

# Setting up your Mattermost

March 13, 2018

## 1 Setting up your Mattermost machine(s)

### 1.1 Create Containers

You'll need to create these one at a time.

```
sudo lxc-create -n mattermost -t ubuntu
sudo lxc-create -n matterweb -t ubuntu
sudo lxc-create -n matterdb -t ubuntu
```

```
In [1]: pwd
```

```
/home/vagrant/rdf/ais/hands-on-ansible
```

```
In [2]: sudo lxc-create -n mattermost -t ubuntu
        sudo lxc-create -n matterweb -t ubuntu
        sudo lxc-create -n matterdb -t ubuntu
```

```
Checking cache download in /var/cache/lxc/xenial/rootfs-amd64 ...
Copy /var/cache/lxc/xenial/rootfs-amd64 to /var/lib/lxc/mattermost/rootfs ...
Copying rootfs to /var/lib/lxc/mattermost/rootfs ...
Generating locales (this might take a while)...
  de_DE.UTF-8... done
Generation complete.
debconf: kann Oberfläche nicht initialisieren: Dialog
debconf: (Die Dialog-Oberfläche funktioniert nicht auf einem Dumb-Terminal, einem Emacs-Shellbuf
debconf: greife zurück auf die Oberfläche: Readline
debconf: kann Oberfläche nicht initialisieren: Readline
debconf: (Can't locate Term/ReadLine.pm in @INC (you may need to install the Term::ReadLine modu
debconf: greife zurück auf die Oberfläche: Teletype
Creating SSH2 RSA key; this may take some time ...
2048 SHA256:l8UdmYqAlbQaT0bt5Tl+7a9XEnrmNVnAC590oHNkM5c root@rdf-dev (RSA)
Creating SSH2 DSA key; this may take some time ...
1024 SHA256:ylMzZ7BXS Kud6qjgIVY9tA15dDixPMIdAeQY4z+hByg root@rdf-dev (DSA)
Creating SSH2 ECDSA key; this may take some time ...
256 SHA256:d9uyiffQjn3dW6SZU7xNnGaUMwMk9KRWzLU1USrcXc4 root@rdf-dev (ECDSA)
Creating SSH2 ED25519 key; this may take some time ...
```

```
256 SHA256:PF39qfkWr4HdnF/+7ikqSZS0Fc2MvUU/xKo2rnfGhjk root@rdf-dev (ED25519)
invoke-rc.d: could not determine current runlevel
invoke-rc.d: policy-rc.d denied execution of start.
```

```
Current default time zone: 'Etc/UTC'
Local time is now:      Tue Mar 13 12:47:01 UTC 2018.
Universal Time is now:  Tue Mar 13 12:47:01 UTC 2018.
```

```
##
# The default user is 'ubuntu' with password 'ubuntu'!
# Use the 'sudo' command to run tasks as root in the container.
##
```

```
Checking cache download in /var/cache/lxc/xenial/rootfs-amd64 ...
Copy /var/cache/lxc/xenial/rootfs-amd64 to /var/lib/lxc/matterweb/rootfs ...
Copying rootfs to /var/lib/lxc/matterweb/rootfs ...
Generating locales (this might take a while)...
  de_DE.UTF-8... done
Generation complete.
debconf: kann Oberfläche nicht initialisieren: Dialog
debconf: (Die Dialog-Oberfläche funktioniert nicht auf einem Dumb-Terminal, einem Emacs-Shellbuf
debconf: greife zurück auf die Oberfläche: Readline
debconf: kann Oberfläche nicht initialisieren: Readline
debconf: (Can't locate Term/ReadLine.pm in @INC (you may need to install the Term::ReadLine modu
debconf: greife zurück auf die Oberfläche: Teletype
Creating SSH2 RSA key; this may take some time ...
2048 SHA256:Tsz01xVAHUtZNF3DKfv051NYcxYh+djfd2zjPlrKG/w root@rdf-dev (RSA)
Creating SSH2 DSA key; this may take some time ...
1024 SHA256:yJP6vZ8WIOjQwA89sIOpvxoRX32XRB0iY7VzE5C7tIY root@rdf-dev (DSA)
Creating SSH2 ECDSA key; this may take some time ...
256 SHA256:EnBJ/Ds5zb5aoJP2EU6p0E+iF10P1Qf8zVoMpvb5qTM root@rdf-dev (ECDSA)
Creating SSH2 ED25519 key; this may take some time ...
256 SHA256:z2Fvwrry03/BaMYQX+H7c2Ptlv1VoPWeDv2Q943gMXs root@rdf-dev (ED25519)
invoke-rc.d: could not determine current runlevel
invoke-rc.d: policy-rc.d denied execution of start.
```

```
Current default time zone: 'Etc/UTC'
Local time is now:      Tue Mar 13 12:48:00 UTC 2018.
Universal Time is now:  Tue Mar 13 12:48:00 UTC 2018.
```

```
##
# The default user is 'ubuntu' with password 'ubuntu'!
# Use the 'sudo' command to run tasks as root in the container.
##
```

```
Checking cache download in /var/cache/lxc/xenial/rootfs-amd64 ...
```

```

Copy /var/cache/lxc/xenial/rootfs-amd64 to /var/lib/lxc/matterdb/rootfs ...
Copying rootfs to /var/lib/lxc/matterdb/rootfs ...
Generating locales (this might take a while)...
  de_DE.UTF-8... done
Generation complete.
debconf: kann Oberfläche nicht initialisieren: Dialog
debconf: (Die Dialog-Oberfläche funktioniert nicht auf einem Dumb-Terminal, einem Emacs-Shellbuf
debconf: greife zurück auf die Oberfläche: Readline
debconf: kann Oberfläche nicht initialisieren: Readline
debconf: (Can't locate Term/ReadLine.pm in @INC (you may need to install the Term::ReadLine modu
debconf: greife zurück auf die Oberfläche: Teletype
Creating SSH2 RSA key; this may take some time ...
2048 SHA256:2AvL8aM7VG8WBVgCQa+fyoLntVkOp200J7Tf0gcoCEc root@rdf-dev (RSA)
Creating SSH2 DSA key; this may take some time ...
1024 SHA256:lCLRL+GCLcmLEbkPXB29THCT2L2b/jeifJhP3A3VPMM root@rdf-dev (DSA)
Creating SSH2 ECDSA key; this may take some time ...
256 SHA256:3oHuRJ02/1vLfFdu+dRjsbM5yvK26bLm4Ehto2QdH+0 root@rdf-dev (ECDSA)
Creating SSH2 ED25519 key; this may take some time ...
256 SHA256:Rx/2GDVT/cDDlRjr46npZzmJdgj1ToOQNPCqJDRnf4E root@rdf-dev (ED25519)
invoke-rc.d: could not determine current runlevel
invoke-rc.d: policy-rc.d denied execution of start.

Current default time zone: 'Etc/UTC'
Local time is now:      Tue Mar 13 12:48:58 UTC 2018.
Universal Time is now:  Tue Mar 13 12:48:58 UTC 2018.

##
# The default user is 'ubuntu' with password 'ubuntu'!
# Use the 'sudo' command to run tasks as root in the container.
##

```

### 1.1.1 Start the Containers

```

sudo lxc-start -n mattermost
sudo lxc-start -n matterweb
sudo lxc-start -n matterdb
sleep 15
sudo lxc-ls -f

```

```

In [3]: sudo lxc-start -n mattermost
        sudo lxc-start -n matterweb
        sudo lxc-start -n matterdb
        sleep 15
        sudo lxc-ls -f

```

NAME	STATE	AUTOSTART	GROUPS	IPV4	IPV6
------	-------	-----------	--------	------	------

```
matterdb    RUNNING 0          -      10.0.3.237 -
mattermost  RUNNING 0          -      10.0.3.207 -
matterweb   RUNNING 0          -      10.0.3.209 -
```

In [4]: `sudo lxc-ls -f`

The configuration file contains legacy configuration keys.  
Please update your configuration file!

The configuration file contains legacy configuration keys.  
Please update your configuration file!

The configuration file contains legacy configuration keys.  
Please update your configuration file!

NAME	STATE	AUTOSTART	GROUPS	IPV4	IPV6
bsa-bashy	STOPPED	0	-	-	-
bsa-testing	STOPPED	0	-	-	-
lvm_container	STOPPED	0	-	-	-
matterdb	RUNNING	0	-	10.0.3.172	-
mattermost	RUNNING	0	-	10.0.3.207	-
matterweb	RUNNING	0	-	10.0.3.194	-

## 1.2 Prep machines

You may have to ssh to each host first, if the ansible 2.2 regression is not fixed yet. Just add each host to your known\_hosts by typing 'yes' and you'll be ready to go. Ansible version that have this bug fixed will not have to do this step first, and can directly run the commands below.

```
cd /home/dave/code/hands-on-ansible/02-playbooks/00-simple-playbook-examples
vim inv
ansible-playbook prepare_ansible_target.yml -k --ask-sudo-pass -i inv
```

```
In [5]: MATTER_LXC=$(sudo lxc-ls --filter=matter --fancy --fancy-format IPV4 | grep -v IPV4)
        for i in $MATTER_LXC
        do
            ssh-keygen -R $i
            ssh-keyscan $i >> ~/.ssh/known_hosts
        done
```

```
do_known_hosts: hostkeys_foreach failed: No such file or directory
# 10.0.3.237:22 SSH-2.0-OpenSSH_7.2p2 Ubuntu-4ubuntu2.4
# 10.0.3.237:22 SSH-2.0-OpenSSH_7.2p2 Ubuntu-4ubuntu2.4
# 10.0.3.237:22 SSH-2.0-OpenSSH_7.2p2 Ubuntu-4ubuntu2.4
Host 10.0.3.207 not found in /home/vagrant/.ssh/known_hosts
# 10.0.3.207:22 SSH-2.0-OpenSSH_7.2p2 Ubuntu-4ubuntu2.4
# 10.0.3.207:22 SSH-2.0-OpenSSH_7.2p2 Ubuntu-4ubuntu2.4
# 10.0.3.207:22 SSH-2.0-OpenSSH_7.2p2 Ubuntu-4ubuntu2.4
Host 10.0.3.209 not found in /home/vagrant/.ssh/known_hosts
# 10.0.3.209:22 SSH-2.0-OpenSSH_7.2p2 Ubuntu-4ubuntu2.4
```

```
# 10.0.3.209:22 SSH-2.0-OpenSSH_7.2p2 Ubuntu-4ubuntu2.4
# 10.0.3.209:22 SSH-2.0-OpenSSH_7.2p2 Ubuntu-4ubuntu2.4
```

```
In [6]: cd 02-playbooks/00-simple-playbook-examples
```

```
In [7]: sudo lxc-ls --filter=matter --fancy --fancy-format IPV4 | grep -v IPV4 > inv
```

To on terminal.

```
cd ~/rdf/ais/hands-on-ansible/02-playbooks/00-simple-playbook-examples
ansible-playbook prepare_ansible_target.yml -k --ask-sudo-pass -i inv
```

### 1.3 Install Mattermost

```
cd ~/rdf/ais/hands-on-ansible/02-playbooks/02-install-mattermost/install_mattermost
vim hosts
ansible-playbook install-mattermost.yml -i hosts
```

```
In [15]: pwd
```

```
/home/vagrant/rdf/ais/hands-on-ansible/02-playbooks/00-simple-playbook-examples
```

```
In [8]: cd ~/rdf/ais/hands-on-ansible/02-playbooks/02-install-mattermost/install_mattermost
```

```
In [9]: cat install-mattermost.yml
```

```
---
- name: Database Setup
  hosts: dbservers
  remote_user: root
  roles:
    - common
    - database

- name: Webserver Setup
  hosts: webservers
  remote_user: root
  roles:
    - common
    - web
```

```
In [10]: sudo lxc-ls --filter 'matter'
```

```
matterdb    mattermost matterweb
```

```
In [13]: echo "[dbservers]" > hosts
        sudo lxc-ls --filter=matterm --fancy --fancy-format=IPv4 | grep -v IPv4 >> hosts
        echo "[webservers]" >> hosts
        sudo lxc-ls --filter=matterm --fancy --fancy-format=IPv4 | grep -v IPv4 >> hosts
        #sudo lxc-ls --filter=matterw --fancy --fancy-format=IPv4 | grep -v IPv4 >> hosts
```

```
In [14]: cat hosts
```

```
[dbservers]
10.0.3.207
[webservers]
10.0.3.207
```

```
In [17]: ls -lF
```

```
insgesamt 16
drwxrwxr-x 2 vagrant vagrant 4096 Mär 12 00:24 group_vars/
-rw-rw-r-- 1 vagrant vagrant   49 Mär 13 13:07 hosts
-rw-rw-r-- 1 vagrant vagrant  200 Mär 12 00:24 install-mattermost.yml
drwxrwxr-x 5 vagrant vagrant 4096 Mär 12 00:24 roles/
```

```
In [18]: ls -lF group_vars
```

```
insgesamt 4
-rw-rw-r-- 1 vagrant vagrant 1950 Mär 12 00:24 all
```

```
In [19]: cat group_vars/all
```

```
---
```

```
## This playbook expects:
# one Database server
# one or more web servers
# upstart or systemd on the webservers
# webserver IP address entered in ansible inventory (hostnames are problematic because we use th
```

```
#####
```

```
# Common configuration options:
```

```
#####
```

```
# The domain that nginx listens for
```

```
mattermost_domain: mattermost.tutoriallinux.com
```

```
# If you're using a separate database server, choose "require"
```

```
# If you're installing both DB and Web on a single server, choose "disable"
```

```
# "require" (default), "verify-full", "verify-ca", and "disable" are supported
```

```
mm_ssl_mode: disable
```

```
## Change this to 'localhost' if you're running your
## database on the same machine as your web application
## mattermost will try to connect to {{ db_server }}:5432
# grab the first DB server (this is not elegant)
# db_server: "{{ hostvars[groups['dbservers'][0]]['ansible_default_ipv4']['address'] }}"
db_server: localhost
```

```
#####
# Database
#####
# Postgres Version
PG_VERSION: "9.5"
PG_HBA_CONF: /etc/postgresql/{{ PG_VERSION }}/main/pg_hba.conf
PG_CONF: /etc/postgresql/{{ PG_VERSION }}/main/postgresql.conf
```

```
db_user: mmuser
db_password: "your_mattermost_user_password"
```

```
#####
# System
#####
mattermost_sysuser: "mattermost"
mattermost_directory: /home/{{ mattermost_sysuser }}/mattermost_app
```

```
#####
# Web
#####
LATEST_MM_VERSION: "3.5.0"
LATEST_MM_DOWNLOADNAME: "mattermost-team-{{ LATEST_MM_VERSION }}-linux-amd64.tar.gz"
LATEST_MM_URL: https://releases.mattermost.com/{{ LATEST_MM_VERSION }}/{{ LATEST_MM_DOWNLOADNAME
```

**Achtung** Die Versionen können sich geändert haben. Daher nach schauen!  
<https://about.mattermost.com/download/>

```
In [20]: apt policy postgresql
```

```
postgresql:
  Installiert:          (keine)
  Installationskandidat: 9.5+173ubuntu0.1
  Versionstabelle:
    9.5+173ubuntu0.1 500
    500 http://us.archive.ubuntu.com/ubuntu xenial-updates/main amd64 Packages
```

```

500 http://us.archive.ubuntu.com/ubuntu xenial-updates/main i386 Packages
500 http://security.ubuntu.com/ubuntu xenial-security/main amd64 Packages
500 http://security.ubuntu.com/ubuntu xenial-security/main i386 Packages
9.5+173 500
500 http://us.archive.ubuntu.com/ubuntu xenial/main amd64 Packages
500 http://us.archive.ubuntu.com/ubuntu xenial/main i386 Packages

```

In [21]: `ansible-playbook install-mattermost.yml -i hosts`

```

-----
< PLAY [Database Setup] >
-----

```

```

\      ^__^
\      (oo)\_______
      (__)\\       )\/\
          ||----w |
          ||     ||

```

```

-----
< TASK [Gathering Facts] >
-----

```

```

\      ^__^
\      (oo)\_______
      (__)\\       )\/\
          ||----w |
          ||     ||

```

ok: [10.0.3.207]

```

-----
< TASK [common : COMMON | Install basic packages] >
-----

```

```

\      ^__^
\      (oo)\_______
      (__)\\       )\/\
          ||----w |
          ||     ||

```

changed: [10.0.3.207] => (item=wget)

ok: [10.0.3.207] => (item=vim)

changed: [10.0.3.207] => (item=nano)

changed: [10.0.3.207] => (item=curl)

```

-----
< TASK [database : SYSTEM | Install basic database packages] >
-----

```

```

\      ^__^
\      (oo)\_______
      (__)\\       )\/\

```



```

      ||----w |
      ||      ||

```

```

changed: [10.0.3.207] => (item=postgresql)
changed: [10.0.3.207] => (item=postgresql-contrib)
changed: [10.0.3.207] => (item=python-psycopg2)

```

```

-----
< TASK [database : POSTGRES | Create mattermost database] >
-----

```

```

\      ^__^
\      (oo)\_______
      (__)\\       )\/\
          ||----w |
          ||      ||

```

```

changed: [10.0.3.207]

```

```

-----
< TASK [database : POSTGRES | Create mattermost DB user] >
-----

```

```

\      ^__^
\      (oo)\_______
      (__)\\       )\/\
          ||----w |
          ||      ||

```

```

changed: [10.0.3.207]

```

```

-----
/ TASK [database : POSTGRES | Shore up DB privileges for our \
\ application user]                                           /
-----

```

```

\      ^__^
\      (oo)\_______
      (__)\\       )\/\
          ||----w |
          ||      ||

```

```

ok: [10.0.3.207]

```

```

-----
/ TASK [database : POSTGRES | Set up pg_hba.conf, allow \
\ connections from webserver]                                /
-----

```

```

\      ^__^
\      (oo)\_______
      (__)\\       )\/\
          ||----w |
          ||      ||

```

```

skipping: [10.0.3.207]

```

```
-----  
< TASK [database : POSTGRES | Listen on all IPs] >  
-----
```

```
  \   ^__^  
  \  (oo)\_____  
      (__)\       )\/\  
         ||----w |  
         ||     ||
```

skipping: [10.0.3.207]

```
-----  
< PLAY [Webserver Setup] >  
-----
```

```
  \   ^__^  
  \  (oo)\_____  
      (__)\       )\/\  
         ||----w |  
         ||     ||
```

```
-----  
< TASK [Gathering Facts] >  
-----
```

```
  \   ^__^  
  \  (oo)\_____  
      (__)\       )\/\  
         ||----w |  
         ||     ||
```

ok: [10.0.3.207]

```
-----  
< TASK [common : COMMON | Install basic packages] >  
-----
```

```
  \   ^__^  
  \  (oo)\_____  
      (__)\       )\/\  
         ||----w |  
         ||     ||
```

ok: [10.0.3.207] => (item=wget)

ok: [10.0.3.207] => (item=vim)

ok: [10.0.3.207] => (item=nano)

ok: [10.0.3.207] => (item=curl)

```
-----  
< TASK [web : SYSTEM | Install util packages] >  
-----
```

```
  \   ^__^  
  \  (oo)\_____  
      (__)\       )\/\  
         ||----w |  
         ||     ||
```

```

    ||----w |
    ||      ||

```

ok: [10.0.3.207] => (item=python-apt)

```

-----
/ TASK [web : NGINX | Ensure that nginx PPA is added to \
\ Ubuntu] /
-----

```

```

\      ^__^
\      (oo)\_______
          (__)\       )\/\
              ||----w |
              ||     ||

```

changed: [10.0.3.207]

```

-----
< TASK [web : NGINX | Install nginx] >
-----

```

```

\      ^__^
\      (oo)\_______
          (__)\       )\/\
              ||----w |
              ||     ||

```

changed: [10.0.3.207]

```

-----
< TASK [web : NGINX | Remove default vhost] >
-----

```

```

\      ^__^
\      (oo)\_______
          (__)\       )\/\
              ||----w |
              ||     ||

```

changed: [10.0.3.207]

```

-----
< TASK [web : NGINX | Configure mattermost vhost] >
-----

```

```

\      ^__^
\      (oo)\_______
          (__)\       )\/\
              ||----w |
              ||     ||

```

changed: [10.0.3.207]

```

-----
/ TASK [web : NGINX | nginx should be running, and enabled at \
\ boot] /
-----

```

```

-----
\      ^__^
\      (oo)\_______
      (__)\       )\/\
          ||----w |
          ||     ||

```

ok: [10.0.3.207]

```

-----
< TASK [web : SYSTEM | Create mattermost system user] >
-----

```

```

\      ^__^
\      (oo)\_______
      (__)\       )\/\
          ||----w |
          ||     ||

```

changed: [10.0.3.207]

```

-----
< TASK [web : stat] >
-----

```

```

\      ^__^
\      (oo)\_______
      (__)\       )\/\
          ||----w |
          ||     ||

```

ok: [10.0.3.207]

```

-----
< TASK [web : INSTALL | Download Mattermost] >
-----

```

```

\      ^__^
\      (oo)\_______
      (__)\       )\/\
          ||----w |
          ||     ||

```

changed: [10.0.3.207]

```

-----
< TASK [web : INSTALL | Unarchive mattermost.tar.gz] >
-----

```

```

\      ^__^
\      (oo)\_______
      (__)\       )\/\
          ||----w |
          ||     ||

```

changed: [10.0.3.207]

```
-----
/ TASK [web : INSTALL | Rename downloaded mattermost \
\ directory] /
-----
```

```

\   ^__^
\   (oo)\_______
      (__)\       )\/\
         ||----w |
         ||     ||

```

changed: [10.0.3.207]

```
-----
/ TASK [web : INSTALL | Ensure Mattermost appdata directory \
\ exists] /
-----
```

```

\   ^__^
\   (oo)\_______
      (__)\       )\/\
         ||----w |
         ||     ||

```

changed: [10.0.3.207]

```
-----
< TASK [web : CLEANUP | Remove downloaded mattermost.tar.gz] >
-----
```

```

\   ^__^
\   (oo)\_______
      (__)\       )\/\
         ||----w |
         ||     ||

```

changed: [10.0.3.207]

```
-----
< TASK [web : CONFIG | Set up main Mattermost config file] >
-----
```

```

\   ^__^
\   (oo)\_______
      (__)\       )\/\
         ||----w |
         ||     ||

```

changed: [10.0.3.207]

```
-----
/ TASK [web : CONFIG | Set proper permissions on mattermost \
\ app directory] /
-----
```

```

\   ^__^
\   (oo)\_______

```

```

      (__) \          ) \ / \
        ||----w |
        ||       ||

```

changed: [10.0.3.207]

```

-----
< TASK [web : INIT | Crude Check for systemd] >
-----

```

```

\      ^__^
\      (oo)\_______
      (__) \          ) \ / \
          ||----w |
          ||       ||

```

ok: [10.0.3.207]

```

-----
< TASK [web : INIT | Crude Check for upstart] >
-----

```

```

\      ^__^
\      (oo)\_______
      (__) \          ) \ / \
          ||----w |
          ||       ||

```

ok: [10.0.3.207]

```

-----
< TASK [web : INIT | Create systemd unit file] >
-----

```

```

\      ^__^
\      (oo)\_______
      (__) \          ) \ / \
          ||----w |
          ||       ||

```

changed: [10.0.3.207]

```

-----
< TASK [web : INIT | Create upstart init file] >
-----

```

```

\      ^__^
\      (oo)\_______
      (__) \          ) \ / \
          ||----w |
          ||       ||

```

changed: [10.0.3.207]

```

-----
/ TASK [web : MATTERMOST | Mattermost should be running, and \
\ enabled at boot] /

```

```

-----
\      ^__^
 \    (oo)\_______
      (__)\       )\/\
         ||----w |
         ||     ||

changed: [10.0.3.207]

-----
< RUNNING HANDLER [web : reload nginx] >
-----
\      ^__^
 \    (oo)\_______
      (__)\       )\/\
         ||----w |
         ||     ||

changed: [10.0.3.207]

-----
< RUNNING HANDLER [web : reload systemd] >
-----
\      ^__^
 \    (oo)\_______
      (__)\       )\/\
         ||----w |
         ||     ||

changed: [10.0.3.207]

-----
< RUNNING HANDLER [web : restart mattermost] >
-----
\      ^__^
 \    (oo)\_______
      (__)\       )\/\
         ||----w |
         ||     ||

changed: [10.0.3.207]

-----
< PLAY RECAP >
-----
\      ^__^
 \    (oo)\_______
      (__)\       )\/\
         ||----w |
         ||     ||

10.0.3.207 : ok=31  changed=22  unreachable=0  failed=0

```

## 1.4 The playbook files

```
In [22]: cat install-mattermost.yml
```

```
---
- name: Database Setup
  hosts: dbservers
  remote_user: root
  roles:
    - common
    - database

- name: Webserver Setup
  hosts: webservers
  remote_user: root
  roles:
    - common
    - web
```

```
In [24]: ls -lF roles/
```

```
insgesamt 12
drwxrwxr-x 3 vagrant vagrant 4096 Mär 12 00:24 common/
drwxrwxr-x 5 vagrant vagrant 4096 Mär 12 00:24 database/
drwxrwxr-x 5 vagrant vagrant 4096 Mär 12 00:24 web/
```

```
In [25]: cat roles/common/tasks/main.yml
```

```
---
- name: COMMON | Install basic packages
  package: name={{ item }} state=present
  with_items:
    - wget
    - vim
    - nano
    - curl
```

```
In [26]: cat roles/database/tasks/main.yml
```

```
---
- name: SYSTEM | Install basic database packages
  package: name={{ item }} state=present
  with_items:
```



```

- postgresql
- postgresql-contrib
- python-psycopg2

- name: POSTGRES | Create mattermost database
  become: true
  become_user: postgres
  postgresql_db:
    name: mattermost

- name: POSTGRES | Create mattermost DB user
  become: yes
  become_user: postgres
  postgresql_user:
    db: mattermost
    name: "{{ db_user }}"
    password: "{{ db_password }}"
    priv: ALL

- name: POSTGRES | Shore up DB privileges for our application user
  become: yes
  become_user: postgres
  postgresql_user:
    name: "{{ db_user }}"
    role_attr_flags: NOSUPERUSER,NOCREATEDB

- block:
  - name: POSTGRES | Set up pg_hba.conf, allow connections from webserver
    template: src=pg_hba.conf dest={{ PG_HBA_CONF }}
    notify:
      - restart postgres

  - name: POSTGRES | Listen on all IPs
    lineinfile:
      dest: "{{ PG_CONF }}"
      line: listen_addresses='*'
    notify:
      - restart postgres
# we only open up Postgres if we're running a separate web server
when: hostvars[groups['webserver']][0]['inventory_hostname'] != inventory_hostname

```

In [27]: cat roles/database/templates/pg\_hba.conf

```

# DO NOT DISABLE!
# If you change this first entry you will need to make sure that the
# database superuser can access the database using some other method.

```

```
# Noninteractive access to all databases is required during automatic
# maintenance (custom daily cronjobs, replication, and similar tasks).
#
```

```
# Database administrative login by Unix domain socket
```

```
local    all                postgres                                peer
```

```
# TYPE  DATABASE      USER            ADDRESS              METHOD
```

```
# "local" is for Unix domain socket connections only
```

```
local    all                all                                peer
```

```
# IPv4 local connections:
```

```
host     all                all                127.0.0.1/32        md5
```

```
# IPv6 local connections:
```

```
host     all                all                ::1/128              md5
```

```
# Allow replication connections from localhost, by a user with the
# replication privilege.
```

```
#local    replication        postgres                                peer
```

```
#host     replication        postgres                127.0.0.1/32        md5
```

```
#host     replication        postgres                ::1/128              md5
```

```
## hostvars[host]['ansible_default_ipv4']['address'] is not set yet, so we have to use inventory
```

```
{% for host in groups['webservers'] %}
```

```
host all all {{ hostvars[host]['inventory_hostname'] }}/32 md5
```

```
{% endfor %}
```

```
In [28]: cat roles/web/tasks/main.yml
```

```
---
```

```
# Webserver Configuration
```

```
- name: SYSTEM | Install util packages
```

```
  package: name={{ item }} state=present
```

```
  with_items:
```

```
    - python-apt
```

```
- name: NGINX | Ensure that nginx PPA is added to Ubuntu
```

```
  apt_repository: repo='ppa:nginx/stable' update_cache=yes
```

```
- name: NGINX | Install nginx
```

```
  package: name=nginx state=present
```

```
- name: NGINX | Remove default vhost
```

```
  file: path=/etc/nginx/sites-enabled/default state=absent
```

```
- name: NGINX | Configure mattermost vhost
```

```

template: src=mattermost.conf dest=/etc/nginx/conf.d/mattermost.conf
notify:
  - reload nginx

- name: NGINX | nginx should be running, and enabled at boot
  service: name=nginx state=started enabled=yes

# Application Install
- name: SYSTEM | Create mattermost system user
  user: name="{{ mattermost_sysuser }}" comment="Mattermost"

- stat: path={{ mattermost_directory }}
  register: mattermost_install

- block:
  - name: INSTALL | Download Mattermost
    ## unarchive is new in 2.0, and remote_src requires 2.2. For older versions, use 'get_url'
    # unarchive: remote_src=yes src="{{ LATEST_MM_URL }}" dest="/home/{{ mattermost_sysuser }}"
    ## get_url bugs out on target machines using older versions of Ubuntu
    # get_url: url="{{ LATEST_MM_URL }}" dest="/home/{{ mattermost_sysuser }}/{{ LATEST_MM_DOWNLOADNAME }}"
    #
    ## Forget it; we're using wget
    raw: (cd /home/{{ mattermost_sysuser }}/ && wget {{ LATEST_MM_URL }})

  - name: INSTALL | Unarchive mattermost.tar.gz
    unarchive: copy=no src=/home/{{ mattermost_sysuser }}/{{ LATEST_MM_DOWNLOADNAME }} dest=/home/{{ mattermost_sysuser }}/{{ LATEST_MM_DIRECTORY }}

  - name: INSTALL | Rename downloaded mattermost directory
    command: mv /home/{{ mattermost_sysuser }}/mattermost {{ mattermost_directory }}

  - name: INSTALL | Ensure Mattermost appdata directory exists
    file: path={{ mattermost_directory }}/data state=directory mode=0755 owner="{{ mattermost_sysuser }}"

  - name: CLEANUP | Remove downloaded mattermost.tar.gz
    file: path=/home/{{ mattermost_sysuser }}/{{ LATEST_MM_DOWNLOADNAME }} state=absent

# Only execute the above task block if we don't already have a Mattermost install directory
when: mattermost_install.stat.exists == False

- name: CONFIG | Set up main Mattermost config file
  template: src=mattermost_config.json dest="{{ mattermost_directory }}/config/config.json"
  notify:
    - restart mattermost

- name: CONFIG | Set proper permissions on mattermost app directory
  file:
    path: "{{ mattermost_directory }}"
    # mode: 0755

```

```

    owner: "{{ mattermost_sysuser }}"
    group: "{{ mattermost_sysuser }}"
    recurse: yes

# Create either a systemd or an upstart configuration file
# for the mattermost service -- hopefully not both
- name: INIT | Crude Check for systemd
  stat: path=/usr/lib/systemd
  register: systemd_installed

- name: INIT | Crude Check for upstart
  stat: path=/usr/share/upstart
  register: upstart_installed

- name: INIT | Create systemd unit file
  template: src=mattermost.service dest=/etc/systemd/system/mattermost.service
  notify:
    - reload systemd
  when: systemd_installed.stat.exists

- name: INIT | Create upstart init file
  template: src=mattermost.upstart dest=/etc/init/mattermost.conf
  when: upstart_installed.stat.exists

- name: MATTERMOST | Mattermost should be running, and enabled at boot
  service: name=mattermost state=started enabled=yes
  notify:
    - reload nginx

```

In [29]: `cat roles/web/templates/mattermost.conf`

```

server {
    server_name {{ mattermost_domain }};
    location / {
        client_max_body_size 50M;
        proxy_set_header Upgrade $http_upgrade;
        proxy_set_header Connection "upgrade";
        proxy_set_header Host $http_host;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        proxy_set_header X-Forwarded-Proto $scheme;
        proxy_set_header X-Frame-Options SAMEORIGIN;
        proxy_pass http://127.0.0.1:8065;
    }
}

```

In [32]: `grep '^mattermost_*' ./group_vars/all`

```
mattermost_domain: mattermost.tutoriallinux.com
mattermost_sysuser: "mattermost"
mattermost_directory: /home/{{ mattermost_sysuser }}/mattermost_app
```

```
In [33]: grep '^LATEST_*' ./group_vars/all
```

```
LATEST_MM_VERSION: "3.5.0"
```

```
LATEST_MM_DOWNLOADNAME: "mattermost-team-{{ LATEST_MM_VERSION }}-linux-amd64.tar.gz"
```

```
LATEST_MM_URL: https://releases.mattermost.com/{{ LATEST_MM_VERSION }}/{{ LATEST_MM_DOWNLOADNAME
```

```
In [34]: cat roles/web/templates/mattermost_config.json
```

```
{
  "ServiceSettings": {
    "SiteURL": "",
    "ListenAddress": ":8065",
    "MaximumLoginAttempts": 10,
    "SegmentDeveloperKey": "",
    "GoogleDeveloperKey": "",
    "EnableOAuthServiceProvider": false,
    "EnableIncomingWebhooks": true,
    "EnableOutgoingWebhooks": true,
    "EnableCommands": true,
    "EnableOnlyAdminIntegrations": true,
    "EnablePostUsernameOverride": false,
    "EnablePostIconOverride": false,
    "EnableTesting": false,
    "EnableDeveloper": false,
    "EnableSecurityFixAlert": true,
    "EnableInsecureOutgoingConnections": false,
    "EnableMultifactorAuthentication": false,
    "AllowCorsFrom": "",
    "SessionLengthWebInDays": 30,
    "SessionLengthMobileInDays": 30,
    "SessionLengthSSOInDays": 30,
    "SessionCacheInMinutes": 10,
    "WebsocketSecurePort": 443,
    "WebsocketPort": 80,
    "WebserverMode": "gzip",
    "EnableCustomEmoji": false,
    "RestrictCustomEmojiCreation": "all"
  },
  "TeamSettings": {
    "SiteName": "Mattermost",
    "MaxUsersPerTeam": 50,
    "EnableTeamCreation": true,
    "EnableUserCreation": true,

```

```

    "EnableOpenServer": false,
    "RestrictCreationToDomains": "",
    "RestrictTeamNames": true,
    "EnableCustomBrand": false,
    "CustomBrandText": "",
    "CustomDescriptionText": "",
    "RestrictDirectMessage": "any",
    "RestrictTeamInvite": "all",
    "RestrictPublicChannelManagement": "all",
    "RestrictPrivateChannelManagement": "all",
    "UserStatusAwayTimeout": 300
  },
  "SqlSettings": {
    "DriverName": "postgres",
    "DataSource": "postgres://{{ db_user }}:{{ db_password }}@{{ db_server }}:5432/mattermos",
    "DataSourceReplicas": [],
    "MaxIdleConns": 10,
    "MaxOpenConns": 10,
    "Trace": false,
    "AtRestEncryptKey": ""
  },
  "LogSettings": {
    "EnableConsole": true,
    "ConsoleLevel": "DEBUG",
    "EnableFile": true,
    "FileLevel": "INFO",
    "FileFormat": "",
    "FileLocation": "",
    "EnableWebhookDebugging": true,
    "EnableDiagnostics": true
  },
  "PasswordSettings": {
    "MinimumLength": 5,
    "Lowercase": false,
    "Number": false,
    "Uppercase": false,
    "Symbol": false
  },
  "FileSettings": {
    "MaxFileSize": 52428800,
    "DriverName": "local",
    "Directory": "./data/",
    "EnablePublicLink": false,
    "PublicLinkSalt": "",
    "ThumbnailWidth": 120,
    "ThumbnailHeight": 100,
    "PreviewWidth": 1024,
    "PreviewHeight": 0,

```

```

    "ProfileWidth": 128,
    "ProfileHeight": 128,
    "InitialFont": "luximbi.ttf",
    "AmazonS3AccessKeyId": "",
    "AmazonS3SecretAccessKey": "",
    "AmazonS3Bucket": "",
    "AmazonS3Region": "",
    "AmazonS3Endpoint": "",
    "AmazonS3BucketEndpoint": "",
    "AmazonS3LocationConstraint": false,
    "AmazonS3LowercaseBucket": false
  },
  "EmailSettings": {
    "EnableSignUpWithEmail": true,
    "EnableSignInWithEmail": true,
    "EnableSignInWithUsername": true,
    "SendEmailNotifications": false,
    "RequireEmailVerification": false,
    "FeedbackName": "",
    "FeedbackEmail": "",
    "FeedbackOrganization": "",
    "SMTPUsername": "",
    "SMTPPassword": "",
    "SMTPServer": "",
    "SMTPPort": "",
    "ConnectionSecurity": "",
    "InviteSalt": "",
    "PasswordResetSalt": "",
    "SendPushNotifications": false,
    "PushNotificationServer": "",
    "PushNotificationContents": "generic",
    "EnableEmailBatching": false,
    "EmailBatchingBufferSize": 256,
    "EmailBatchingInterval": 30
  },
  "RateLimitSettings": {
    "EnableRateLimiter": true,
    "PerSec": 10,
    "MemoryStoreSize": 10000,
    "VaryByRemoteAddr": true,
    "VaryByHeader": ""
  },
  "PrivacySettings": {
    "ShowEmailAddress": true,
    "ShowFullName": true
  },
  "SupportSettings": {
    "TermsOfServiceLink": "https://about.mattermost.com/default-terms/",

```

```

    "PrivacyPolicyLink": "https://about.mattermost.com/default-privacy-policy/",
    "AboutLink": "https://about.mattermost.com/default-about/",
    "HelpLink": "https://about.mattermost.com/default-help/",
    "ReportAProblemLink": "https://about.mattermost.com/default-report-a-problem/",
    "SupportEmail": "feedback@mattermost.com"
  },
  "GitLabSettings": {
    "Enable": false,
    "Secret": "",
    "Id": "",
    "Scope": "",
    "AuthEndpoint": "",
    "TokenEndpoint": "",
    "UserApiEndpoint": ""
  },
  "GoogleSettings": {
    "Enable": false,
    "Secret": "",
    "Id": "",
    "Scope": "profile email",
    "AuthEndpoint": "https://accounts.google.com/o/oauth2/v2/auth",
    "TokenEndpoint": "https://www.googleapis.com/oauth2/v4/token",
    "UserApiEndpoint": "https://www.googleapis.com/plus/v1/people/me"
  },
  "Office365Settings": {
    "Enable": false,
    "Secret": "",
    "Id": "",
    "Scope": "User.Read",
    "AuthEndpoint": "https://login.microsoftonline.com/common/oauth2/v2.0/authorize",
    "TokenEndpoint": "https://login.microsoftonline.com/common/oauth2/v2.0/token",
    "UserApiEndpoint": "https://graph.microsoft.com/v1.0/me"
  },
  "LdapSettings": {
    "Enable": false,
    "LdapServer": "",
    "LdapPort": 389,
    "ConnectionSecurity": "",
    "BaseDN": "",
    "BindUsername": "",
    "BindPassword": "",
    "UserFilter": "",
    "FirstNameAttribute": "",
    "LastNameAttribute": "",
    "EmailAttribute": "",
    "UsernameAttribute": "",
    "NicknameAttribute": "",
    "IdAttribute": "",

```



```

        "SyncIntervalMinutes": 60,
        "SkipCertificateVerification": false,
        "QueryTimeout": 60,
        "MaxPageSize": 0,
        "LoginFieldName": ""
    },
    "ComplianceSettings": {
        "Enable": false,
        "Directory": "./data/",
        "EnableDaily": false
    },
    "LocalizationSettings": {
        "DefaultServerLocale": "en",
        "DefaultClientLocale": "en",
        "AvailableLocales": ""
    },
    "SamlSettings": {
        "Enable": false,
        "Verify": false,
        "Encrypt": false,
        "IdpUrl": "",
        "IdpDescriptorUrl": "",
        "AssertionConsumerServiceURL": "",
        "IdpCertificateFile": "",
        "PublicCertificateFile": "",
        "PrivateKeyFile": "",
        "FirstNameAttribute": "",
        "LastNameAttribute": "",
        "EmailAttribute": "",
        "UsernameAttribute": "",
        "NicknameAttribute": "",
        "LocaleAttribute": "",
        "LoginButtonText": "With SAML"
    },
    "NativeAppSettings": {
        "AppDownloadLink": "https://about.mattermost.com/downloads/",
        "AndroidAppDownloadLink": "https://about.mattermost.com/mattermost-android-app/",
        "IosAppDownloadLink": "https://about.mattermost.com/mattermost-ios-app/"
    },
    "ClusterSettings": {
        "Enable": false,
        "InterNodeListenAddress": ":8075",
        "InterNodeUrls": []
    }
}

```

In [35]: cat roles/web/handlers/main.yml

---

```

- name: reload nginx
  service: name=nginx state=reloaded

- name: reload systemd
  command: systemctl daemon-reload

- name: restart mattermost
  service: name=mattermost state=restarted

```

In [36]: cat roles/web/templates/mattermost.service

```

[Unit]
Description=Mattermost
After=syslog.target network.target

[Service]
Type=simple
WorkingDirectory={{ mattermost_directory }}/bin
User={{ mattermost_sysuser }}
ExecStart={{ mattermost_directory }}/bin/platform
PIDFile=/var/spool/mattermost/pid/master.pid
# Requires=

[Install]
WantedBy=multi-user.target

```

In [37]: cat roles/web/templates/mattermost.upstart

```

start on runlevel [2345]
stop on runlevel [016]
respawn
limit nofile 50000 50000
chdir {{ mattermost_directory }}
setuid {{ mattermost_sysuser }}
exec bin/platform

```