

1 Manual Email Server Interaction

How to send emails manually. This is essential for troubleshooting automated email systems.

2 Basics

```
openssl s_client -debug -starttls smtp -crlf -connect smtp.emailprovider.com:465
then continue with
EHLO hostname
AUTH
etc...
```

Here's an example:

```
Compression: NONE
Expansion: NONE
No ALPN negotiated
SSL-Session:
  Protocol : TLSv1.2
  Cipher   : ECDHE-RSA-AES128-GCM-SHA256
  Session-ID: 480E968D62206D936801683C3BB12679DCB5CEDB0B20F4C3C2EB9DC97A54FAF4
  Session-ID-ctx:
  Master-Key: BAB3C9AD7E209D2A979A621731BCB6A0B4368EEE03E2B99CF884D2671E2D62A1A365E
  Key-Arg   : None
  PSK identity: None
  PSK identity hint: None
  SRP username: None
  TLS session ticket lifetime hint: 300 (seconds)
  TLS session ticket:
0000 - 26 e3 0c d9 a7 0e b1 88-52 ce 35 aa a0 8d bd 40 &.....R.5....@
0010 - 0c 39 e4 60 04 59 06 bb-b2 7e 35 f9 56 36 d1 46 .9.' .Y...~5.V6.F
0020 - d2 8c 48 29 44 fa 9f 2b-cd af fc 9a 68 b0 b8 63 ..H)D..+....h..c
0030 - 35 06 cd ba 67 57 bf c4-84 19 5a 05 fd a7 62 51 5...gW....Z...bQ
0040 - 1c 63 d7 b0 b4 ce 62 9f-66 13 7b 4c 74 54 86 fa .c....b.f.{LtT..
0050 - 3b 31 e1 e1 bd 19 29 e8-76 c2 6c 45 db 1d 32 50 ;1....).v.1E..2P
```

```
0060 - 60 63 ec 38 a3 e5 de 26-d6 27 c6 26 60 09 1a 59 'c.8...&.'.&'..Y
0070 - 59 e9 97 b4 07 9f 6c fc-46 cb 9e 0b 40 57 8f 71 Y.....l.F...@W.q
0080 - 20 98 54 06 38 42 47 c1-e6 fd 74 92 dc 11 a5 97 .T.8BG...t.....
0090 - 5d 81 7e 0b 66 b7 8e aa-c0 61 48 0c 90 84 ac 2d ]..~.f.....aH....-
```

```
Start Time: 1590893833
Timeout : 300 (sec)
Verify return code: 0 (ok)
```

250 PIPELINING

EHL0 localhost

write to 0x1c0dd20 [0x1c17853] (45 bytes => 45 (0x2D))

```
0000 - 17 03 03 00 28 2a 65 16-62 f5 2c 8c e5 d9 f2 ef ....(*e.b.,.....
0010 - bb 8a ac 3a 6a dc db 32-79 56 7f 86 90 2e ed 44 ...:j..2yV.....D
0020 - 6e 6a ea 12 64 bb f8 1e-95 7e 63 16 c5 nj..d....~c..
```

read from 0x1c0dd20 [0x1c13303] (5 bytes => 5 (0x5))

```
0000 - 17 03 03 00 a7 .....
```

read from 0x1c0dd20 [0x1c13308] (167 bytes => 167 (0xA7))

```
0000 - 80 ae b0 b8 00 a2 d6 6b-47 42 2c 5d 30 1c 04 bd .....kGB,]0...
0010 - 5c bb 84 61 20 5a 2e 0d-c5 79 28 a9 21 d6 ad 1b \..a Z...y(!...
0020 - 99 e5 fc da a1 fb da bc-70 9e 9b ac 5a e1 0f 8e .....p...Z...
0030 - bb c8 6d cb 2e 27 af 9b-4a 6a e8 17 69 31 63 14 ..m..'..Jj..i1c.
0040 - 24 68 d7 6b cc a7 dc 24-7c d6 4b fa 2a 3e 38 61 $h.k...$|.K.*>8a
0050 - 58 57 4d e8 1c e7 66 3c-22 0f 07 62 42 14 e7 78 XWM...f<"..bB..x
0060 - 86 8a 6c 6f 8f 79 06 f6-dc 33 b5 e9 ec db b8 b4 ..lo.y...3.....
0070 - 0e 7d d7 08 17 cd 4d b3-ac 16 79 08 87 df 31 95 .}....M...y...1.
0080 - 03 8d 9e 8c 25 09 ca 38-d0 be ee 45 38 d8 c4 a5 ....%..8...E8...
0090 - c3 90 44 23 5d e7 9b 1b-c0 40 d2 cc 40 c5 4a e4 ..D#]....@...@.J.
00a0 - 25 38 8b 05 2f b2 33 %8../.3
```

250-www192.vfemail.net

250-8BITMIME

250-AUTH PLAIN

250-BURL imap

250-CHUNKING

250-ENHANCEDSTATUSCODES

250-SIZE 78643200

250 PIPELINING

Here you might enter at the prompt

AUTH LOGIN

But that will fail:

AUTH LOGIN

```
write to 0x1c0dd20 [0x1c17853] (41 bytes => 41 (0x29))
0000 - 17 03 03 00 24 2a 65 16-62 f5 2c 8c e6 59 01 74    ....$*e.b.,...Y.t
0010 - 10 99 f5 d2 e6 75 88 d3-b9 58 0e 92 78 fc f1 ad    .....u...X..x...
0020 - c6 aa 50 2a 6c f4 cf e5-dd                        ..P*1....
read from 0x1c0dd20 [0x1c13303] (5 bytes => 5 (0x5))
0000 - 17 03 03 00 3a                                    .....:
read from 0x1c0dd20 [0x1c13308] (58 bytes => 58 (0x3A))
0000 - 80 ae b0 b8 00 a2 d6 6c-bf e5 f8 3d 5a 39 93 2b    .....1...=Z9.+
0010 - f8 a2 12 03 0f 0f 5c a3-95 0a 6c b6 d9 fa 3d 09    .....\.l...=.
0020 - 73 f7 5c 26 8c 41 aa cf-87 0f 65 61 52 7d ec f7    s.\&.A....eaR}..
0030 - 4a fe cd a4 f8 3e be 48-a3 92                    J....>.H..
504 5.5.4 Authentication failed.
```

If you look at the EHLO, it responds with what auth it supports. In this case, AUTH PLAIN. So it accepts plain text passwords (over an encrypted session of course).

Unfortunately, ssmtp (which I'm using) doesn't support plain. from ssmtp manual:

Specifies mechanism for SMTP authentication. (Only LOGIN and CRAM-MD5)

ref: https://wiki.zoneminder.com/SMS_Notifications