

How to update cURL trusted root certificates.

Phil Rigby - 2021-06-16 - Comments (0) - Deskpro Legacy

With [LetsEncrypt's DST Root CA X3 root certificate expiring](#), some customers are experiencing issues when Deskpro needs to contact external websites, such as downloading linked attachments from emails, or adding an external download link etc.

This is often due to PHP cURL, the service Deskpro uses for external websites, having outdated certificates for https requests. As it does not recognise the newer certificates, it will refuse to connect to these external websites, which can block some Deskpro services from running correctly.

This can be fixed easily by manually updating the list of trusted root certificates to include the newer **LetsEncrypt ISRG Root X1 root certificate**. We recommend using the [curl.se CA Bundle](#), as this is regularly extracted from the Firefox browser, which is maintained by Mozilla, and is formatted in a way which cURL expects.

Linux

(Paths in this guide will assume a default Linux installation on Ubuntu 18.04 LTS, but it will be similar for other distros.)

1. Download the latest CA bundle extract from [curl.se](#)

```
wget https://curl.se/ca/cacert.pem -O /etc/ssl/certs/cacert.pem
```

2. Edit your php.ini file.

For Ubuntu 18.04, there are 2 php.ini files which need to be modified in the following locations:

```
/etc/php/<version>/cli/php.ini
```

```
/etc/php/<version>/fpm/php.ini
```

Replace the <version> with the version of PHP you're using, so for PHP 7.4, the path will be /etc/php/7.4/...

In these files, you need to either modify or add the `curl.cainfo` and `openssl.cafile` parameters with the path to the new CA bundle:

```
[curl]
curl.cainfo = /etc/ssl/certs/cacert.pem
```

```
[openssl]
```

```
openssl.cafile = /etc/ssl/certs/cacert.pem
```

(only add the parameter if it does not already exist in your php.ini file. Duplicate parameters can prevent PHP from running correctly)

3. Restart your php-fpm to load the new settings.


```
systemctl restart php<version>-fpm
```

Replace the <version> with the version of PHP you're using, so for PHP 7.4, the command will be `systemctl restart php7.4-fpm`

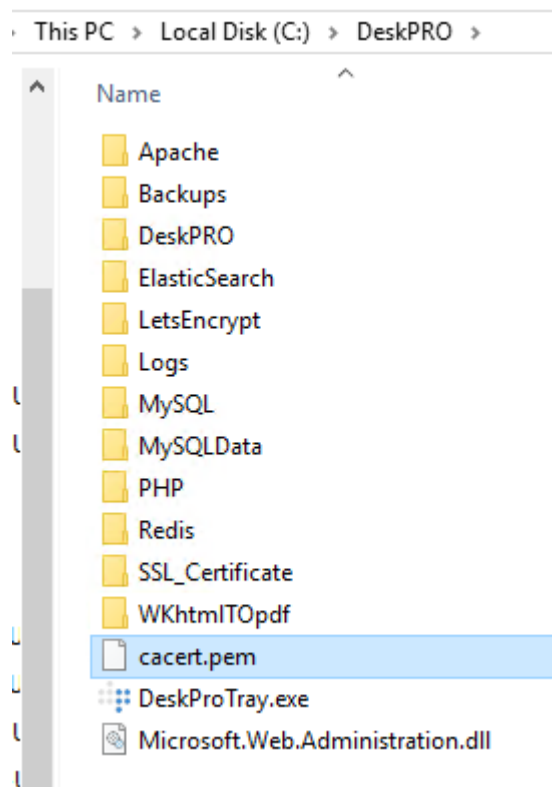
Windows

(Paths in this guide will assume the default Windows installation directory)

1. Download the latest CA bundle extract from [curl.se](https://curl.se/docs/caextract.html), and place it within the Deskpro installation directory (C:\DeskPRO\).



The screenshot shows a web browser window displaying the curl website's 'CA Extract' page. The address bar shows the URL `https://curl.se/docs/caextract.html`. The navigation menu includes 'Docs Overview', 'Project', 'Protocols', 'Releases', 'Tool', and 'Who and Why'. The breadcrumb trail is 'curl / Docs / Protocols / CA Extract'. The main heading is 'CA certificates extracted from Mozilla'. Below the heading, the text reads: 'The Mozilla CA certificate store in PEM format (around 250KB uncompressed):' followed by a link to 'cacert.pem'. A 'Related: SSL Certs' link is also visible. Below this, it says 'This bundle was generated at Tue May 25 03:12:05 2021 GMT.' and provides a paragraph of information about the PEM file and updates.



2. Edit your php.ini file (C:\Deskpro\PHP\php.ini) in notepad.

3. Find the following section of your php.ini file:

```
[curl]
; A default value for the CURLOPT_CAINFO option. This is required to be an
; absolute path.
;curl.cainfo=

[openssl]
; The location of a Certificate Authority (CA) file on the local filesystem
; to use when verifying the identity of SSL/TLS peers. Most users should
; not specify a value for this directive as PHP will attempt to use the
; OS-managed cert stores in its absence. If specified, this value may still
; be overridden on a per-stream basis via the "cafile" SSL stream context
; option.
;openssl.cafile=
```

Modify both parameters to remove the semicolons (;) from the start of the lines, and the path to the cacert.pem file at the end:

```
[curl]
; A default value for the CURLOPT_CAINFO option. This is required to be an
; absolute path.
curl.cainfo=C:\DeskPRO\cacert.pem
```

```
[openssl]
; The location of a Certificate Authority (CA) file on the local filesystem
; to use when verifying the identity of SSL/TLS peers. Most users should
; not specify a value for this directive as PHP will attempt to use the
; OS-managed cert stores in its absence. If specified, this value may still
; be overridden on a per-stream basis via the "cafile" SSL stream context
; option.
openssl.cafile=C:\DeskPRO\cacert.pem
```

4. Save the file

5. Restart your web handler, by opening your DeskPRO Manager (**Start > Configure Deskpro**), then clicking the **'Stop'** button on the end of the web server line.

DeskPRO Manager v.1.0.429

deskpro DeskPRO Desktop Manager

DeskPRO Manager allows you to configure how the necessary modules are loaded.

Run DeskPRO as Windows services

Run DeskPro at Windows startup

Log on as Local System account

I will manually start DeskPRO if needed

Log on using following user account

User Name:

Password:

DeskPRO is powered by:

- MySQL Community Server v.5.7.34.0
- Apache HTTP Server v.2.4.47
- PHP Hypertext Preprocessor v.7.4.19
- Elastic Search v.5.4.0

You can also configure the ports used by each module.

Database server	Port: <input type="text" value="3306"/>	Config View logs	<input type="button" value="Stop"/>	Running
ElasticSearch	Port: <input type="text" value="9200"/>	Config View logs	<input type="button" value="Stop"/>	Running
Redis	Port: <input type="text" value="6379"/>	Config View logs	<input type="button" value="Stop"/>	Running
Apache web server	Port: <input type="text" value="80"/>	Config View logs	<input type="button" value="Stop"/>	Running
<input checked="" type="checkbox"/> Enable SSL support	Port: <input type="text" value="443"/>	Config		

Load DeskPRO Manager at Windows startup

[Open DeskPRO in File Explorer](#)

[Generate your free certificate with Let's Encrypt](#)

Wait for the service to stop completely, then click **'Start'** again to restart.

This should now update the trusted root certificates for cURL, allowing it to connect to external websites using the new **LetsEncrypt ISRG Root X1 root certificate**.

Custom Root Certificates

If you require a custom Root Certificate to use a service such as Cisco Umbrella, or you need Deskpro to trust a self-signed certificate, you can add these custom root certificates to the cacert.pem file.

The certificate needs to be in **Base 64** or **PEM** format, and can be appended to the bottom of the file by running `cat custom-cert.pem >> cacert.pem` in **Linux**, or copy/pasting

the certificate to the file in Notepad for **Windows**.