Letsencrypt certificate request

In order to obtain a valid certificate from Letsencrypt we should perform some steps:

A. Obtain a valid Domain
B. Request letsencrypt certificate using Certbot

Obtain a valid domain

For this purpose, we will use frenom website, that allow us to obtain a free domain.

1. Go to https://www.freenom.com/it/index.html?lang=it website and register on it.
2. Go to https://my.freenom.com/domains.php and type your domain name, selecting one of the ones free.
3. Click on checkout and "purchase" free domain
4. Go on https://my.freenom.com/clientarea.php?action=domains and click on manage domain
5. Go on "manage frenom DNS", open the page and put away for now. It will be useful later for certificate request

Request letsencrypt certificate using Certbot

1. Install Certbot: $ sudo apt install Certbot
2. Request certificate changing <<<<YOUR_DOMAIN>>>> placeholder with the one generates before:
   $sudo certbot -d <<<<YOUR_DOMAIN>>>> --manual --preferred-challenges dns certonly
3. When prompted insert email and other required informations
4. When request is forwarded Certbot will give you the challenge that you must put into your domain dns, in order to obtain certificate

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Please deploy a DNS TXT record under the name
_acme-challenge.networksecurity2021.tk with the following value:

5g76v4pw4nbRUfMEm4on3yPHcfyFlKw6EZAhUpZAuG8

Before continuing, verify the record is deployed.
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5. Go to "manage frenom dns" page, used before, and create new TXT record in this way:
   a. Name: _acme-challenge
   b. Type: TXT
   c. Value: the ones provided from Certbot.
   And click on save
6. Go on https://www.whatsmydns.net/#TXT/, put _acme-challenge.<<your_domain>> and click on search
7. Wait until your txt record is visible on some servers

8. When txt record is visible go on Certbot shell and press Enter in order to complete the process
9. At the end of the process your certificate will be visible on /etc/letsencrypt/live/<<YOUR_DOMAIN>>/ folder, containing the following files:
   a. Cert.pem
   b. Key.pem
   c. Chain.pem
   d. Fullchain.pem