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## CCN Experiment 5

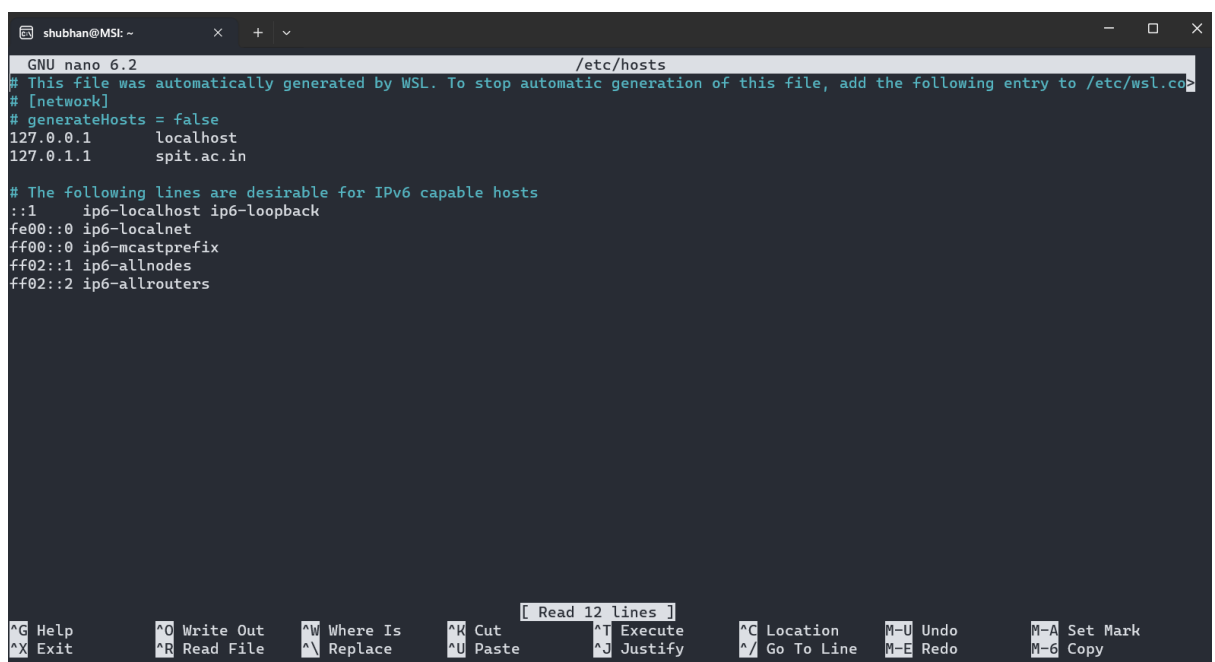
### SMTP

1. Change domain name to custom username using hostname command.



```
shubhan@MSI: ~  
shubhan@MSI:~$ sudo hostname spit.ac.in  
shubhan@MSI:~$
```

2. Run sudo nano /etc/hosts Command And Enter Domain Next To 127.0.1.1 And Save The File.



```
GNU nano 6.2 /etc/hosts  
# This file was automatically generated by WSL. To stop automatic generation of this file, add the following entry to /etc/wsl.conf  
# [network]  
# generateHosts = false  
127.0.0.1 localhost  
127.0.1.1 spit.ac.in  
  
# The following lines are desirable for IPv6 capable hosts  
::1 ip6-localhost ip6-loopback  
fe00::0 ip6-localnet  
ff00::0 ip6-mcastprefix  
ff02::1 ip6-allnodes  
ff02::2 ip6-allrouters
```

3. Run `sudo apt-get update` to install all updates, `sudo apt-get mailutils`, and `sudo apt install postfix`.

```
shubhan@MSI: ~$ sudo nano /etc/hosts
shubhan@MSI:~$ sudo apt get update
E: Invalid operation get
shubhan@MSI:~$ sudo apt-get update
Hit:1 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:2 http://archive.ubuntu.com/ubuntu jammy InRelease
Hit:3 https://ppa.launchpadcontent.net/deadsnakes/ppa/ubuntu jammy InRelease
Hit:4 https://ppa.launchpadcontent.net/git-core/ppa/ubuntu jammy InRelease
Hit:5 http://archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:6 http://archive.ubuntu.com/ubuntu jammy-backports InRelease
Reading package lists... Done
shubhan@MSI:~$ sudo apt-get install mailutils
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
mailutils is already the newest version (1:3.14-1).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
shubhan@MSI:~$ |
```

4. Write the required lines into the `main.cf` file in the `/etc/postfix/` folder

```
GNU nano 6.2 /etc/postfix/main.cf

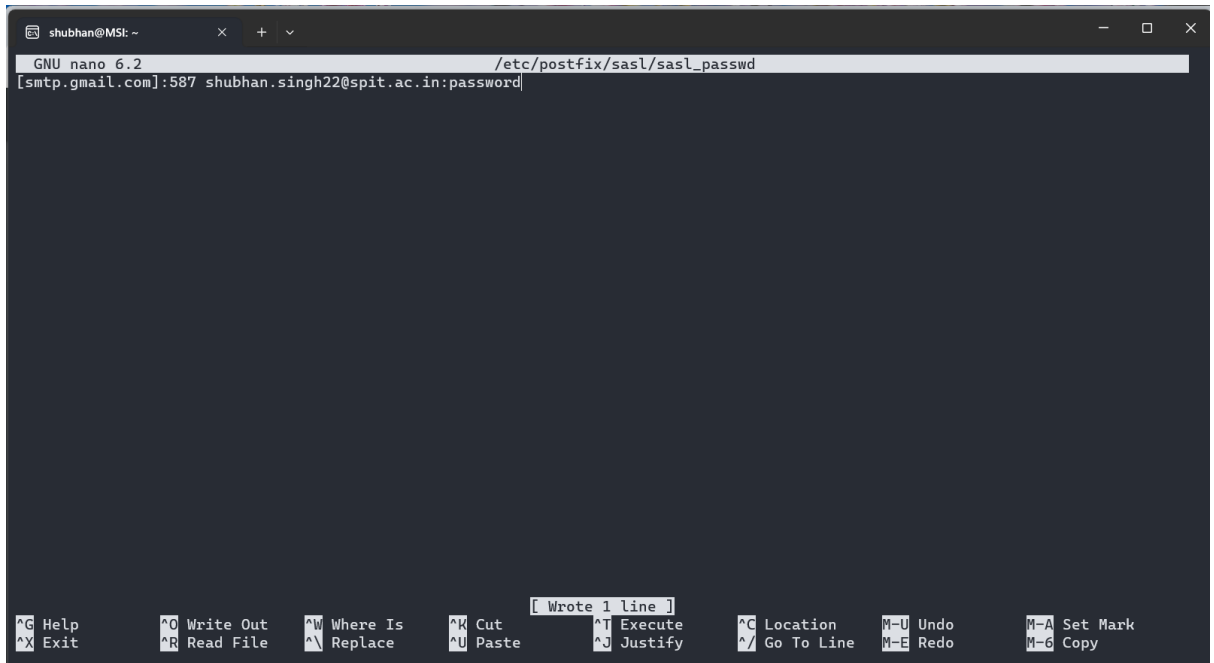
# TLS parameters
smtpd_tls_cert_file=/etc/ssl/certs/ssl-cert-snakeoil.pem
smtpd_tls_key_file=/etc/ssl/private/ssl-cert-snakeoil.key
smtpd_tls_security_level=may

smtp_tls_CApath=/etc/ssl/certs
smtp_tls_security_level=may
smtp_tls_session_cache_database = btree:${data_directory}/smtp_scache

smtpd_relay_restrictions = permit_mynetworks permit_sasl_authenticated defer_unauth_destination
myhostname = spit.ac.in
alias_maps = hash:/etc/aliases
alias_database = hash:/etc/aliases
myorigin = /etc/mailname
mydestination = localhost.ac.in, , localhost
relayhost = [smtp.gmail.com]:587
mynetworks = 127.0.0.0/8 [::ffff:127.0.0.0]/104 [::1]/128
mailbox_size_limit = 0
recipient_delimiter = +
inet_interfaces = all
inet_protocols = all
# Enables SASL authentication for postfix
smtp_sasl_auth_enable = yes
# Disallow methods that allow anonymous authentication
smtp_sasl_security_options = noanonymous
# Location of sasl_passwd we saved
smtp_sasl_password_maps = hash:/etc/postfix/sasl/sasl_passwd

[ Wrote 57 lines ]
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   M-U Undo      M-A Set Mark
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^_ Go To Line M-E Redo      M-6 Copy
```

5. Write the following into the sasl\_passwd file:

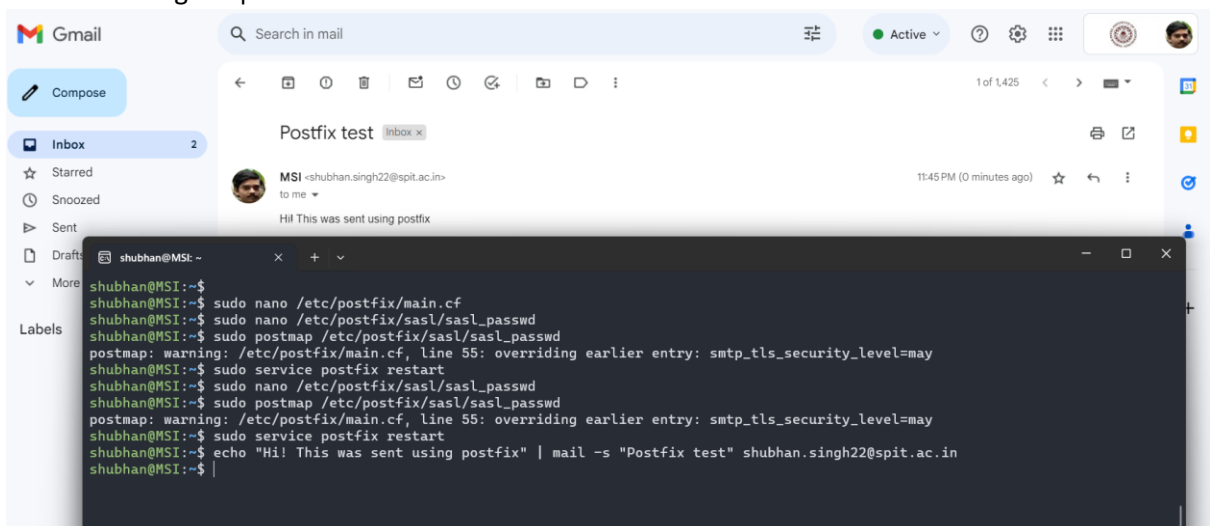


```
shubhan@MSI: ~  
GNU nano 6.2 /etc/postfix/sasl/sasl_passwd  
[smtp.gmail.com]:587 shubhan.singh22@spit.ac.in:password  
  
[Wrote 1 line]  
^G Help      ^O Write Out  ^W Where Is   ^H Cut        ^T Execute    ^C Location   M-U Undo      M-A Set Mark  
^X Exit      ^R Read File  ^_ Replace    ^U Paste      ^J Justify    ^_ Go To Line M-E Redo      M-6 Copy
```

(Here app password generated by google was used instead of password, the ability to allow less secure apps was removed from gmail in 2022, so we have to use app passwords generated by google to allow specific apps to access our account.)

6. After reloading postfix, run the following command to send a mail:

`echo "<Message>" | mail -s "<title>" <email-address>` command



```
shubhan@MSI: ~  
shubhan@MSI:~$ sudo nano /etc/postfix/main.cf  
shubhan@MSI:~$ sudo nano /etc/postfix/sasl/sasl_passwd  
shubhan@MSI:~$ sudo postmap /etc/postfix/sasl/sasl_passwd  
postmap: warning: /etc/postfix/main.cf, line 55: overriding earlier entry: smtp_tls_security_level=may  
shubhan@MSI:~$ sudo service postfix restart  
shubhan@MSI:~$ sudo nano /etc/postfix/sasl/sasl_passwd  
shubhan@MSI:~$ sudo postmap /etc/postfix/sasl/sasl_passwd  
postmap: warning: /etc/postfix/main.cf, line 55: overriding earlier entry: smtp_tls_security_level=may  
shubhan@MSI:~$ sudo service postfix restart  
shubhan@MSI:~$ echo "Hi! This was sent using postfix" | mail -s "Postfix test" shubhan.singh22@spit.ac.in  
shubhan@MSI:~$
```

Gmail interface showing an inbox with five emails from 'me' with subject lines 'Test 5 - Hi! This was sent using postfix', 'Test 4 - Hi! This was sent using postfix', 'Test 3 - Hi! This was sent using postfix', 'Test 2 - Hi! This was sent using postfix', and 'Postfix test - Hi! This was sent using postfix'. The emails are dated 11:47 PM and 11:46 PM.

Terminal window output:

```
shubhan@MSI:~$ sudo nano /etc/postfix/main.cf
shubhan@MSI:~$ sudo nano /etc/postfix/sasl/sasl_passwd
shubhan@MSI:~$ sudo postmap /etc/postfix/sasl/sasl_passwd
postmap: warning: /etc/postfix/main.cf, line 55: overriding earlier entry: smtp_tls_security_level=may
shubhan@MSI:~$ sudo service postfix restart
shubhan@MSI:~$ sudo nano /etc/postfix/sasl/sasl_passwd
shubhan@MSI:~$ sudo postmap /etc/postfix/sasl/sasl_passwd
postmap: warning: /etc/postfix/main.cf, line 55: overriding earlier entry: smtp_tls_security_level=may
shubhan@MSI:~$ sudo service postfix restart
shubhan@MSI:~$ echo "Hi! This was sent using postfix" | mail -s "Postfix test" shubhan.singh22@spit.ac.in
shubhan@MSI:~$ echo "Hi! This was sent using postfix" | mail -s "Test 2" shubhan.singh22@spit.ac.in
shubhan@MSI:~$ echo "Hi! This was sent using postfix" | mail -s "Test 3" shubhan.singh22@spit.ac.in
shubhan@MSI:~$ echo "Hi! This was sent using postfix" | mail -s "Test 4" shubhan.singh22@spit.ac.in
shubhan@MSI:~$ echo "Hi! This was sent using postfix" | mail -s "Test 5" shubhan.singh22@spit.ac.in
shubhan@MSI:~$
```