

IT361 Project
G-10
section 1529

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Prepared for

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System Administration and Maintenance Project - Part 2 Mail Server

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Introduction

In this report, we will delve into the most famous mail servers out there and the intricacies of setting up, configuring, and maintaining a Linux mail server. We will also be testing the server.

A Linux mail server is a computer system or software application running on a Linux-based operating system that specializes in handling email communications. These servers serve as the backbone of email systems, ensuring that messages are routed, stored, and delivered efficiently. Linux, with its robustness, flexibility, and security features, has become a popular choice for hosting mail servers in a variety of environments.

The mail server we used for this report is Postfix, an open-source mail server well known for its security, speed, and flexibility. Many features are included, such as junk mail control, database support, and convenient log management. There are many popular operating systems that use Postfix, including Ubuntu, RedHat/CentOS, NetBSD, and macOS. Postfix is ideal for organizations and businesses of all sizes. It is easy to install and configure, and it provides a wide range of features to satisfy even the most discerning users.

Famous mail server

Part One

EXIM



Exim is a widely used mail server known for its flexibility, customizability, and cross-platform compatibility. It's the default MTA on Debian Linux systems and is written in C for optimal performance. Its regular updates and bug fixes ensure its reliability.

AXIGEN



Axigen is a powerful email server with a robust set of innovative features that make email management hassle-free. It includes a variety of features, like Integrated mailing list server, Malware and spam protection mechanisms, And access to user emails from external sources

SENDMAIL



Sendmail is a widely used and reliable mail server known for its efficiency, flexibility, and customizability. It requires minimal network bandwidth and offers various delivery methods. Despite its age, it remains a popular choice for many organizations.

ZIMBRA

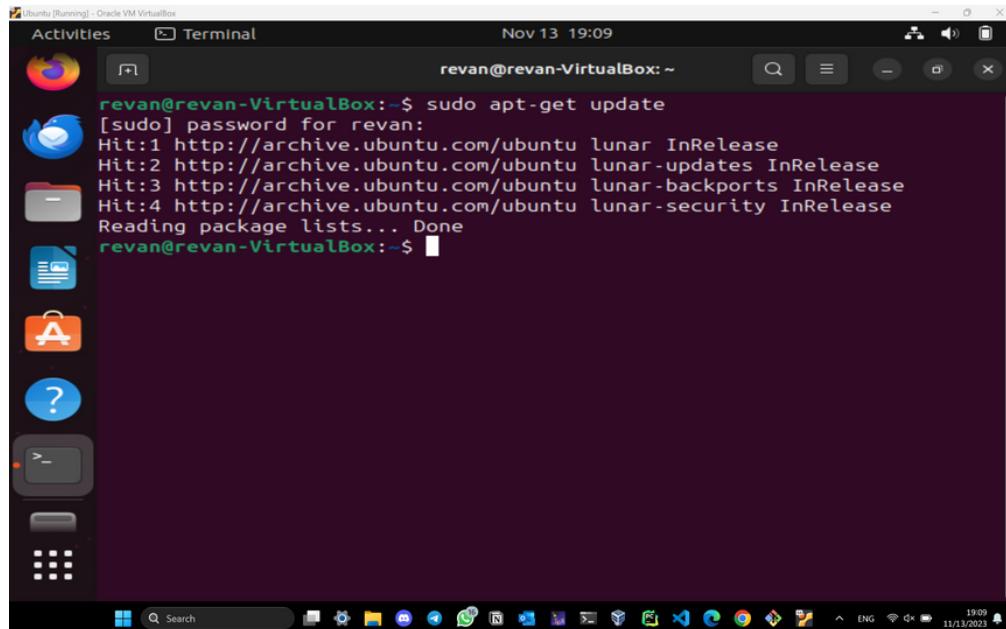


Zimbra is a powerful, scalable, and secure open-source email server that offers a wide range of features, including group calendars, document sharing, and a mobile web client application. It is a great option for businesses of all sizes.

Downloading and Installing steps

Part Two

1. Log In and Update Your Server

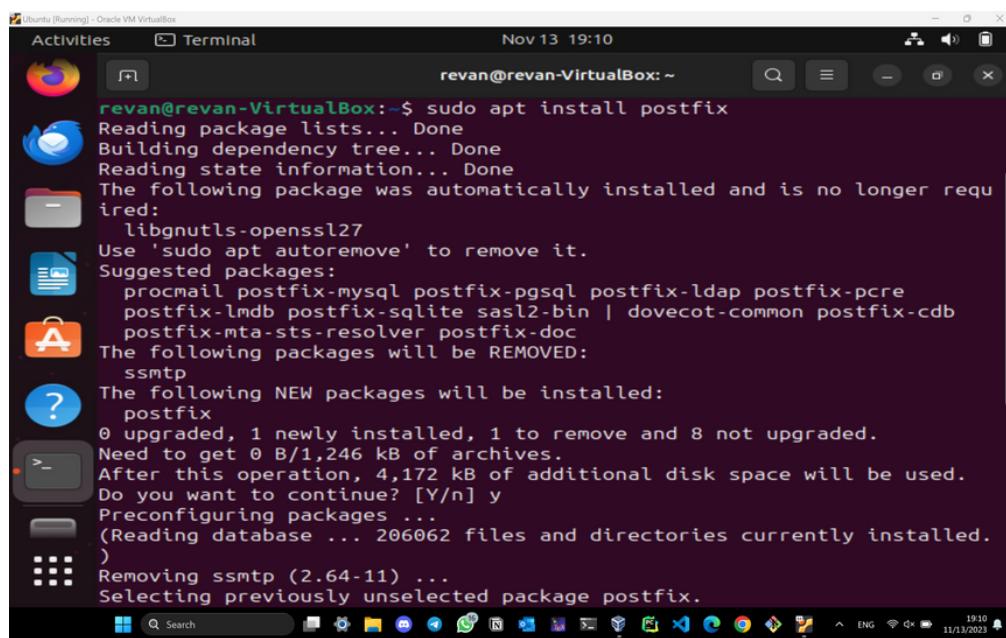


A screenshot of an Ubuntu desktop environment running in Oracle VM VirtualBox. The terminal window shows the command `sudo apt-get update` being run, which updates the package lists from the `lunar` repository. The terminal window is titled "Terminal" and is located in the top panel of the desktop. The desktop background is dark blue/black, and the taskbar at the bottom shows various application icons.

```
revan@revan-VirtualBox:~$ sudo apt-get update
[sudo] password for revan:
Hit:1 http://archive.ubuntu.com/ubuntu lunar InRelease
Hit:2 http://archive.ubuntu.com/ubuntu lunar-updates InRelease
Hit:3 http://archive.ubuntu.com/ubuntu lunar-backports InRelease
Hit:4 http://archive.ubuntu.com/ubuntu lunar-security InRelease
Reading package lists... Done
revan@revan-VirtualBox:~$
```

We chose to use the postfix mail server

2. Install Postfix Email Server



A screenshot of an Ubuntu desktop environment running in Oracle VM VirtualBox. The terminal window shows the command `sudo apt install postfix` being run, which installs the Postfix email server. The terminal window is titled "Terminal" and is located in the top panel of the desktop. The desktop background is dark blue/black, and the taskbar at the bottom shows various application icons.

```
revan@revan-VirtualBox:~$ sudo apt install postfix
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  libgnutls-openssl27
Use 'sudo apt autoremove' to remove it.
Suggested packages:
  procmail postfix-mysql postfix-pgsql postfix-ldap postfix-pcre
  postfix-lmdb postfix-sqlite sasl2-bin | dovecot-common postfix-cdb
  postfix-mta-sts-resolver postfix-doc
The following packages will be REMOVED:
  ssmtp
The following NEW packages will be installed:
  postfix
0 upgraded, 1 newly installed, 1 to remove and 8 not upgraded.
Need to get 0 B/1,246 kB of archives.
After this operation, 4,172 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Preconfiguring packages ...
(Reading database ... 206062 files and directories currently installed.
)
Removing ssmtp (2.64-11) ...
Selecting previously unselected package postfix.
```

Configuration Process of the server

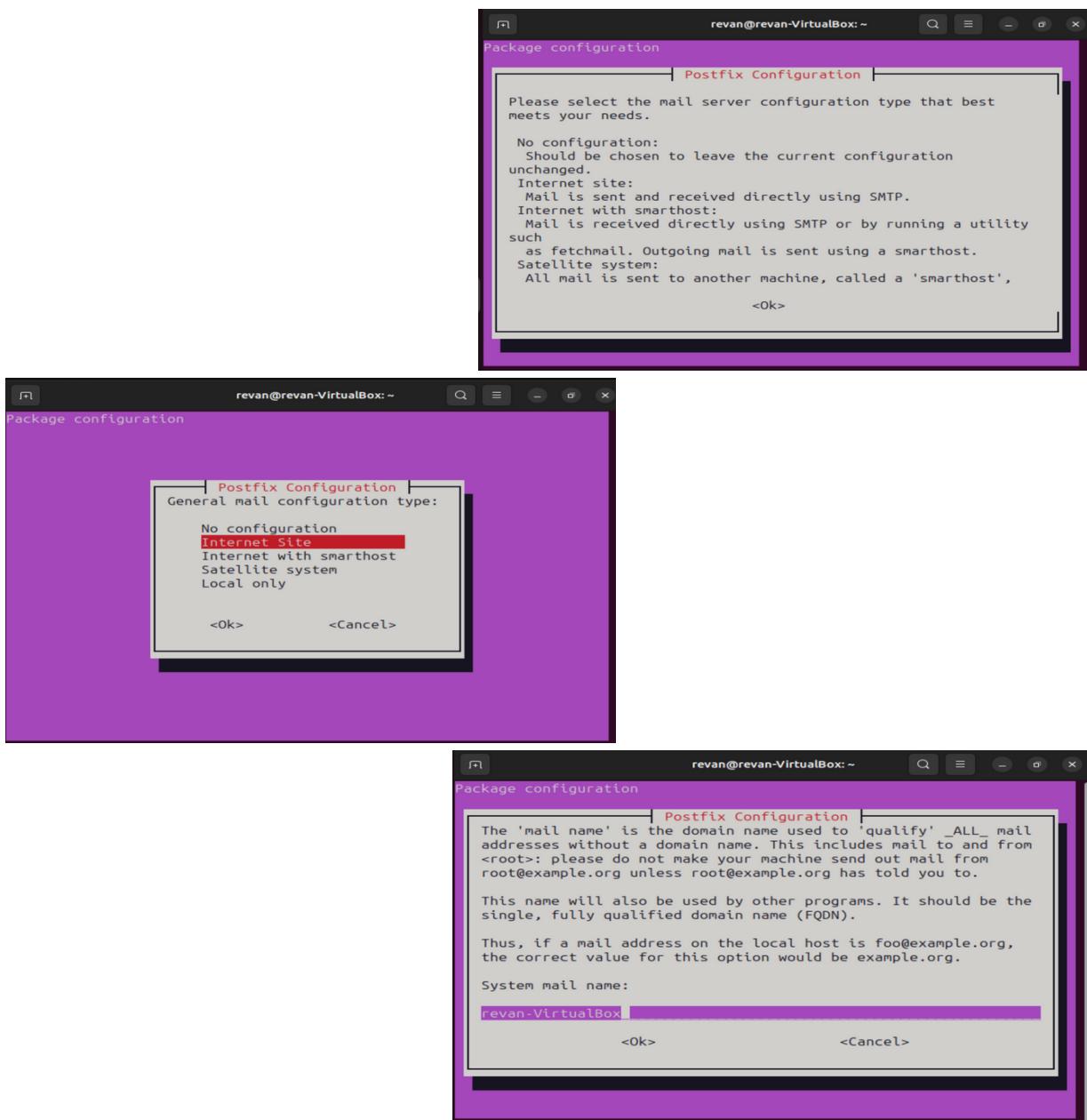
Part Three

3.configure Postfix Email Server

Using this command :

```
revan@revan-VirtualBox:~$ sudo dpkg-reconfigure postfix
```

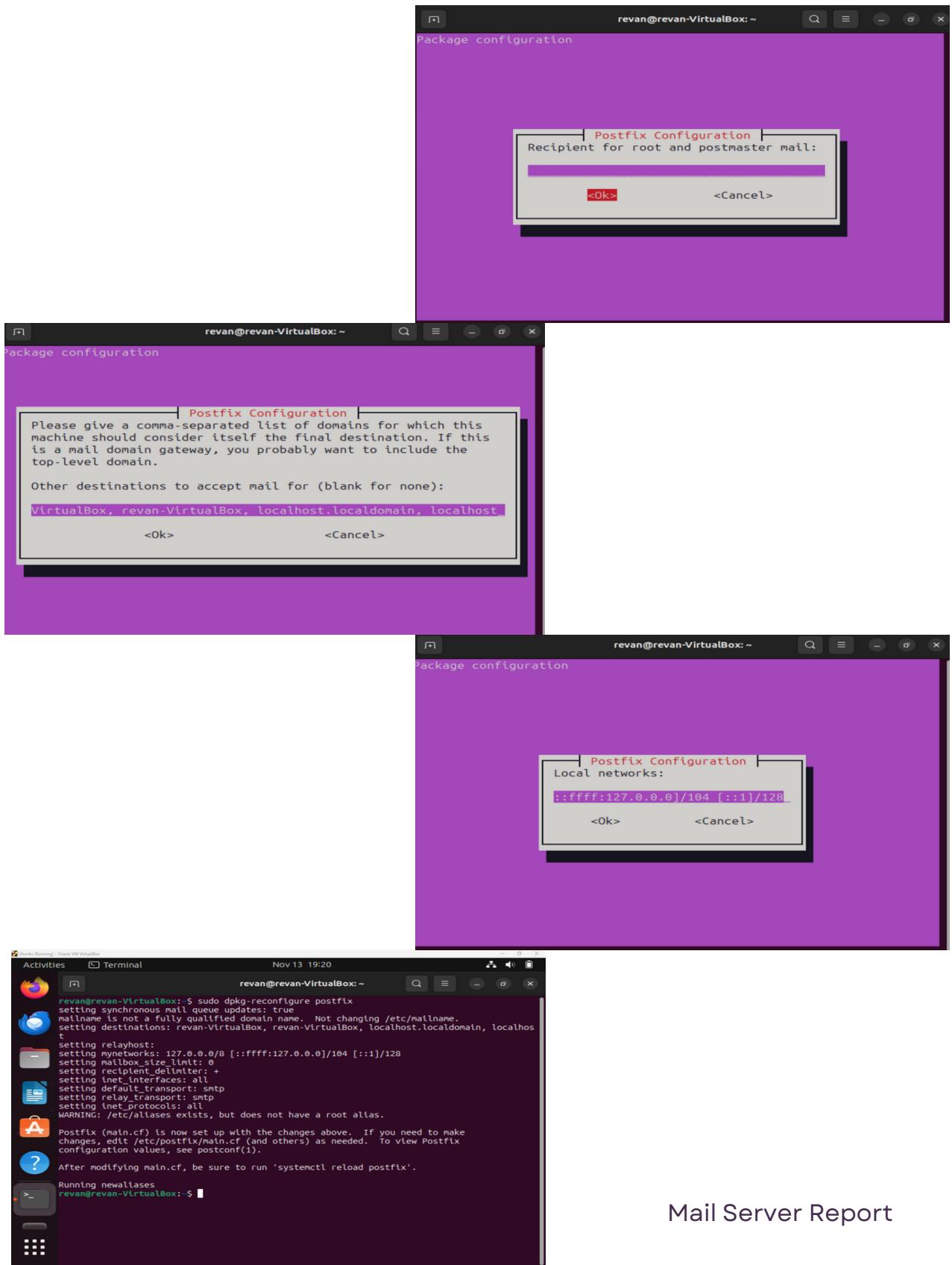
You will be presented with the Postfix configuration windows:



Configuration Process of the server

Part Three

3.configure Postfix Email Server



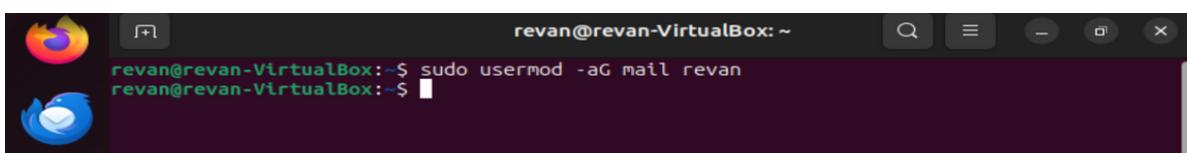
Mail Server Report

Testing the server

Part Four

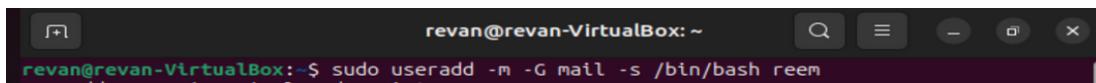
For testing we need to add our user to the group mail, and then create the users and add them to the mail group .

4. Adding our user to the group mail

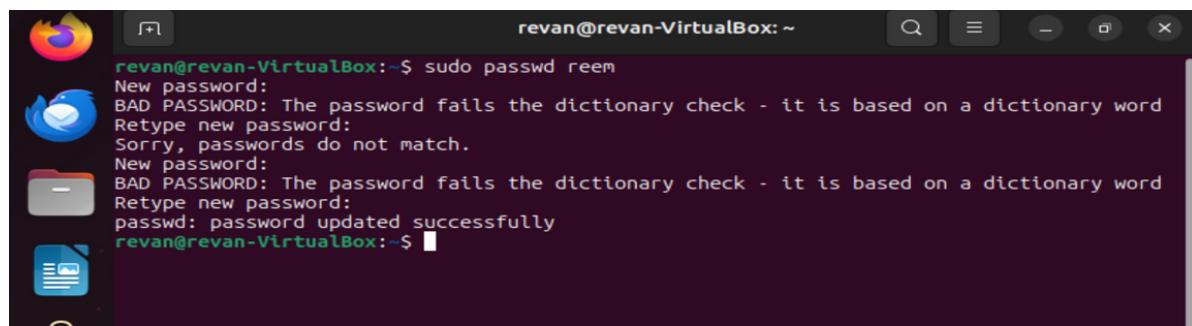


```
revan@revan-VirtualBox:~$ sudo usermod -aG mail revan
revan@revan-VirtualBox:~$
```

5. Creating the users and add them to the mail group



```
revan@revan-VirtualBox:~$ sudo useradd -m -G mail -s /bin/bash reem
```



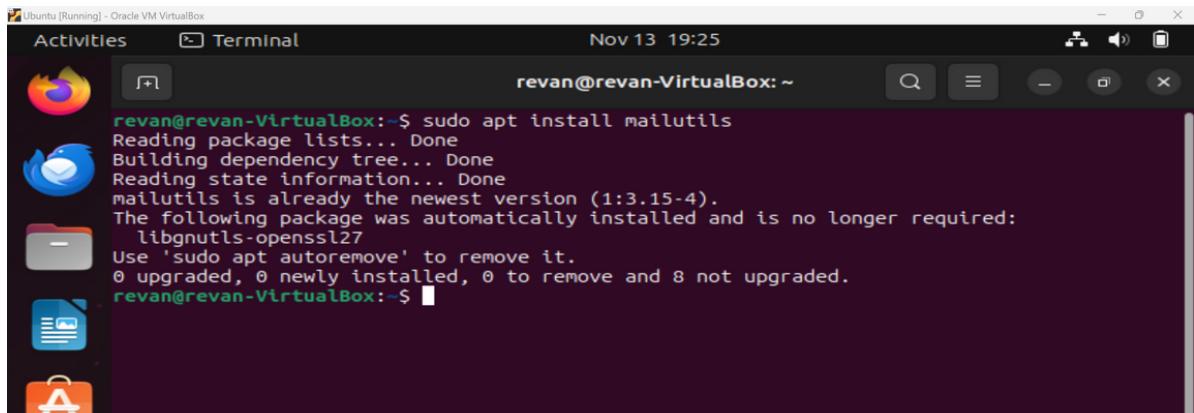
```
revan@revan-VirtualBox:~$ sudo passwd reem
New password:
BAD PASSWORD: The password fails the dictionary check - it is based on a dictionary word
Retype new password:
Sorry, passwords do not match.
New password:
BAD PASSWORD: The password fails the dictionary check - it is based on a dictionary word
Retype new password:
passwd: password updated successfully
revan@revan-VirtualBox:~$
```

Testing the server

Part Four

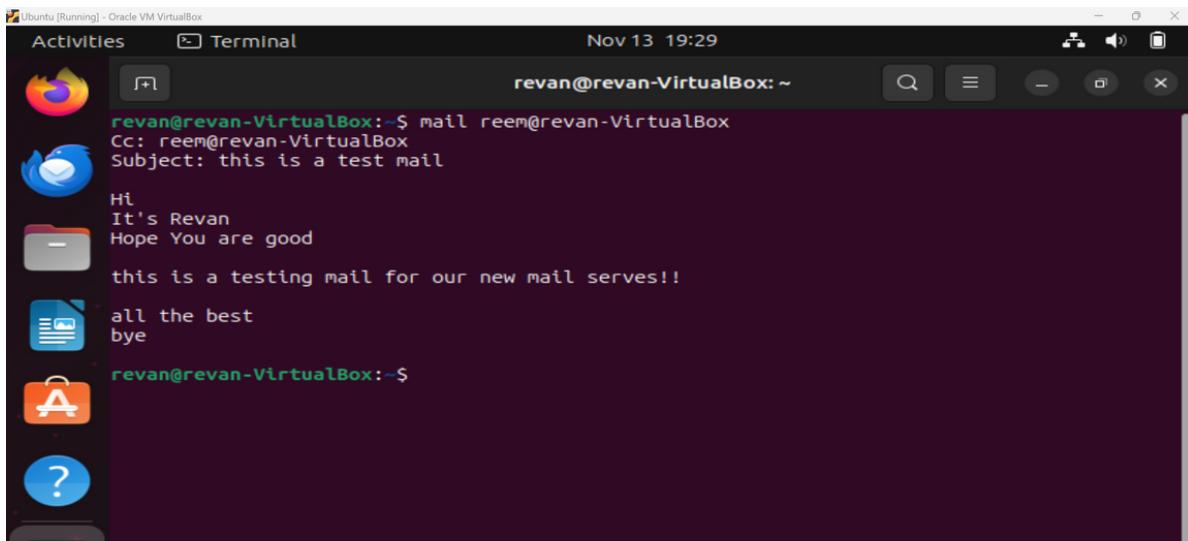
Now we will send and receive an email from the terminal.
To do this, we will install the mailutils package

6. install the mailutils packag



```
Ubuntu [Running] - Oracle VM VirtualBox
Activities Terminal Nov 13 19:25
revan@revan-VirtualBox:~$ sudo apt install mailutils
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
mailutils is already the newest version (1:3.15-4).
The following package was automatically installed and is no longer required:
libgnutls-openssl27
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 8 not upgraded.
revan@revan-VirtualBox:~$
```

7. send an email to our new user



```
Ubuntu [Running] - Oracle VM VirtualBox
Activities Terminal Nov 13 19:29
revan@revan-VirtualBox:~$ mail reem@revan-VirtualBox
Cc: reem@revan-VirtualBox
Subject: this is a test mail

Hi
It's Revan
Hope You are good

this is a testing mail for our new mail serves!!

all the best
bye
revan@revan-VirtualBox:~$
```

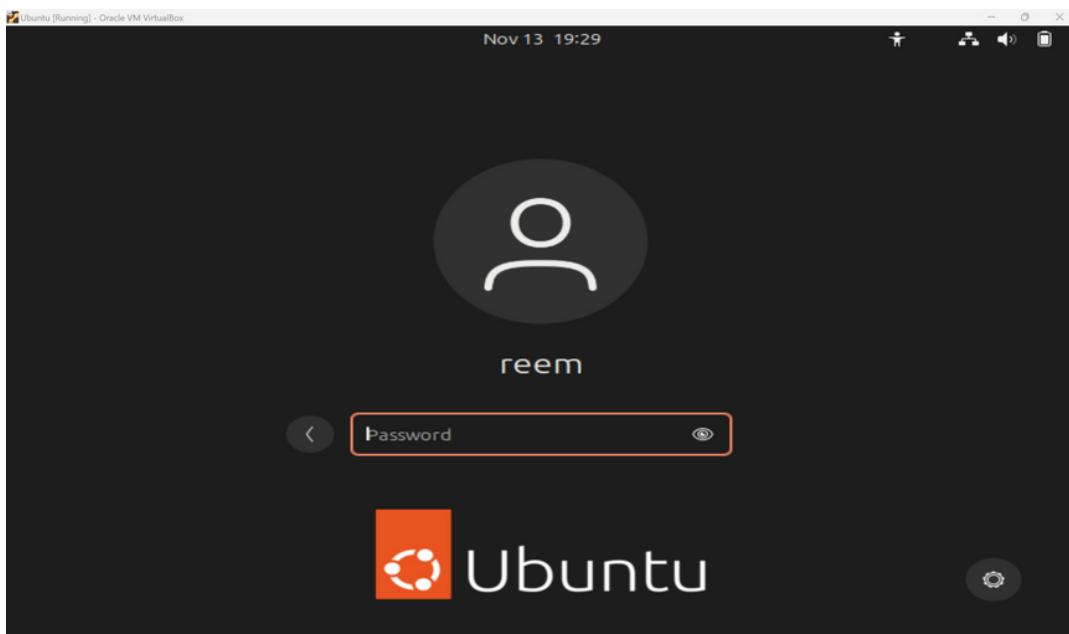
Type in the subject and the message. After that, press CTRL+D to finish

Testing the server

Part Four

8. receiving an email

Now we log into another user and check the mail



Checking the mail box for user reem

```
Activities Terminal Nov 13 19:31
reen@revan-VirtualBox:~$ mail
"/var/mail/reem": 1 message 1 new
>N 1 Revan           Mon Nov 13 19:29 22/586  this is a test m
? 1
Return-Path: <revan@revan-VirtualBox>
X-Original-To: reem@revan-VirtualBox
Delivered-To: reem@revan-VirtualBox
Received: by revan-VirtualBox (Postfix, from userid 1000)
          id 561601000A9; Mon, 13 Nov 2023 19:29:03 +0300 (+03)
To: <reem@revan-VirtualBox>
Cc: <reem@revan-VirtualBox>
Subject: this is a test mail
User-Agent: mail (GNU Mailutils 3.15)
Date: Mon, 13 Nov 2023 19:29:03 +0300
Message-Id: <20231113162903.561601000A9@revan-VirtualBox>
From: Revan <revan@revan-VirtualBox>

Hi
It's Revan
Hope You are good

this is a testing mail for our new mail servers!!

all the best
bye
? ■
```

A terminal window titled "Terminal" is open, showing the command "mail" being run. The output displays an incoming email message for the user "reem". The message is from "Revan" and contains a simple greeting and a note about testing the new mail server. The terminal window is part of a desktop environment with a dark theme, and the desktop icons are visible at the bottom.

Mail Server Report

summary

Part Five

As a summary, the report provided an overview of Postfix, including the famous mail servers, and instructions for downloading, installing, configuring, and testing the server. Even so, Postfix does have some limitations. As an example, it can be difficult to troubleshoot and secure. In addition, Postfix can be slow when processing large volumes of mail. In general, Postfix is a good choice for organizations looking for a reliable and efficient mail server. Before deploying it in a production environment, it is essential to understand its limitations.

Consider Postfix's benefits and limitations before deciding whether to use it. It is a good choice for organizations that require a reliable and efficient mail server, but there are potential challenges to consider when using it.

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Part Five

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