In this article

Install Let's Encrypt with Apache 2.4 on Windows Server 2019

Estimated reading time: 3 min

Introduction

In this article, we will help you to configure a Let's Encrypt client on Windows Server 2019 and how you can enable and configure your SSL certificate on your Apache webserver.

Prerequisites

- VPS or Dedicated Server with Windows Server 2019 installed.
- You must be logged in via Remote Desktop Protocol as an administrative user.
- Installed Apache 2.4 in `C:\Apache24`
- A domain name pointed towards your VPS or Dedicated server. In this tutorial, we will use *s30426.hosted-by-snel.com*. Replace all occurrences of *s30426.hosted-by-snel.com* with your actual domain name.

Step 1: Log in with RDP into Windows Server 2019

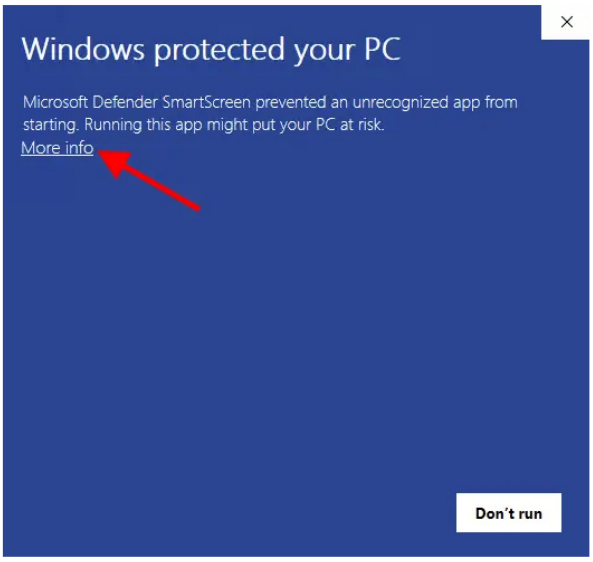
Connect to your server with the login credentials which you can find in your client area.

Step 2: Download Let's Encrypt client

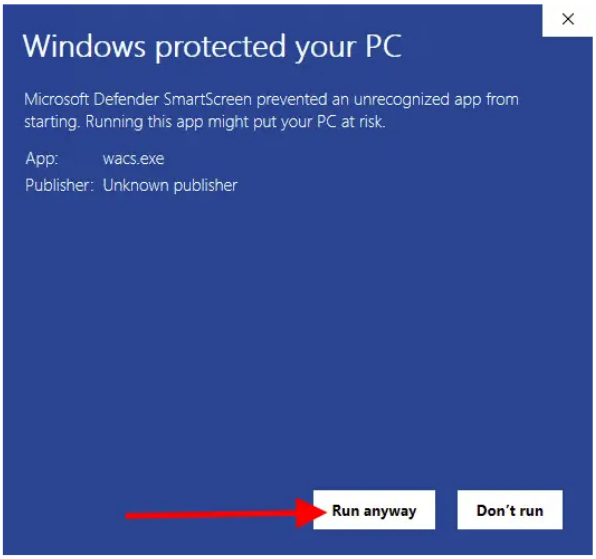
We will use Win-acme for issuing an SSL certificate. Visit the website of Win-acme to download the latest version. Extract the download zip to `C:\win-acme`

Step 3: Run Win-acme Let's Encrypt client

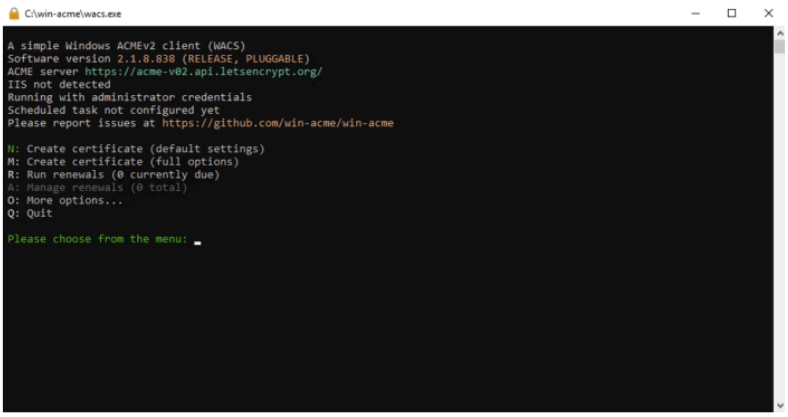
Start `wacs` with administrator permission. If Microsoft Defender SmartScreen is enabled it will ask your permission.



Click on `More info` . A new button will appear and click on `Run anyway`.



Win-acme will start



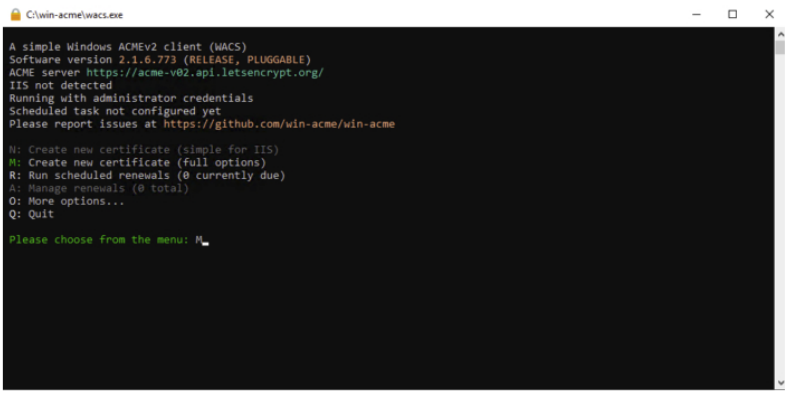
Step 4: Create a batch file

Create the following filename `C:\win-acme\Scripts\RestartApache.bat`

```
net stop "Apache2.4" & sc start "Apache2.4"
```

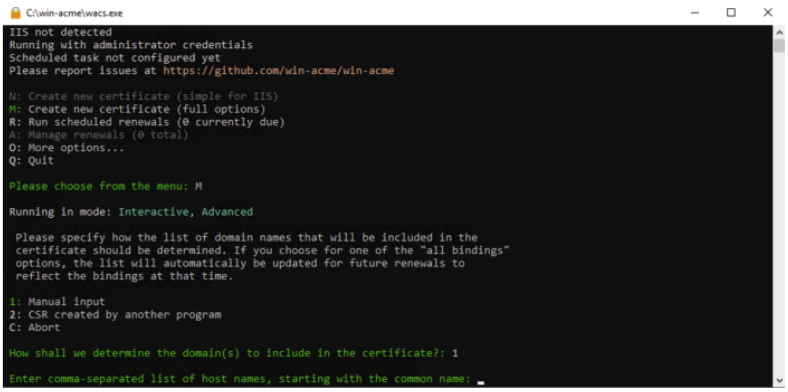
Step 5: Issue certificate

Enter `M` in the command prompt en hit enter.

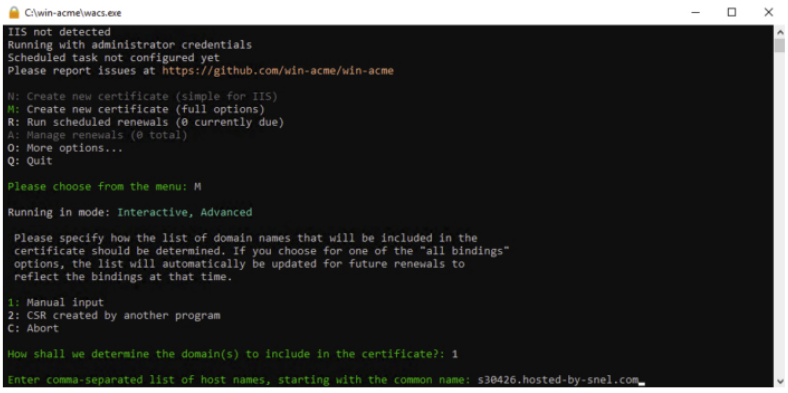


Choose `manual input` in our situation, it's option 1.

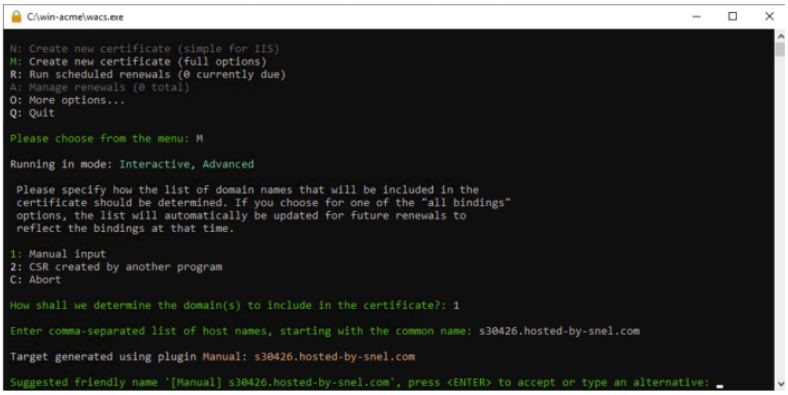
> Manual-input can be a different number in your setup



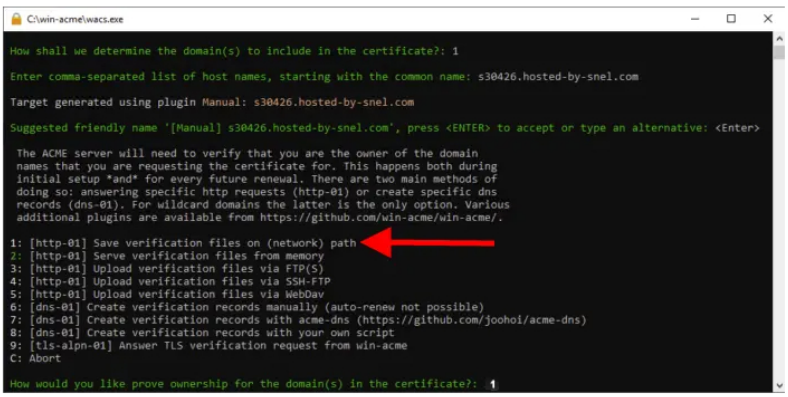
Enter the domain name where you want to issue a certificate. In our article it's: `s30426.hosted-by-snel.com`



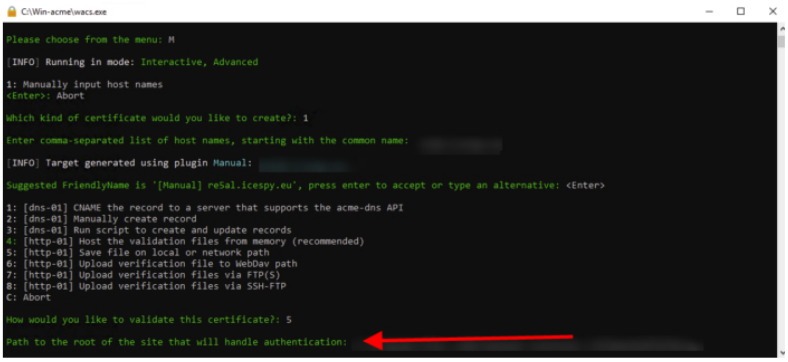
It will ask you for a friendly name, we leave it blank. Hit enter to continue.



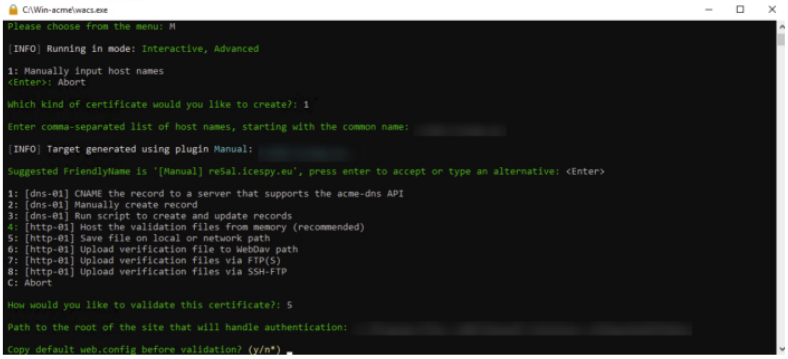
It will ask how you want to verify that you are the owner of that domain. In our case, s30426.hosted-by-snel.com is already pointing to our server and is active in Apache. In our setup, we choose option 1 `[http-01] Serve verification files on (network) path`.



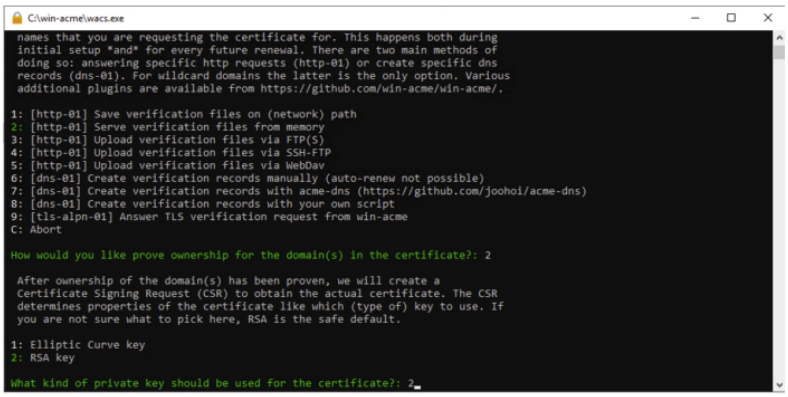
Since we have chosen network path it will ask us for a path, in our case its `C:\Apache24\htdocs`



It will ask you if you want to copy the default web.config before validation. We choose `N`

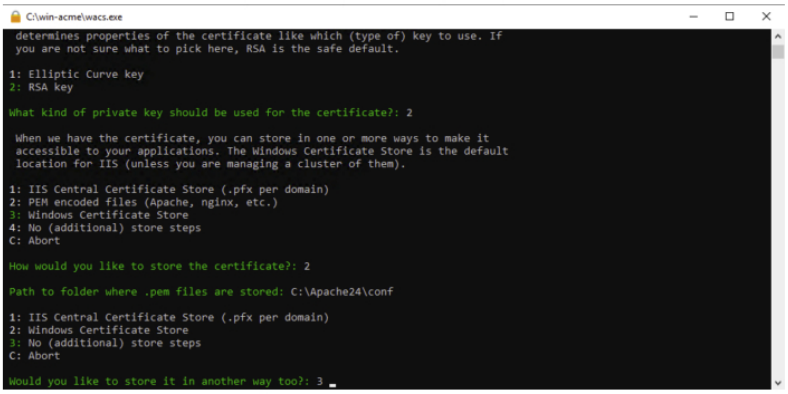


It will what type of private key we want. We will choose option 2 `RSA key` as a private key.

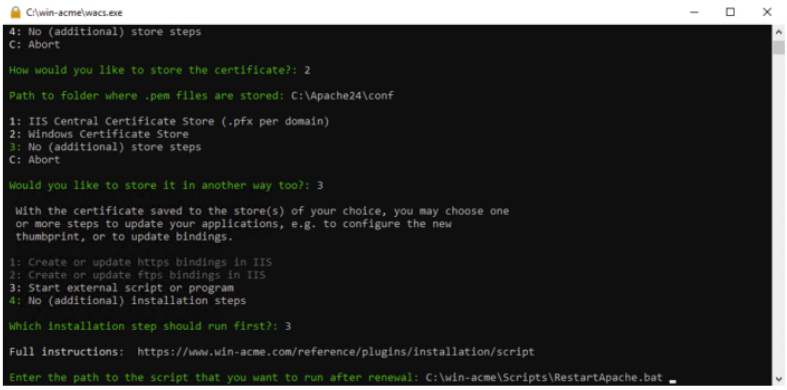


Since we want to use the SSL certificate on our Apache webserver we will choose option 2 `PEM encoded files (Apache, nginx, etc.)` and hit enter. Once PEM is selected it will ask you where to store those files. In our case it's `C:\Apache24\conf`.

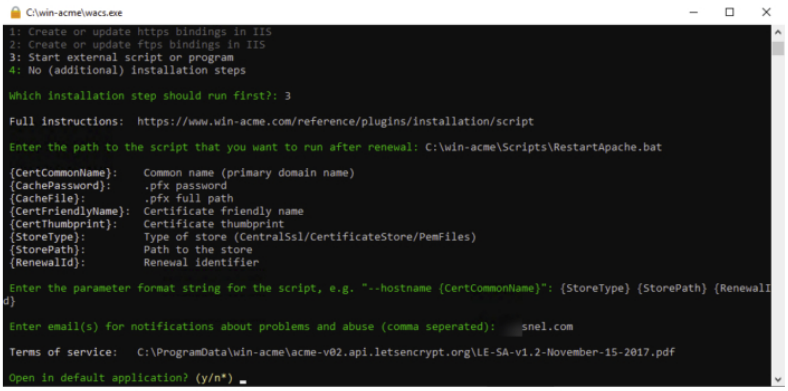
We do not want to store it another way and we select option 3 `No (additional) store steps` and hit enter.



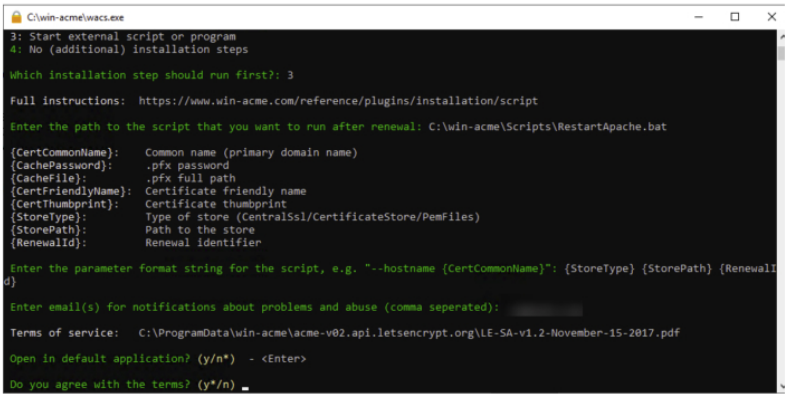
Once the new certificate is saved we do want to perform an extra step and choose for option 3 `Start external script or program`. It will ask the script path that you want to run after renewal `C:\win-acme\Scripts\RestartApache.bat`.



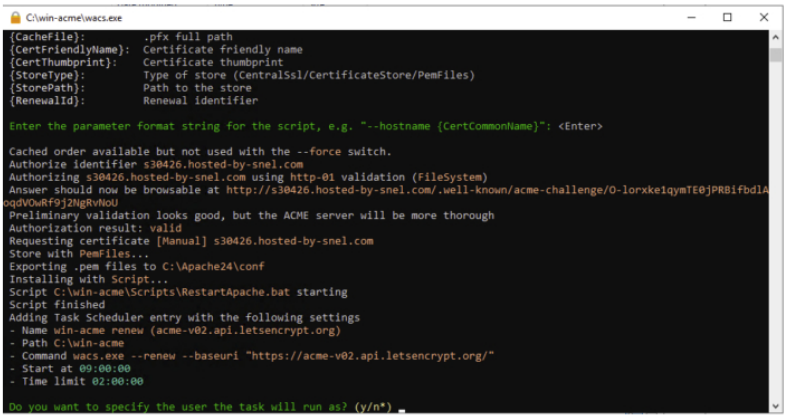
Enter the following `{StoreType} {StorePath} {RenewalId}`. Once this is entered it will ask where you want to receive notification and fill in your email address.



It will ask you if you want to open in default application choose for **N** and accept the terms with **Y**.



Run the task under a specific user, since it requires a user with administrator permissions.



Step 6: Enable SSL if it's not enabled yet

If SSL is already enabled for your Apache webserver you can continue to step 7. Open the httpd configuration file `C:/Apache24/conf/httpd.conf`. In the httpd.conf file changes the following lines by removing the comment sign `#`:

```
Loadmodule ssl_module modules/mod_ssl.so
Include conf/extra/httpd-default.conf
Include conf/extra/httpd-ssl.conf
```

Do an Apache configuration file check. Start command prompt with administration permission. Run de following command:

```
cd C:\Apache24\bin
httpd.exe -t
```

The output should give **Syntax OK** if there is no error in the configuration file.

Step 7: Configure SSL for the newly issued certificate.

Open the httpd-ssl configuration file located here `C:/Apache24/conf/extra/httpd-ssl.conf`.

Change the SSLCertificateFile:

```
SSLCertificateFile "${SRVROOT}/conf/server.crt"
```

with

```
SSLCertificateFile "${SRVROOT}/conf/s30426.hosted-by-snel.com-chain.pem"
```

Change the SSLCertificateKeyFile :

```
SSLCertificateKeyFile "${SRVROOT}/conf/server.key"
```

with

```
SSLCertificateKeyFile "${SRVROOT}/conf/s30426.hosted-by-snel.com-key.pem"
```

Change the SSLCipherSuite:

```
SSLCipherSuite HIGH:MEDIUM:!MD5:!RC4:!3DES
SSLProxyCipherSuite HIGH:MEDIUM:!MD5:!RC4:!3DES
```

with

```
SSLCipherSuite ECDH+AESGCM256:ECDH+CHACHA20:DH+AESGCM256:ECDH+AES256:DH+AES256:!aNULL:!MD5:!DSS
SSLProxyCipherSuite
ECDH+AESGCM256:ECDH+CHACHA20:DH+AESGCM256:ECDH+AES256:DH+AES256:!aNULL:!MD5:!DSS
```

Change SSL protocol

```
SSLProtocol all -SSLv3
SSLProxyProtocol all -SSLv3
```

With

```
SSLProtocol all -SSLv3 -TLSv1 -TLSv1.1
SSLProxyProtocol all -SSLv3 -TLSv1 -TLSv1.1
```

Change VirtualHost

```
#   General setup for the virtual host
DocumentRoot "${SRVROOT}/htdocs"
ServerName www.example.com:443
ServerAdmin admin@example.com
ErrorLog "${SRVROOT}/logs/error.log"
TransferLog "${SRVROOT}/logs/access.log"
```

With

```
#   General setup for the virtual host
DocumentRoot "${SRVROOT}/htdocs"
ServerName s30426.hosted-by-snel.com:443
ServerAdmin <example@example.com>
ErrorLog "${SRVROOT}/logs/error.log"
TransferLog "${SRVROOT}/logs/access.log"
```

Save the changes. Re-check the Apache configuration on the command prompt. Start command prompt with administration permission. Run de following command:

```
cd C:/Apache24/bin
httpd.exe -t
```

If everything is OK. Restart Apache webserver via command prompt. Start command prompt with administration permission. Run de following command:

```
cd C:/Apache24/bin
httpd -k restart
```

Step 8: Verify that SSL is working

Visit the website on your browser: `https://s30426.hosted-by-snel.com`

Conclusion

In this article, we described how you can install a Let's Encrypt client a configure Apache webserver on Windows to use the issues SSL certificate.

Comments

Antonio Pereira says
Thursday, August 20th, 2020 at 15:53

Hello,

Great article it got me up and going. Is there a way to automatically renew certificates after 90 days.

Thanks

Reply

Ahmet Bas says
Thursday, August 20th, 2020 at 15:59

WinAcme will create a renewal task if you followed our article as described in step 6: "Run the task under a specific user, since it requires a user with administrator permissions.". Which will perform a restart of the Apache server after a succesfull renewal.

Reply

Antonio Pereira says
Friday, August 21st, 2020 at 21:15

I must of skipped that test. I see the the restartapache.bat file but its empty. Is there a way i can manually add the entries in the batch file and then I assume i will have to add a windows task scheduler tito run it every 90 days.

Reply

Ahmet Bas says
Monday, August 24th, 2020 at 10:05

We created the restartapache.bat ourself which can be found in step 4, where you can see the content of it. You can go over the process and make the changes you need to make.

Reply

Ryan says
Tuesday, November 10th, 2020 at 16:31

Forbidden
You don't have permission to access this resource.
I get this error after configuring everything right.

Reply

Irma yanet says
Monday, March 1st, 2021 at 20:35

Great !!! I configured Apache for Django and all work fine. Only I had to do a change, I removed the comment sign # at the line :
LoadModule socache_shmcb_module modules/mod_socache_shmcb.so
and all work excelent.
You don't forget to add a permit rule in windows firewall, with a port 443.

Reply

Yaniv says
Saturday, June 5th, 2021 at 16:19

Thank you! works like magic 😀

Reply

Sarooj Z says

Monday, November 22nd, 2021 at 11:19

You are a star!
While configuring at end of step 5 I provided invalid credintial and I could not set task to run automatically renew certificates. How can I go back to that step? Appriciate your assistance.

Reply

Ahmet Bas says
Monday, November 22nd, 2021 at 11:51

If you open Win-acme client and click on "More Options" you can "(Re)create scheduled task" which should help you to change values.

Reply

Sarooj Z says
Monday, November 22nd, 2021 at 12:16

Thanks so much...

Reply

Pavel says
Monday, February 28th, 2022 at 15:10

You made my day!

Thank you so much.

Reply

Raul Chiarella says
Tuesday, March 29th, 2022 at 19:19

How can i do this procedure on Windows Server Core passing parameters only?

Reply

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Snel Status

All systems operational