# **SSL Certificate Installation in Ubuntu**

As initial conditions, you must have a domain name. It's DNS A-record must contain the public address of your server. If the firewall is enabled, open access for HTTP and HTTPS traffic.

sudo ufw allow 80

sudo ufw allow 443

And also, open access for SSH otherwise you can’t login via SSH

sudo ufw allow 22

**Step 1 – Installing the "Let's Encrypt" package**

The process of installing the "Let's Encrypt" package with all its dependencies is extremely simple. To do this, enter the command:

sudo apt install letsencrypt

(or)

sudo apt install certbot

Along with the "Let's Encrypt" package, this command also installs the "certbot.timer" utility for automatic certificate renewal. It checks the validity of SSL certificates in the system twice a day and extends those that expire in the next 30 days. To make sure that it is running, enter:

sudo systemctl status certbot.timer

**Step 2 – Standalone server for getting the "Let's Encrypt" SSL certificate**

The easiest way to get an ssl certificate is to use a standalone option in Certbot. Replace domain-name.com with your domain name, run the command, and follow the instructions:

sudo certbot certonly --standalone --agree-tos --preferred-challenges http -d domain-name.com

(or)

sudo certbot certonly --standalone -d your-domain.com

**Step 3 – Automatic installation of the SSL certificate on nginx and Apache web servers**

Certbot can automatically install the certificate on nginx and Apache web servers. To do this, you need to install an additional package and choose the appropriate one for your web server.

apt install python3-certbot-nginx

apt install python3-certbot-apache

Run this command for nginx:

sudo certbot --nginx --agree-tos --preferred-challenges http -d domain-name.com

Or this for Apache:

sudo certbot --apache --agree-tos --preferred-challenges http -d domain-name.com

**Step 4 – "Let's Encrypt" Wildcard SSL certificate**

To create a wildcard certificate, the only possible challenge method is DNS. In the d parameter, you must specify both the bare domain and wildcard.

sudo certbot certonly --manual --agree-tos --preferred-challenges dns -d domain-name.com -d \*.domain-name.com