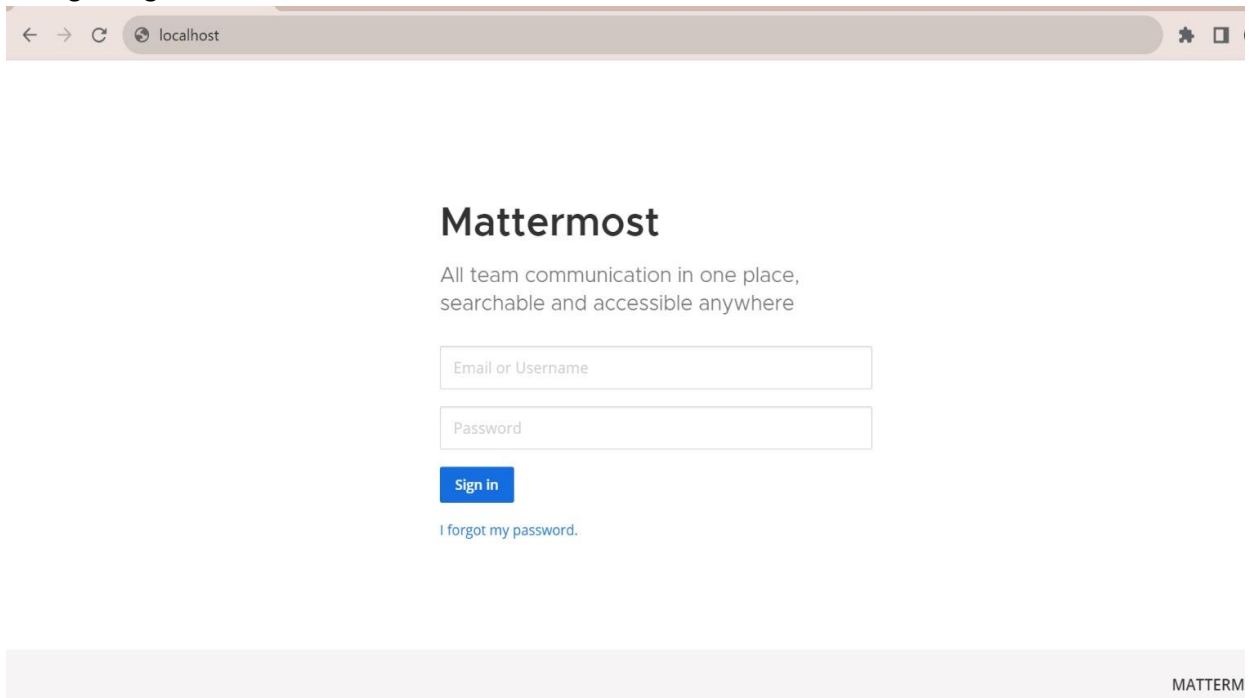
"CustomBrandText": "",
"CustomDescriptionText": "",
"RestrictDirectMessage": "any",
"UserStatusAwayTimeout": 300,
"MaxChannelsPerTeam": 2000,
"MaxNotificationsPerChannel": 1000,
"EnableConfirmNotificationsToChannel": true,
"TeammateNameDisplay": "username",
"ExperimentalViewArchivedChannels": true,
"ExperimentalEnableAutomaticReplies": false,
"LockTeammateNameDisplay": false,
"ExperimentalPrimaryTeam": "",
"ExperimentalDefaultChannels": []
},
"ClientRequirements": {
  "AndroidLatestVersion": "",
  "AndroidMinVersion": "",
  "IosLatestVersion": "",
  "IosMinVersion": ""
},
"SqlSettings": {
  "DriverName": "mysql",
  "DataSource": "mmuser:RahulKumar@17@tcp(192.168.56.101:3306)/mattermost?charset=utf8mb4,utf8\u0026writeTimeout=30s",
  "DataSourceReplicas": [],
  "DataSourceSearchReplicas": [],
  "MaxIdleConns": 20,
  "ConnMaxLifetimeMilliseconds": 3600000,
  "ConnMaxIdleTimeMilliseconds": 300000,
  "MaxOpenConns": 300,
  "Trace": false,
  "AtRestEncryptKey": "5sior36in8ejmfhnk77jtgh7sewewujr",

```

6. Install nginx server in your windows and add proxy config to point to both VM1 and VM2 NGINX



7. Configure nginx file run localhost url in browser



The screenshot shows a web browser window with the address bar displaying 'localhost'. The page content includes the Mattermost logo, a tagline, and a login form with fields for 'Email or Username' and 'Password', a 'Sign in' button, and a link for 'I forgot my password.'.

← → ↻ localhost

Mattermost

All team communication in one place,
searchable and accessible anywhere

[Sign in](#)

[I forgot my password.](#)

MATTERM