ARCHIVING AND ROTATING LOG FILES, EMAIL NOTIFICATIONS FOR TOMCAT FAILURES

1. Archive and Rotate Log Files Every Hour

To manage the rotation and archiving of log files for Tomcat, we can use logrotate, a Linux utility that automatically rotates, compresses, and mails log files. Here are the steps to configure log rotation for Tomcat:

Step : 1 Install logrotate

- sudo apt-get update
- sudo apt-get install logrotate

Step :2 Configure logrotate for Tomcat Logs

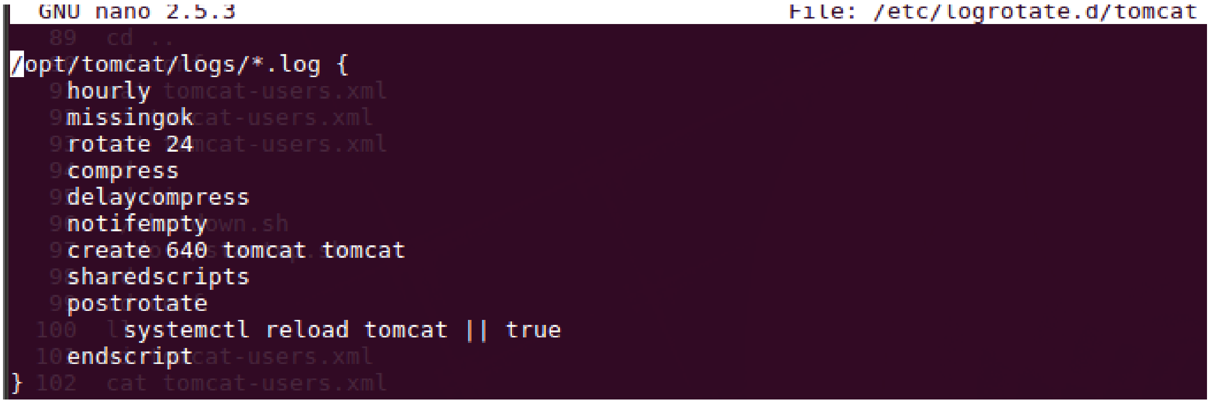
✓ Create a new configuration file for Tomcat logs

✓ Open or create the logrotate configuration file

- sudo nano /etc/logrotate.d/tomcat

Add the following configuration to rotate logs every hour, archive them, and retain old logs for a specific period:

```
/opt/tomcat/logs/*.log {
   hourly
   missingok
   rotate 24
   compress
   delaycompress
   notifempty
   create 640 tomcat tomcat
   sharedscripts
   postrotate
      systemctl reload tomcat || true
   endscript
}
```



```
  GNU nano 2.5.3                                    File: /etc/logrotate.d/tomcat

/opt/tomcat/logs/*.log {
    hourly
    missingok
    rotate 24
    compress
    delaycompress
    notifempty
    create 640 tomcat tomcat
    sharedscripts
    postrotate
        systemctl reload tomcat || true
    endscript
}
```

Save and close the file crtl+o then enter ,ctrl+x

Step: 3 Test configuration

After making the changes, test the log rotation:

- sudo logrotate -f /etc/logrotate.d/tomcat

2. Email Notification for Tomcat status

Step : 1 Install and configure mailutils

- sudo apt update

- sudo apt install mailutils

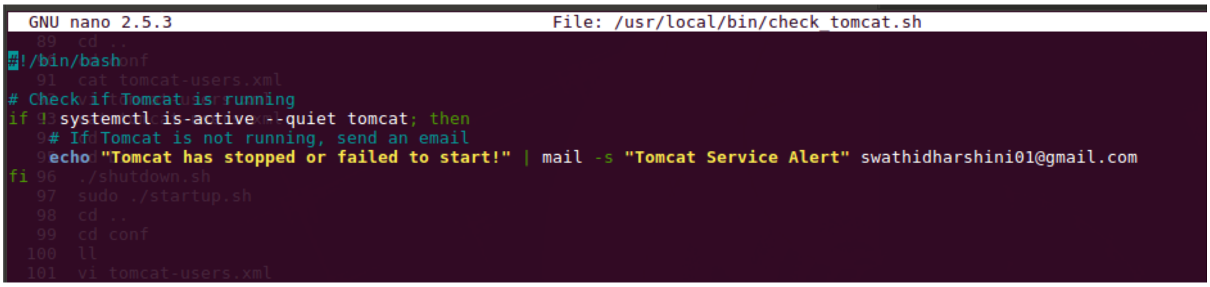
Step 2: Create a Script to check tomcat status

1.Create a shell script and check if tomcat is running and send email if it fail to start or stops

- sudo nano /usr/local/bin/check_tomcat.sh

2.Add the following script :Replace swathidharshini01@gmail.com with your email address

```
#!/bin/bash

# Check if Tomcat is running

if ! systemctl is-active --quiet tomcat; then

   # If Tomcat is not running, send an email

   echo "Tomcat has stopped or failed to start!" | mail -s "Tomcat Service Alert" admin@example.com

fi
```



```
  GNU nano 2.5.3                                   File: /usr/local/bin/check_tomcat.sh

#!/bin/bash
# Check if Tomcat is running
if ! systemctl is-active --quiet tomcat; then
    # If Tomcat is not running, send an email
    echo "Tomcat has stopped or failed to start!" | mail -s "Tomcat Service Alert" swathidharshini01@gmail.com
fi
```

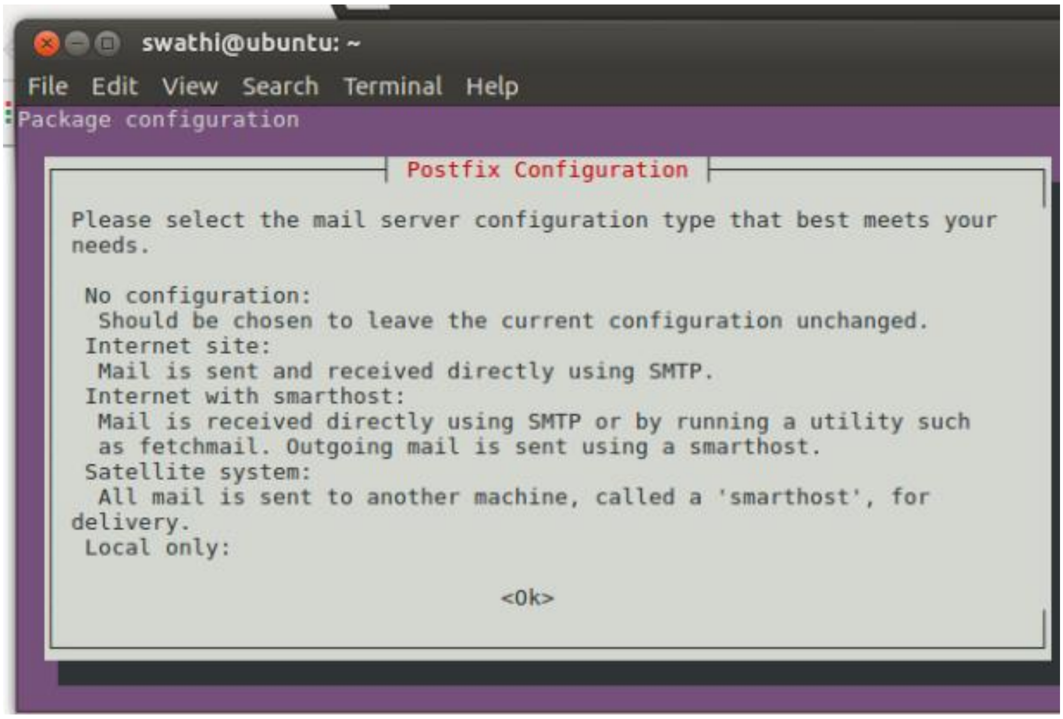
Make the script executable

- sudo chmod +x /usr/local/bin/check_tomcat.sh

if you're setting up email notifications and the required mail utilities, like mailutils, triggered the postfix installation. Here's a step-by-step setup:

Postfix Configuration Steps

1. Choose the Mail Server Type
   In the postfix configuration screen, you'll see options like:

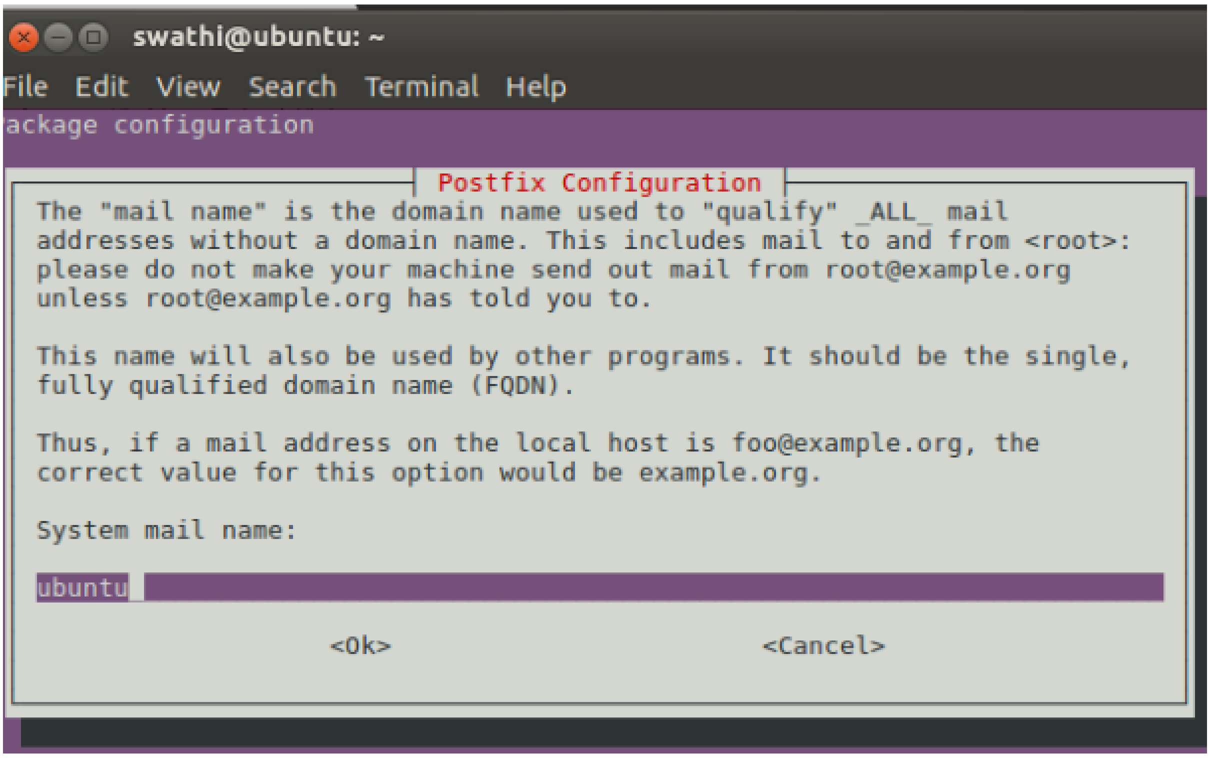


```
Package configuration

                     ┤ Postfix Configuration ├

 Please select the mail server configuration type that best meets your
 needs.

  No configuration:
   Should be chosen to leave the current configuration unchanged.
  Internet site:
   Mail is sent and received directly using SMTP.
  Internet with smarthost:
   Mail is received directly using SMTP or by running a utility such
   as fetchmail. Outgoing mail is sent using a smarthost.
  Satellite system:
   All mail is sent to another machine, called a 'smarthost', for
 delivery.
  Local only:

                                 <Ok>
```

Select "Internet with smarthost" on this screen.

- Use the arrow keys to move to that option, and then press **Enter**.

2.Set the system mail name

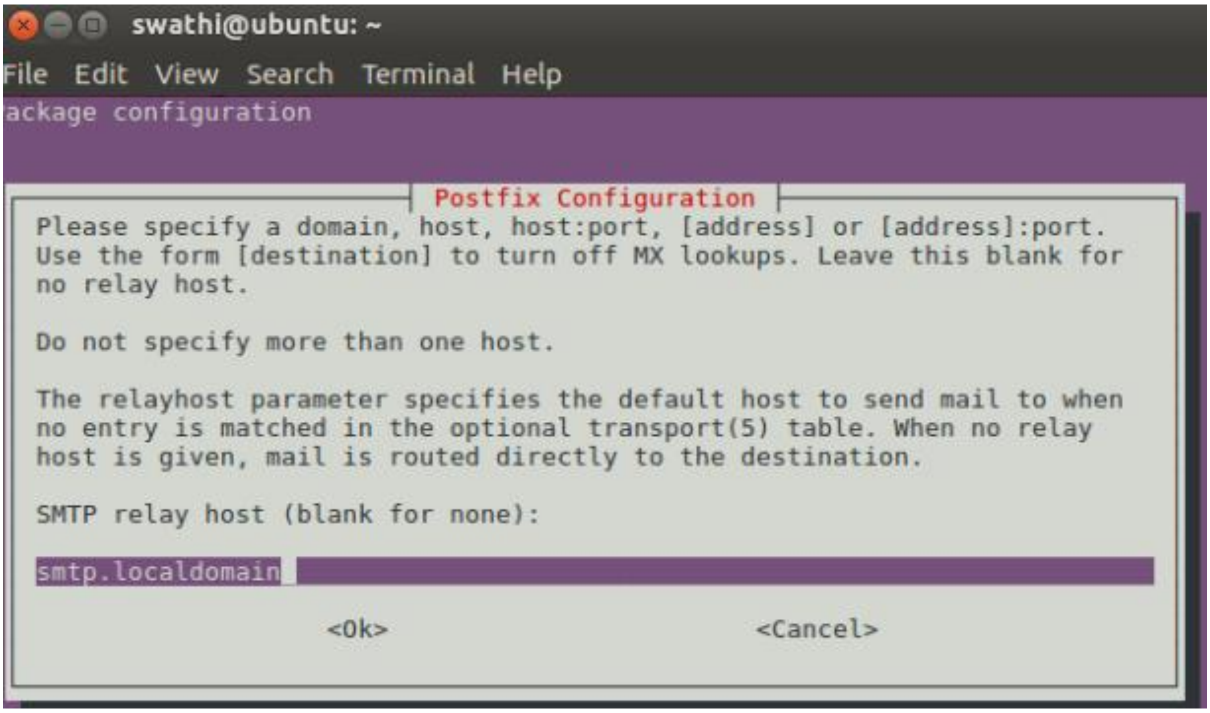


```
ackage configuration
                         Postfix Configuration
 The "mail name" is the domain name used to "qualify" _ALL_ mail
 addresses without a domain name. This includes mail to and from <root>:
 please do not make your machine send out mail from root@example.org
 unless root@example.org has told you to.

 This name will also be used by other programs. It should be the single,
 fully qualified domain name (FQDN).

 Thus, if a mail address on the local host is foo@example.org, the
 correct value for this option would be example.org.

 System mail name:

 ubuntu

                <Ok>                              <Cancel>
```

Leave it as ubuntu or change it to localhost if you prefer use table key to select <ok>,press Enter.

Configuring Internet with Smarthosr in Postfix

1.Smarthost (SMTP Replay)Address :



```
ackage configuration

                         Postfix Configuration
 Please specify a domain, host, host:port, [address] or [address]:port.
 Use the form [destination] to turn off MX lookups. Leave this blank for
 no relay host.

 Do not specify more than one host.

 The relayhost parameter specifies the default host to send mail to when
 no entry is matched in the optional transport(5) table. When no relay
 host is given, mail is routed directly to the destination.

 SMTP relay host (blank for none):

 smtp.localdomain

                <Ok>                              <Cancel>
```

In this screen, **SMTP relay host** is asking for the hostname and port of the SMTP server you want Postfix to use for sending mail.

Replace smtp.localdomain with: **[smtp.gmail.com]:587** then click ok

Setting Up Postfix to Use Gmail's SMTP Server

After completing the initial configuration, follow these steps:

1. **Open the Postfix configuration file**:

- sudo nano /etc/postfix/main.cf

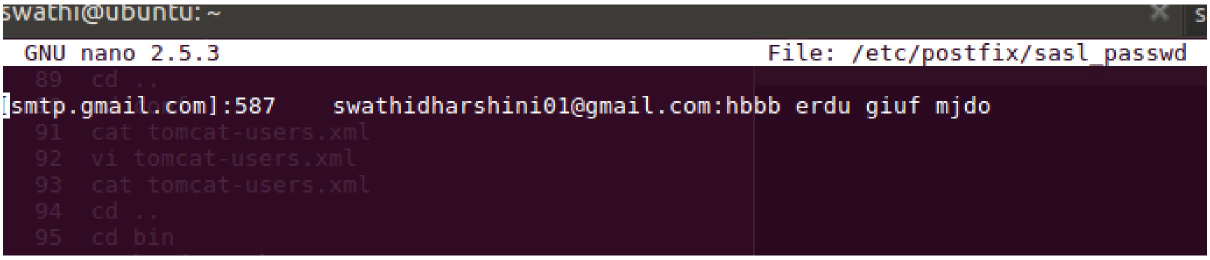
  Add the following settings at the end of the file to configure Gmail’s SMTP:

2. **Add the following settings at the end of the file to configure Gmail’s SMTP:**

```
relayhost = [smtp.gmail.com]:587
smtp_sasl_auth_enable = yes
smtp_sasl_password_maps = hash:/etc/postfix/sasl_passwd
smtp_sasl_security_options = noanonymous
smtp_tls_security_level = encrypt
smtp_tls_CAfile = /etc/ssl/certs/ca-certificates.crt
```

3. **Create the sasl_passwd file to store your Gmail credentials**:

- sudo nano /etc/postfix/sasl_passwd
- [smtp.gmail.com]:587   your-email@gmail.com:your- app password



```
swathi@ubuntu: ~
  GNU nano 2.5.3                                   File: /etc/postfix/sasl_passwd
   89  cd ..
[smtp.gmail.com]:587    swathidharshini01@gmail.com:hbbb erdu giuf mjdo
   91  cat tomcat-users.xml
   92  vi tomcat-users.xml
   93  cat tomcat-users.xml
   94  cd ..
   95  cd bin
```

Steps to Generate an App Password for Gmail

Enable 2-Step Verification (if not already enabled):

- Go to Google Account Security.
- Under **"Signing in to Google,"** find **"2-Step Verification"** and enable it if it's not already turned on.

Generate an App Password:

- Once 2-Step Verification is enabled, return to the **Security** section of your Google Account.
- Under **"Signing in to Google,"** Search for **"App Passwords"** and click on it.
- Google will display a 16-character password.
- copy it—this is the password you'll use instead of your main Google password.

4.Secure and Hash the Password File:

```
- sudo chmod 600 /etc/postfix/sasl_passwd
- sudo postmap /etc/postfix/sasl_passwd
```

5.Restart Postfix

```
- sudo systemctl restart postfix
```

3 . Create a crone jab to run the script every hour:

Now, create a cron job to run this script every hour to check Tomcat's status and send an email notification if it’s stopped.

1.Open your crontab for editing:

```
- sudo crontab -e
```

2.Add the following line to run the script every hour:

```
- 0 * * * * /usr/local/bin/check_tomcat.sh
```

- Save and exit

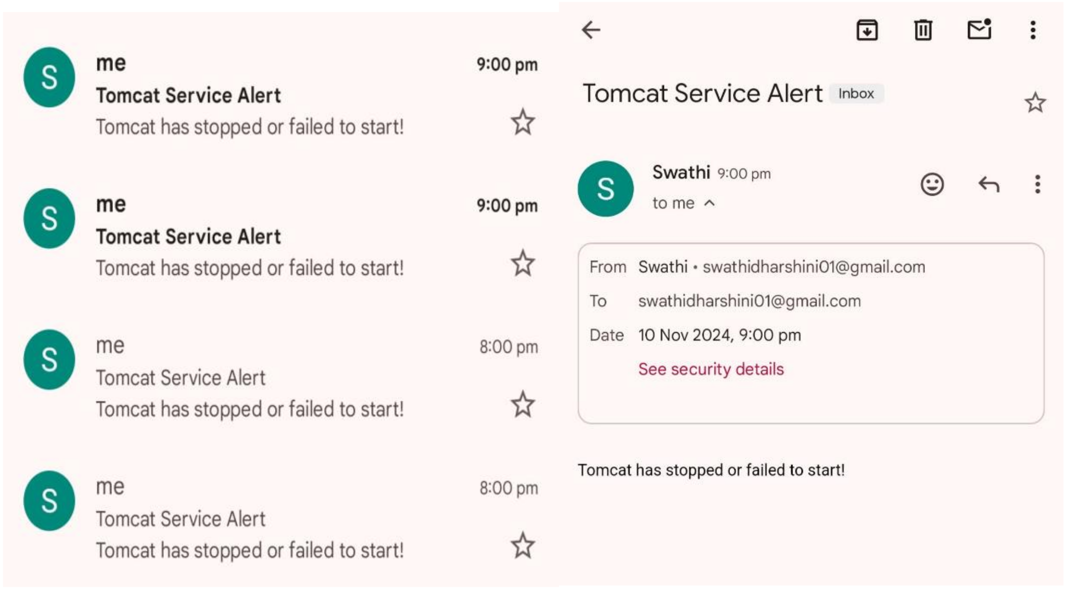
- This cron job will execute the check_tomcat.sh script at the start of every hour.

3.Test your script:

To test whether the email is sent when Tomcat is not running, you can stop Tomcat manually:

```
- sudo systemctl stop tomcat
```

ScreenShot



me
Tomcat Service Alert
Tomcat has stopped or failed to start!
9:00 pm

me
Tomcat Service Alert
Tomcat has stopped or failed to start!
9:00 pm

me
Tomcat Service Alert
Tomcat has stopped or failed to start!
8:00 pm

me
Tomcat Service Alert
Tomcat has stopped or failed to start!
8:00 pm

Tomcat Service Alert Inbox

Swathi 9:00 pm
to me

From Swathi • swathidharshini01@gmail.com
To swathidharshini01@gmail.com
Date 10 Nov 2024, 9:00 pm
See security details

Tomcat has stopped or failed to start!