

Tvheadend - Bug #5782

httpc stuck and 100% cpu, when connecting to http2 server

2019-11-19 17:55 - Laurent H.

Status:	New	Start date:	2019-11-19
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:	IPTV	Estimated time:	0.00 hour
Target version:		Affected Versions:	
Found in version:	4.3-1855~gd453f5bef		

Description

Hello,

When downloading iptv m3u file from an apache 2.4 with http2 module enabled, httpc get stuck using 100% cpu.

It seems httpc does not like apache response with upgrade header.

I'm using Tvheadend version 4.3-1855~gd453f5bef on Debian Buster

- tvheadend.log when apache2 http2 module is enable :

```
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 0000: Connected to tv.xxxxxxxxxx.com:443
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 0000: sending HTTP/1.1 cmd
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 47 45 54 20 2F 66 72 65 65 2E 6D 33 75 20 48 54 GET /
free.m3u HT
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 54 50 2F 31 2E 31 0D 0A 48 6F 73 74 3A 20 74 76 TP/1.
1..Host: tv
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 2E 78 78 78 78 78 78 78 78 78 2E 63 6F 6D 0D 0A .xxxx
xxxx.com..
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 55 73 65 72 2D 41 67 65 6E 74 3A 20 4B 6F 64 69 User-
Agent: Kodi
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 2F 31 38 2E 31 20 28 58 31 31 3B 20 4C 69 6E 75 /18.1
(X11; Linu
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 78 20 78 38 36 5F 36 34 29 20 44 65 62 69 61 6E x x86
_64) Debian
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 20 47 4E 55 2F 4C 69 6E 75 78 20 41 70 70 5F 42 GNU/
Linux App_B
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 69 74 6E 65 73 73 2F 36 34 20 56 65 72 73 69 6F itnes
s/64 Versio
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 6E 2F 31 38 2E 31 0D 0A 43 6F 6E 6E 65 63 74 69 n/18.
1..Connecti
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 6F 6E 3A 20 63 6C 6F 73 65 0D 0A 0D 0A on: c
lose....
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 0000: add poll for input (1)
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 0000: client flush 0
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 0000: HTTP/1.1 answer 'HTTP/1.1 200 OK' (rcseq: 0)
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 48 54 54 50 2F 31 2E 31 20 32 30 30 20 4F 4B 00 HTTP/
1.1 200 OK.
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 0A 64 61 74 65 3A 20 54 75 65 2C 20 31 39 20 4E .date
: Tue, 19 N
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 6F 76 20 32 30 31 39 20 31 36 3A 30 37 3A 35 37 ov 20
19 16:07:57
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 20 47 4D 54 0D 0A 73 65 72 76 65 72 3A 20 41 70 GMT.
.server: Ap
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 61 63 68 65 0D 0A 75 70 67 72 61 64 65 3A 20 68 ache.
.upgrade: h
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 32 2C 68 32 63 0D 0A 63 6F 6E 6E 65 63 74 69 6F 2,h2c
..connectio
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 6E 3A 20 55 70 67 72 61 64 65 0D 0A 6C 61 73 74 n: Up
grade..last
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 2D 6D 6F 64 69 66 69 65 64 3A 20 57 65 64 2C 20 -modi
```

```

fied: Wed,
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 31 33 20 4E 6F 76 20 32 30 31 39 20 31 34 3A 33 13 No
v 2019 14:3
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 37 3A 35 35 20 47 4D 54 0D 0A 65 74 61 67 3A 20 7:55
GMT..etag:
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 22 31 34 39 35 2D 35 39 37 33 62 34 66 37 31 30 "1495
-5973b4f710
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 31 63 31 22 0D 0A 61 63 63 65 70 74 2D 72 61 6E 1c1".
.accept-ran
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 67 65 73 3A 20 62 79 74 65 73 0D 0A 63 6F 6E 74 ges:
bytes..cont
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 65 6E 74 2D 6C 65 6E 67 74 68 3A 20 35 32 36 39 ent-l
ength: 5269
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 0D 0A 63 6F 6E 74 65 6E 74 2D 74 79 70 65 3A 20 ..con
tent-type:
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 61 75 64 69 6F 2F 78 2D 6D 70 65 67 75 72 6C 0D audio
/x-mpegurl.
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 0A 73 74 72 69 63 74 2D 74 72 61 6E 73 70 6F 72 .stri
ct-transport-
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 74 2D 73 65 63 75 72 69 74 79 3A 20 6D 61 78 2D t-sec
urity: max-
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 61 67 65 3D 33 31 35 33 36 30 30 30 3B 20 69 6E age=3
1536000; in
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 63 6C 75 64 65 53 75 62 44 6F 6D 61 69 6E 73 3B clude
SubDomains;
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 20 70 72 65 6C 6F 61 64 3B 0D 0A 78 2D 66 72 61 prel
oad;..x-fra
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 6D 65 2D 6F 70 74 69 6F 6E 73 3A 20 53 41 4D 45 me-op
tions: SAME
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 4F 52 49 47 49 4E 0D 0A 78 2D 78 73 73 2D 70 72 ORIGI
N..x-xss-pr
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 6F 74 65 63 74 69 6F 6E 3A 20 31 3B 20 6D 6F 64 otect
ion: 1; mod
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 65 3D 62 6C 6F 63 6B 0D 0A 78 2D 63 6F 6E 74 65 e=blo
ck..x-conte
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 6E 74 2D 74 79 70 65 2D 6F 70 74 69 6F 6E 73 3A nt-ty
pe-options:
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 20 6E 6F 73 6E 69 66 66 0D 0A 78 2D 72 6F 62 6F nosn
iff..x-robo
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 74 73 2D 74 61 67 3A 20 6E 6F 6E 65 00 0A 0D 0A ts-ta
g: none....
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 0000: client flush -22
Nov 19 17:07:57 nas tvheadend[63262]: httpc: 0000: shutdown

```

httpc get stuck using 100% cpu until i stop tvheadend

- log without http2 module :

```

Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0000: Connected to tv.aaaaaaaa.com:443
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0000: sending HTTP/1.1 cmd
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 47 45 54 20 2F 66 72 65 65 2E 6D 33 75 20 48 54 G
ET /free.m3u HT
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 54 50 2F 31 2E 31 0D 0A 48 6F 73 74 3A 20 74 76 T
P/1.1..Host: tv
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 2E 78 78 78 78 78 78 78 78 2E 63 6F 6D 0D 0A .
aaaaaaaa.com..
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 55 73 65 72 2D 41 67 65 6E 74 3A 20 4B 6F 64 69 U
ser-Agent: Kodi
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 2F 31 38 2E 31 20 28 58 31 31 3B 20 4C 69 6E 75 /
18.1 (X11; Linu
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 78 20 78 38 36 5F 36 34 29 20 44 65 62 69 61 6E x
86_64) Debian
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 20 47 4E 55 2F 4C 69 6E 75 78 20 41 70 70 5F 42
GNU/Linux App_B
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 69 74 6E 65 73 73 2F 36 34 20 56 65 72 73 69 6F i
tness/64 Versio

```

```

Nov 19 17:10:16 nas tvheadend[63568]: httpc: 6E 2F 31 38 2E 31 0D 0A 43 6F 6E 6E 65 63 74 69 n
/18.1..Connecti
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 6F 6E 3A 20 63 6C 6F 73 65 0D 0A 0D 0A          o
n: close....
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0000: add poll for input and output (2)
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0000: add poll for input (1)
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0000: client flush 0
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0000: HTTP/1.1 answer 'HTTP/1.1 200 OK' (rcseq: 0
)
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 48 54 54 50 2F 31 2E 31 20 32 30 30 20 4F 4B 00 H
TTP/1.1 200 OK.
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0A 64 61 74 65 3A 20 54 75 65 2C 20 31 39 20 4E .
date: Tue, 19 N
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 6F 76 20 32 30 31 39 20 31 36 3A 31 30 3A 31 36 o
v 2019 16:10:16
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 20 47 4D 54 0D 0A 73 65 72 76 65 72 3A 20 41 70
GMT..server: Ap
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 61 63 68 65 0D 0A 6C 61 73 74 2D 6D 6F 64 69 66 a
che..last-modif
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 69 65 64 3A 20 57 65 64 2C 20 31 33 20 4E 6F 76 i
ed: Wed, 13 Nov
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 20 32 30 31 39 20 31 34 3A 33 37 3A 35 35 20 47
2019 14:37:55 G
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 4D 54 0D 0A 65 74 61 67 3A 20 22 31 34 39 35 2D M
T..etag: "1495-
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 35 39 37 33 62 34 66 37 31 30 31 63 31 22 0D 0A 5
973b4f7101c1"..
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 61 63 63 65 70 74 2D 72 61 6E 67 65 73 3A 20 62 a
ccept-ranges: b
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 79 74 65 73 0D 0A 63 6F 6E 74 65 6E 74 2D 6C 65 y
tes..content-le
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 6E 67 74 68 3A 20 35 32 36 39 0D 0A 63 6F 6E 74 n
gth: 5269..cont
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 65 6E 74 2D 74 79 70 65 3A 20 61 75 64 69 6F 2F e
nt-type: audio/
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 78 2D 6D 70 65 67 75 72 6C 0D 0A 73 74 72 69 63 x
-mpegurl..stric
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 74 2D 74 72 61 6E 73 70 6F 72 74 2D 73 65 63 75 t
-transport-secu
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 72 69 74 79 3A 20 6D 61 78 2D 61 67 65 3D 33 31 r
ity: max-age=31
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 35 33 36 30 30 30 3B 20 69 6E 63 6C 75 64 65 53 5
36000; includeS
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 75 62 44 6F 6D 61 69 6E 73 3B 20 70 72 65 6C 6F u
bDomains; prelo
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 61 64 3B 0D 0A 78 2D 66 72 61 6D 65 2D 6F 70 74 a
d;..x-frame-opt
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 69 6F 6E 73 3A 20 53 41 4D 45 4F 52 49 47 49 4E i
ons: SAMEORIGIN
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0D 0A 78 2D 78 73 73 2D 70 72 6F 74 65 63 74 69 .
.x-xss-protecti
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 6F 6E 3A 20 31 3B 20 6D 6F 64 65 3D 62 6C 6F 63 o
n: 1; mode=bloc
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 6B 0D 0A 78 2D 63 6F 6E 74 65 6E 74 2D 74 79 70 k
..x-content-typ
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 65 2D 6F 70 74 69 6F 6E 73 3A 20 6E 6F 73 6E 69 e
-options: nosni
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 66 66 0D 0A 78 2D 72 6F 62 6F 74 73 2D 74 61 67 f
f..x-robots-tag
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 3A 20 6E 6F 6E 65 0D 0A 63 6F 6E 6E 65 63 74 69 :
none..connecti
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 6F 6E 3A 20 63 6C 6F 73 65 00 0A 0D 0A          o
n: close....
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0000: data complete, finishing
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0000: finishing
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0000: shutdown
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0000: add poll for input (0)

```

```
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0000: shutdown
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0000: client flush 0
Nov 19 17:10:16 nas tvheadend[63568]: httpc: 0000: Closed
```

History

#1 - 2019-11-22 19:38 - Pablo R.

Could you try <https://tvheadend.org/projects/tvheadend/wiki/Debugging#Mutex-profiling>

It could give more information on where the problem is.

#2 - 2019-11-22 20:12 - Jaroslav Kysela

Error -22 means -EINVAL - something wrong in the header parser code probably.

#3 - 2019-11-22 21:22 - Flole Systems

The -EINVAL is at httpc.c:1099, try to change line 1096 to

```
if (strcasecmp(p, "close") == 0 || strcasecmp(p, "upgrade") == 0)
```

After you verified this I can provide a PR for that (we should add a comment to why this was necessary).

#4 - 2019-11-23 13:10 - Laurent H.

Pablo R. wrote:

Could you try <https://tvheadend.org/projects/tvheadend/wiki/Debugging#Mutex-profiling>

It could give more information on where the problem is.

```
nc -lu -p 7777
thread: mutex 0x56552f6bdca0 at src/main.c:1224 took 184ms
thread: mutex 0x56552f6bdca0 at src/input/mpegts/linuxdvtv/linuxdvtv_adapter.c:606 took 1615ms
```

but nothing more.

#5 - 2019-11-23 13:22 - Laurent H.

Flole Systems wrote:

The -EINVAL is at httpc.c:1099, try to change line 1096 to

[...]

After you verified this I can provide a PR for that (we should add a comment to why this was necessary).

With your patch :

```
diff --git a/src/httpc.c b/src/httpc.c
index 6cb4798cc..178ecbe72 100644
--- a/src/httpc.c
+++ b/src/httpc.c
@@ -1093,7 +1093,7 @@ header:
 }
 p = http_arg_get(&hc->hc_args, "Connection");
 if (p && ver != RTSP_VERSION_1_0) {
-   if (strcasecmp(p, "close") == 0)
+   if (strcasecmp(p, "close") == 0 || strcasecmp(p, "upgrade") == 0)
       hc->hc_keepalive = 0;
       else if (strcasecmp(p, "keep-alive")) /* no change for keep-alive */
         return http_client_flush(hc, -EINVAL);
```

I can confirm, it works with that patch, iptv m3u are downloaded and parsed ok.

#6 - 2019-11-23 17:13 - Flole Systems

PR is created

#7 - 2019-11-29 04:14 - Flole Systems

PR is merged. Now we still need to figure out why an invalid value causes high CPU usage but your initial problem should be fixed.

#8 - 2019-11-29 08:12 - Laurent H.

Thanks, let me know if you need me to do some tests.