

curl:// for network debugger

How can curl:// help me to find the error



About me

- Aleksandar Lazic
 - Owner of ME2Digital e. U.
- Use curl:// since long time
 - can't remember when I used it the first time
- Work in IT since 1999



curl://up

Why curl://

- Have a lot protocols
- -v is one of the important option
- -k is another important options
- Why? => Because almost all “Enterprise” companies have there own CA/PKI
- This is one of the tool which almost every os have installed by default



Telnet in 2017

- curl:// have the protocol telnet implemented
- Today's admins does not want to have telnet bin
- With telnet you can fast and easy check if a connection is possible or not
- `curl -v telnet://www.google.com:80/`
- `echo -e 'GET / HTTP/1.0\n' | curl -v telnet://www.google.com:80/`
-



curl://up

Example telnet call

```
echo -e 'GET / HTTP/1.0\n' | curl -v telnet://www.google.com:80/
*   Trying 2607:f8b0:4009:813::2004...
* Connected to www.google.com (2607:f8b0:4009:813::2004) port 80 (#0)
HTTP/1.0 302 Found
Cache-Control: private
Content-Type: text/html; charset=UTF-8
Location: http://www.google.de/?gfe_rd=cr&ei=gKW4WLaaItT_8Af1mZKwDw
Content-Length: 258
Date: Thu, 02 Mar 2017 23:06:40 GMT

<HTML><HEAD><meta http-equiv="content-type" content="text/html; charset=utf-8">
<TITLE>302 Moved</TITLE></HEAD><BODY>
<H1>302 Moved</H1>
The document has moved
<A HREF="http://www.google.de/?gfe_rd=cr&ei=gKW4WLaaItT_8Af1mZKwDw">here</A>.
</BODY></HTML>
* Closing connection 0
```



Resolve for poor man

- Sometimes is DNS to slow
- Not easy to change
- DNS on commandline ;-)
- Do you know the option
 - `--resolve HOST:PORT:ADDRESS`
- Just use it as normal Request

Example resolve call

Original call:

```
curl -v http://me2digital.online -o /dev/null
```

```
Connected to me2digital.online (192.0.78.25) port 80 (#0)
```

Google call:

```
curl -v --resolve me2digital.online:80:2607:f8b0:4009:813::2004  
http://me2digital.online -o /dev/null
```

```
* Added me2digital.online:80:2607:f8b0:4009:813::2004 to DNS cache
```

```
* Rebuilt URL to: http://me2digital.online/
```

```
* Hostname me2digital.online was found in DNS cache
```

```
*   Trying 2607:f8b0:4009:813::2004...
```

```
....
```

```
* Connected to me2digital.online (2607:f8b0:4009:813::2004) port 80  
(#0)
```



Why do I need --resolve

- For most for Server Name Indication (SNI) debugging
- With SNI a call to the IP is not enough
- The SSL-Layer decides which vhost will be used
- The SSL-Layer decides which certificate will be used

Example

- `curl -v https://caddy-template-usage-caddy-test001.f0b6.ded-stg2-aws.openshiftapps.com/templates/print-headers.tmpl`
 - * SSL connection using **ECDHE-RSA-AES128-GCM-SHA256**
- `curl -v https://54.71.185.21/templates/print-headers.tmpl`
 - **curl: (51)** SSL: certificate subject name '*.f0b6.ded-stg2-aws.openshiftapps.com' does not match target host name '54.71.185.21'
- `curl -v --resolve 54.71.185.21:443:caddy-template-usage-caddy-test001.f0b6.ded-stg2-aws.openshiftapps.com https://caddy-template-usage-caddy-test001.f0b6.ded-stg2-aws.openshiftapps.com/templates/print-headers.tmpl`
 - * SSL connection using **ECDHE-RSA-AES128-GCM-SHA256**

