```
Select ec2-user@ip-172-31-9-224:~                                                           ─

Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Vaibhav Joshi> cd Desktop
PS C:\Users\Vaibhav Joshi\Desktop> ssh -i Ec2-Instance.pem ec2-user@52.15.74.25
Last login: Mon Nov  1 17:51:01 2021 from 103.149.126.234
[ec2-user@ip-172-31-9-224 ~]$ systemctl status httpd.service
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; vendor preset: disabled)
   Active: active (running) since Thu 2021-10-28 10:02:29 UTC; 4 days ago
     Docs: man:httpd.service(8)
 Main PID: 2593 (httpd)
   Status: "Running, listening on: port 80"
    Tasks: 213 (limit: 4731)
   Memory: 24.9M
   CGroup: /system.slice/httpd.service
           ├─ 2593 /usr/sbin/httpd -DFOREGROUND
           ├─14693 /usr/sbin/httpd -DFOREGROUND
           ├─14694 /usr/sbin/httpd -DFOREGROUND
           ├─14695 /usr/sbin/httpd -DFOREGROUND
           └─14696 /usr/sbin/httpd -DFOREGROUND

Oct 28 10:02:29 ip-172-31-9-224.us-east-2.compute.internal systemd[1]: Starting The Apache HTTP Server...
Oct 28 10:02:29 ip-172-31-9-224.us-east-2.compute.internal systemd[1]: Started The Apache HTTP Server.
Oct 28 10:02:29 ip-172-31-9-224.us-east-2.compute.internal httpd[2593]: Server configured, listening on: port 80
Oct 31 03:15:01 ip-172-31-9-224.us-east-2.compute.internal systemd[1]: Reloading The Apache HTTP Server.
Oct 31 03:15:01 ip-172-31-9-224.us-east-2.compute.internal systemd[1]: Reloaded The Apache HTTP Server.
Oct 31 03:15:01 ip-172-31-9-224.us-east-2.compute.internal httpd[2593]: Server configured, listening on: port 80
[ec2-user@ip-172-31-9-224 ~]$
```

```
ec2-user@ip-172-31-9-224:~                                               —    □    ×

Installing:
 mod_ssl           x86_64      1:2.4.37-39.module+el8.4.0+12865+a7065a39.1     rhel-8-appstream-rhui-rpms      135 k
Installing dependencies:
 sscg              x86_64      2.3.3-14.el8                                    rhel-8-appstream-rhui-rpms       49 k

Transaction Summary
================================================================================================================
Install  2 Packages

Total download size: 184 k
Installed size: 364 k
Is this ok [y/N]: y
Downloading Packages:
(1/2): sscg-2.3.3-14.el8.x86_64.rpm                                            335 kB/s |  49 kB    00:00
(2/2): mod_ssl-2.4.37-39.module+el8.4.0+12865+a7065a39.1.x86_64.rpm            852 kB/s | 135 kB    00:00
----------------------------------------------------------------------------------------------------------------
Total                                                                          909 kB/s | 184 kB    00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :                                                                                      1/1
  Installing       : sscg-2.3.3-14.el8.x86_64                                                             1/2
  Installing       : mod_ssl-1:2.4.37-39.module+el8.4.0+12865+a7065a39.1.x86_64                           2/2
  Running scriptlet: mod_ssl-1:2.4.37-39.module+el8.4.0+12865+a7065a39.1.x86_64                           2/2
  Verifying        : sscg-2.3.3-14.el8.x86_64                                                             1/2
  Verifying        : mod_ssl-1:2.4.37-39.module+el8.4.0+12865+a7065a39.1.x86_64                           2/2
Installed products updated.

Installed:
  mod_ssl-1:2.4.37-39.module+el8.4.0+12865+a7065a39.1.x86_64                   sscg-2.3.3-14.el8.x86_64

Complete!
[ec2-user@ip-172-31-9-224 ~]$
```

```
ec2-user@ip-172-31-9-224:~

[ec2-user@ip-172-31-9-224 ~]$
[ec2-user@ip-172-31-9-224 ~]$
[ec2-user@ip-172-31-9-224 ~]$
[ec2-user@ip-172-31-9-224 ~]$
[ec2-user@ip-172-31-9-224 ~]$
[ec2-user@ip-172-31-9-224 ~]$ sudo yum install openssl
Updating Subscription Management repositories.
Last metadata expiration check: 1:16:52 ago on Mon 01 Nov 2021 04:46:32 PM UTC.
Package openssl-1:1.1.1g-15.el8_3.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-9-224 ~]$
```

```
ec2-user@ip-172-31-9-224:~

Last metadata expiration check: 1:16:52 ago on Mon 01 Nov 2021 04:46:32 PM UTC.
Package openssl-1:1.1.1g-15.el8_3.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-9-224 ~]$ openssl genrsa -out ca.key 2048
Generating RSA private key, 2048 bit long modulus (2 primes)
....................+++++
.....+++++
e is 65537 (0x010001)
[ec2-user@ip-172-31-9-224 ~]$ openssl req -new -key ca.key -out ca.csr
You are about to be asked to enter information that will be incorporated
into your certificate request.
What you are about to enter is what is called a Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.
-----
Country Name (2 letter code) [XX]:IN
State or Province Name (full name) []:
Locality Name (eg, city) [Default City]:
Organization Name (eg, company) [Default Company Ltd]:
Organizational Unit Name (eg, section) []:
Common Name (eg, your name or your server's hostname) []:
Email Address []:

Please enter the following 'extra' attributes
to be sent with your certificate request
A challenge password []:
An optional company name []:
[ec2-user@ip-172-31-9-224 ~]$
```

```
ec2-user@ip-172-31-9-224:~

[ec2-user@ip-172-31-9-224 ~]$ openssl x509 -req -days 365 -in ca.csr -signkey ca.key -out  ca.crt
Signature ok
subject=C = IN, L = Default City, O = Default Company Ltd
Getting Private key
[ec2-user@ip-172-31-9-224 ~]$
```

```
[root@ip-172-31-9-224 ec2-user]#
[root@ip-172-31-9-224 ec2-user]#
[root@ip-172-31-9-224 ec2-user]#
[root@ip-172-31-9-224 ec2-user]#
[root@ip-172-31-9-224 ec2-user]#
[root@ip-172-31-9-224 ec2-user]# cp  ca.crt  /etc/pki/tls/certs
[root@ip-172-31-9-224 ec2-user]# cp  ca.key  /etc/pki/tls/private/
[root@ip-172-31-9-224 ec2-user]# cp  ca.csr  /etc/pki/tls/private
[root@ip-172-31-9-224 ec2-user]#
[root@ip-172-31-9-224 ec2-user]# vim /etc/httpd/conf.d/ssl.conf
```

```
[root@ip-172-31-9-224 ec2-user]# httpd -t
Syntax OK
[root@ip-172-31-9-224 ec2-user]#
```

```
# Load config files in the "/etc/httpd/conf.d" directory, if any.
IncludeOptional conf.d/*.conf
<VirtualHost *:443>
  SSLEngine on
  SSLCertificateFile /etc/pki/tls/certs/ca.crt
  SSLCertificateKeyFile  /etc/pki/tls/private/ca.key
  servername  /var/www/html
</VirtualHost>



-- INSERT --
```

← → C ⚠ Not secure | https://52.15.74.25

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Red Hat Enterprise Linux **Test Page**

This page is used to test the proper operation of the HTTP server after it has been installed. [...] d at this site is workin[...]
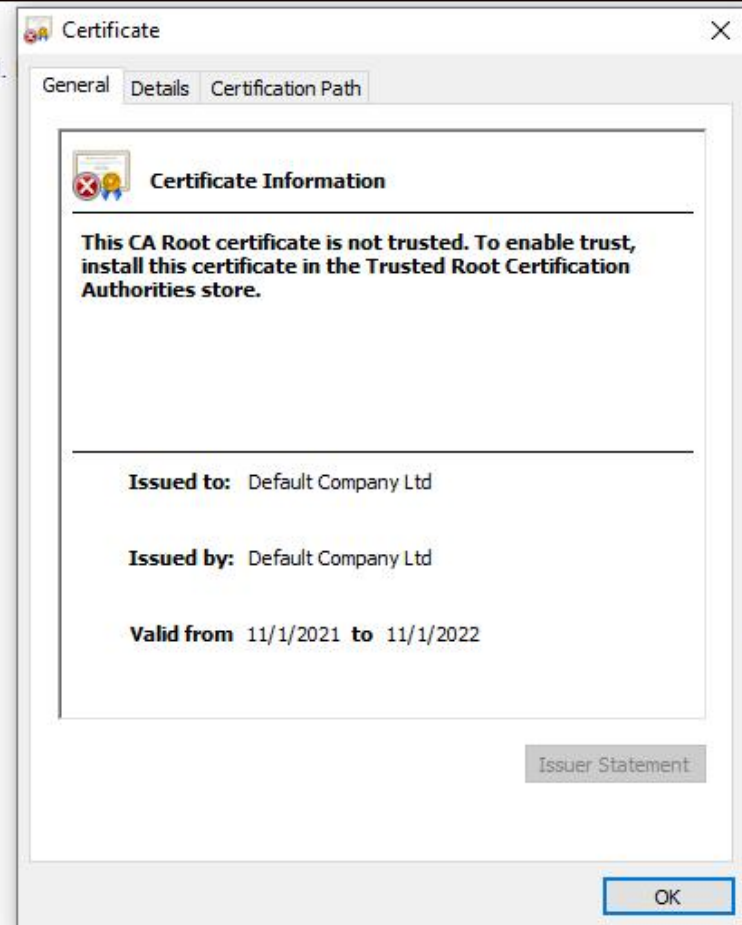
If you are a member of the general public:

The fact that you are seeing this page indicates that the website you just visited is either experiencing problems, or is undergoing routine maintenance.

If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.

For example, if you experienced problems while visiting www.example.com, you should send e-mail to "webmaster@example.com".

For information on Red Hat Enterprise Linux, please visit the Red Hat, Inc. website. The documentation for Red Hat Enterprise Linux is available on the Red Hat, Inc. website.

Certificate ✕

General | Details | Certification Path

Certificate Information

This CA Root certificate is not trusted. To enable trust, install this certificate in the Trusted Root Certification Authorities store.

Issued to: Default Company Ltd

Issued by: Default Company Ltd

Valid from 11/1/2021 to 11/1/2022

Issuer Statement

OK

2.4
APACHE

52.15.74.25 ✕

⚠ **Your connection to this site is not secure**
You should not enter any sensitive information
on this site (for example, passwords or credit
cards), because it could be stolen by attackers.
Learn more

You have chosen to disable security warnings for
this site. Re-enable warnings

🔲 Certificate is not valid   ⧉

🍪 Cookies   0 in use ⧉

⚙ Site settings   ⧉

Red Hat Enterprise Linux **Test Page**

This p... TP server after it has been installed. If you can read this page, it means that the HTTP server installed at this site is working properly.

If you ...

The fa... website you just visited is either
exper... ...ance.

If you... know that you've seen this page
instea... e-mail. In general, mail sent to
the na... ...ain should reach the appropriate
perso...

For example, if you experienced problems while visiting www.example.com, you should
send e-mail to "webmaster@example.com".

For information on Red Hat Enterprise Linux, please visit the Red Hat, Inc. website. The
documentation for Red Hat Enterprise Linux is available on the Red Hat, Inc. website.

If you are the website administrator:

You may now add content to the webroot directory. Note that until you do so, people
visiting your website will see this page, and not your content.

For systems using the Apache HTTP Server: You may now add content to the directory
/var/www/html/. Note that until you do so, people visiting your website will see this page,
and not your content. To prevent this page from ever being used, follow the instructions in
the file /etc/httpd/conf.d/welcome.conf.

For systems using NGINX: You should now put your content in a location of your choice
and edit the root configuration directive in the **nginx** configuration file
/etc/nginx/nginx.conf.

Red Hat Enterprise Linux   **Powered by** APACHE 2.4

⚠ Warning: Potential Security Risk Ahead

Firefox detected a potential security threat and did not continue to 52.15.74.25. If you visit this site, attackers could try to steal information like your passwords, emails, or credit card details.

Learn more...

Go Back (Recommended)   Advanced...

52.15.74.25 uses an invalid security certificate.

The certificate is not trusted because it is self-signed.

Error code: MOZILLA_PKIX_ERROR_SELF_SIGNED_CERT

View Certificate

Go Back (Recommended)   Accept the Risk and Continue

Red Hat Enterprise Linux **Test Page**

This page is used to test the proper operation of the HTTP server after it has been installed. If you can read this page, it means that the HTTP server installed at this site is working properly.

If you are a member of the general public:

The fact that you are seeing this page indicates that the website you just visited is either experiencing problems, or is undergoing routine maintenance.

If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.

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