



# Copper version 0.5

## Installation manual

### **PREPARED FOR**

LK domain Registry

### **PREPARED BY**

R.W.D Tharanga Rajapaksha  
Lanka Software Foundation



JUN 19, 2019

## **Content**

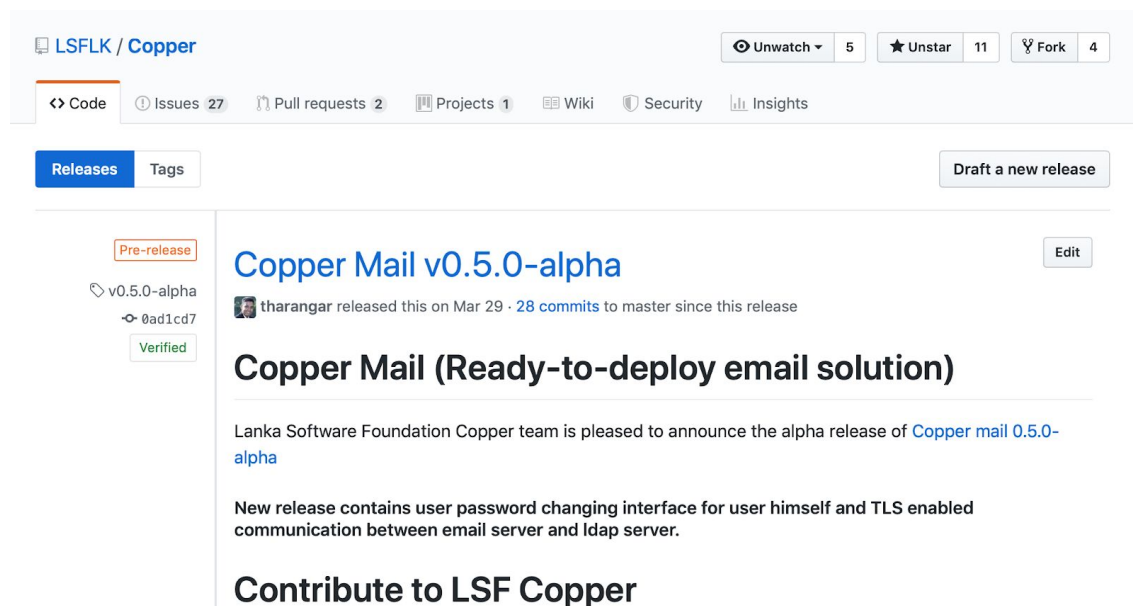
Download the project version 0.5	3
Deployment	3
Primary Deployment Testing	5
Secondary Deployment Testing	5
Installation	9
Functional Testing	17
Result	19

# 1. Download the project version 0.5

Copper Email solution version 0.5 deployment manual is prepared to make it easy for anyone to follow the steps required for successful completion.

Version 0.5 can be download from the following url.

<https://github.com/LSFLK/Copper/releases>



The screenshot shows the GitHub repository page for LSFLK/Copper. The repository has 5 watchers, 11 stars, and 4 forks. The 'Releases' tab is selected, showing the 'v0.5.0-alpha' release. The release is marked as 'Pre-release' and 'Verified'. The release title is 'Copper Mail v0.5.0-alpha'. The release description states: 'Lanka Software Foundation Copper team is pleased to announce the alpha release of Copper mail 0.5.0-alpha. New release contains user password changing interface for user himself and TLS enabled communication between email server and Idap server.' The release was created by 'tharangar' on Mar 29, 2020, with 28 commits to master since this release. There is an 'Edit' button next to the release title.

## 2. Deployment

Change to /copper/copper-server/kubernetes/deployment

Folder which has all shell script for deployment and un deployment.

If you have already deploy the system and if you want to undeploy it.

```
$ sh undeploy.sh
```

Change to deployment directory and run the deploy.sh shell script and provide necessary information. Your domain name should have 3 parts EX : copper.opensource.lk.

```
$ sh deploy.sh
```

```

[wso2s-MacBook-Pro:kubernetes wso2$ ls
Apps                deployment          groupware           persistent
README.md           emailserver         openldap            phpldapadmin
[wso2s-MacBook-Pro:kubernetes wso2$ code .
[wso2s-MacBook-Pro:kubernetes wso2$ cd deployment/
[wso2s-MacBook-Pro:deployment wso2$
[wso2s-MacBook-Pro:deployment wso2$
[wso2s-MacBook-Pro:deployment wso2$ sh deploy.sh
*****
**                                **
**      POWERED BY LANKA SOFTWARE FOUNDATION  (LSF)      **
**                                **
*****
* -Deploying Copper Email Server...
namespace/copper created
* -Copper namespace created...
* -Please Submit your Input data carefully...
Enter mysql database name:
copper
Enter mysql database password:
copper
Your domain must contain 3 parts. (Eg: part1.part2.part3)
Enter the first part of domain:
copper
Enter the second part of domain:
opensource
Enter the third part of domain:
lk
Enter LDAP admin password:
admin
Enter LDAP readonly user name:
raa
Enter LDAP readonly user password:
raa
Enter organization name
lsf
Enter password for spam filter (RspamD)
spam
* -Configuration going to be created...
secret/email-secret created
* -Secret configuration files Created...
* -ldap.ldif file was Created...
* -deploy.sh: cert.pem file '../tls/cert.pem' not found in tls directory. !
* -deploy.sh: privkey.pem file '../tls/privkey.pem' not found in tls directory. !

```

### 3. Primary Deployment Testings

Once you done the deployment then you have to check whether all pods are created and services are up and running with necessary ip allocation using following commands.

Show all pods (like vm) for the copper email solution.

```
$ kubectl get pods -n copper
```

Show all services which allow us to access each service.

```
$ kubectl get services -n copper
```

```
wso2s-MacBook-Pro:deployment wso2$ kubectl get pods -n copper
NAME                                READY   STATUS    RESTARTS   AGE
alertmanager-65dcbc787c-5cjin       1/1     Running   0           45m
email-79995b5b4b-htlc8              1/1     Running   0           45m
groupoffice-79787bc875-dhchb        1/1     Running   0           45m
ldap-669556c756-vm9mw               1/1     Running   0           45m
ldap-pw-645487d4d8-9x444            1/1     Running   0           45m
mysql-64d8bfbcb65-gwcrn             1/1     Running   0           45m
phpldapadmin-controller-th7cz       1/1     Running   0           45m
prometheus-deployment-5965686675-dq7bd 1/1     Running   0           45m
wso2s-MacBook-Pro:deployment wso2$ kubectl get services -n copper
NAME                                TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)                                AGE
alertmanager                        NodePort    10.107.142.186 <none>        9093:31000/TCP 45m
email                               LoadBalancer 10.108.35.13  localhost    25:30609/TCP,143:31056/TCP,587:30771/TCP,4190:31239/TCP,11334:31218/TCP 45m
groupoffice                         LoadBalancer 10.110.34.131 localhost    8004:31192/TCP 45m
ldap                                LoadBalancer 10.111.55.147 localhost    389:30169/TCP 45m
ldap-pw                             LoadBalancer 10.102.75.88  localhost    4343:31516/TCP,433:32747/TCP 45m
mysql                               ClusterIP    None          <none>        3306/TCP 45m
phpldapadmin-service               LoadBalancer 10.107.248.246 localhost    4433:31780/TCP 45m
prometheus-service                 NodePort    10.106.45.225 <none>        8080:30000/TCP 45m
```

In services External-IP and the port should be used to access each service.

### 4. Secondary Deployment Testings

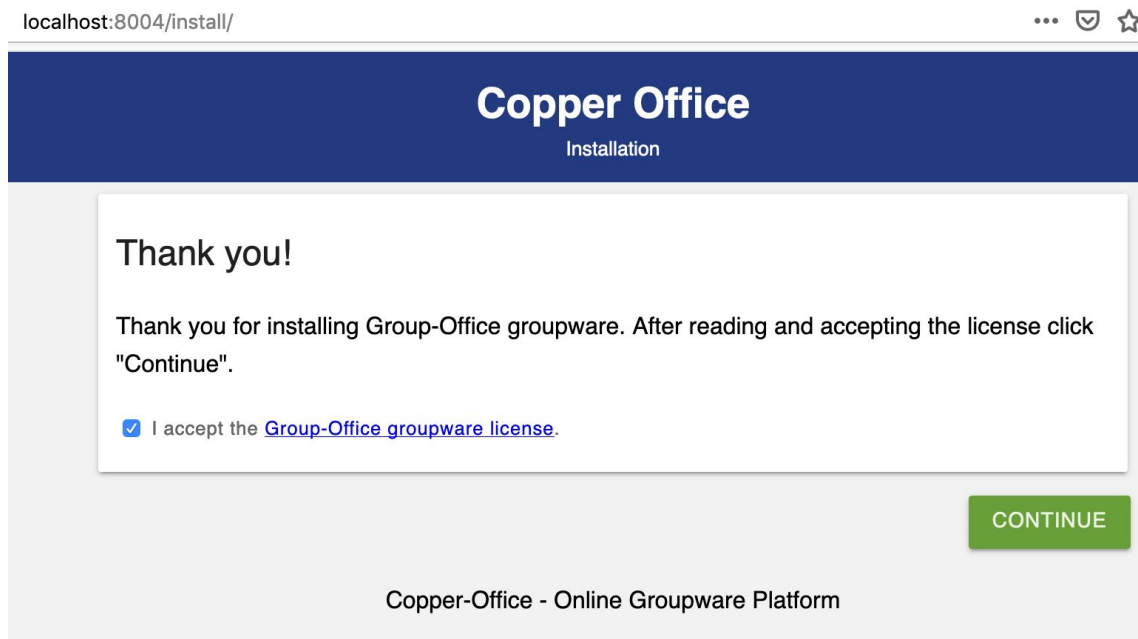
Now it is must to check your interfaces.

Basically there are 4 interfaces to be checked .

1. Web client interface
2. Phpldapadmin interface
3. Password change interface
4. Rspamd interface

## 1. Web client interface

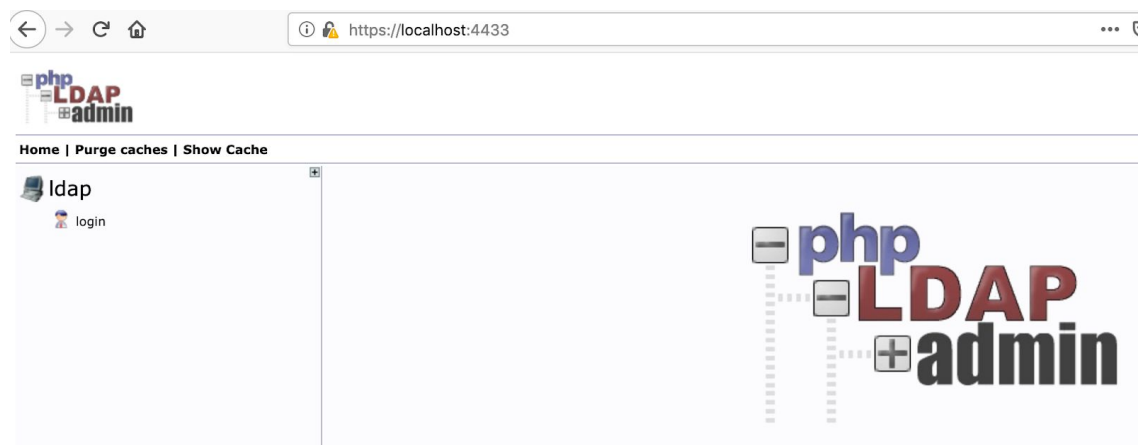
You should be able to see the installation interface of group office.



## 2. Phpldapadmin interface

<https://localhost:4433/>

You may want to accept the certificate due to those certificates are self signed.



### 3. Password changing interface.

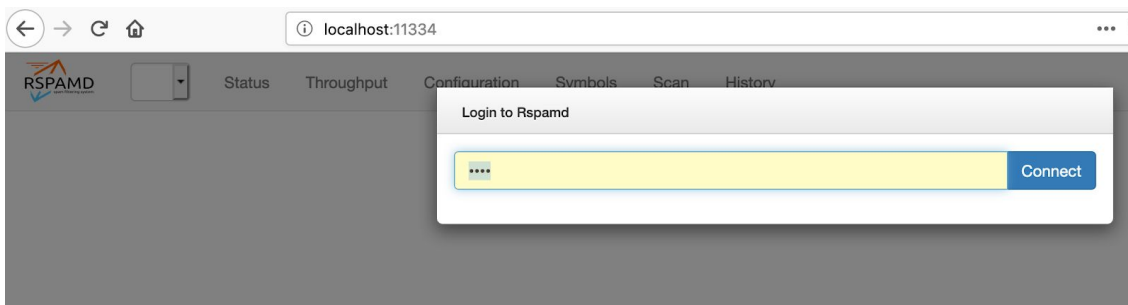
<https://localhost:4343/service/>

The screenshot shows a web browser window with the address bar displaying <https://localhost:4343/service/>. The page has a background of large grey gears. At the top, there is a navigation bar with four links: 'Self service password' (with a home icon), 'Question' (with a question mark icon), 'Email' (with an envelope icon), and 'SMS' (with a mobile phone icon). Below the navigation bar is a green square icon containing a white tree with a wrench. A green banner with a checkmark icon and the text 'Change your password' is displayed. Below this is a yellow banner with an information icon and the text 'Enter your old password and choose a new one.' At the bottom, there are two input fields: the first is labeled 'Login' and contains the text 'Login'; the second is labeled 'Old password' and contains the text 'Old password'.

### 4. RspamD interface

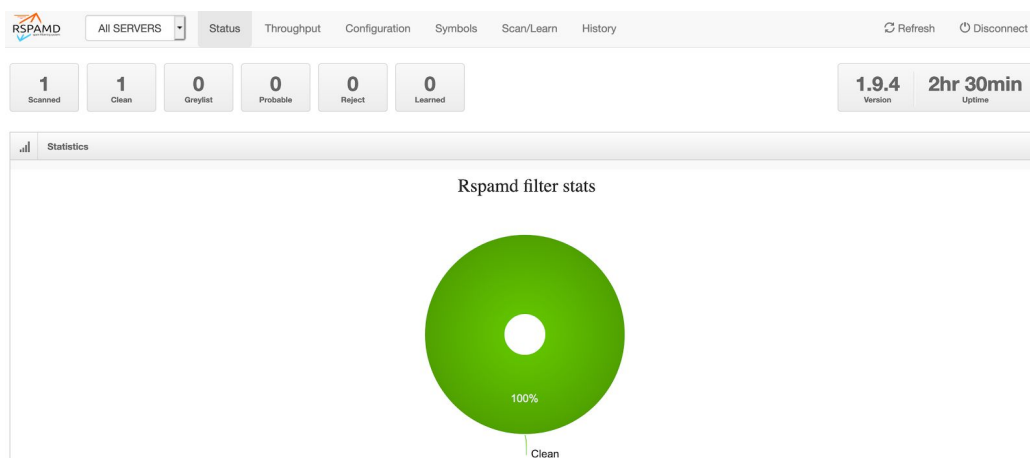
Finally you should have access to the RspamD interface too.

<http://localhost:11334/>



This is the password you have provided in the installation process.

Once you connect Then your spam dashboard will appear.





## 5. Installation

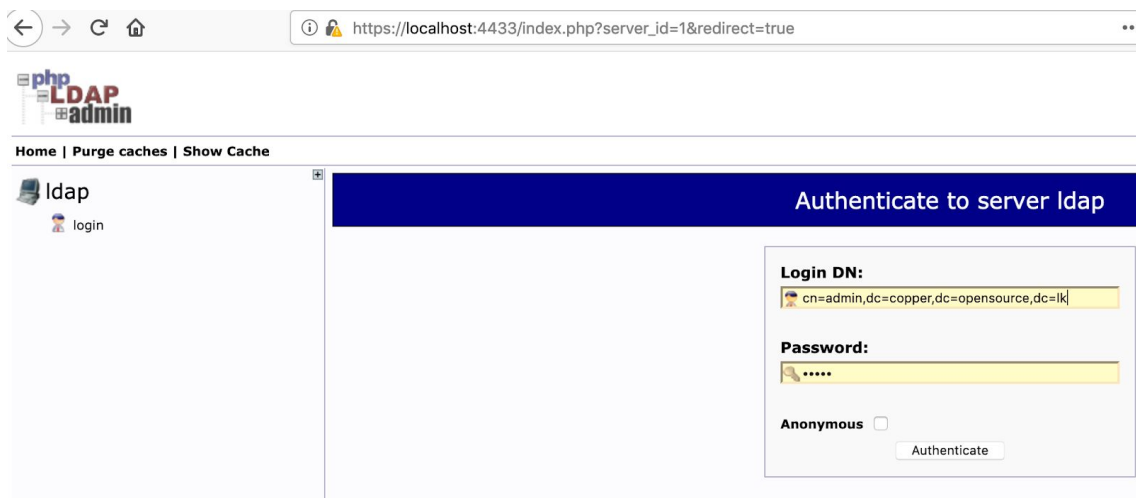
Installation Begins with ldap server configuration. In Deployment there may be two test user accounts created in the “ldap.ldif” file in the deployment folder. First of all these configuration should be imported to ldap server.

First login to the phpldapadmin .

Username : your domain name with admin username :

Ex : “cn=admin,dc=copper,dc=opensource,dc=lk”

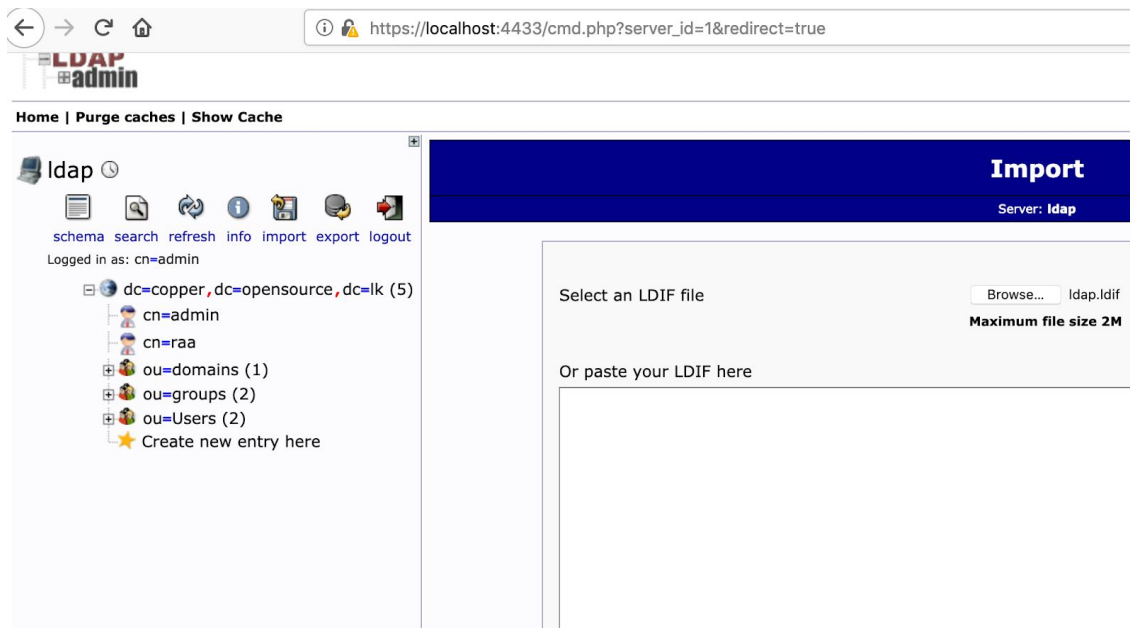
Password : <what you have provided in the deployment process “



The screenshot shows the phpldapadmin web interface in a browser. The address bar displays the URL: `https://localhost:4433/index.php?server_id=1&redirect=true`. The page header includes the "phpLDAPadmin" logo and navigation links: "Home | Purge caches | Show Cache". On the left sidebar, there is a "ldap" section with a "login" link. The main content area features a dark blue header that reads "Authenticate to server ldap". Below this, there is a login form with the following fields and options:

- Login DN:** A text input field containing the value `cn=admin,dc=copper,dc=opensource,dc=lk`.
- Password:** A password input field with masked characters (dots).
- Anonymous:** A checkbox that is currently unchecked.
- Authenticate:** A button to submit the login information.

Then import the “ldap.ldif” file in the deployment folder.



Then your user base is ok and following users may have created.

Ex

Username : copper

Password : coppermail@lsf

Username : test

Password : coppermail@lsf

### Install Group office web client

Once the user management part is done then web client installation should be started .

Proceed the group office interface installation and press ok for configuration page also and give following parameters too.

localhost:8004/install/install.php

# Copper Office

Installation

## Create an administrator account

Please fill in the details for the administrative account and press "Install".

E-mail  
test@copper.opensource.lk

Username  
admin

Password  
.....

Confirm  
.....

INSTALL

This is the admin account password and you have to remember it for further logins.

Once Installation completed then try to log in again with given username and password.

localhost:8004/#summary

# Copper Office

Notes Address book Bookmarks Calendar E-mail Files **Start page** Tasks

+ Add Manage announcements

Tasks

Name Due date

No Tasks to display

Appointments

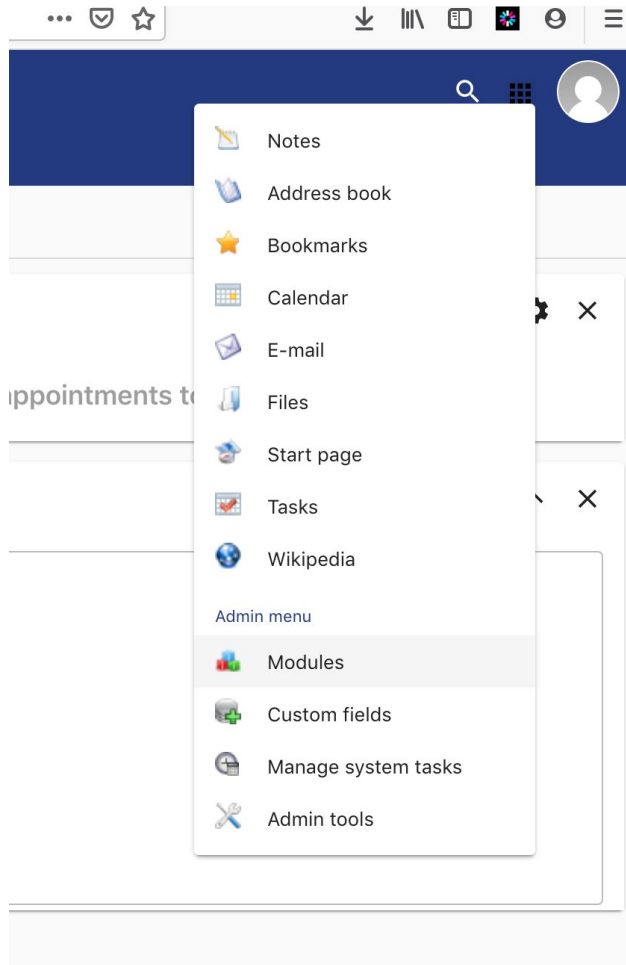
No appointments to display

Notes






Add Idap module

Again logout and login again.

Click on “Modules”.

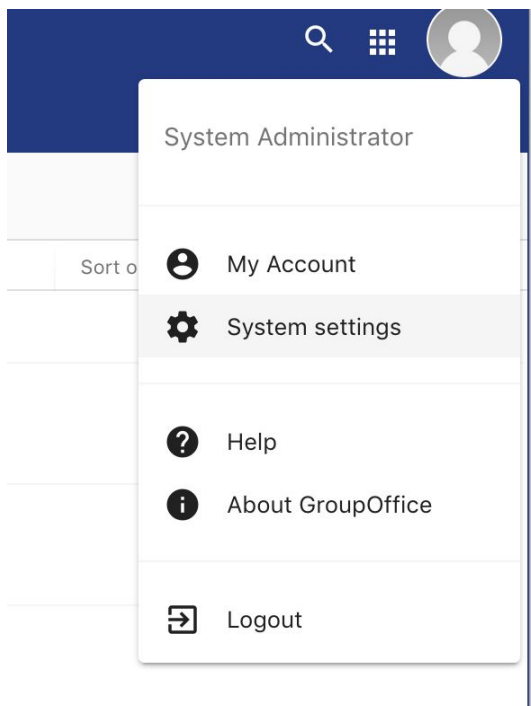


Then add the Idap plugin from the community section and then add the admin user also.

Copper Office		
<a href="#">Notes</a> <a href="#">Modules</a> <a href="#">Address book</a> <a href="#">Bookmarks</a> <a href="#">Calendar</a> <a href="#">E-mail</a> <a href="#">Files</a> <a href="#">Start page</a> <a href="#">Tasks</a> <a href="#">Wikipedia</a>		
		
↑ Name	Enabled	Sort order
↓ Community		
 <b>API key generator</b> Generate access keys for external API access.	<input type="checkbox"/>	
 <b>Google authenticator</b> Improves security by adding two factor authentication options to the user account settings.	<input checked="" type="checkbox"/>	
 <b>IMAP authenticator</b> Use an IMAP mail server to authenticate and autcreate users.	<input type="checkbox"/>	
 <b>LDAP authenticator</b> Use an LDAP directory to authenticate and autcreate users.	<input checked="" type="checkbox"/>	

Then log out and log in again.

**Configure your ldap server.**



Go to System settings and then go to Authentication.

+ For ldap server

Fill following details as given in the example.

### Server profile

Domains:

copper.opensource.lk

+

Enter the domains this ldap server should be used to authenticate. Users must login with their e-mail address and if the domain matches this profile it will be used.

Hostname:

ldap

Port:

389

Encryption:

None

☒ Use authentication

Enable this if the LDAP server requires authentication to lookup users or groups

Username:

cn=raa,dc=copper,dc=opensource,dc=lk

cn=Administrator,dc=com

Password:

...

### Users

Username attribute:

uid

peopleDN:

opper,dc=opensource,dc=lk

groupsDN:

opper,dc=opensource,dc=lk

☒ Create e-mail account for users

Save

Then you have to provide your email server details as follows.

These information should be given as same given in the example because those information about your email server container.

## Server profile

×

### IMAP Server

Hostname:

Port:

Encryption:

☐ Validate certificate

☐ Remove domain from username

Users must login with their full e-mail adress. Enable this option if the IMAP excepts the username without domain.

### SMTP Server

Hostname:

Port:

☒ Use user credentials

Enable this if the SMTP server credentials are identical to the IMAP server.

Username:

Password:

Encryption:

☐ Validate certificate

Save

Finally add to Internal group and then save.

User options

Groups:

[+ Add](#)

Users will automatically be added to these groups

[Save](#)

Then again logout.

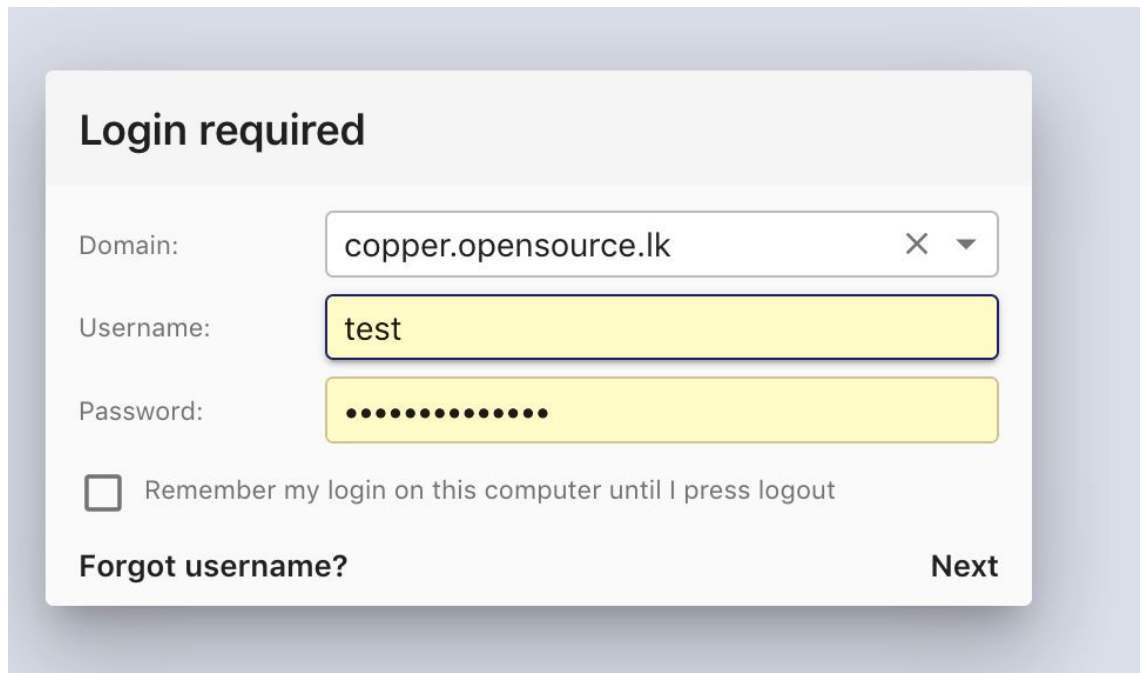


## 6. Functional Testing

Once completed above all steps then you can start your functional testing.

1. Login to you domain.

`http://localhost:8004`



**Login required**

Domain:

Username:

Password:

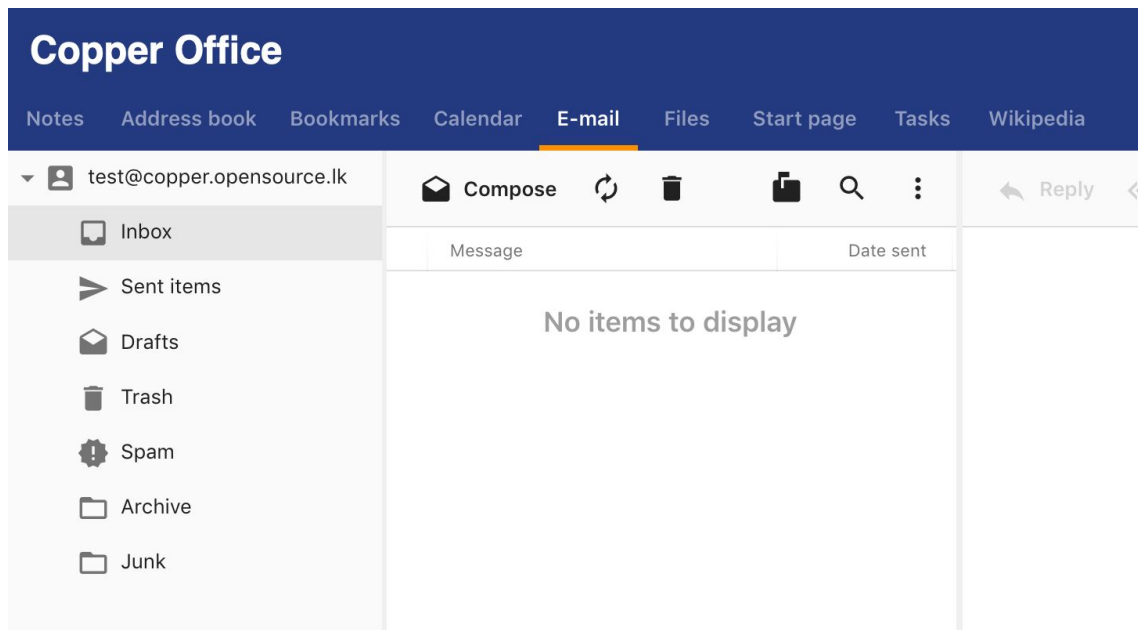
☐ Remember my login on this computer until I press logout

[Forgot username?](#) **Next**

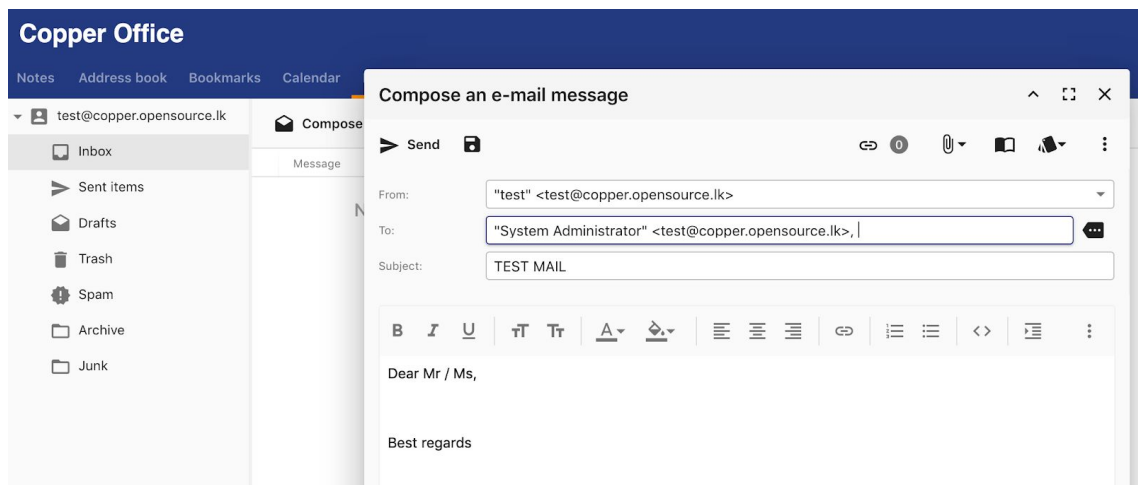
Now you can select your domain and login with test user account or copper account (both password is coppermail@lsf).

Successful login will bring you the dashboard. Then click Email tab.

If Email connectivity is success your folder structure will be shown as shown in bellow image.



Then try to send a mail to yourself to check mail sending and receiving in same domain.



If mail sent then popup close and receive also should happen properly.

# 7. Result

