DOKUMENTASI – *Mail Ops*

Instalallation Mail Server

Contents

Documentation

Installation Bind9 (DNS Server)

Update and upgrade Linux (Ubuntu 20.04)

```
apt update && apt upgrade
```

Setting Server IP Address

```
vi /etc/netplan/50-cloud-init.yaml
network:
    version: 2
    ethernets:
        eth0:
            accept-ra: false
            addresses:
            - 2400:6180:0000:00D0:0000:0000:12F9:A001/64
            - 188.166.239.101/20
            - 10.15.0.9/16
            match:
                macaddress: c2:c9:3d:b2:ee:31
            mtu: 1500
            nameservers:
                addresses:
                - 67.207.67.2
                - 67.207.67.3
                search: []
            routes:
            -   to: ::/0
                via: 2400:6180:0000:00D0:0000:0000:0000:0001
            -   to: 0.0.0.0/0
                via: 188.166.224.1
            set-name: eth0
        eth1:
            addresses:
            - 10.130.10.155/16
            match:
                macaddress: be:ca:79:e1:d6:c0
            mtu: 1500
            nameservers:
                addresses:
                - 67.207.67.2
                - 67.207.67.3
                search: []
            set-name: eth1
```

Install bind9 package

```
apt install bind9 -y
```

Move to bind directory

```
cd /etc/bind
```

Edit file zona

vi named.conf.default-zones

```
zone "cls-indo.com" {
     type master;
     file "/etc/bind/cls-indo-forward";
     allow-update { none; };
};

zone "239.166.188.in-addr.arpa" {
     type master;
     file "/etc/bind/cls-indo-reverse";
     allow-update { none; };
};
```

Edit the file named.conf.options, change it to be like this

vi named.conf.options

```
. . .
        forwarders {
                8.8.8.8;
                8.8.4.4;
        };
        allow-query { any; };
. . .
        auth-nxdomain no;    # conform to RFC1035
        listen-on-v6 { none; };
};
```

Open the file named.conf, change it to be like this

vi named.conf

```
include "/etc/bind/named.conf.options";
//include "/etc/bind/named.conf.local";
include "/etc/bind/named.conf.default-zones";
```

Create reverse and forward files by copying the following files

cp db.local cls-indo-forward
cp db.127 cls-indo-reverse

Change the forward file to be like this

vi cls-indo-forward

```
; BIND data file for local loopback interface
;
$TTL    604800
@       IN      SOA      cls-indo.com. root.cls-indo.com. (
                              2         ; Serial
                         604800         ; Refresh
                          86400         ; Retry
                        2419200         ; Expire
                         604800 )       ; Negative Cache TTL
;
        IN      NS      cls-indo.com.
        IN      MX      200     smtp.cls-indo.com.
        IN      A       188.166.239.101
smtp    IN      A       188.166.239.101
```

Then edit the reverse file to be like this

```
vi cls-indo-reverse
; BIND reverse data file for local loopback interface
;
$TTL    604800
@       IN      SOA     cls-indo.com. root.cls-indo.com. (
                              1         ; Serial
                         604800         ; Refresh
                          86400         ; Retry
                        2419200         ; Expire
                         604800 )       ; Negative Cache TTL
;
@       IN      NS      cls-indo.com.
101     IN      PTR     smtp.cls-indo.com.
```

Restart service bind9

```
systemctl restart bind9
```

Then edit the resolv.conf file to force it to use the domain that was created

```
vi /etc/resolv.conf
search cls-indo.com
nameserver 188.166.239.101
nameserver 8.8.8.8
```

Installation Zimbra

Edit hostname

```
hostnamectl set-hostname smtp.cls-indo.com
su -
```

Edit file hosts, add domain and ip address of the server

```
vi /etc/hosts
188.166.239.101 smtp.cls-indo.com smtp
```

The next step in Installing Zimbra Ubuntu is downloading Zimbra Collaboration, to download Zimbra you can link https://www.zimbra.com/downloads/

```
wget \
https://files.zimbra.com/downloads/8.8.15_GA/zcs-
8.8.15_GA_4179.UBUNTU20_64.20211118033954.tgz
```

Extract the zimbra file that was downloaded

```
tar -xvf zcs-8.8.15_GA_4179.UBUNTU20_64.20211118033954.tgz
```

If it has been successfully extracted, then move to the zimbra folder

```
cd zcs-8.8.15_GA_4179.UBUNTU20_64.20211118033954
```

Run the installer script. When Zimbra gives a notification of the Software License agreement, select “Y” and do the same on Zimbra’s package repository Installation.

```
./install.sh --platform-override
```

If there is an error like the one below:

```
Use Zimbra's package repository [Y] Y

Warning: apt-key output should not be parsed (stdout is not a terminal)
Importing Zimbra GPG key
ERROR: Unable to retrive Zimbra GPG key for package validation
Please fix system to allow normal package installation before proceeding
```

Follow the following command

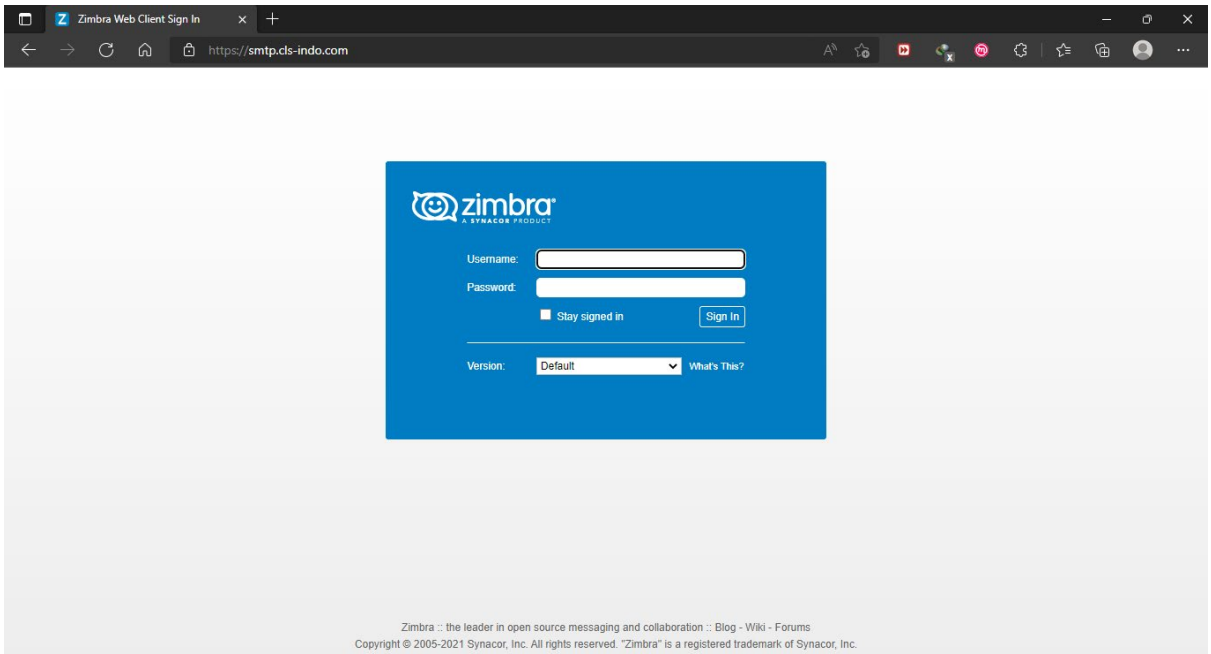
```
apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv-keys 9BE6ED79
```

And run **./Install.sh** again. In the packages installation, select “Y” for each package

```
./install.sh --platform-override
installed packages
zimbra-ldap
zimbra-logger
zimbra-mta
zimbra-dnscache
zimbra-snmp
zimbra-store
zimbra-apache
zimbra-spell
zimbra-memcached
zimbra-proxy
zimbra-drive
zimbra-imapd
```

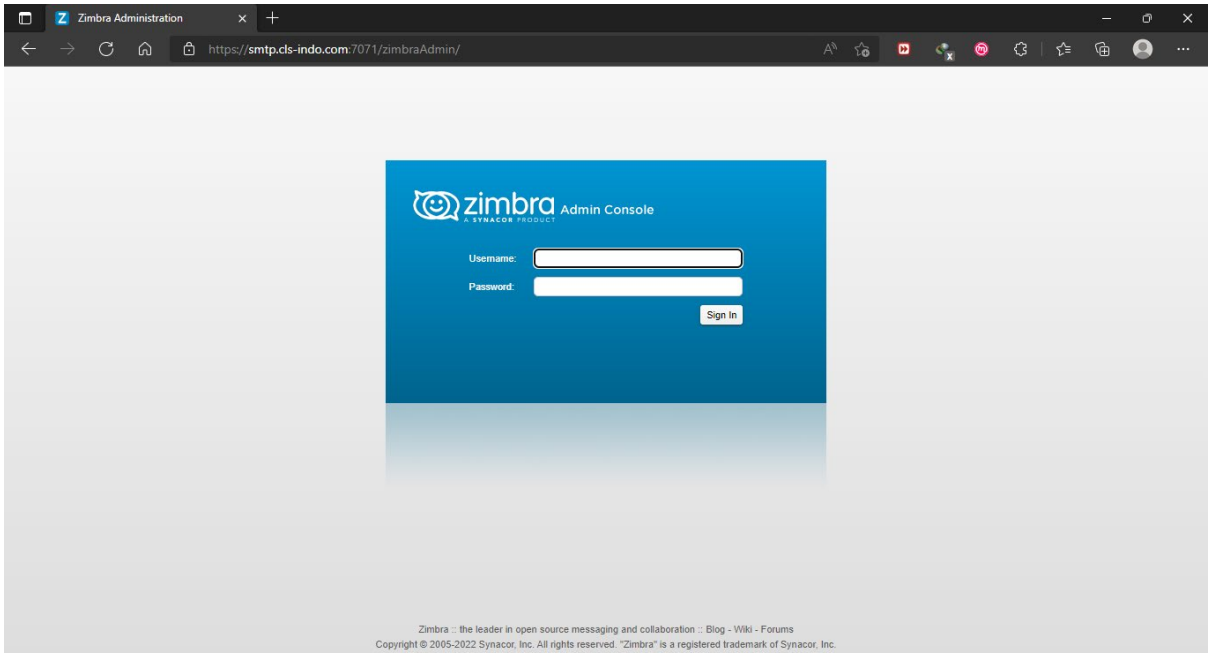
Access Zimbra Dashboard

https://smtp.cls-indo.com



Access Zimbra Dashboard Admin

https://smtp.cls-indo.com:7071



Install SSL Let's Encrypt Zimbra

Install Cerbot

```
apt install certbot
```

SSL Request to Let's Encrypt

```
certbot certonly --standalone -d smtp.cls-indo.com
IMPORTANT NOTES:
 - Congratulations! Your certificate and chain have been saved at:
   /etc/letsencrypt/live/smtp.cls-indo.com/fullchain.pem
   Your key file has been saved at:
   /etc/letsencrypt/live/smtp.cls-indo.com/privkey.pem
   Your cert will expire on 2022-07-10. To obtain a new or tweaked
   version of this certificate in the future, simply run certbot
   again. To non-interactively renew *all* of your certificates, run
   "certbot renew"
 - Your account credentials have been saved in your Certbot
   configuration directory at /etc/letsencrypt. You should make a
   secure backup of this folder now. This configuration directory will
   also contain certificates and private keys obtained by Certbot so
   making regular backups of this folder is ideal.
 - If you like Certbot, please consider supporting our work by:

   Donating to ISRG / Let's Encrypt:   https://letsencrypt.org/donate
   Donating to EFF:                    https://eff.org/donate-le
```

***Note: renew the ssl certificate every 90 days, this is how to renew the ssl certificate**

```
certbot renew
```

Copy the SSL private key to the Zimbra SSL folder

```
cp \
/etc/letsencrypt/live/smtp.cls-indo.com/privkey.pem \
/opt/zimbra/ssl/zimbra/commercial/commercial.key
```

Change permissions to user zimbra on the commercial.key file

```
chown zimbra:zimbra /opt/zimbra/ssl/zimbra/commercial/commercial.key
```

Creating a Let's Encrypt CA, chain.pem

```
wget -O /tmp/ISRG-X1.pem https://letsencrypt.org/certs/isrgrootx1.pem
wget -O /tmp/R3.pem https://letsencrypt.org/certs/lets-encrypt-r3.pem
cat /tmp/R3.pem > /etc/letsencrypt/live/smtp.cls-indo.com/chain.pem
cat /tmp/ISRG-X1.pem >> /etc/letsencrypt/live/smtp.cls-indo.com/chain.pem
```

Change permissions to user zimbra on the folder

```
chown -R zimbra:zimbra /etc/letsencrypt
```

Let's Encrypt SSL Verification

```
su - zimbra
/opt/zimbra/bin/zmcertmgr verifycrt comm \
/opt/zimbra/ssl/zimbra/commercial/commercial.key \
/etc/letsencrypt/live/smtp.cls-indo.com/cert.pem \
/etc/letsencrypt/live/smtp.cls-indo.com/chain.pem
** Verifying '/etc/letsencrypt/live/smtp.cls-indo.com/cert.pem' against
'/opt/zimbra/ssl/zimbra/commercial/commercial.key'
Certificate '/etc/letsencrypt/live/smtp.cls-indo.com/cert.pem' and private
key '/opt/zimbra/ssl/zimbra/commercial/commercial.key' match.
** Verifying '/etc/letsencrypt/live/smtp.cls-indo.com/cert.pem' against
'/etc/letsencrypt/live/smtp.cls-indo.com/chain.pem'
Valid certificate chain: /etc/letsencrypt/live/smtp.cls-indo.com/cert.pem:
OK
```

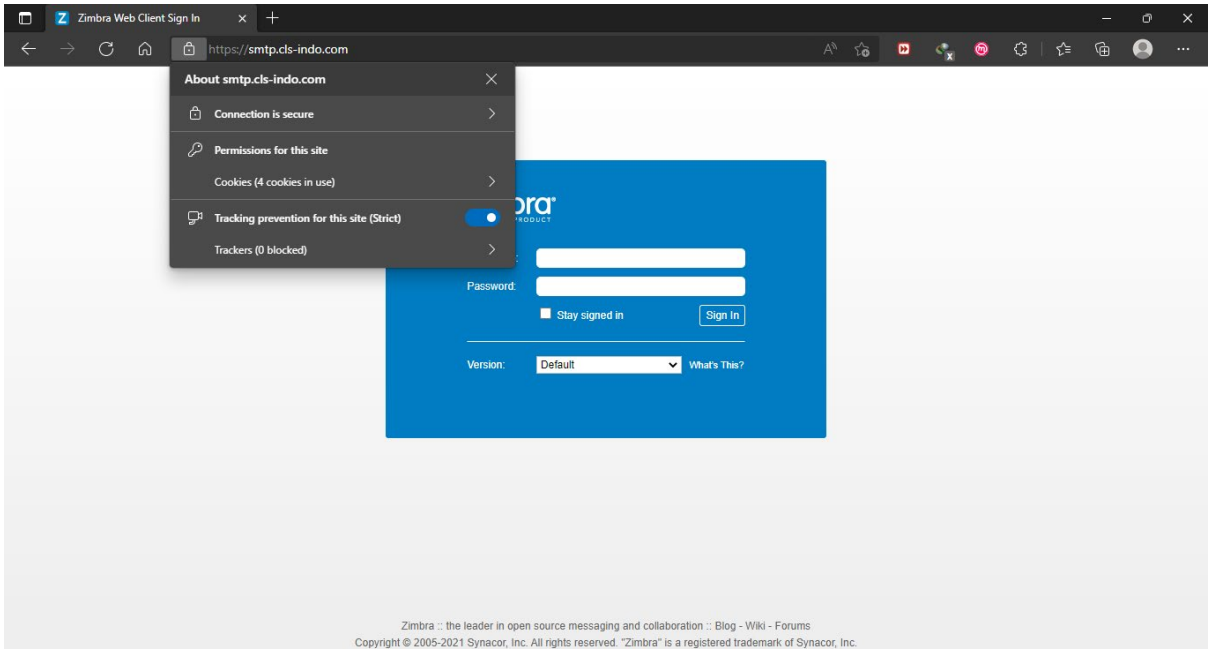
Deploy SSL Let’s Encrypt

```
/opt/zimbra/bin/zmcertmgr deploycrt comm \
/etc/letsencrypt/live/smtp.cls-indo.com/cert.pem \
/etc/letsencrypt/live/smtp.cls-indo.com/chain.pem
```

Restart Zimbra

```
zmcontrol restart
```

Access Zimbra in a web browser



Install and configuration Shorewall

Install shorewall ipv4

```
apt install shorewall
```

Change directory

```
cd /etc/shorewall/
```

Edit the *interfaces* file, then enter the interface used

```
vim interfaces
ZONE    INTERFACE       OPTIONS
net      eth0
loc      eth1
```

Open the *policy* file, give the desired policy

```
vim policy
#SOURCE          DEST               POLICY     LOGLEVEL     LIMIT
fw               all                ACCEPT     info
net              all                DROP       info
loc              all                ACCEPT     info
all              all                REJECT     info
```

Open the *rules* file, accept ports that are allowed in and out

```
vim rules
#ACTION SOURCE  DEST      PROTO      DPORT    SPORT    ORIGDEST
ACCEPT  net     fw        tcp        22
ACCEPT  net     fw        tcp        25
ACCEPT  net     fw        tcp        80
ACCEPT  net     fw        tcp        443
ACCEPT  net     fw        tcp        143
```

```
ACCEPT  net     fw      tcp     993
ACCEPT  net     fw      tcp     995
ACCEPT  net     fw      tcp     465
ACCEPT  net     fw      tcp     587
ACCEPT  net     fw      tcp     953
ACCEPT  net     fw      tcp     7071
ACCEPT  net     fw      tcp     8443
```

Open the zones file, enter the type and zone

```
vim zones
#ZONE   TYPE            OPTIONS
fw      firewall
net     ipv4
loc     ipv4
```

Restart shorewall

```
systemctl restart shorewall
```

Management User and Contact Group On Zimbra

Create Account on Zimbra (Via Command)

Create an e-mail account

```
su - zimbra
zmprov ca admin.legal@cls-indo.com clsindo1234!
```

Change/reset email account password

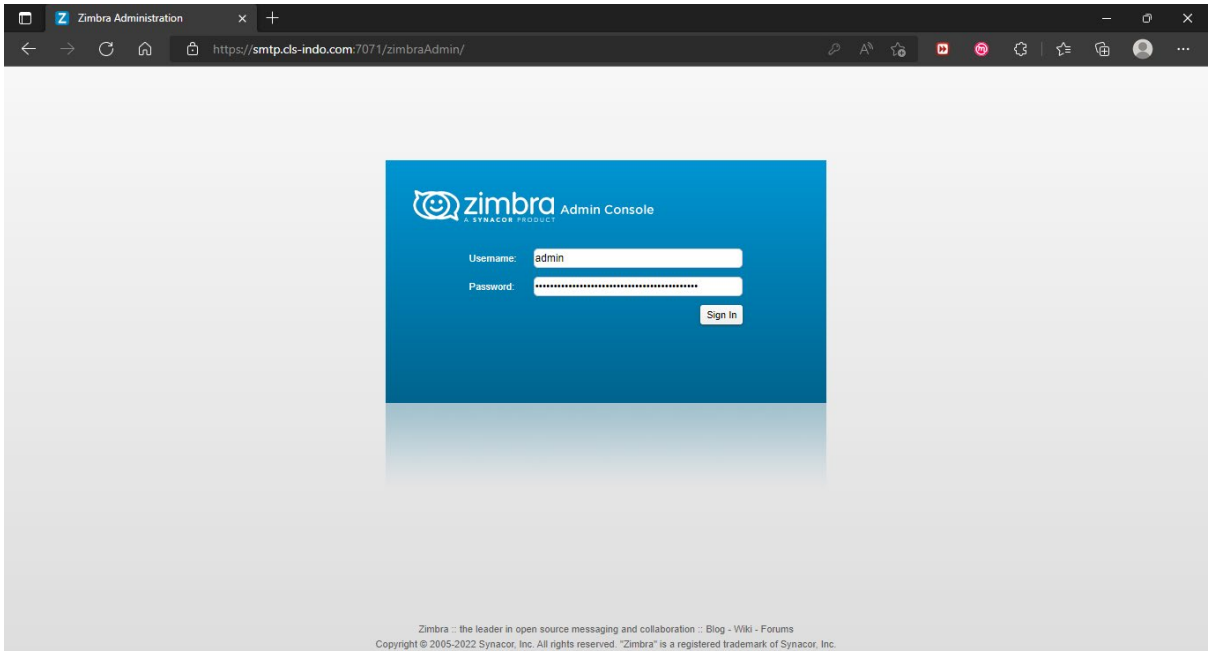
```
zmprov sp admin.legal@cls-indo.com NEW_PASSWORD
```

Delete the contents of a specific user's mailbox

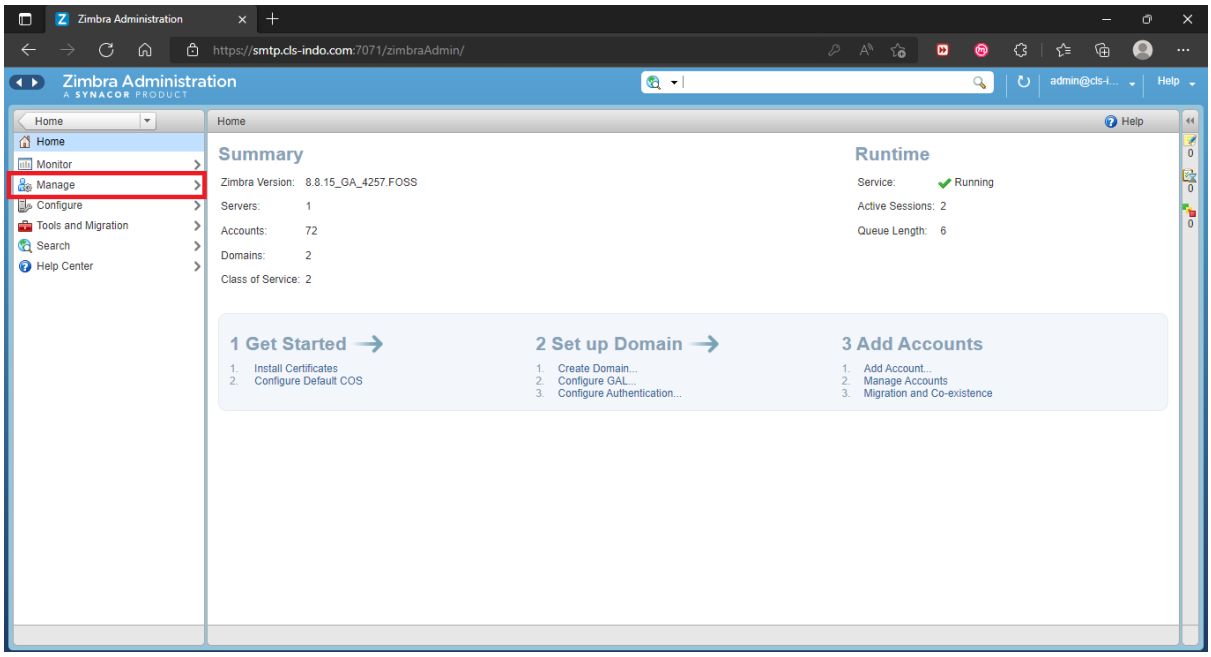
```
zmmailbox -z -m admin.legal@cls-indo.com emptyFolder /Inbox
```

Create Account on Zimbra (Via Webmail)

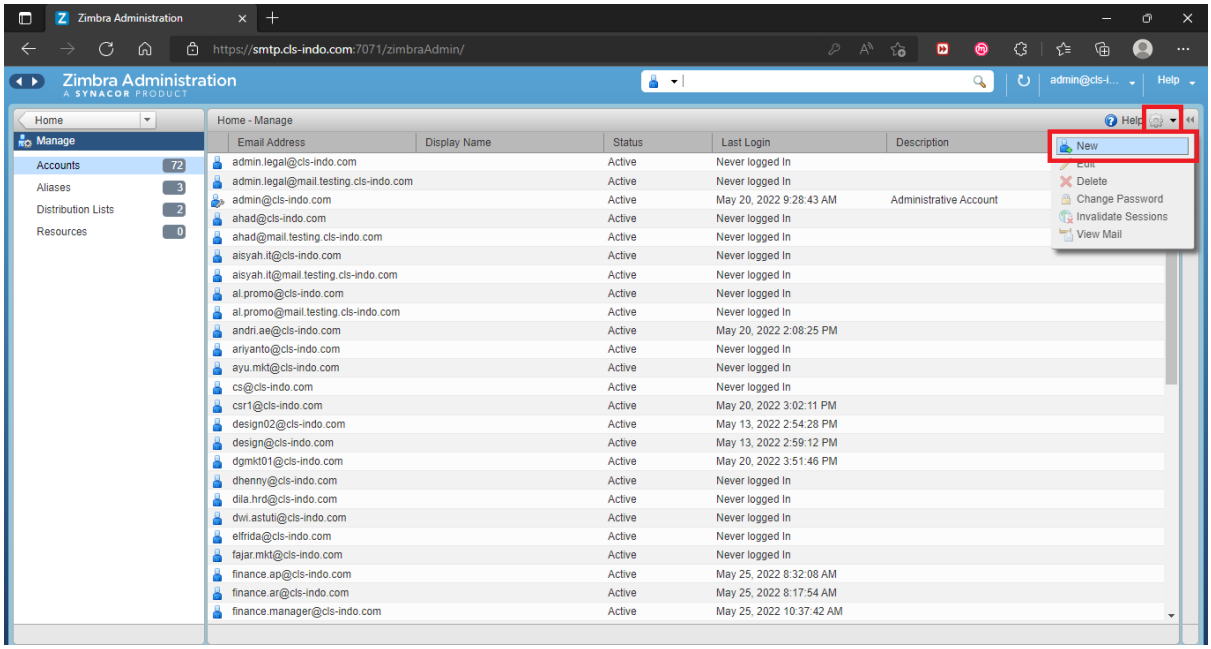
Login to Zimbra Admin https://smtp.cls-indo.com:7071



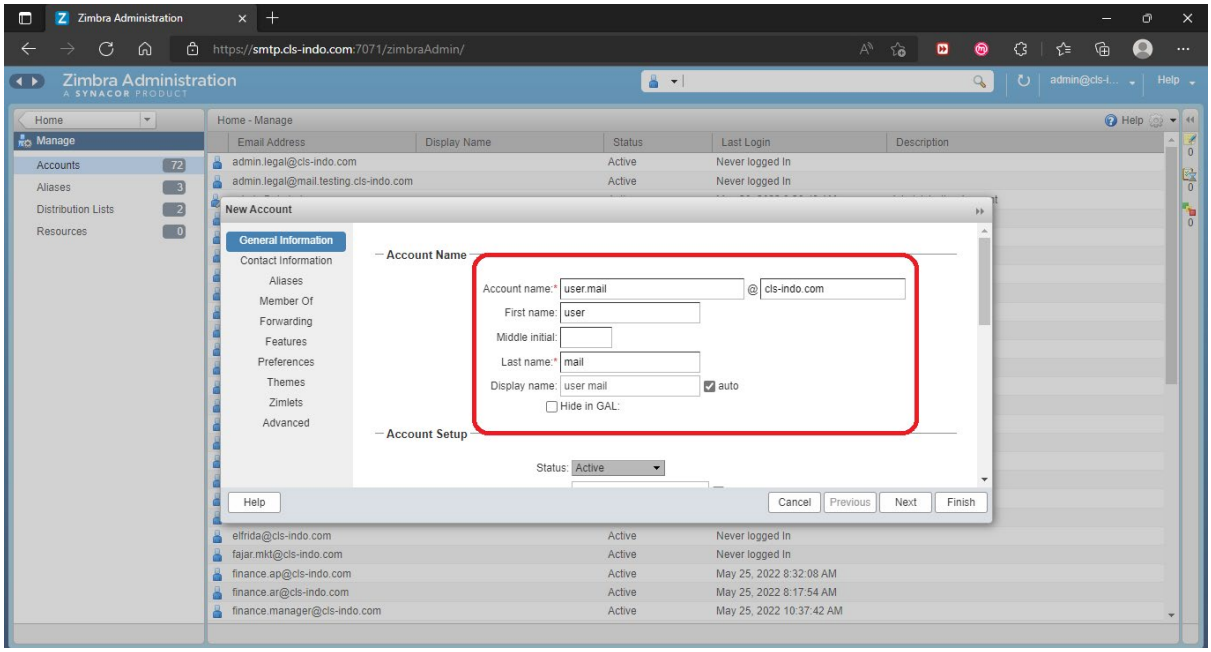
Click **Manage**



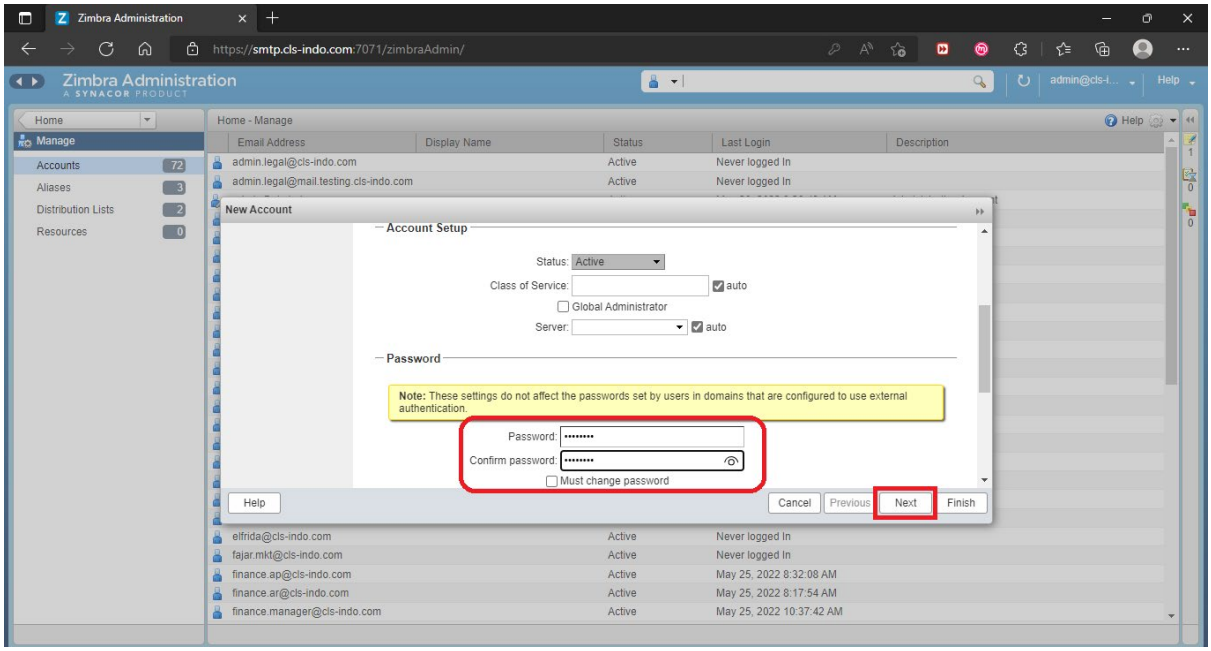
Click the **Settings Button** at the top right, then click **New**



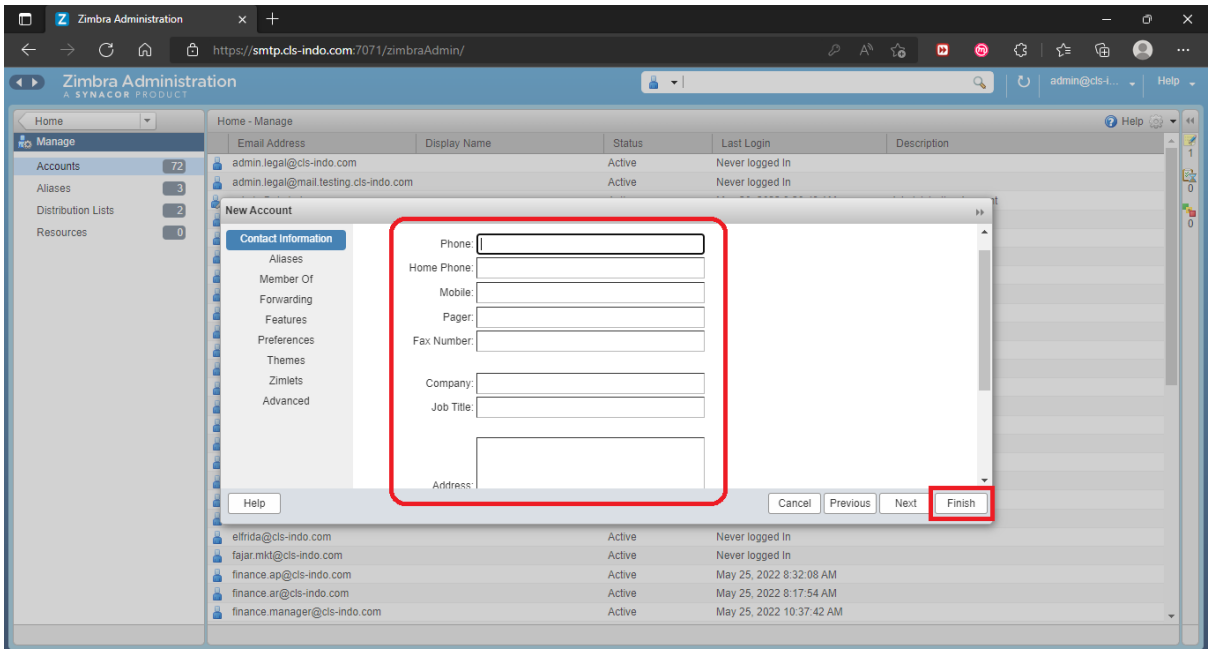
Enter username and email name



Enter the email password, then click Next

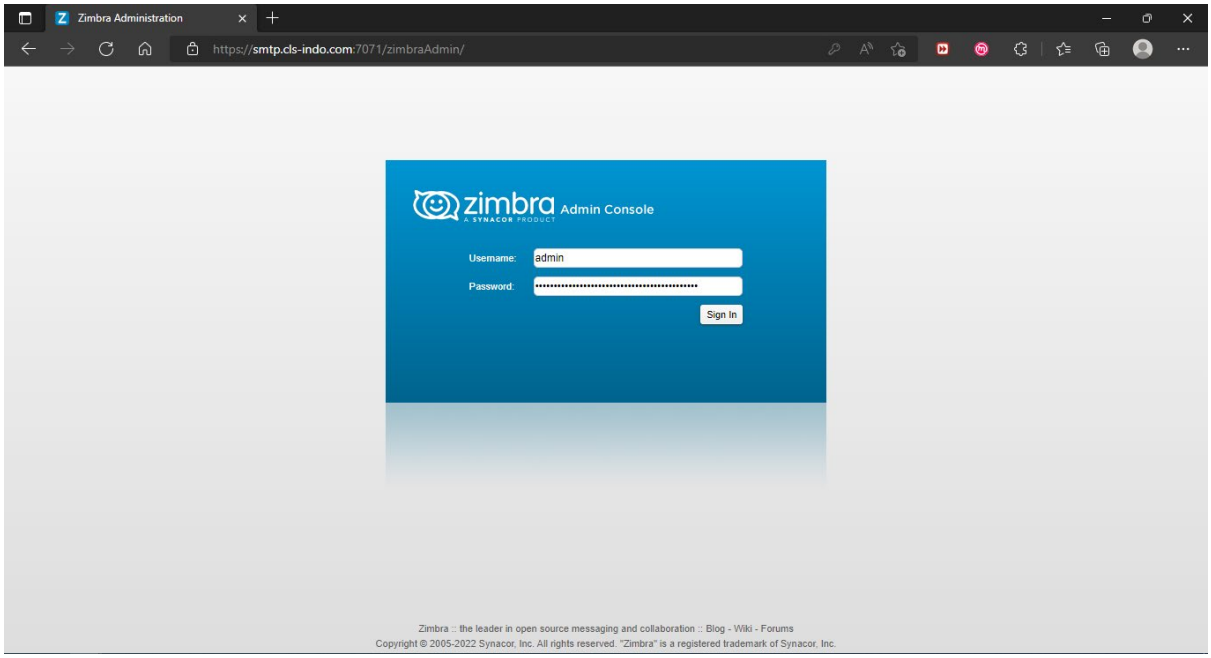


Enter the required additional information, when finished click **Finish**

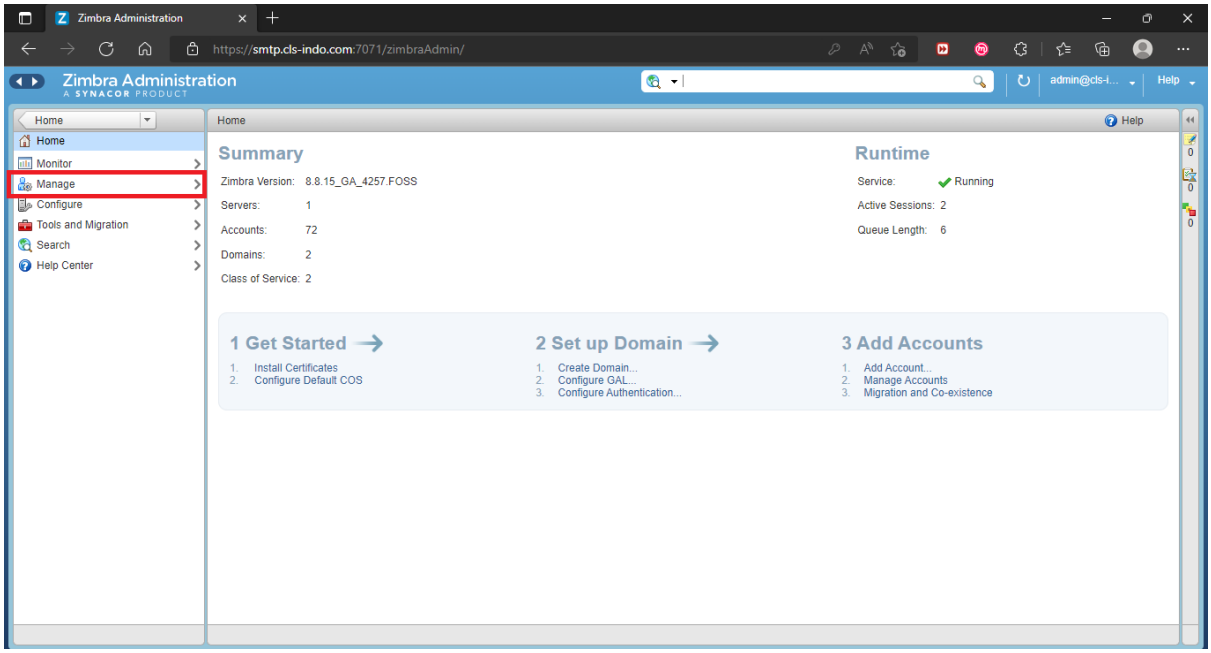


Create Admin Account on Zimbra (Via Webmail)

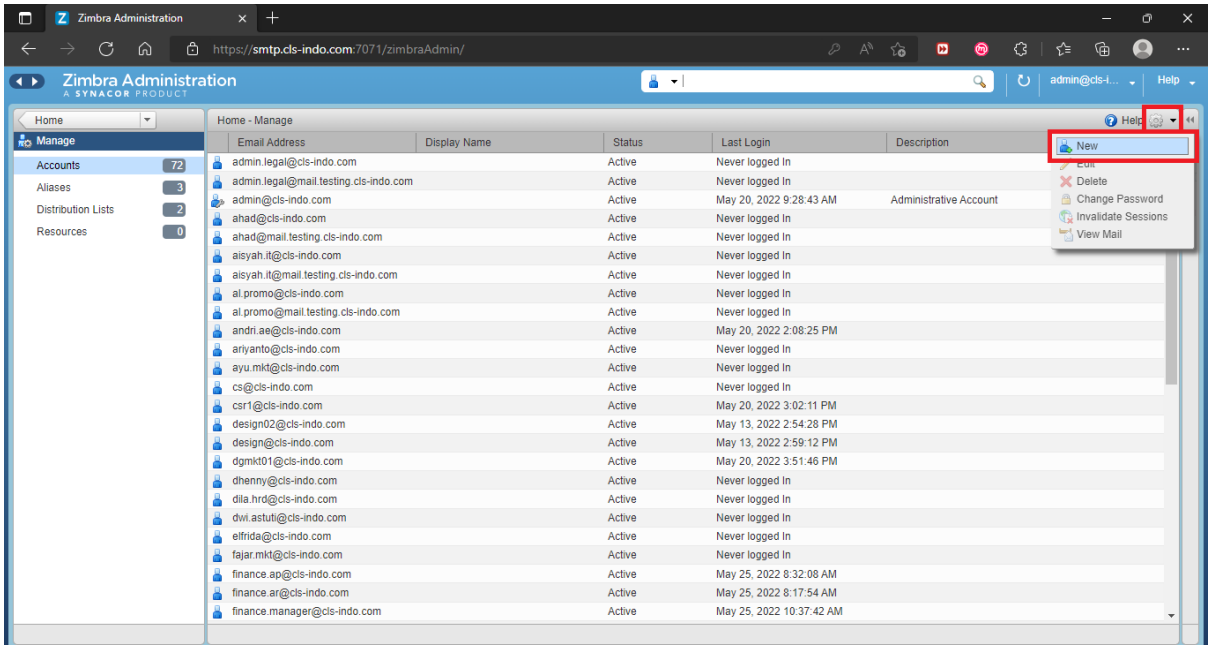
Login to Zimbra Admin https://smtp.cls-indo.com:7071



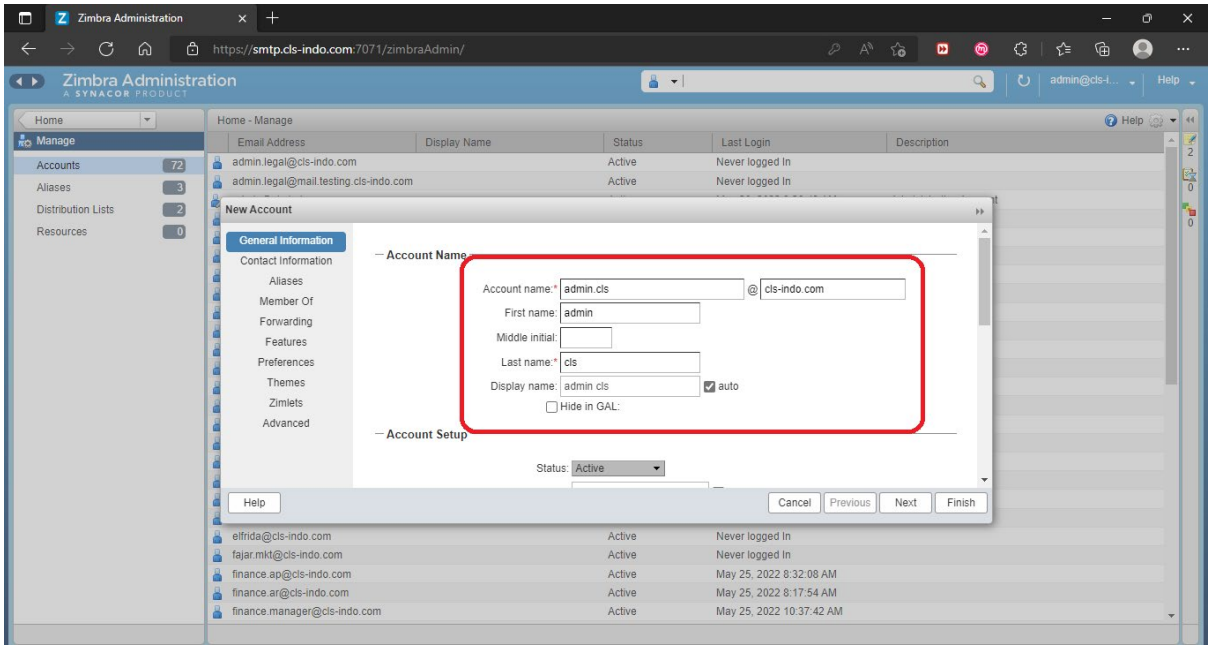
Click **Manage**



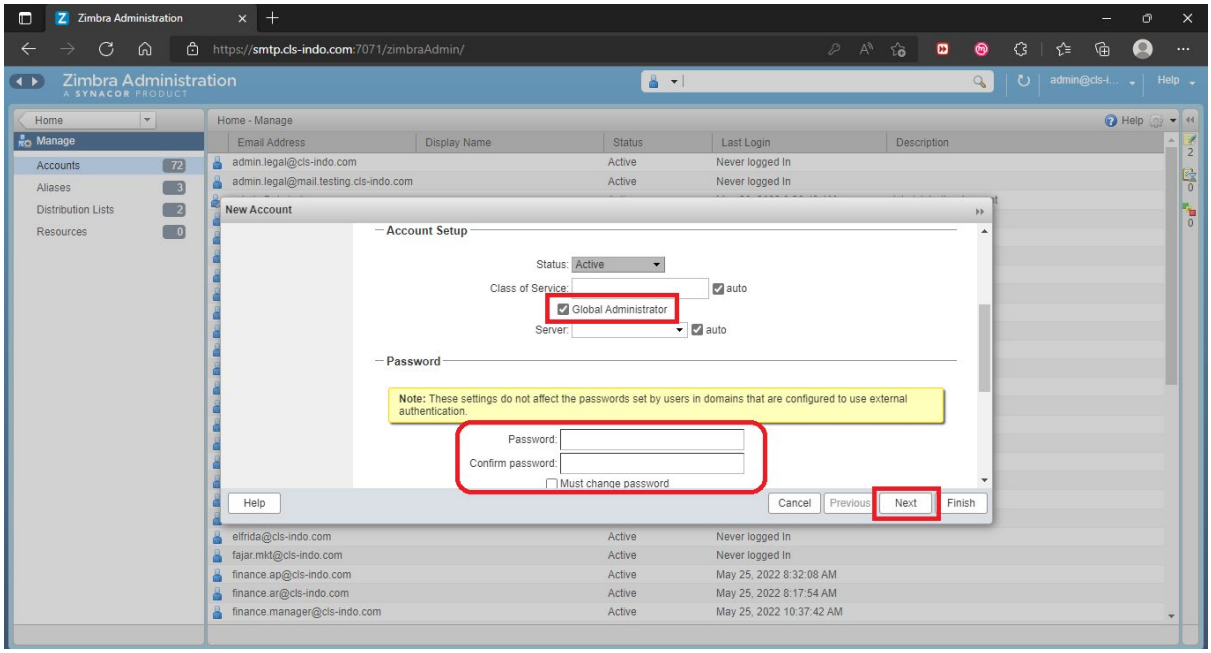
Click the **Settings Button** at the top right, then click **New**



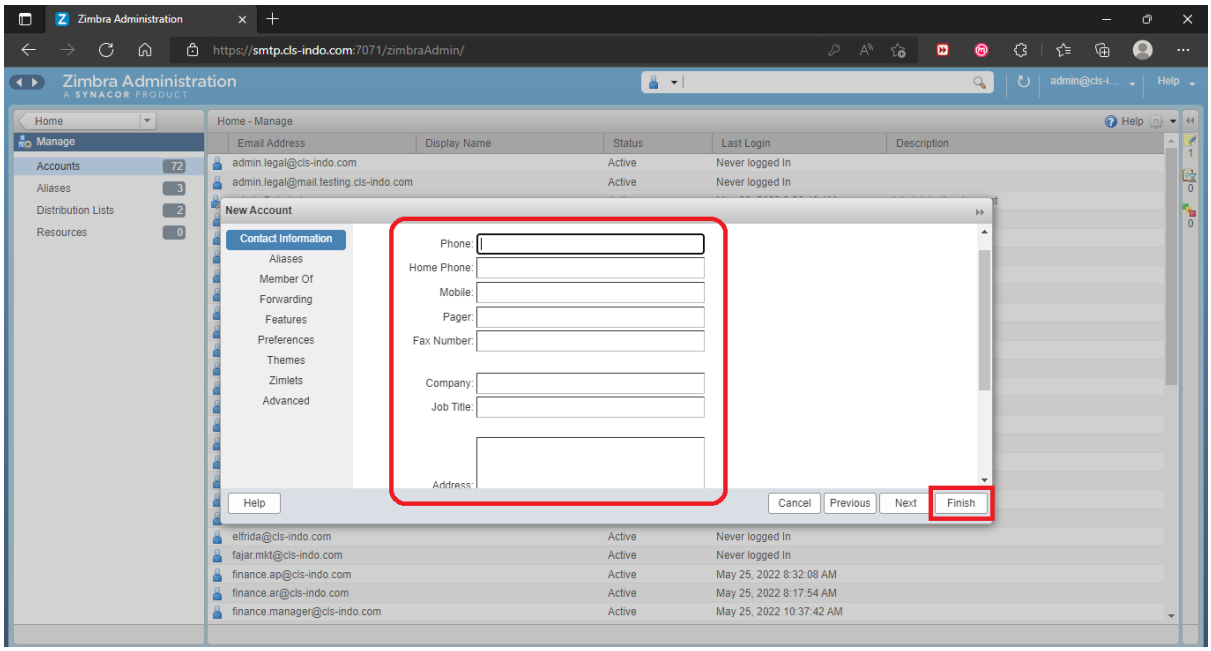
Enter the username admin



Check **Global Administrator**, then click **Next**

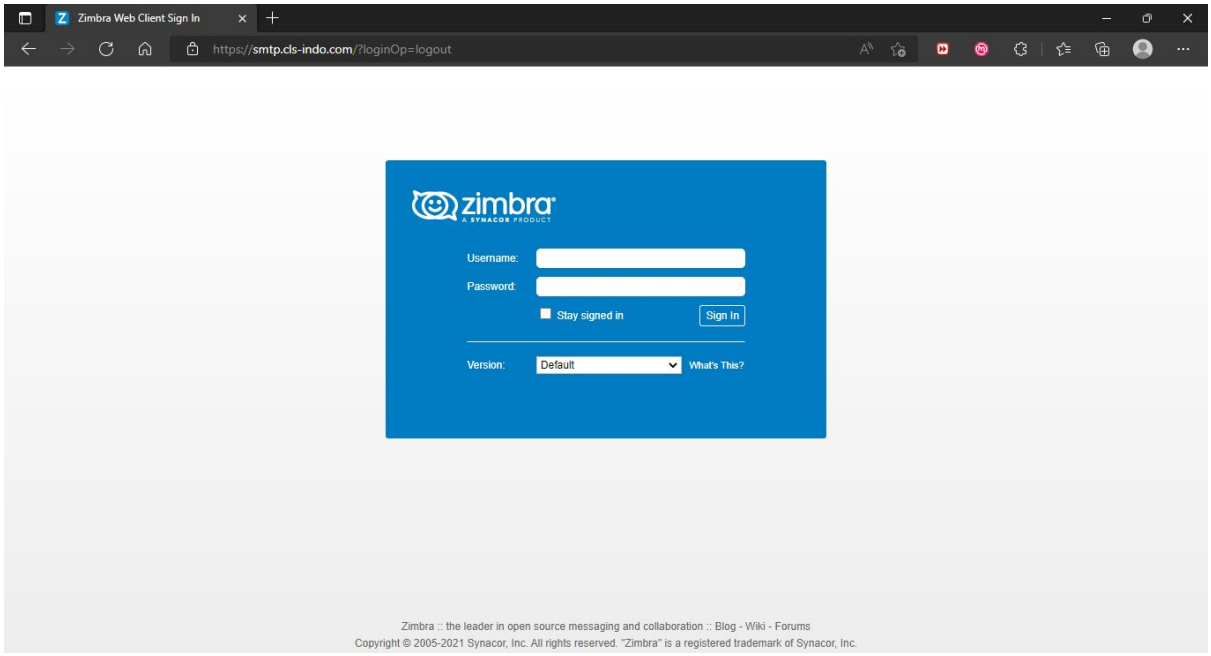


Enter the required additional information, when finished click **Finish**

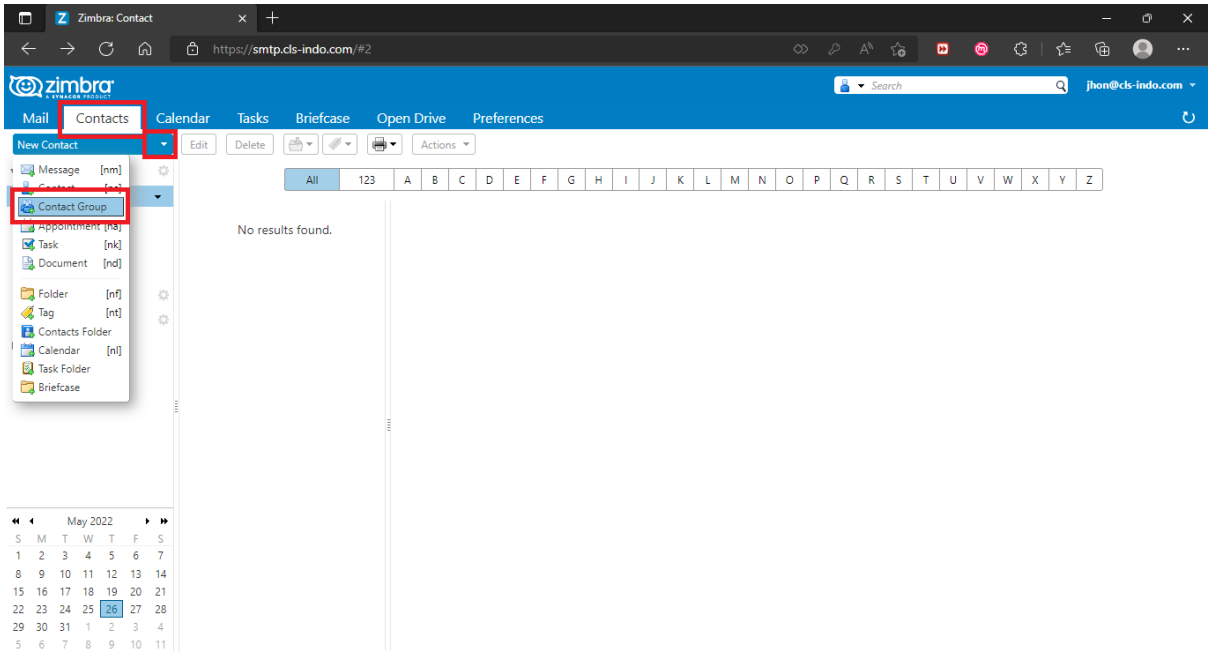


Create a Contact Group in Zimbra

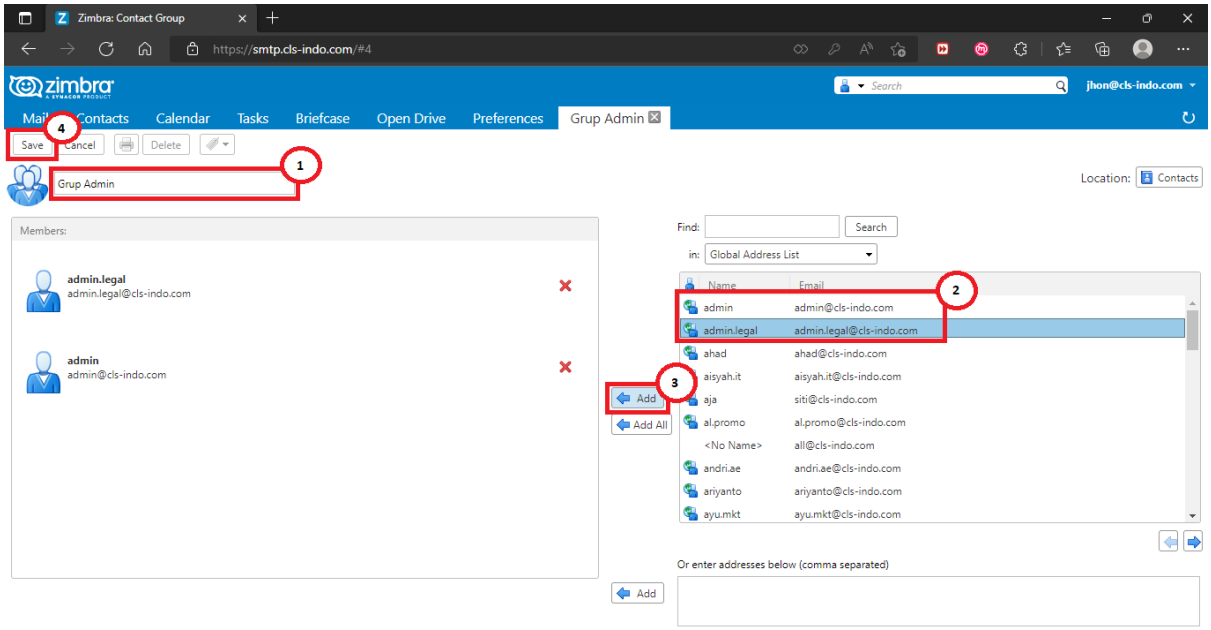
Login to webmail Zimbra https://smtp.cls-indo.com/



Click **Contacts**, then click the down arrow. Then click **Contact Group**



Enter the name of the contact group and enter the name of the contact that will be a contact group. When finished, click save



Setting Timezone

See timezone list

```
timedatectl list-timezones
```

Set the timezone to Asia/Jakarta

```
timedatectl set-timezone Asia/Jakarta
```

Changing Mailbox Quota Account on Zimbra

Change Via Cli

Login to user Zimbra

```
su - Zimbra
```

Change the account quota using the following command (example: 1GB)

```
zmprov ma user@cls-indo.com zimbraMailQuota 1073741824
```

Information :

In CLI the unit is bytes

1 GB = 1024 MB = 1048576 KB = 1073741824 Byte

2 GB = 2147483648 Byte

3 GB = 3221225472 Byte

4 GB = 4294967296 Byte

5 GB = 5368709120 Byte

6 GB = 6442450944 Byte

7 GB = 7516192768 Byte

8 GB = 8589934592 Byte

9 GB = 9663676416 Byte

10 GB = 10737418240 Byte

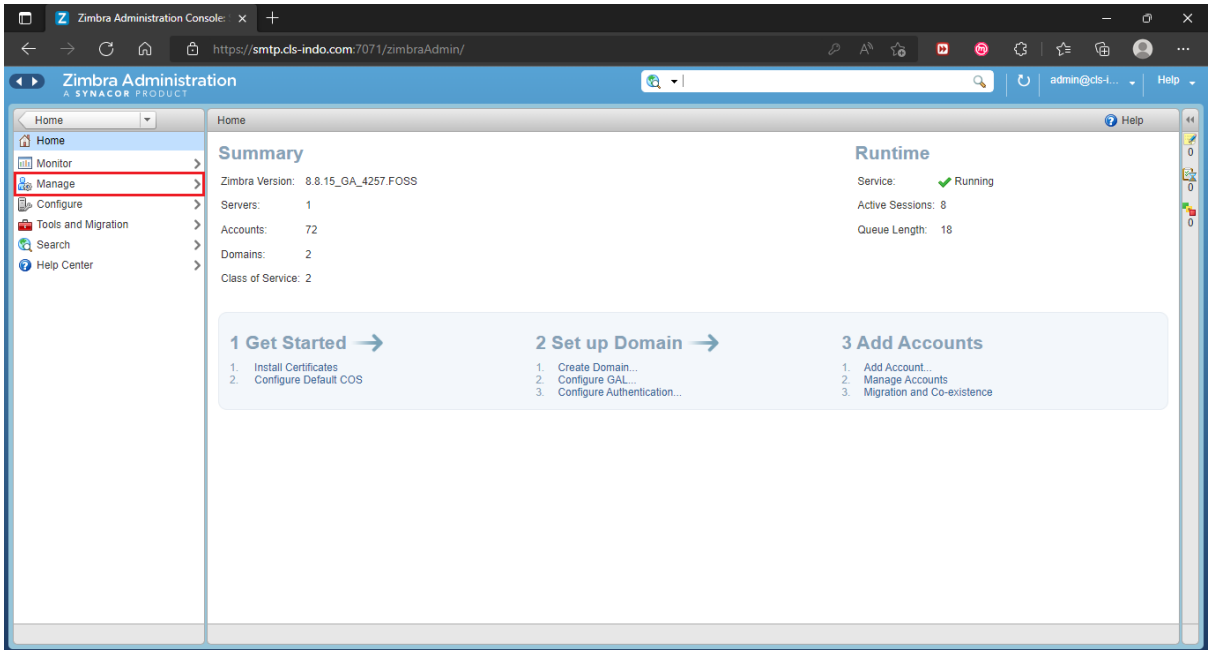
To check whether the settings have been set or not, use the following command:

```
zmprov ga user@cls-indo.com | grep zimbraMailQuota
```

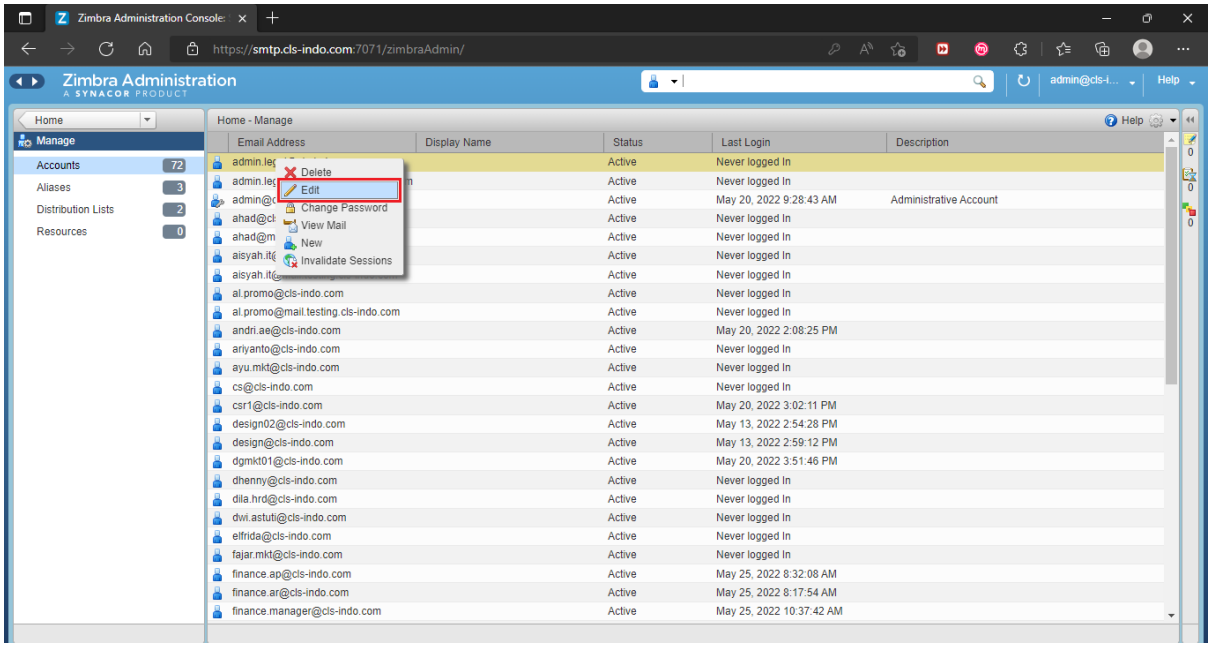
Change via Zimbra Admin web

Open url zimbra admin. https://smtp.cls-indo.com:7071

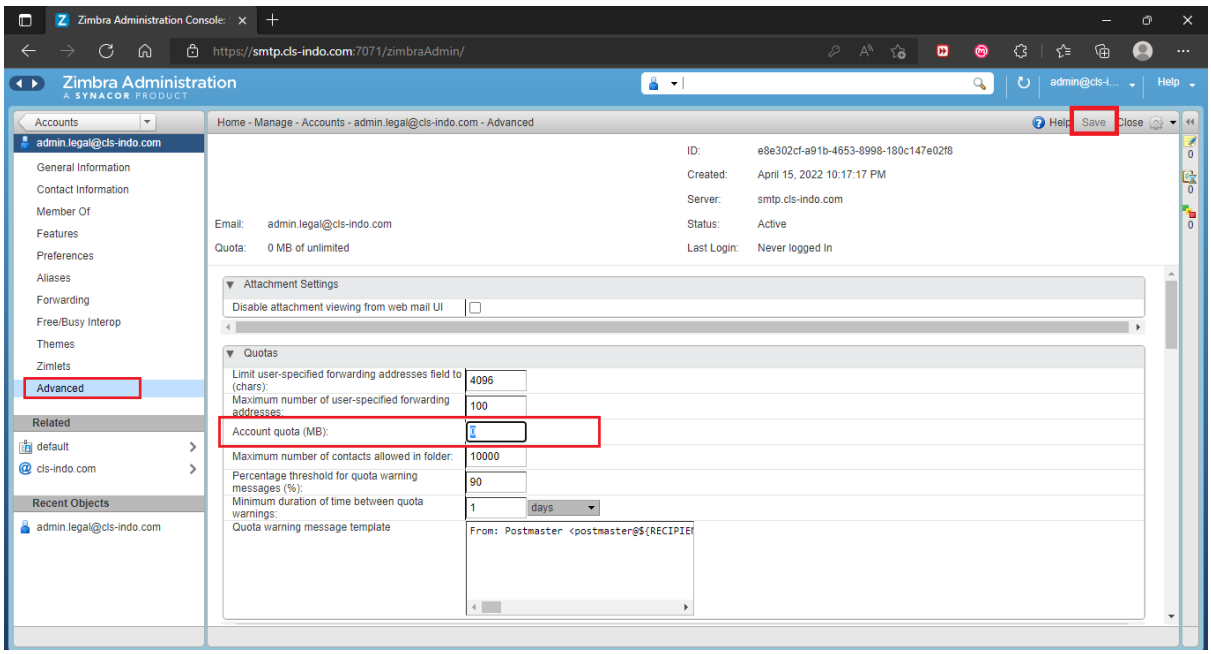
Click **Manage**



Right Click on user@cls-indo.com, Select Edit



Select **Advanced**, then enter Mailbox Size in Account quota (MB): (in MB). When finished, click Save in the upper right corner



Information :

Account quota (MB): 0 -> Unlimited

1 GB = 1024 MB

2 GB = 2048 MB

3 GB = 3072 MB

4 GB = 4096 MB

5 GB = 5120 MB

6 GB = 6144 MB

7 GB = 7168 MB

8 GB = 8192 MB

9 GB = 9216 MB

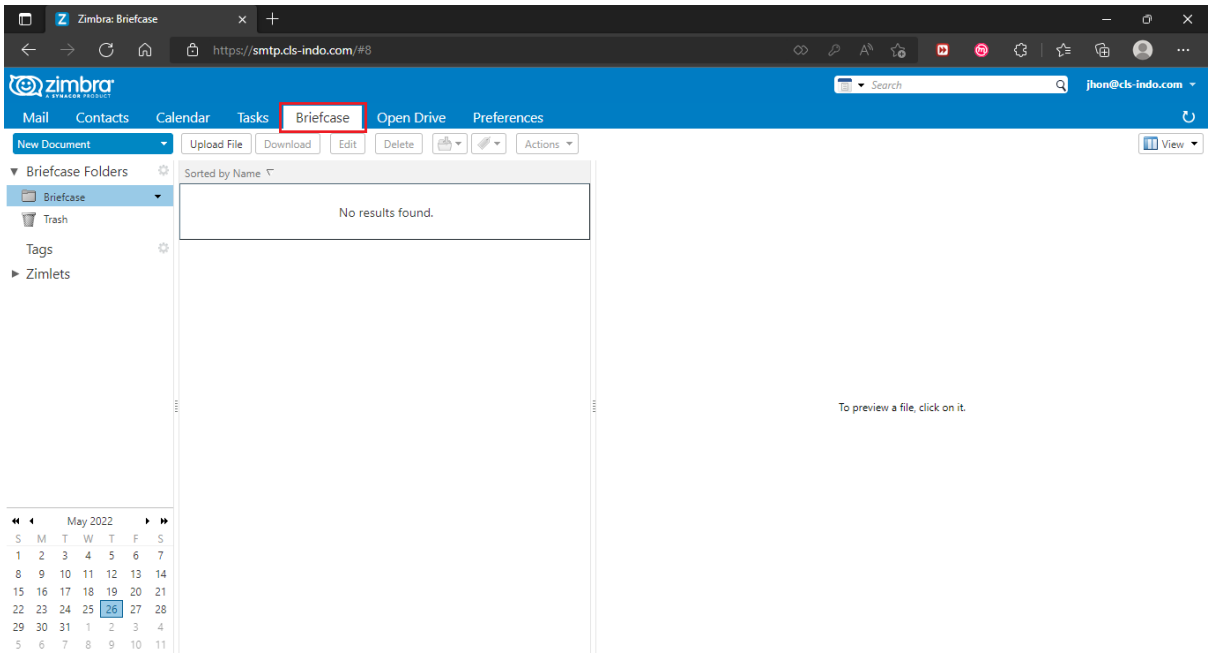
10 GB = 10240 MB

Klik **Save** Pada pojok kanan atas

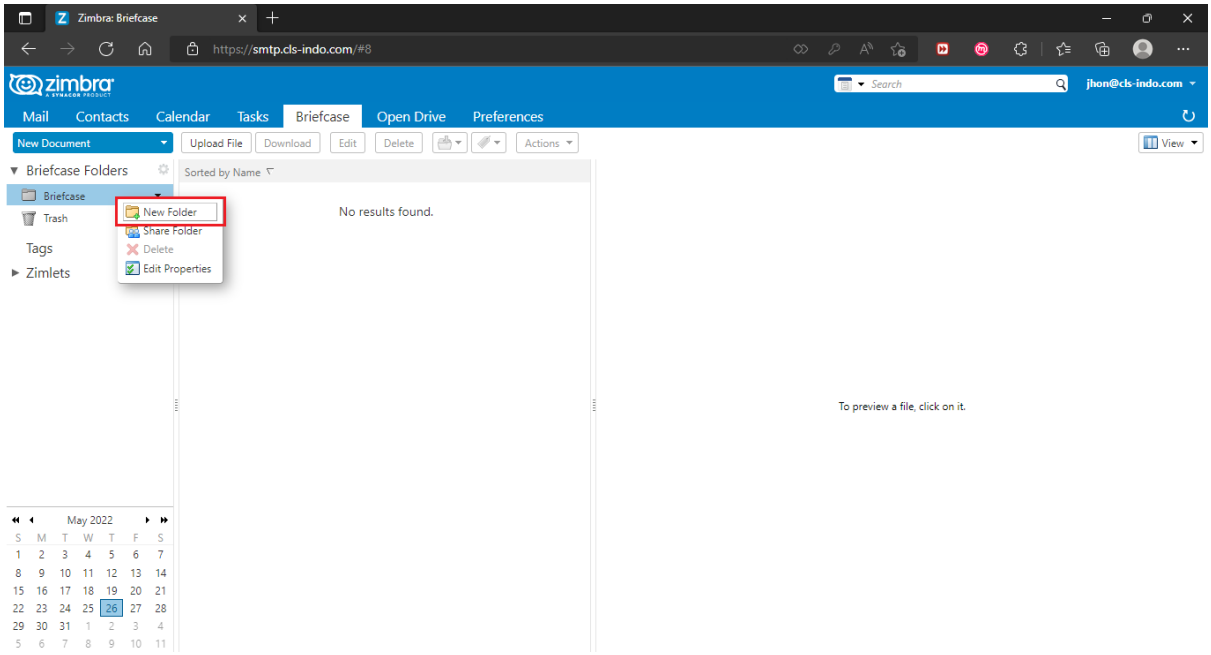
Working in Briefcase

Creating Briefcase folders

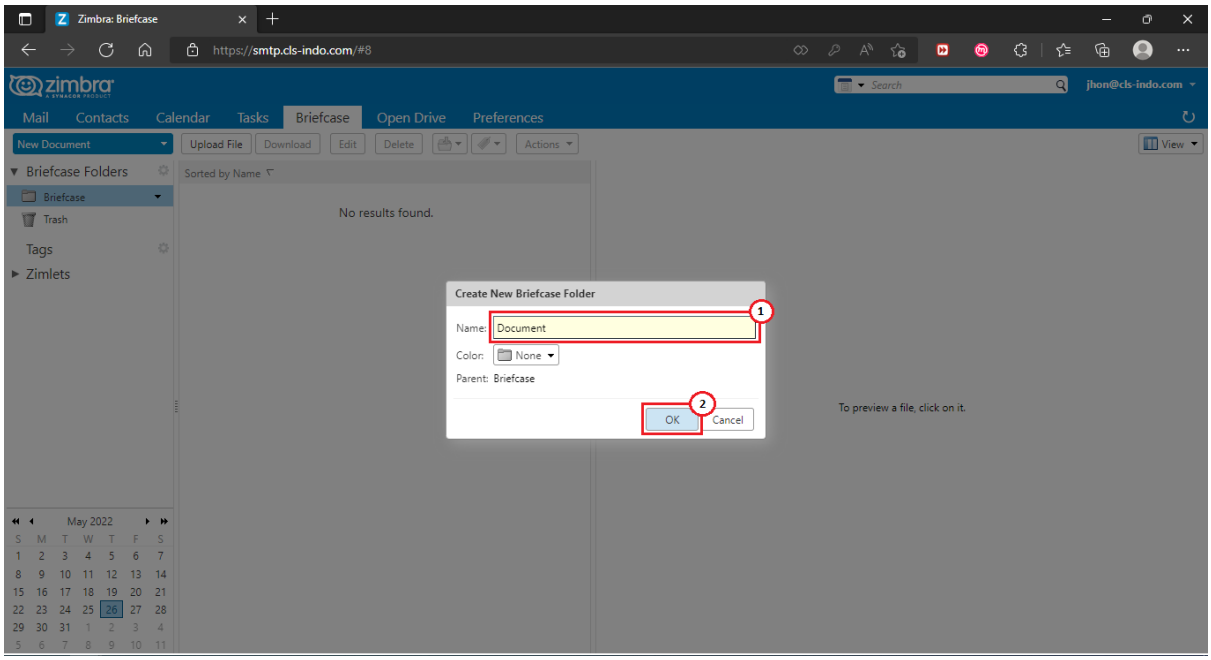
Click the **Briefcase** tab.



Right-click **Briefcase**, select **New Folder**



Type a name for the new Briefcase folder. Then click **OK**. The new briefcase displays in the Overview pane.



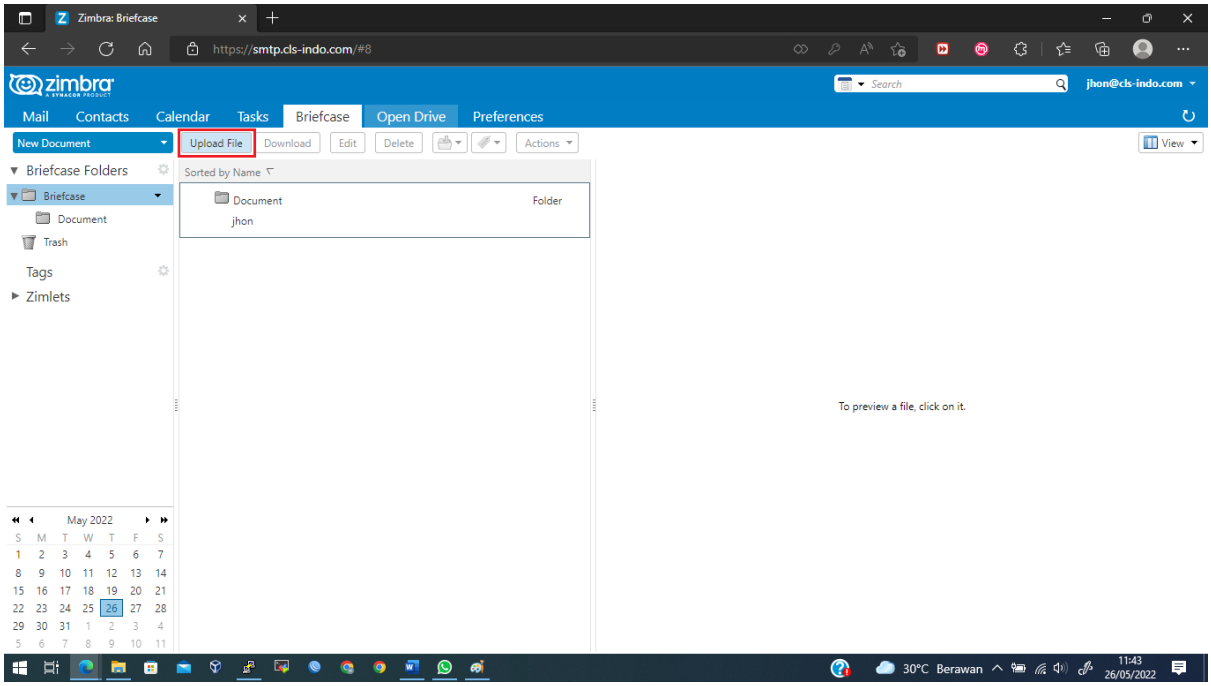
This name must be unique within the hierarchy of your mailbox folders. Briefcase folders cannot have the same name as any top-level folder in your Zimbra mail, calendar, or address book. For example, if you have a calendar named Holidays, you cannot name a top-level Briefcase Holidays. Holidays could be a name of a briefcase within another briefcase.

Select the folder hierarchy. You can create a new top-level briefcase, or you can place it under an existing briefcase.

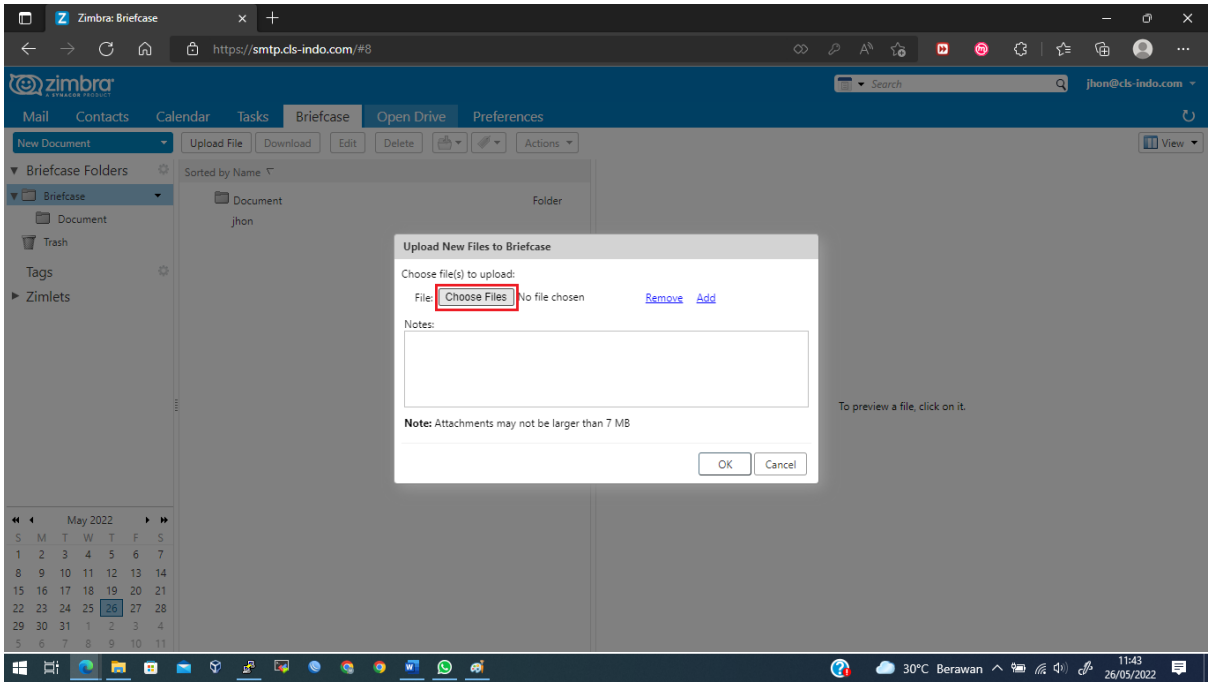
Uploading Files

Uploading a file transfers a file from your personal computer to your email account. This makes the file available any time you log in to your account. Your account quota determines how many files can be uploaded to your Briefcase.

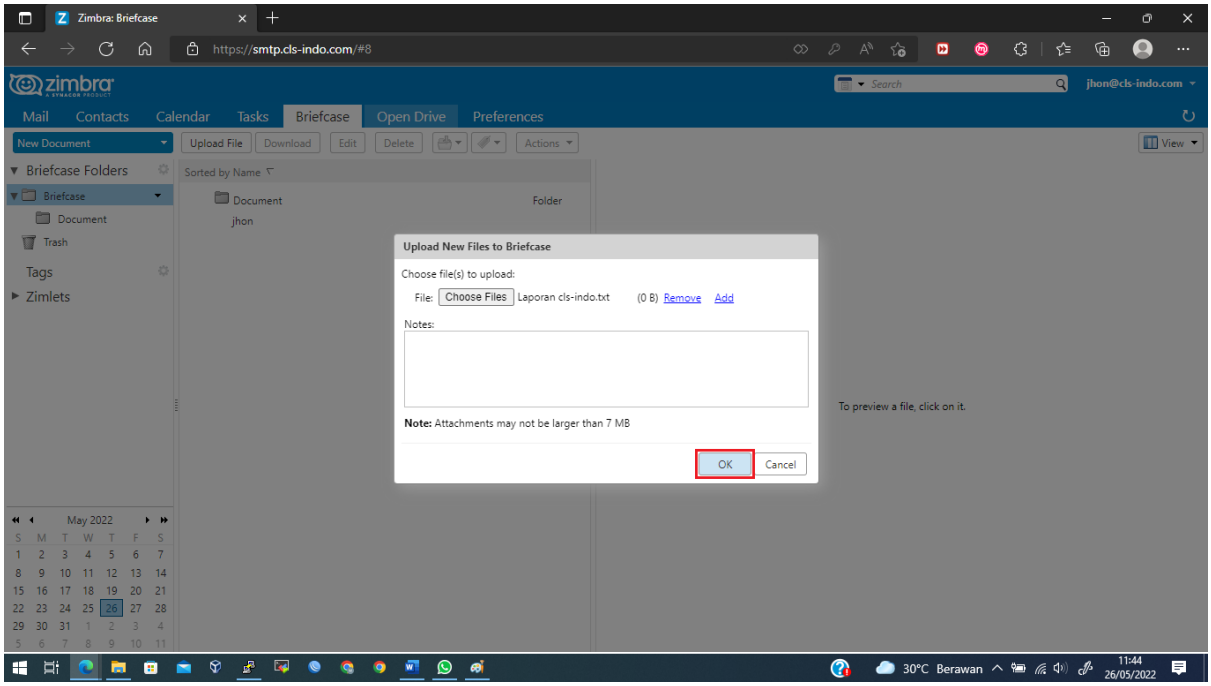
Open Briefcase and on the toolbar click **Upload File**.



In the **Upload New File to Briefcase** dialog click **Choose Files** to find the files to upload. You can select multiple files to upload at once if the files are in the same directory. To add other files, click **Add** and browse to the file.

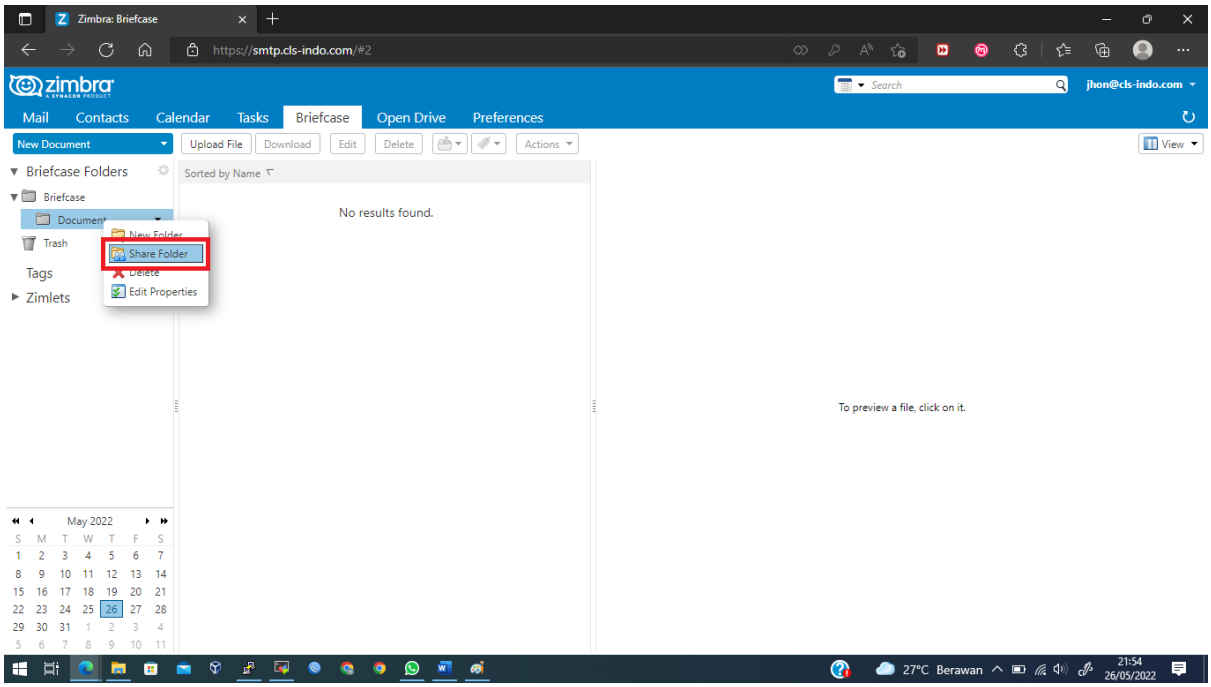


When you upload a file with the same name as an existing file, an Information dialog displays a warning. If you click **No**, the file is not uploaded. When all files are uploaded, click **OK**. The files are displayed in the briefcase.

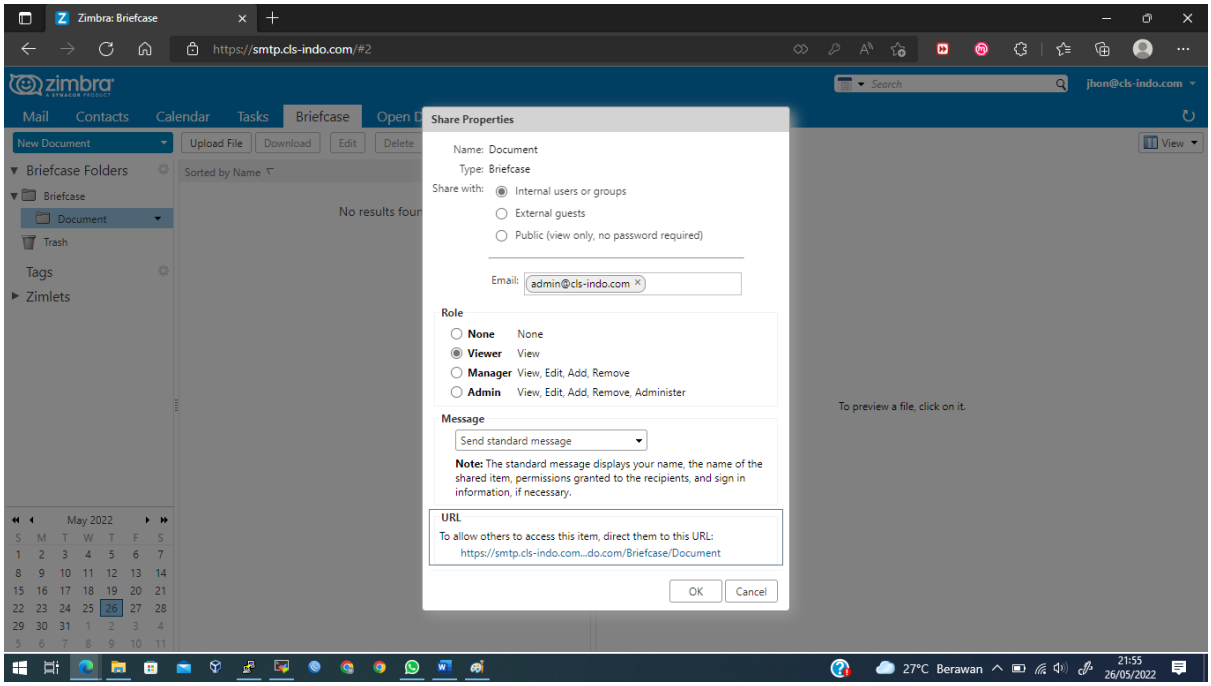


Sharing your Briefcase

Right-click on the folder you want to share, select **Share Folder**



Select the desired share with and roles, then click **OK**



Internal Users or Groups

For internal users or groups, you specify the type of access permissions to give the Grantee:

- Viewer. The Grantee can read the contents of the folder but cannot make changes to the content.
- Manager. The Grantee has permission to view and edit the contents of a folder, create new sub folders, present items on your behalf, and delete items from the folder.
- Admin. The Grantee has full permission to view and edit the content of a shared folder, create new sub folders, present on your behalf, delete items from the shared folder, and share the folder with others.

Note: None is an option to temporarily disable access to a mail folder without revoking the share privileges. The Grantee still has the mail folder in his mailbox but cannot view or manage activities on the grantor's mail folder.

External Guests

You can share external guests that must use a password to view the folder content. External guides cannot make changes to your folder. You create the password

Public URL

Anyone who knows the URL to the folder can view the folder content. The public cannot make any changes to the folder. When you select to share with Public, the URL for that displays in the Share Properties dialog is made accessible to the public.

See The Postfix Queues [Mail Queue]

First Way [CLI]

As zimbra using sudo - show a summary of queue count - ~/libexec/zmqstat:

```
sudo ~/libexec/zmqstat
deferred=3
incoming=0
active=0
hold=0
corrupt=0
```

As zimbra - /opt/zimbra/postfix/sbin/postqueue -p

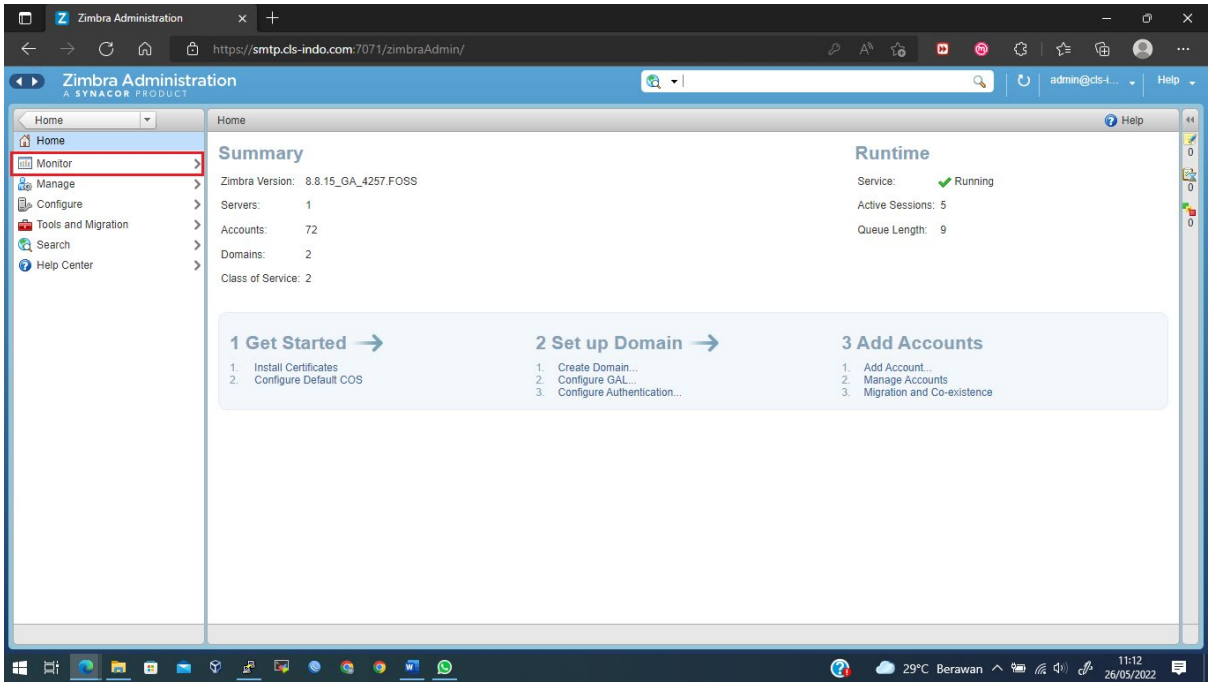
```
/opt/zimbra/common/sbin/postqueue -p
-Queue ID-  --Size-- ----Arrival Time---- -Sender/Recipient-------
992C64BB81C   42244 Wed May 25 08:28:01  warehouse@cls-indo.com
(host  mx6.telkomsel.co.id[202.3.219.124]  said:  450  Service  temporarily
unavailable; Client Host [188.166.239.101] blocked using Trend Micro Email
Reputation    Service.    Please    see    http://www.mail-abuse.com/cgi-
bin/lookup?ip_address=188.166.239.101  (in reply to RCPT TO command))
                                         BillCo_jabotabek@telkomsel.co.id
                                         CES@telkomsel.co.id
(lost connection with mx6.telkomsel.co.id[202.3.219.124] while sending RCPT
TO)
                                         gabriella_m_h@telkomsel.co.id
. . .
-- 1079 Kbytes in 3 Requests.
```

As zimbra - mailq

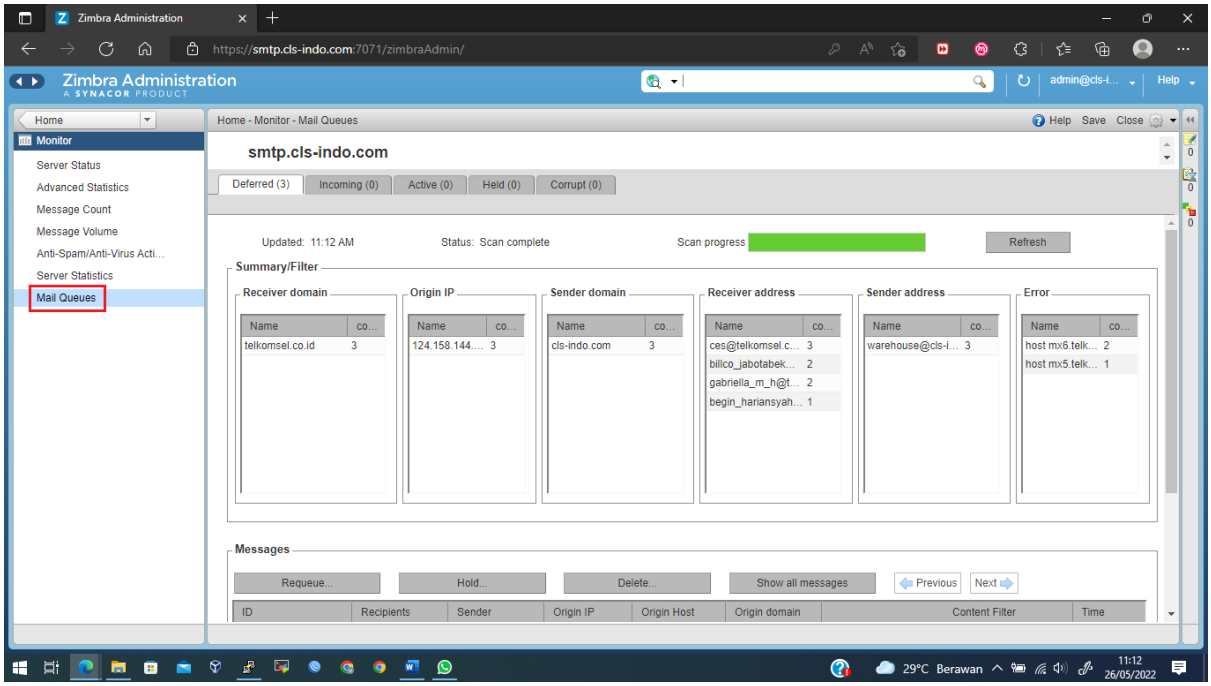
```
mailq
-Queue ID-  --Size-- ----Arrival Time---- -Sender/Recipient-------
992C64BB81C   42244 Wed May 25 08:28:01  warehouse@cls-indo.com
(host  mx6.telkomsel.co.id[202.3.219.124]  said:  450  Service  temporarily
unavailable; Client Host [188.166.239.101] blocked using Trend Micro Email
Reputation    Service.    Please    see    http://www.mail-abuse.com/cgi-
bin/lookup?ip_address=188.166.239.101  (in reply to RCPT TO command))
                                         BillCo_jabotabek@telkomsel.co.id
                                         CES@telkomsel.co.id
(lost connection with mx6.telkomsel.co.id[202.3.219.124] while sending RCPT
TO)
                                         gabriella_m_h@telkomsel.co.id
. . .
-- 1079 Kbytes in 3 Requests.
```

Second Way (Via Zimbra Admin)

Click **Monitor**



Click **Mail Queues**



Antivirus Zimbra

ClamAV is powerful antivirus software that can scan your email and your server for malicious files. It works like an antivirus program on your computer, but ClamAV scans your server. Specifically, ClamAV looks for malicious email attachments and malicious server files.

Basic features of ClamAV:

1. ClamAV is designed to scan files quickly.
2. Real time protection (Linux only). The ClamOnAcc client for the ClamD scanning daemon provides on-access scanning on modern versions of Linux. This includes an optional capability to block file access until a file has been scanned (on-access prevention).
3. ClamAV detects millions of viruses, worms, trojans, and other malware, including Microsoft Office macro viruses, mobile malware, and other threats.
4. ClamAV's bytecode signature runtime, powered by either LLVM or our custom bytecode interpreter, allows the ClamAV signature writers to create and distribute very complex detection routines and remotely enhance the scanner's functionality.
5. Signed signature databases ensure that ClamAV will only execute trusted signature definitions.
6. ClamAV scans within archives and compressed files but also protects against archive bombs

To enable antivirus service in Zimbra:

```
zmprov -l ms smtp.cls-indo.com -zimbraServiceEnabled antivirus
```

To configure virus definition update frequency:

```
zmprov mcf zimbraVirusDefinitionsUpdateFrequency 2h
```

Migration Plan MailOps

NO	Migration Plan				
1.	remove TXT record on DNS public				
	cls-indo.com.	3600	IN	TXT	v=spf1 +a +mx +ip4:202.157.186.2 +a:mail.cls-indo.com +a:cls-indo.com +ip4:103.82.240.51 +ip4:103.82.240.174 +include:zoho.com ~all
2.	edit MX record				
	mail.cls-indo.com from 0 to 300				
3.	Add DMARC record				
	v=DMARC1;p=quarantine;pct=5;rua=mailto:postmaster@cls-indo.com				

MailOps Flow