SMTP–POP3 client Application

User guide
Version 0.1

November 2015

Redpine Signals, Inc.

2107 N. First Street, #680

San Jose, CA 95131.

Tel: (408) 748-3385

This project is applicable to all the WiSeConnect variants like WiSeConnect Plus, WiSeMCU and WYZBEE. The term WiSeConnect refers to its appropriate variant.

Application Overview:

SMTP is a Simple Mail Transfer Protocol, which is used to send mails from mail client to mail server. SMTP is a connection-oriented, text-based protocol in which a mail sender communicates with a mail receiver by issuing command strings and supplying necessary data over a reliable ordered data stream channel, typically a Transmission Control Protocol (TCP) connection.

An SMTP session consists of commands originated by an SMTP client (the initiating agent, sender, or transmitter) and corresponding responses from the SMTP server (the listening agent, or receiver) so that the session is opened, and session parameters are exchanged.

POP3 is a Post Office Protocol, which is designed for downloading mails from the mail server. POP3 is a connection-oriented, text-based protocol in which a POP3 client communicates with the POP3 server by issuing command strings and supplying necessary data over a reliable ordered data stream channel. POP3 supports simple download-and-delete requirements for access to remote mailboxes.

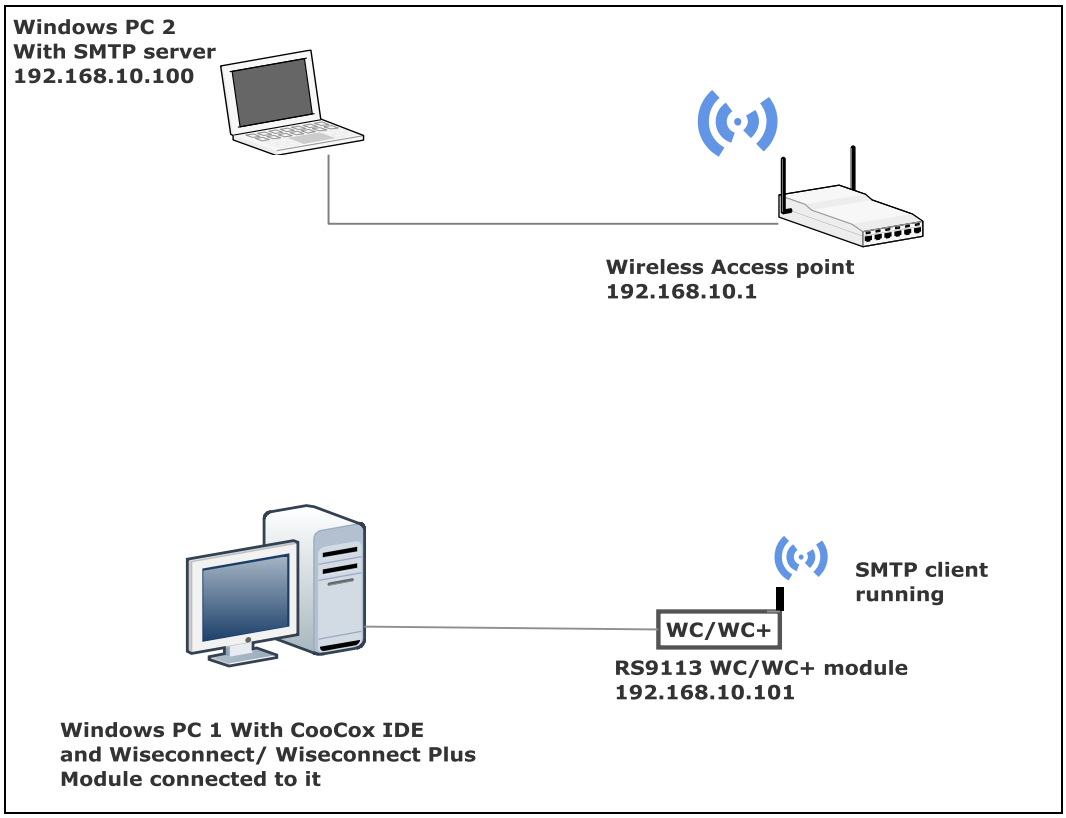
An POP3 session consists of commands originated by an POP3 client and corresponding responses from the POP3 server so that the session is opened, and session parameters are exchanged.

The SMTP-POP3 client application demonstrates how WiSeConnect device can send a mail to an SMTP server and how it can download a mail from POP3 server.

- Configure an SMTP server in a PC connected to Access point
- Connect WiSeConnect device to Access point wirelessly
- Create SMTP client and send mail to SMTP server

Setup required:

1. Windows PC with Coocox IDE
2. WiSeConnect device
3. Wlan Access point
4. Windows PC with a simple SMTP server installed.



Description:

This application is used to configure WiSeConnect device to connect to a Wlan Access point and send a mail to the SMTP server running on the Windows PC to which the Access point is connected.

User can find some simple SMTP servers from internet.

Please find one at the following location:

http://nilhcem.github.com/FakeSMTP/downloads/fakeSMTP-latest.zip

Configuring the Application:

Edit the **rsi_smtp_pop3_client_app.c** file in the following path .

sapis/examples/wlan/smtp_pop3_client

1. From given configuration,

```
#define SSID                "<ap_name>"
#define CHANNEL_NO            0
#define SECURITY_TYPE       <security-type>
#define PSK                  "<psk>"
```

SSID refers to the name of the Access point to connect.

CHANNEL_NO refers to the channel in which device should scan. If it is 0 , device will scan all channels

SECURITY_TYPE refers to the type of security

PSK refers to the secret key if the Access point was configured in WPA/WPA2 security modes

2. To configure SMTP client Parameters

To select IPv6, FLAGS should be set to 1, bydefault it supports IPv4

```
#define FLAGS           0
```

To configure the SMTP server port , default port is 25. If server can listen on other non statndard ports, change the SMTP_PORT

```
#define SMTP_PORT       25
```

To configure the SMTP client username for authentication

```
#define SMTP_USERNAME       "<username>"
```

To configure the password for authentication

```
#define PASSWORD             "<password>"
```

To configure the sender's address

```
#define FROM_ADDRESS        "<from address>"
```

IP address of the SMTP server should be in long format and in little endian byte order.

To configure the POP3 server port , default port is 110. If server can listen on other non statndard ports, change the POP3_PORT

```
#define POP3_PORT               110
```

To configure the POP3 client username for authentication

```
#define POP3_USERNAME           "<username>"
```

To configure the password for authentication

```
#define POP3_PASSWORD           "<password>"
```

Example: To configure "192.168.10.1" as IP address, update the macro **SERVER_IP** as **0x010AA8C0**.

```
#define SERVER_IP          0x9200A8C0
```

To configure the authentication type, supported types are defined in Application include file

```
#define AUTH_TYPE         <auth_type>
```

To configure the authentication type, supported priorities are defined in Application include file

```
#define PRIORITY          <priority>
```

To configure domain name of the client.

```
#define CLIENT_DOMAIN      "<domain name>"
```

To configure mail recipient address.

```
#define MAIL_RECIPIENT_ADDRESS  "<recipient address>"
```

To configure subject of the mail.This should be a string

```
#define MAIL_SUBJECT      "<subject>"
```

To configure mail body .

```
#define MAIL_BODY          "<message body>"
```

Note :Mail body to the mail send API (rsi_smtp_client_mail_send_async) need not be a string . A buffer with definite length can be pointed to the API

3. Enable/Disable DHCP mode

   1 – Enables DHCP mode (gets the IP from DHCP server)

   0 – Disables DHCP mode

```
#define  DHCP_MODE              <dhcp mode>
```

4. To configure static IP address

   IP address to be configured to the device should be in long format and in little endian byte order.

   Example: To configure "192.168.10.1" as IP address, update the macro **DEVICE_IP** as **0x010AA8C0**.

```
#define  DEVICE_IP          0X010AA8C0
```

   IP address of the gateway should also be in long format and in little endian byte order

   Example: To configure "192.168.10.1" as Gateway, update the macro **GATEWAY** as **0x010AA8C0**

```
#define  GATEWAY            0x010AA8C0
```

   IP address of the network mask should also be in long format and in little endian byte order

   Example: To configure "255.255.255.0" as network mask, update the macro **NETMASK** as **0x00FFFFFF**

```
#define   NETMASK            0x00FFFFFF
```

Update Wlan configuration file:

sapis/include/rsi_wlan_config.h

CONCURRENT_MODE	DISABLE
RSI_FEATURE_BIT_MAP	FEAT_SECURITY_OPEN

RSI_TCP_IP_BYPASS	DISABLE
RSI_TCP_IP_FEATURE_BIT_MAP	(TCP_IP_FEAT_DHCPV4_CLIENT | TCP_IP_FEAT_SMTP_CLIENT | TCP_IP_FEAT_POP3_CLIENT)
RSI_CUSTOM_FEATURE_BIT_MAP	0
RSI_BAND	RSI_BAND_2P4GHZ

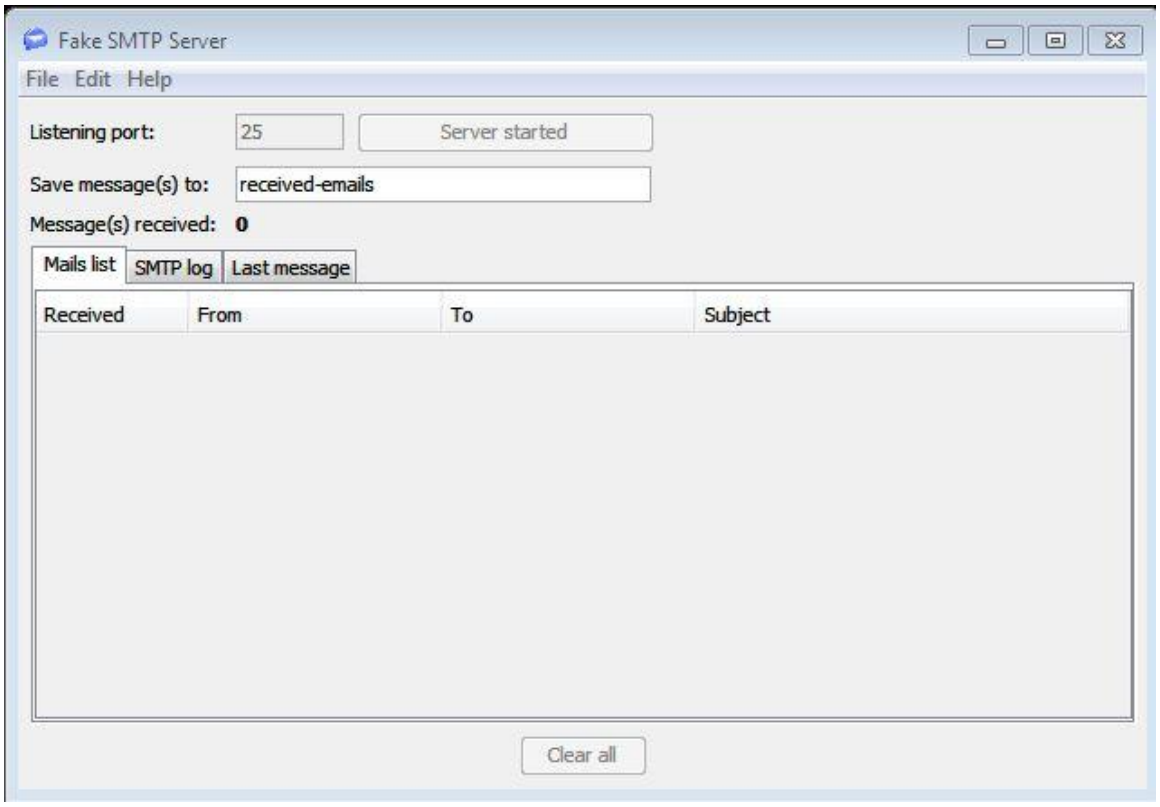
Executing the Application:

1. Connect WiSeConnect device to the Windows PC running Cocoox IDE.
2. Configure the macros in the files located at

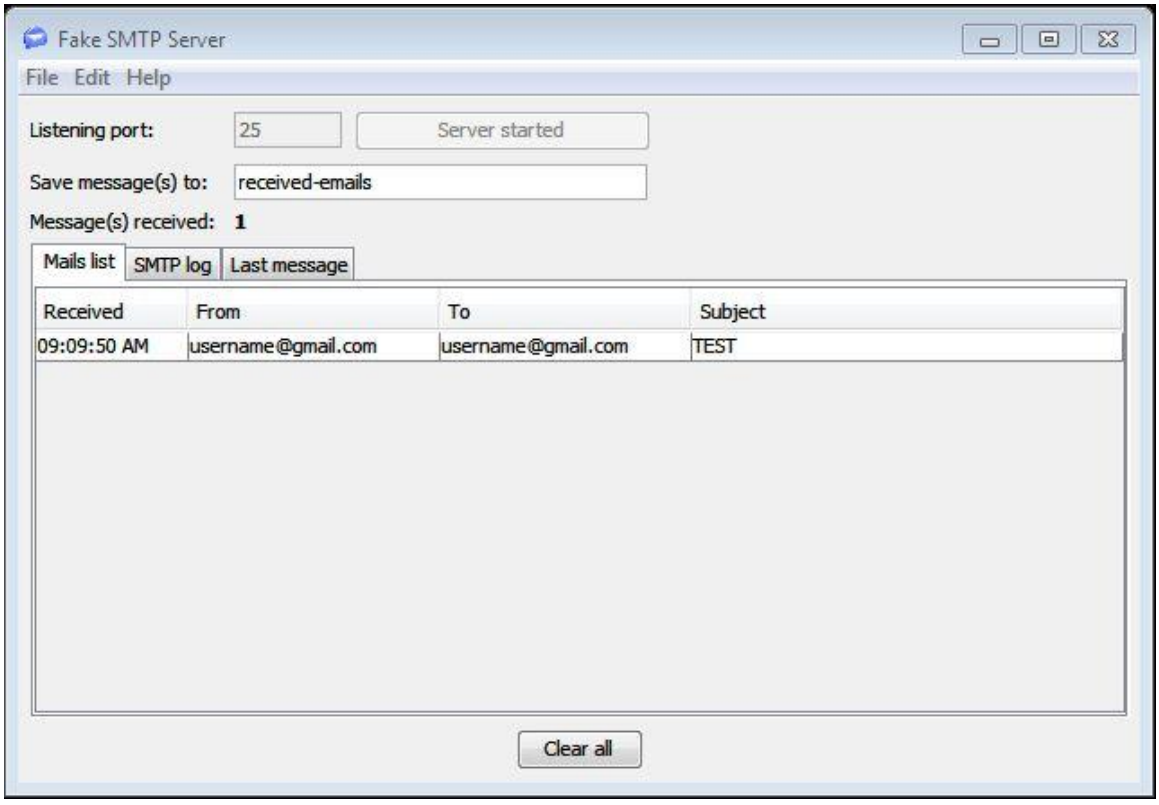
   sapis/examples/wlan/smtp_pop3_client/rsi_smtp_pop3_client_app.c

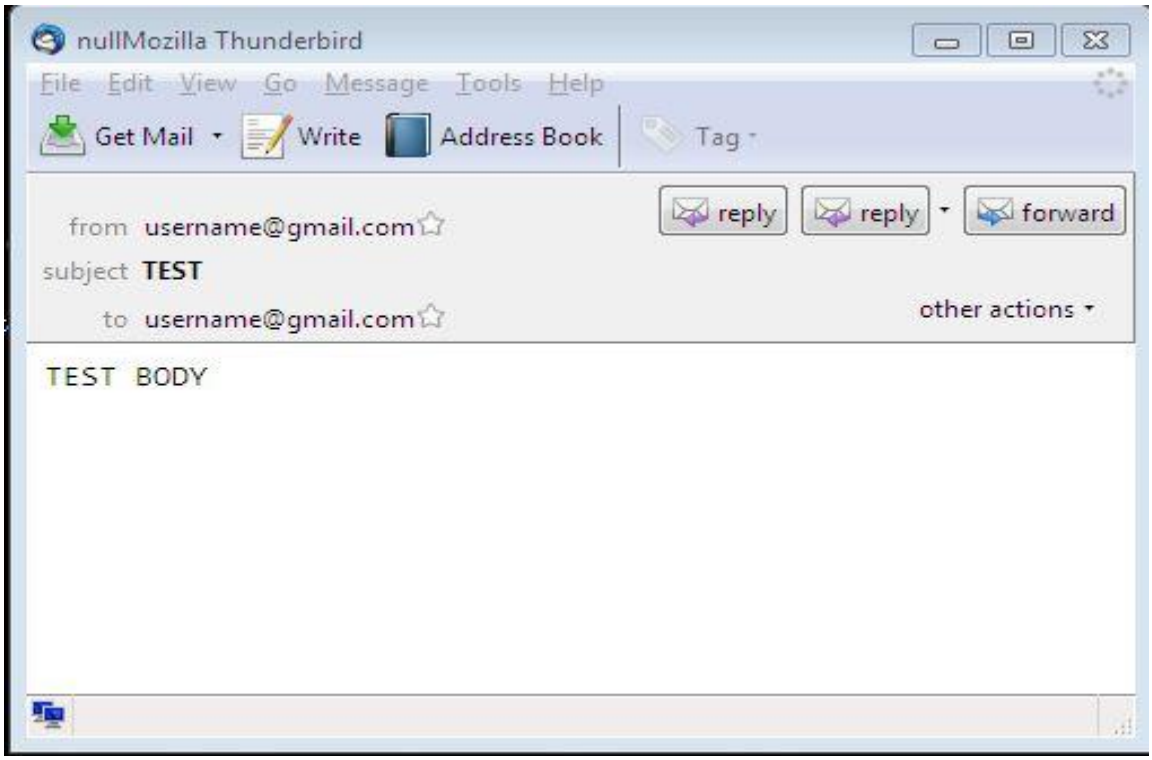
   sapis/include/rsi_wlan_config.h

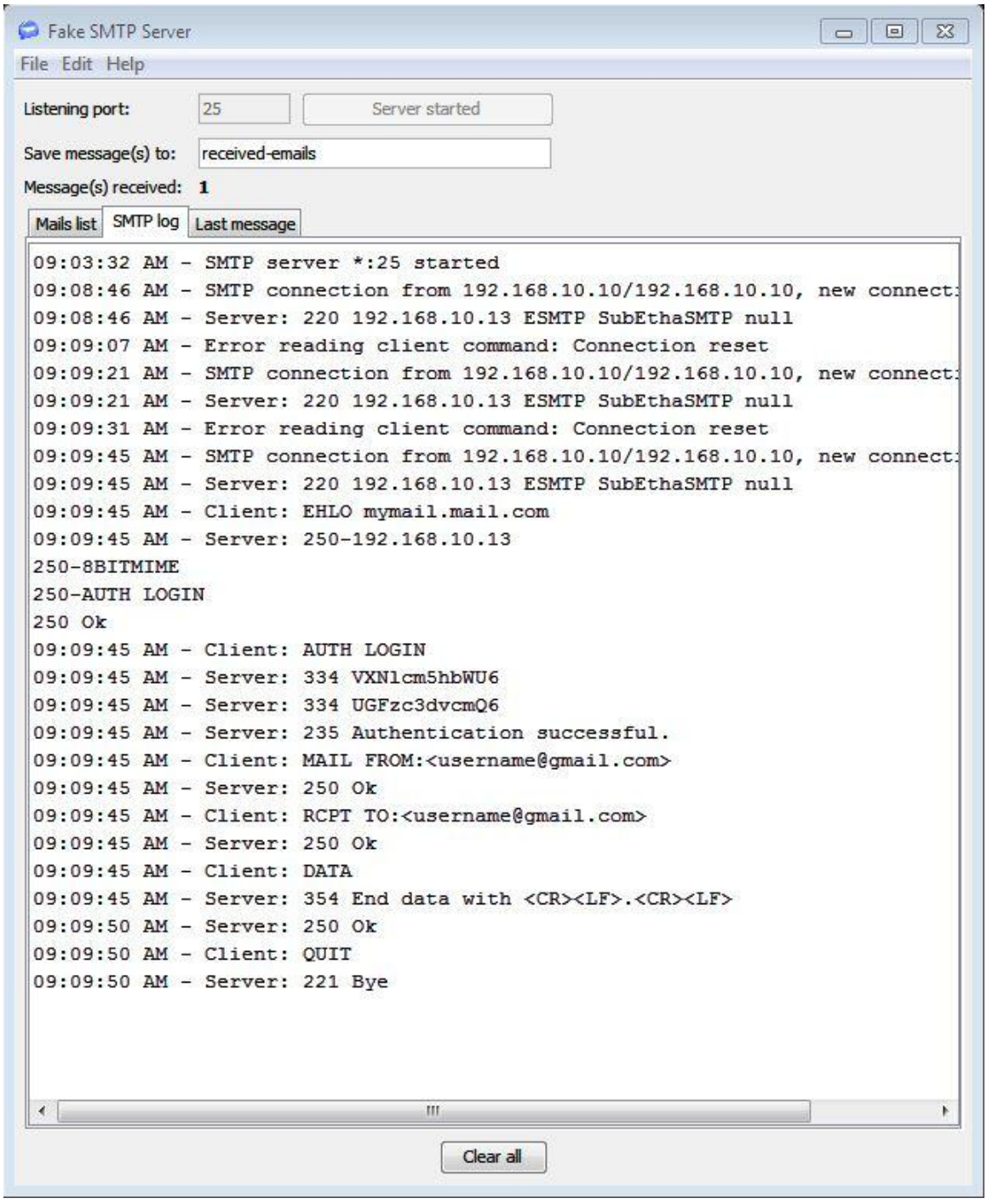
3. Run Simple SMTP server on the PC to which Access point is connected.



4. Build and launch the application.
5. After the program gets executed, WiSeConnect Device would be connected to Access point and get IP.
6. Device as an smtp client start authenticating with the SMTP server.
7. After successful authentication, it sends a mail to the server
8. Device as an pop3 client start authenticating with the POP3 server.
9. After successful authentication, it receives a mail from the server.




nullMozilla Thunderbird
File Edit View Go Message Tools Help
Get Mail
Write
Address Book
Tag
from username@gmail.com
subject TEST
to username@gmail.com
reply
reply
forward
other actions
TEST BODY


Fake SMTP Server
File Edit Help
Listening port:
25
Server started
Save message(s) to:
received-emails
Message(s) received: 1
Mails list
SMTP log
Last message
09:03:32 AM - SMTP server *:25 started
09:08:46 AM - SMTP connection from 192.168.10.10/192.168.10.10, new connect
09:08:46 AM - Server: 220 192.168.10.13 ESMTP SubEthaSMTP null
09:09:07 AM - Error reading client command: Connection reset
09:09:21 AM - SMTP connection from 192.168.10.10/192.168.10.10, new connect
09:09:21 AM - Server: 220 192.168.10.13 ESMTP SubEthaSMTP null
09:09:31 AM - Error reading client command: Connection reset
09:09:45 AM - SMTP connection from 192.168.10.10/192.168.10.10, new connect
09:09:45 AM - Server: 220 192.168.10.13 ESMTP SubEthaSMTP null
09:09:45 AM - Client: EHLO mymail.mail.com
09:09:45 AM - Server: 250-192.168.10.13
250-8BITMIME
250-AUTH LOGIN
250 Ok
09:09:45 AM - Client: AUTH LOGIN
09:09:45 AM - Server: 334 VXNlcm5hbWU6
09:09:45 AM - Server: 334 UGFzc3dvcmQ6
09:09:45 AM - Server: 235 Authentication successful.
09:09:45 AM - Client: MAIL FROM:<username@gmail.com>
09:09:45 AM - Server: 250 Ok
09:09:45 AM - Client: RCPT TO:<username@gmail.com>
09:09:45 AM - Server: 250 Ok
09:09:45 AM - Client: DATA
09:09:45 AM - Server: 354 End data with <CR><LF>.<CR><LF>
09:09:50 AM - Server: 250 Ok
09:09:50 AM - Client: QUIT
09:09:50 AM - Server: 221 Bye
Clear all