comment installer-joomla sur-almalinux-9

Joomla is flexible and open-source content management for building websites and online publications. Powered by PHP, it can be used for multiple scenarios, such as forums, photo galleries, e-commerce, and other web-based applications.

Follow our tutorial to install Joomla CMS on the AlmaLinux 9 server with the LAMP Stack (Apache/Httpd, MariaDB, and PHP).

Prerequisites

Before you begin, make sure you have these on your environment:

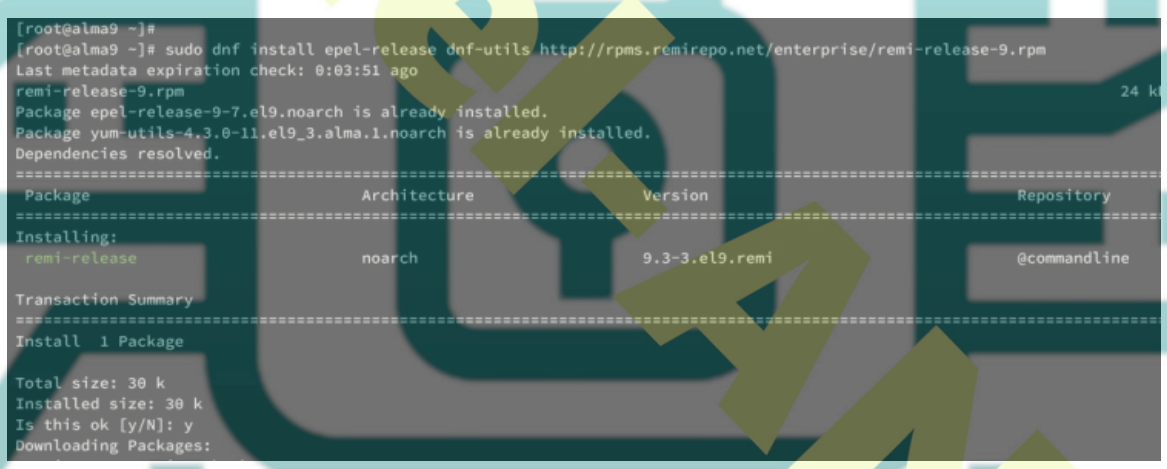
- A AlmaLinux 9 server.
- A non-root user with administrator privileges.
- A SELinux with status permissive.
- A domain name pointed to the server IP address.

Install LAMP Stack Dependencies

Joomla is a content management system written in PHP with MySQL/MariaDB database. So before you install Joomla, you will install dependencies for it. In this example, you will install Joomla with the LAMP Stack (Apache/Httpd, MySQL/MariaDB, and PHP) on your AlmaLinux 9 server.

To get started, execute the following command to add the EPEL and Remi repository to your AlmaLinux server. The EPEL repository is required for installing some additional dependencies, and the Remi repository for PHP packages.

```
sudo dnf install epel-release dnf-utils http://rpms.remirepo.net/enterprise/remi-release-9.rpm
```



Now execute the command below to reset the PHP repository module and enable the Remi PHP module. Type y to confirm and proceed.

```
sudo dnf module reset php
sudo dnf module enable php:remi-8.2
```

```
[root@alma9 ~]#
[root@alma9 ~]# sudo dnf module enable php:remi-8.2
Extra Packages for Enterprise Linux 9 - x86_64
Remi's Modular repository for Enterprise Linux 9 - x86_64
Safe Remi's RPM repository for Enterprise Linux 9 - x86_64
Dependencies resolved.
================================================================================
 Package                          Architecture                        Version
================================================================================
Enabling module streams:
 php                                                                  remi-8.2

Transaction Summary
================================================================================

Is this ok [y/N]: y
Complete!
[root@alma9 ~]#
```

After the repository is added, install LAMP Stack and additional dependencies by executing the command below.

```
sudo dnf install httpd mariadb-server php php-curl php-common php-json php-intl php-xml php-gd php-mysql php-imagick php-mbstring
php-zip wget unzip nano
```

When prompted, input y to proceed to the installation. Also, input y to accept the GPG key if asked.

```
[root@alma9 ~]#
[root@alma9 ~]# sudo dnf install httpd mariadb-server php php-curl php-common php-json php-intl php-xml php-gd php-mysql php-imagick php-mbstring php
-zip wget unzip nano
Last metadata expiration check: 0:00:41 ago
Package wget-1.21.1-7.el9.x86_64 is already installed.
Package unzip-6.0-56.el9.x86_64 is already installed.
Dependencies resolved.
================================================================================
 Package                    Architecture  Version                                    Repository      Size
================================================================================
Installing:
 httpd                      x86_64        2.4.57-5.el9                               appstream       46 k
 mariadb-server             x86_64        3:10.5.22-1.el9_2.alma.1                   appstream      9.6 M
 nano                       x86_64        5.6.1-5.el9                                baseos         698 k
 php                        x86_64        8.2.15-1.el9.remi                          remi-modular   1.8 M
 php-common                 x86_64        8.2.15-1.el9.remi                          remi-modular   846 k
 php-gd                     x86_64        8.2.15-1.el9.remi                          remi-modular    63 k
 php-intl                   x86_64        8.2.15-1.el9.remi                          remi-modular   226 k
 php-mbstring               x86_64        8.2.15-1.el9.remi                          remi-modular   574 k
 php-pecl-imagick-im7       x86_64        3.7.0-7.el9.remi.8.2                       remi-modular   187 k
 php-pecl-mysql             x86_64        1.0.0-0.25.20210423.ca514c4.el9.remi.8.2   remi-modular    43 k
 php-pecl-zip               x86_64        1.22.3-1.el9.remi.8.2                      remi-modular    74 k
 php-xml                    x86_64        8.2.15-1.el9.remi                          remi-modular   213 k
Installing dependencies:
 ImageMagick7-libs          x86_64        1:7.1.1.27-1.el9.remi                      remi-safe      2.5 M
```

```
Total
Remi's Modular repository for Enterprise Linux 9 - x86_64
Importing GPG key 0x478F8947:
 Userid     : "Remi's RPM repository (https://rpms.remirepo.net/) <remi@remirepo.net>"
 Fingerprint: B1AB F71E 14C9 D748 97E1 98A8 B195 27F1 478F 8947
 From       : /etc/pki/rpm-gpg/RPM-GPG-KEY-remi.el9
Is this ok [y/N]: y
Key imported successfully
```

With the installation finished, start and enable the httpd service with the following command.

```
sudo systemctl start httpd
sudo systemctl enable httpd
```

Then verify the httpd to ensure that the service is running.

```
sudo systemctl status httpd
```

Below you can see the httpd service running.

```
[root@alma9 ~]#
[root@alma9 ~]# sudo systemctl start httpd
[root@alma9 ~]# sudo systemctl enable httpd
Created symlink /etc/systemd/system/multi-user.target.wants/httpd.service → /usr/lib/syst
[root@alma9 ~]#
[root@alma9 ~]# sudo systemctl status httpd
● httpd.service - The Apache HTTP Server
     Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)
    Drop-In: /etc/systemd/system/httpd.service.d
             └─php-fpm.conf
     Active: active (running) since
       Docs: man:httpd.service(8)
   Main PID: 10410 (httpd)
     Status: "Total requests: 0; Idle/Busy workers 100/0;Requests/sec: 0; Bytes served/se
      Tasks: 213 (limit: 24732)
     Memory: 27.2M
        CPU: 264ms
     CGroup: /system.slice/httpd.service
```

For the mariadb service, execute the command below to start and enable it.

```
sudo systemctl start mariadb
sudo systemctl enable mariadb
```

Then verify the mariadb service with the command below. You will see the mariadb is running.

```
sudo systemctl status mariadb
```

```
[root@alma9 ~]#
[root@alma9 ~]# sudo systemctl start mariadb
[root@alma9 ~]# sudo systemctl enable mariadb
Created symlink /etc/systemd/system/mysql.service → /usr/lib/systemd/system/mariadb.service.
Created symlink /etc/systemd/system/mysqld.service → /usr/lib/systemd/system/mariadb.service.
Created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service → /usr/lib/systemd
[root@alma9 ~]#
[root@alma9 ~]# sudo systemctl status mariadb
● mariadb.service - MariaDB 10.5 database server
     Loaded: loaded (/usr/lib/systemd/system/mariadb.service; enabled; preset: disabled)
     Active: active (running) since
       Docs: man:mariadbd(8)
             https://mariadb.com/kb/en/library/systemd/
   Main PID: 28110 (mariadbd)
     Status: "Taking your SQL requests now..."
      Tasks: 15 (limit: 24732)
     Memory: 78.6M
        CPU: 2.124s
```

Lastly, execute the following command to verify the PHP version and the list of enabled extensions.

```
php -v
php -m
```

You will see PHP 8.2 are installed like the following:

```
[root@alma9 ~]#
[root@alma9 ~]# php -v
PHP 8.2.15 (cli) (built: Jan 16 2024 12:19:32) (NTS gcc x86_64)
Copyright (c) The PHP Group
Zend Engine v4.2.15, Copyright (c) Zend Technologies
    with Zend OPcache v8.2.15, Copyright (c), by Zend Technologies
[root@alma9 ~]#
[root@alma9 ~]# php -m
[PHP Modules]
bz2
calendar
Core
ctype
curl
date
dom
exif
fileinfo
filter
```

Setting Up PHP

Now that you have installed LAMP Stack on your AlmaLinux server, the next step is to configure your PHP installation for Joomla. You will modify the default PHP configuration php.ini and make some changes to it.

Execute the nano command below to open the default PHP configuration */etc/php.ini*.

```
sudo nano /etc/php.ini
```

Change the default configuration with the following and be sure to adjust the **memory_limit** option with your current available memory/RAM.

```
memory_limit=512M
upload_max_filesize=64M
post_max_size=64M
max_execution_time=60

output_buffering = Off
```

Save the file and exit the editor when finished.

Now restart the httpd service to apply your modification using the following command.

```
sudo systemctl restart httpd
```

Setting Up MariaDB Server

After you have configured PHP, you will set up the MariaDB server by securing the installation via the mariadb-secure-installation utility and then creating a new database and user for Joomla.

Execute the *mariadb-secure-installation* command to secure your MariaDB server installation.

```
sudo mariadb-secure-installation
```

When asked to apply a new configuration, input y to confirm or n to reject it. Below are some of the MariaDB server configurations you will be asked for:

- The default MariaDB installation comes without a password, press ENTER when prompted for the password.
- Now input Y to set up the MariaDB root password. Then, type the new password for MariaDB and repeat the password.
- Input Y to remove the anonymous user from your MariaDB installation.
- Input Y again when prompted to disable the remote login for the MariaDB root user.
- Input Y to remove the default database test from your MariaDB.
- Lastly, input Y to reload table privileges and apply new changes.

With the MariaDB server configured, you need to create a new database and user for Joomla.

Execute the mariadb command below to log in to the MariaDB. Input your MariaDB root password when prompted to log in.

```
sudo mariadb -u root -p
```

Now execute the following MariaDB queries to create a new database **joomladb**, a new user **joomla** with password **p4ssword**, then grant privileges for user joomla to the **joomladb** database.

```
CREATE DATABASE joomladb;
CREATE USER joomla@localhost IDENTIFIED BY 'p4ssword';
GRANT ALL PRIVILEGES ON joomladb.* TO joomla@localhost;
FLUSH PRIVILEGES;
```

```
MariaDB [(none)]> CREATE DATABASE joomladb;
Query OK, 1 row affected (0.003 sec)

MariaDB [(none)]> CREATE USER joomla@localhost IDENTIFIED BY 'p4ssword';
Query OK, 0 rows affected (0.003 sec)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON joomladb.* TO joomla@localhost;
Query OK, 0 rows affected (0.003 sec)

MariaDB [(none)]> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.002 sec)
```

Next, verify the list privileges for user **joomla** with the MariaDB query below. You will see the **joomla** user with privileges to access the database **joomladb**.

```
SHOW GRANTS FOR joomla@localhost;
```

```
MariaDB [(none)]> SHOW GRANTS FOR joomla@localhost;
+----------------------------------------------------------------------------
| Grants for joomla@localhost
+----------------------------------------------------------------------------
| GRANT USAGE ON *.* TO `joomla`@`localhost` IDENTIFIED BY PASSWORD '*544F2E9
| GRANT ALL PRIVILEGES ON `joomladb`.* TO `joomla`@`localhost`
+----------------------------------------------------------------------------
2 rows in set (0.000 sec)

MariaDB [(none)]> quit
Bye
[root@alma9 ~]#
```

Lastly, type quit to exit from the MariaDB server.

Setting Up Firewalld

By default, the firewalld is running on AlmaLinux server. So now you will need to open both HTTP and HTTPS ports to firewalld.

Execute the firewall-cmd command below to open both HTTP and HTTPS services on firewalld. Then, reload firewalld to apply the modification.

```
sudo firewall-cmd --add-service={http,https} --permanent
sudo firewall-cmd --reload
```

Now verify the list-enabled rules on firewalld by executing the command below.

```
sudo firewall-cmd --list-all
```

You will see below both HTTP and HTTPS services added to firewalld.

```
[root@alma9 ~]#
[root@alma9 ~]# sudo firewall-cmd --add-service={http,https} --permanent
success
[root@alma9 ~]# sudo firewall-cmd --reload
success
[root@alma9 ~]# sudo firewall-cmd --list-all
public (active)
  target: default
  icmp-block-inversion: no
  interfaces: eth0 eth1
  sources:
  services: cockpit dhcpv6-client http https ssh
  ports:
  protocols:
```

Downloading Joomla

Now you have the LAMP Stack installed and configured, the next step is to download the Joomla source code, set up the

document root directory for Joomla, and then set up the proper ownership for the Joomla source code.

Move your working directory */var/www* and download the Joomla source code using the wget command below. Be sure to check the Joomla download page and grab the link for the latest version.

```
cd /var/www/
wget https://downloads.joomla.org/cms/joomla5/5-0-2/Joomla_5-0-2-Stable-Full_Package.zip
```

Once downloaded, execute the unzip command below to extract the Joomla source code to the **joomla** directory. So your document root for Joomla will be located at */var/www/joomla* directory.

```
unzip Joomla_5-0-2-Stable-Full_Package.zip -d joomla
```

Lastly, execute the following chmod command to change the ownership of the */var/www/joomla* directory to the *apache* user and group. This will ensure the httpd web server can access the Joomla source code.

```
sudo chown -R apache:apache /var/www/joomla
```

Setting Up Httpd Virtual Host

With the Joomla source code downloaded, in the next stage, you will create a new httpd virtual host file for Joomla. So before going further, ensure that you have prepared your domain name for your Joomla installation.

Create a new virtual host configuration */etc/httpd/conf.d/joomla.conf* using the following nano editor command.

```
sudo nano /etc/httpd/conf.d/joomla.conf
```

Insert the configuration below and be sure to change the domain name with your Joomla domain. Also, be sure to change the path for both access and error logs for your Joomla.

```
<VirtualHost *:80>

ServerAdmin webmaster@hwdomain.io

ServerName hwdomain.io
DocumentRoot /var/www/joomla

<Directory /var/www/joomla/>
Options FollowSymlinks
AllowOverride All
Require all granted
</Directory>

ErrorLog /var/log/httpd/hwdomain.io_error.log
CustomLog /var/log/httpd/hwdomain.io_access.log combined

</VirtualHost>
```

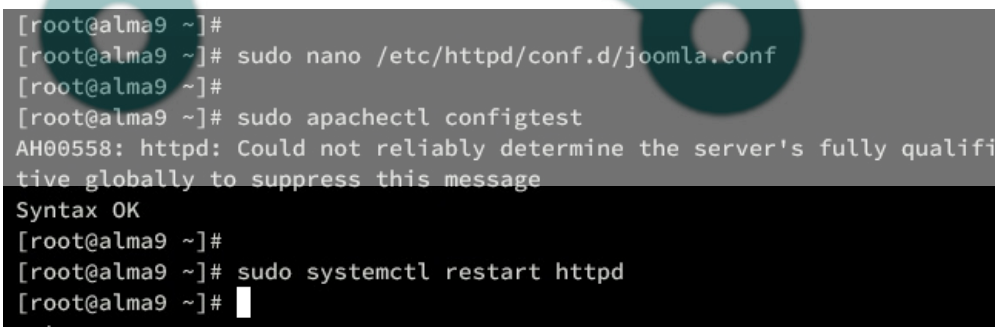
When you're done, save the file and exit the editor.

Now execute the apachectl command below to verify your httpd configuration. When you have proper syntax, you should get an output **Syntax OK**.

```
sudo apachectl configtest
```

Lastly, restart the httpd service to apply your virtual host configuration with the command below.

```
sudo systemctl restart httpd
```



Secure with Certbot and Letsencrypt

At this point, you have everything configured and ready to start the Joomla installation. But before that, you will secure Joomla using SSL/TLS certificates from Letsencrypt. If you have a domain name for your Joomla installation, follow this. And if you don't, you can skip this section.

First, install the Certbot and Certbot Apache plugin with the following command.

```
sudo dnf install certbot python3-certbot-apache -y
```

Now execute the certbot command below to generate SSL/TLS certificates for your Joomla installation. Be sure to change the details of the domain name and email address with your information.

```
sudo certbot --apache --agree-tos --redirect --hsts --staple-ocsp --email alice@hwdomain.io -d hwdomain.io
```

When the process is complete, your SSL/TLS certificates will be available in the /etc/letsencrypt/live/domain.com directory. Also, your Joomla installation is automatically configured with HTTPS.

Installing Joomla

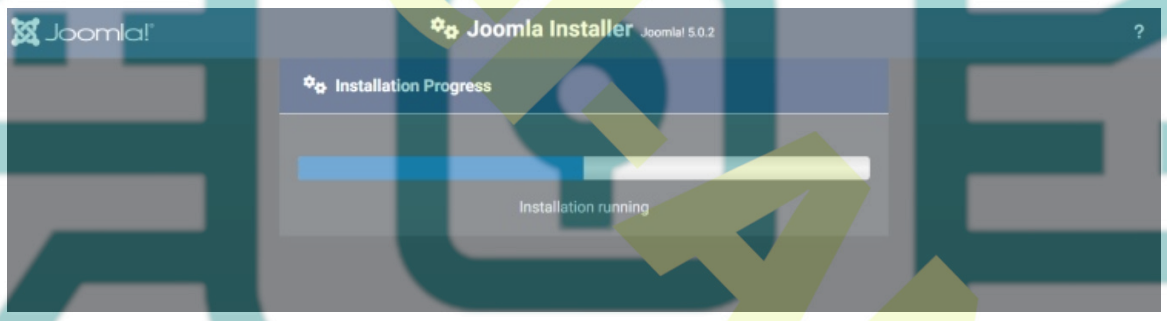
Launch your web browser and visit the domain name of your Joomla installation, such as http://hwdomain.io/. If the installation is successful, you will see the Joomla installation page.

Select the default language to English and input your basic site name. Then click **Setup Login Data** to continue.

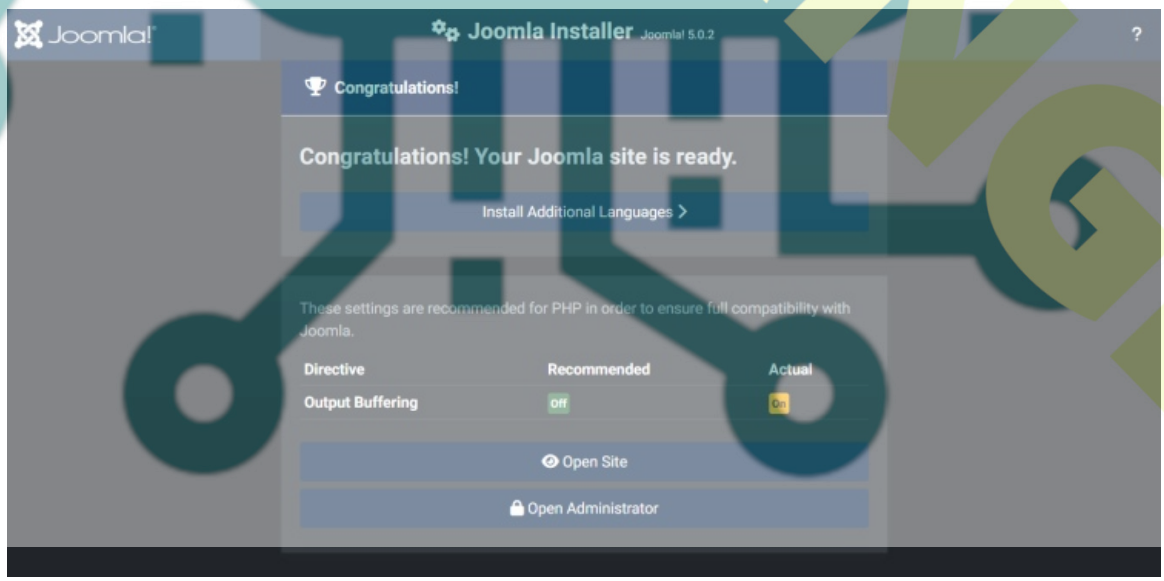
Now input the email address, username, and password for Joomla and click **Setup Database Connection**.

Input details of your MariaDB database credentials and click **Install Joomla** to proceed with the installation.

During the Joomla installation, you will see the following:



Once the Joomla installation is complete, you will get a message '**Congratulations! Your Joomla site is ready**'.



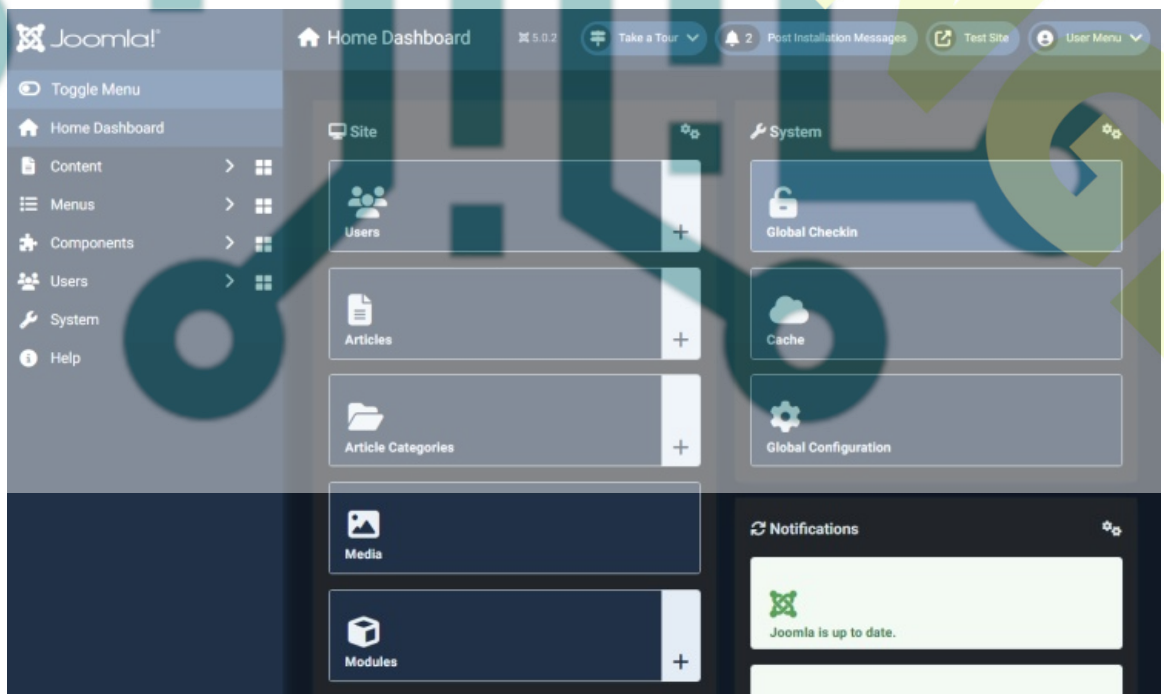
From there, you can click both two links:

- **Open Site** to access the home page of your Joomla site.
- **Open Administrator** to open the admin login for Joomla, which is located at http://hwdomain.io/administrator.

Below you can see the default home page for Joomla.

Below is the login page of the Joomla administrator. Input your username and password, then click **Login**.

If you have correct admin user and password, you will get the Joomla administrator dashboard like the following:



With this, your Joomla installation on the AlmaLinux 9 server is finished.

Conclusion

Congratulations! You have completed the installation of the Joomla open-source content management system on the AlmaLinux 9 server. You have installed Joomla with the LAMP Stack (Apache/Httpd, MariaDB, and PHP), secured Joomla with SSL/TLS certificates from Letsencrypt, and configured firewalld to open both HTTP and HTTPS ports.