Universidad de Alcalá

Departamento de Automática

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Arquitectura y Tecnología de Computadores

ARQUITECTURA DE REDES
Laboratorio

Práctica 6: Configurar una cuenta de *gmail* para acceder a ella por medio de O*penSSL*.

Grado en Ingeniería Informática
Curso 2015/16

1. Configurar una cuenta de *gmail* para acceder a ella por medio de *OpenSSL*:

1º.- Permitir "*Acceso de aplicaciones menos seguras.*"

Para poder acceder al servidor de correo desde aplicaciones menos seguras que los clientes de correo convencionales, se debe habilitar esta opción.

- Entrar en *Configuración* de la cuenta *Gmail.*
- Seleccionar *Cuentas e importación*
- Dentro de *Cambiar la configuración de la cuenta:,* accede a *Otra configuración de la cuenta de Google*
- Entrar en *Seguridad*
- Dentro de *Permisos de cuenta* accede a *Acceso de aplicaciones menos seguras* acceder a *Configuración.*
- Seleccionan *Habilitar*

2º.- Habilitar POP, IMAP y SMPT.

Por defecto estos protocolos están inhabilitados, por tanto procederemos a habilitarlos para poder acceder a través de nuestras herramientas de correo.

- Entrar en *Configuración* de la cuenta *Gmail.*
- Seleccionar *Reenvío y correo POP/IMAP*
- Acceder a *Descarga de correo POP:* y seleccionar *Habilitar POP para todos los mensajes*
- Acceder a *Acceso IMAP*: y seleccionar *Habilitar IMAP*
- Dejar el resto de opciones por defecto y activar *Guardar cambios*

3º Configuración de accesos.

Para acceder al servidor a través de **POP**, la configuración que se deberá utilizar será:

- **Servidor de correo entrante (POP3) - requiere SSL:**
  - **Servidor**: pop.gmail.com
  - **Puerto:** 995

Para acceder al servidor a través de **SMTP**, la configuración que se deberá utilizar será

- **Servidor de correo saliente (SMTP) - requiere TLS o SSL:**
  - **Servidor**: smtp.gmail.com
  - **Puerto para TLS/STARTTLS**: 587
  - **Puerto para SSL**: 465

Para acceder al servidor a través de **IMAP**, la configuración que se deberá utilizar será

- **Servidor de correo entrante (IMAP) - requiere SSL:**
    - **Servidor**: imap.gmail.com
    - **Puerto**: 993

4º Proceder a realizar la conexión.

Se debe tener presente que hay conexiones en las que es necesario previamente codificar en Base64 el usuario y la contraseña. Disponemos de dos tipos de codificación en base64:

a) La codificación de nuestro *Login y Password* por separado (auth login)

```
echo -n "mi_login" | openssl enc -base64
LW4gImFycXVpdGFyZGUxIiANCg==
```

```
echo -n "mi_clave" | openssl enc -base64
LW4gIkAxMjM0NTYjIiANCg==
```

b) La codificación de nuestro *Login y Password* juntos (auth plain)

```
echo -e "\0mi_login@gmail.com\0mi_clave” | base64
AGFycXVpdGFyZGUxQGdtYWlsLmNvbQBAMTIzNDU2Iwo=
```

Ejemplo:
A continuación, es posible conectarse con el servidor para acceder a los mensajes. Por ejemplo, para hacerlo por IMAP, se pueden usar los comandos:

(COMENTARIO: conexión)
```
openssl s_client -crlf -connect imap.gmail.com:993 -quiet
```

(COMENTARIO: hacer login)
```
a1 login usuario contraseña
```

(COMENTARIO: listado general)
```
a1 list "" "*"
```

(COMENTARIO: información del buzón de entrada)
```
a1 examine inbox
```

(COMENTARIO: obtener el cuerpo del mensaje 1)
```
a1 fetch 1 body[]
```

(COMENTARIO: obtener parte primera del cuerpo del mensaje 1)
```
a1 fetch 1 body.peek[1]
```

```
etc...
```

2. Ejemplos de accesos a través de OpenSSL:

a) Enviar correos con IMAP y Openssl.

As the port-number normally is 993, an example OpenSSL command would be `openssl s_client -connect imap.example.com:993 -quiet`. (If you would like to see the public key of the server, as well as some other encryption-related information, omit *-quiet*.) The server should then start an IMAP session, displaying a greeting such as the `* OK Dovecot ready` example below.

A continuación comenzamos a realizar el acceso tipo:

```
jm@jm-VirtualBox:~$ openssl s_client -crlf -connect imap.gmail.com:993
CONNECTED(00000003)
depth=2 /C=US/O=GeoTrust Inc./CN=GeoTrust Global CA
verify error:num=20:unable to get local issuer certificate
verify return:0
---
Certificate chain
 0 s:/C=US/ST=California/L=Mountain View/O=Google Inc/CN=imap.gmail.com
   i:/C=US/O=Google Inc/CN=Google Internet Authority G2
 1 s:/C=US/O=Google Inc/CN=Google Internet Authority G2
   i:/C=US/O=GeoTrust Inc./CN=GeoTrust Global CA
 2 s:/C=US/O=GeoTrust Inc./CN=GeoTrust Global CA
   i:/C=US/O=Equifax/OU=Equifax Secure Certificate Authority
---
Server certificate
-----BEGIN CERTIFICATE-----
MIIEdjCCA16gAwIBAgIIIb9LQfTZpKYwDQYJKoZIhvcNAQEFBQAwSTELMAkGA1UE
BhMCVVMxEzARBgNVBAoTCkdvb2dsZSBJbmMxJTAjBgNVBAMTHEdvb2dsZSBJbnRl
cm5ldCBBdXRob3JpdHkgRzIwHhcNMTQxMTIwMDk0ODI0WhcNMTUwMjE4MDAwMDAw
WjBoMQswCQYDVQQGEwJVUzETMBEGA1UECAwKQ2FsaWZvcm5pYTEWMBQGA1UEBwwN
TW91bnRhaW4gVmlldzETMBEGA1UECgwKR29vZ2xlIEluYzEXMBUGA1UEAwwOaW1h
cC5nbWFpbC5jb20wggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQClt5ig
rjtZQEdCyyNlteiKNtnn9MotJs9mxB85geRCXC7SGS/9rKT39s94dDgpFYl2nDbA
XdDoql/5gqGsC7q3CKKx/lC7JL+cfqCa3e5nO7vl34C1ceVMtBTEQz2iiHoleHzj
DYKXzKmcHeWgd2PmEuLFTP+yq/47pJWUdraxxCnd6u6XJf5hgFY2BOtcQcwgc0Au
bPwBE44IqO0/Pc6qc8JBvVWGxlO+wluTTgjD60+kzNadReXUSnsQ73+IPzkCXNml
tB8/2uewIkJOz0dCwqq2hAOm+J0s7ECp+tA+Iu82Gxvd32qexg4Yp4YNY8sxkMAb
GXhj95AjM0yuytilAgMBAAGjggFBMIIBPTAdBgNVHSUEFjAUBggrBgEFBQcDAQYI
KwYBBQUHAwIwGQYDVR0RBBIwEIIOaW1hcC5nbWFpbC5jb20waAYIKwYBBQUHAQEE
XDBaMCsGCCsGAQUFBzAChh9odHRwOi8vcGtpLmdvb2dsZS5jb20vR0lBRzIuY3J0
MCsGCCsGAQUFBzABhh9odHRwOi8vY2xpZW50czEuZ29vZ2xlLmNvbS9vY3NwMB0G
A1UdDgQWBBQ7WbzSiNEA/mS6mKvm79WFLqZd/TAMBgNVHRMBAf8EAjAAMB8GA1Ud
IwQYMBaAFErdBhYbvPZotXb1gba7Yhq6WoEvMBcGA1UdIAQQMA4wDAYKKwYBBAHW
eQIFATAwBgNVHR8EKTAnMCWgI6Ahhh9odHRwOi8vcGtpLmdvb2dsZS5jb20vR0lB
RzIuY3JsMA0GCSqGSIb3DQEBBQUAA4IBAQCPRVHj0vU0XXqjak4WhcR91PJj15ZG
CzBJrLoDBojl7r/TBxBc9D0tlczeC7z6GGA2J52iFc7cuJuxgbmMiA34loOLXnFB
d+HINknRAEIVKPs711JpuV1gnyPAQ0jiiyXFAQ7FvqdMXnOaQmh03p2PnNf3TesH
Ui/Jq1DE0JEiWakCrNDAMLVfqvto7gQSQzPvRONUTd+2QnwuRfGJFFnMrQFTtfnM
qI8o0Gv7FH9eXbby7evqLye3DlhuGSg41qcK9f6GxG1FdxGJ8YOu5F9X/3rkUenp
bxUibUixz2V++VfDpo2Qlb8vplTYMrCX58lRsv5E2+jnhxD2CGPWAPF4
-----END CERTIFICATE-----
subject=/C=US/ST=California/L=Mountain View/O=Google Inc/CN=imap.gmail.com
issuer=/C=US/O=Google Inc/CN=Google Internet Authority G2
---
No client certificate CA names sent
---
SSL handshake has read 3369 bytes and written 409 bytes
---
New, TLSv1/SSLv3, Cipher is RC4-SHA
Server public key is 2048 bit
Secure Renegotiation IS supported
Compression: NONE
Expansion: NONE
```

```
SSL-Session:
    Protocol  : TLSv1
    Cipher    : RC4-SHA
    Session-ID:
6EA18744CBC87CEC7F527247A7FEEBBFF993AC440EAE7FB1B1BEC98560D73ADC
    Session-ID-ctx:
    Master-Key:
EB984544AB20F2357DD9E15AAA88123919642CBB674925E4C88385107574A8A2971E554A425C1B
80CC80A22CFBA5174A
    Key-Arg   : None
    TLS session ticket lifetime hint: 100800 (seconds)
    TLS session ticket:
    0000 - 8b 95 6f 3b 57 84 dc 43-65 96 6d 65 09 0a 24 98   ..o;W..Ce.me..$.
    0010 - 6f 8c c2 33 4f e9 0a 5d-10 36 9e d1 32 0d f9 ae   o..3O..].6..2...
    0020 - 2b 45 05 05 2d 92 84 4c-27 e2 a2 ea 25 1e e3 09   +E..-..L'...%...
    0030 - da 67 92 32 5c a7 5a 32-f7 3f 9c 0e 28 80 93 94   .g.2\.Z2.?..(...
    0040 - d8 f0 d1 0c c9 0b 85 2a-c1 4b bf fd 1c 2e 2c 23   .......*.K....,#
    0050 - f0 16 c8 82 a4 c1 55 48-19 8c 81 52 45 dc 2a f1   ......UH...RE.*.
    0060 - b1 b9 67 58 b7 b9 2f 39-5d 92 69 17 ba 0d 35 b0   ..gX../9].i...5.
    0070 - 2b 4d 05 12 c5 a9 48 e8-e3 5c 7b f0 9d 0a bd fb   +M....H..\{.....
    0080 - fa 23 ae f4 d8 b5 8e 13-88 25 df cd 1b ce 51 a0   .#.......%....Q.
    0090 - 12 c0 99 6a 50 bf 27 14-9e 05 14 6d 82 04 47 3d   ...jP.'....m..G=
    00a0 - 4d 83 1e db                                       M...

    Start Time: 1417437983
    Timeout   : 300 (sec)
    Verify return code: 20 (unable to get local issuer certificate)
---
* OK Gimap ready for requests from 83.61.7.39 mn5mb168902251wjb
a login arquitarde1 ########
* CAPABILITY IMAP4rev1 UNSELECT IDLE NAMESPACE QUOTA ID XLIST CHILDREN X-GM-
EXT-1 UIDPLUS COMPRESS=DEFLATE ENABLE MOVE CONDSTORE ESEARCH UTF8=ACCEPT
a OK arquitarde1@gmail.com authenticated (Success)
a list "" "*"
* LIST (\HasNoChildren) "/" "INBOX"
* LIST (\HasChildren \Noselect) "/" "[Gmail]"
* LIST (\HasNoChildren \Drafts) "/" "[Gmail]/Borradores"
* LIST (\HasNoChildren \Flagged) "/" "[Gmail]/Destacados"
* LIST (\HasNoChildren \Sent) "/" "[Gmail]/Enviados"
* LIST (\HasNoChildren \Important) "/" "[Gmail]/Importantes"
* LIST (\Trash \HasNoChildren) "/" "[Gmail]/Papelera"
* LIST (\HasNoChildren \Junk) "/" "[Gmail]/Spam"
* LIST (\All \HasNoChildren) "/" "[Gmail]/Todos"
a OK Success
a select INBOX
* FLAGS (\Answered \Flagged \Draft \Deleted \Seen $Phishing $NotPhishing)
* OK [PERMANENTFLAGS (\Answered \Flagged \Draft \Deleted \Seen $Phishing
$NotPhishing \*)] Flags permitted.
* OK [UIDVALIDITY 1] UIDs valid.
* 3 EXISTS
* 0 RECENT
* OK [UIDNEXT 39] Predicted next UID.
* OK [HIGHESTMODSEQ 4763]
a OK [READ-WRITE] INBOX selected. (Success)
a fetch 1 body
* 1 FETCH (BODY (("TEXT" "PLAIN" ("CHARSET" "ISO-8859-1") NIL NIL "QUOTED-
PRINTABLE" 513 11)("TEXT" "HTML" ("CHARSET" "ISO-8859-1") NIL NIL "QUOTED-
PRINTABLE" 1546 46) "ALTERNATIVE"))
a OK Success
a logout
* BYE LOGOUT Requested
tag OK 73 good day (Success)
read:errno=0
```

b) Enviar correos con SMTP y Openssl

Disponemos de dos tipos de codificación en base64:

1º) La codificación de nuestro *Login y Password* por separado

```
echo -n "milogin" | openssl enc -base64
```

```
echo -n "arquitarde1" | openssl enc -base64
LW4gImFycXWpdGFyZGUxIiANCg==
```

```
echo -n "miclave" | openssl enc -base64
```

```
echo -n "########" | openssl enc -base64
LW4gIkAxMjM0ETYjIiANCg==
```

2º) La codificación de nuestro *Login y password* juntos

```
echo -e "\0arquitarde1@gmail.com\0########" | base64
AGFycXVpdGFyZGUxQGdtYWlsLmNvbQBEMTIzNDU2Iwo=
```

A continuación comenzamos a realizar el acceso del tipo:

```
jm@jm-VirtualBox:~$ openssl s_client -crlf -connect smtp.gmail.com:465

CONNECTED(00000003)
depth=2 /C=US/O=GeoTrust Inc./CN=GeoTrust Global CA
verify error:num=20:unable to get local issuer certificate
verify return:0
---
Certificate chain
 0 s:/C=US/ST=California/L=Mountain View/O=Google Inc/CN=smtp.gmail.com
   i:/C=US/O=Google Inc/CN=Google Internet Authority G2
 1 s:/C=US/O=Google Inc/CN=Google Internet Authority G2
   i:/C=US/O=GeoTrust Inc./CN=GeoTrust Global CA
 2 s:/C=US/O=GeoTrust Inc./CN=GeoTrust Global CA
   i:/C=US/O=Equifax/OU=Equifax Secure Certificate Authority
---
Server certificate
-----BEGIN CERTIFICATE-----
MIIEdjCCA16gAwIBAgIIGcMF7jeVMoAwDQYJKoZIhvcNAQEFBQAwSTELMAkGA1UE
BhMCVVMxEzARBgNVBAoTCkdvb2dsZSBJbmMxJTAjBgNVBAMTHEdvb2dsZSBJbnRl
cm5ldCBBdXRob3JpdHkgRzIwHhcNMTQwNzE1MDg0MDM4WhcNMTUwNDA0MTUxNTU1
WjBoMQswCQYDVQQGEwJVUzETMBEGA1UECAwKQ2FsaWZvcm5pYTEWMBQGA1UEBwwN
TW91bnRhaW4gVmlldzETMBEGA1UECgwKR29vZ2xlIEluYzEXMBUGA1UEAwwOc210
cC5nbWFpbC5jb20wggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQCu4vOr
LgyNsHicxBORgO2OOfXKxEKb830NzNu6elubbf1T45GilB3fHgDQJELRydTRZilo
Efv75Ag7uRQM/M1tk+1h18wDpJZem+zFmJcs30ccBN21CnCvqsIEYJMyY3kcV4vD
x44bx6VvEAmJ9/kiFJ7xRUlCchu5YVOFoVkMaEax3UWb5Fti9pe8VgYdasuk53ae
8ZuIr4pFew9fraxOe/6LXEaPMSw622KSWpyK/GUbaAp07hV11c+LVgjlUDTgA+2k
nDigWrdb+yLL9Hv3WNLWjEAHFWhEce5QwV3SN8JLga3Rbw2N3lq9afkQtOnkJgdM
UG4xkUHGqscggMDJAgMBAAGjggFBMIIBPTAdBgNVHSUEFjAUBggrBgEFBQcDAQYI
KwYBBQUHAwIwGQYDVR0RBBIwEIIOc210cC5nbWFpbC5jb20waAYIKwYBBQUHAQEE
XDBaMCsGCCsGAQUFBzAChh9odHRwOi8vcGtpLmdvb2dsZS5jb20vR0lBRzIuY3J0
MCsGCCsGAQUFBzABhh9odHRwOi8vY2xpZW50czEuZ29vZ2xlLmNvbS9vY3NwMB0G
A1UdDgQWBBSanZBvY+Rnj0HquJmae9AJvwiCzTAMBgNVHRMBAf8EAjAAMB8GA1Ud
IwQYMBaAFErdBhYbvPZotXb1gba7Yhq6WoEvMBcGA1UdIAQQMA4wDAYKKwYBBAHW
eQIFATAwBgNVHR8EKTAnMCWgI6Ahhh9odHRwOi8vcGtpLmdvb2dsZS5jb20vR0lB
RzIuY3JsMA0GCSqGSIb3DQEBBQUAA4IBAQCVoGAOKZoil4sNAYvlb9uxNmWqQqyh
```

```
ql0D1bewbLxs3DSVWSe2DhPjjhdMHMTcMpB+jQzAbGxVYiuNLdqLl1Xcde7EUmo1
KJUGzTO046k+11LYVOxEXLBe5s3FF+niFJby7XFgmI3yMt4blHN5tHm/7JijL1Ip
vkcsynOnOwAEHehI1U12N0JEpkcoetM6MA8cGtn74EPTas4Npa+mTNo3seH8iY43
4L4hnsubXMhcQQ9IQMPtKuZYNUXklN/NS0f69Be+3HQRTOljtCxdpm/v/emHPjwg
/Cwu+58fZK+flQ1PQcY24Cgt7EF0R+uqo5Il3CGuCgrd4JxJNMuGcsGS
-----END CERTIFICATE-----
subject=/C=US/ST=California/L=Mountain View/O=Google Inc/CN=smtp.gmail.com
issuer=/C=US/O=Google Inc/CN=Google Internet Authority G2
---
No client certificate CA names sent
---
SSL handshake has read 3389 bytes and written 409 bytes
---
New, TLSv1/SSLv3, Cipher is RC4-SHA
Server public key is 2048 bit
Secure Renegotiation IS supported
Compression: NONE
Expansion: NONE
SSL-Session:
    Protocol  : TLSv1
    Cipher    : RC4-SHA
    Session-ID:
A3FECE54D4E45A15FD7B43BDBB3E0F6B48B75BD5FC27B097FE4012D1FF6D0756
    Session-ID-ctx:
    Master-Key:
89AB7CDE8C5FBCF9940F4E012F24BE8D20A05D810327C6205A173E9B5F7D7CD29DEFC74617C61D
89B7E4E6FC62F48FB4
    Key-Arg   : None
    TLS session ticket lifetime hint: 100800 (seconds)
    TLS session ticket:
    0000 - d7 15 b6 8e 84 c9 af 13-f0 5d 95 16 f3 99 1e b5   .........].....
    0010 - 3b be a9 04 ab e8 b6 75-86 ec db a4 ca b4 89 d8   ;......u........
    0020 - c4 af e1 23 d7 5f 78 f8-3e 2d 20 43 e0 3e 14 83   ...#._x.>- C.>..
    0030 - d3 8e 69 65 a3 86 4a ab-ed f4 fd 2b 38 e8 c5 b6   ..ie..J....+8...
    0040 - 8f 77 14 2a a4 cf 13 ad-db 53 0c ef ea 25 e1 40   .w.*.....S...%.@
    0050 - 3c b6 1a 39 70 ac 81 b1-b6 1b b4 55 c4 d5 48 4a   <..9p......U..HJ
    0060 - f1 5f 16 30 8c c1 a0 85-9b db e4 3b 62 be f1 38   ._.0.......;b..8
    0070 - d2 ef 16 5b fd 74 a9 f5-1a b0 20 d4 39 47 b2 61   ...[.t.... .9G.a
    0080 - 72 40 d9 13 45 d8 67 80-95 2c 09 56 64 e8 a3 97   r@..E.g..,.Vd...
    0090 - 53 f1 33 d7 72 83 15 dc-91 e3 b4 cb bc d4 21 92   S.3.r.........!.
    00a0 - df 12 72 a4                                       ..r.

    Start Time: 1417435327
    Timeout   : 300 (sec)
    Verify return code: 20 (unable to get local issuer certificate)
---
220 mx.google.com ESMTP bj7sm27293821wjc.33 - gsmtp
ehlo arquitarde1
250-mx.google.com at your service, [83.61.7.39]
250-SIZE 35882577
250-8BITMIME
250-AUTH LOGIN PLAIN XOAUTH XOAUTH2 PLAIN-CLIENTTOKEN OAUTHBEARER
250-ENHANCEDSTATUSCODES
250-PIPELINING
250-CHUNKING
250 SMTPUTF8
auth plain
334
AGFycXVpdGFyZGUxQGdtYVlsLmNvbQBAETIzNDU2Iwo=
235 2.7.0 Accepted
mail from:<arquitarde1@gmail.com>
250 2.1.0 OK bj7sm27293821wjc.33 - gsmtp
rcpt to:<jmruiz@gmail.com>
250 2.1.5 OK bj7sm27293821wjc.33 - gsmtp
data
354  Go ahead bj7sm27293821wjc.33 - gsmtp
```

```
Subject: "prueba"
hola mundo
.
250 2.0.0 OK 1417435934 bj7sm27293821wjc.33 - gsmtp
quit
221 2.0.0 closing connection bj7sm27293821wjc.33 - gsmtp
read:errno=0
```

c) Recibir correos con POP y Openssl.

A continuación comenzamos a realizar el acceso del tipo:

```
jm@jm-VirtualBox:~$ openssl s_client -crlf -connect pop.gmail.com:995

CONNECTED(00000003)
depth=2 /C=US/O=GeoTrust Inc./CN=GeoTrust Global CA
verify error:num=20:unable to get local issuer certificate
verify return:0
---
Certificate chain
 0 s:/C=US/ST=California/L=Mountain View/O=Google Inc/CN=pop.gmail.com
   i:/C=US/O=Google Inc/CN=Google Internet Authority G2
 1 s:/C=US/O=Google Inc/CN=Google Internet Authority G2
   i:/C=US/O=GeoTrust Inc./CN=GeoTrust Global CA
 2 s:/C=US/O=GeoTrust Inc./CN=GeoTrust Global CA
   i:/C=US/O=Equifax/OU=Equifax Secure Certificate Authority
---
Server certificate
-----BEGIN CERTIFICATE-----
MIIEdDCCA1ygAwIBAgIIJ8eYIE4GCgQwDQYJKoZIhvcNAQEFBQAwSTELMAkGA1UE
BhMCVVMxEzARBgNVBAoTCkdvb2dsZSBJbmMxJTAjBgNVBAMTHEdvb2dsZSBJbnRl
cm5ldCBBdXRob3JpdHkgRzIwHhcNMTQxMTIwMTAwOTQ2WhcNMTUwMjE4MDAwMDAw
WjBnMQswCQYDVQQGEwJVUzETMBEGA1UECAwKQ2FsaWZvcm5pYTEWMBQGA1UEBwwN
TW91bnRhaW4gVmlldzETMBEGA1UECgwKR29vZ2xlIEluYzEWMBQGA1UEAwwNcG9w
LmdtYWlsLmNvbTCCASIwDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBAKTwXGBn
BQxritsinoJ4dogj2KniCQAXH9ULYeJY76a4iPbArHTBn71uaGPHOyQWMPl5Ybfo
SIQvm2nHa4Ah9tsX/9JI25NJzr767ZQyRyIFCCLjr98BM/6kGyGgpALZCYhZY7KL
RrDeMXSS7yqlYdeAekmrCiy76zeXPeMeI1HUu+OSYCSDfrwrcEty2ISNSSNHjZGT
Gt0LoJvndhzH7kF0esLYLARROWqUiF4/rpqfAZ5KE4uXzZrR7zf6FAIOFvBi0cKj
3dFiblTuAp1we0mKHL54F8d0gDhoKYEYqhSKyODhmAP5/PDib6folQ+ATbrIrTQA
wyJdHHmtGuVJvi0CAwEAAaOCAUAwggE8MB0GA1UdJQQWMBQGCCsGAQUFBwMBBggr
BgEFBQcDAjAYBgNVHREEETAPgg1wb3AuZ21haWwuY29tMGgGCCsGAQUFBwEBBFww
WjArBggrBgEFBQcwAoYfaHR0cDovL3BraS5nb29nbGUuY29tL0dJQUcyLmNydDAr
BggrBgEFBQcwAYYfaHR0cDovL2NsaWVudHMxLmdvb2dsZS5jb20vb2NzcDAdBgNV
HQ4EFgQU3IIRmnZHpFmHG1+BQIOJgRV15f4wDAYDVR0TAQH/BAIwADAfBgNVHSME
GDAWgBRK3QYWG7z2aLV29YG2u2IaulqBLzAXBgNVHSAEEDAOMAwGCisGAQQB1nkC
BQEwMAYDVR0fBCkwJzAloCOgIYYfaHR0cDovL3BraS5nb29nbGUuY29tL0dJQUcy
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xjFHmsM/LrIBHq7EY5gyZSBq/iDXB3Sae7Otqr8D3J5XuVzAUai3Q++56LZBWQRq
Nv24KHKsOYpPA+g0vPrnhZyBX7gQ8vB+zMNiQ5ifc0xQsAzR3o763A==
-----END CERTIFICATE-----
subject=/C=US/ST=California/L=Mountain View/O=Google Inc/CN=pop.gmail.com
issuer=/C=US/O=Google Inc/CN=Google Internet Authority G2
---
No client certificate CA names sent
---
SSL handshake has read 3367 bytes and written 409 bytes
---
New, TLSv1/SSLv3, Cipher is RC4-SHA
Server public key is 2048 bit
Secure Renegotiation IS supported
```

```
Compression: NONE
Expansion: NONE
SSL-Session:
    Protocol  : TLSv1
    Cipher    : RC4-SHA
    Session-ID:
4CF7A01C60B1D4D310D369BF926EE9896956148D60C94298009B5A31C5DA78FF
    Session-ID-ctx:
    Master-Key:
DC75395FD8B8E2A3FC0652FCBA48A1A07B2D5FFFE8597D683984F7F4107DC25BF2659AB75F4C4F
C8A176F2CF3743A363
    Key-Arg   : None
    TLS session ticket lifetime hint: 100800 (seconds)
    TLS session ticket:
    0000 - 28 0b cb a7 05 34 69 89-22 fe 9d 2a a4 29 d4 fb   (....4i."..*.)..
    0010 - 53 87 8f 4c d1 bf 7e 42-b1 fd e4 aa 6a 5e 83 3c   S..L..~B....j^.<
    0020 - 55 a5 28 81 21 9f b7 59-3a ee 5f 42 9f 18 4f 31   U.(.!..Y:._B..O1
    0030 - 22 a2 df a5 3f 59 43 a5-5c aa 7f cb a1 15 04 33   "...?YC.\......3
    0040 - fe df 0a 0f a2 63 25 9b-8d 66 85 c0 39 04 ae 9b   .....c%..f..9...
    0050 - cb 21 ff b2 64 a0 ae 14-3e a2 01 ad c0 ba d7 9c   .!..d...>.......
    0060 - 21 df e9 c4 a4 d3 71 ff-3a 27 c3 75 13 8f 4e 9c   !.....q.:'.u..N.
    0070 - 08 fc b9 72 8c 04 77 a0-3e c4 c7 2b 88 45 6d 7c   ...r..w.>..+.Em|
    0080 - f0 90 a3 72 fb 7e fe 27-90 28 aa f4 8f 83 66 a1   ...r.~.'.(....f.
    0090 - cd 93 6b 04 97 07 a7 96-30 00 a6 1c f5 ef 55 0f   ..k.....0.....U.
    00a0 - 7f 54 22 4a                                       .T"J

    Start Time: 1417437215
    Timeout   : 300 (sec)
    Verify return code: 20 (unable to get local issuer certificate)
---
+OK Gpop ready for requests from 83.61.7.39 z2mb423516133wea
user arquitarde1
+OK send PASS
pass ########
+OK Welcome.
list
+OK 18 messages (760054 bytes)
1 2788
2 3371
3 3058
4 2219
5 2282
6 2226
7 2243
8 2306
9 2236
10 2200
11 2334
12 2303
13 2197
14 2305
15 2287
16 693228
17 15545
18 14926
.

list 1
+OK 1 2788
retr 1
+OK message follows
MIME-Version: 1.0
Received: by 10.68.241.71; Tue, 18 Dec 2012 15:25:11 -0800 (PST)
Date: Tue, 18 Dec 2012 15:25:11 -0800
Message-ID: <CA+8U=iK7FcRXUCc_nNOxkq7RS-
p0Zv0euyy4FeUcbsnYjbYZfQ@mail.gmail.com>
Subject: =?ISO-8859-1?Q?Obtener_Gmail_en_tu_tel=E9fono_m=F3vil?=
From: El equipo de Gmail <mail-noreply@google.com>
To: Arquitarde 1 <arquitarde1@gmail.com>
Content-Type: multipart/alternative; boundary=bcaec52e57d12ae0ed04d128cfa8

--bcaec52e57d12ae0ed04d128cfa8
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: quoted-printable

 [image: Access Gmail on your mobile phone]
<http://www.google.com/intl/es/mobile/mail/#utm_source=3Dwel-eml&utm_medium=
=3Deml&utm_campaign=3Des>

Ya hace mucho tiempo que no necesitas tu ordenador para acceder a tu
carpeta "Recibidos". Ahora, puedes utilizar Gmail en el tel=E9fono m=F3vil =
para
consultar tu correo electr=F3nico desde cualquier lugar.
       Obt=E9n Gmail para tu tel=E9fono
=BB<http://www.google.com/intl/es/mobile/mail/#utm_source=3Dwel-eml&utm_med=
ium=3Deml&utm_campaign=3Des>

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Content-Transfer-Encoding: quoted-printable

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  <img src=3D"https://mail.google.com/mail/images/phones.png"
       alt=3D"Access Gmail on your mobile phone"
       style=3D"border:0px;"/>
</a>
</p>
<p>Ya hace mucho tiempo que no necesitas tu ordenador para acceder a tu car=
peta "Recibidos". Ahora, puedes utilizar Gmail en el tel=E9fono m=F3vil par=
a consultar tu correo electr=F3nico desde cualquier lugar.</p>

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            style=3D"font-weight: bold; color: #000; text-decoration: none;
            display: block;">
      Obt=E9n Gmail para tu tel=E9fono &#187;</a>
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</p>
```

```
</font>
</html>

--bcaec52e57d12ae0ed04d128cfa8--
.
```

quit

```
+OK Farewell.
read:errno=0
```