Open source, secure and private file-, and datasharing FTW!

Hans de Raad
OpenNovations

7th November 2015

#fscons

OpenNovations by DevHdR

KOLAB
COLLABORATE IN CONFIDENCE

info@hcderaad.nl
www.hcderaad.nl

Great to be here!

- Many thanks to the organization!
  - Beautiful city!

Whoami?

- OpenNovations
  - Current company of Hans de Raad
  - Partner of Kolab Systems AG
- Chamber of commerce registration states:
  - “The goal of the company is to deliver products and services in all aspects of the competence-, personal interest-, and area's of expertise of the owner”.
- In other words, its mainly a vehicle to do something usefull and nice and charging money for that.
- Some areas of interest:
  - Information, communication, technology, workshops and consultancy.
- Do I stick to that?

Why host this yourself?

- Pay with money instead of your data
- On premise availability, sense of your data under your control
- Make it just that tiny little bit harder for information harvesting companies and governments to profile you.
- Some information you just want to keep for yourself.
  - Why? Well, why not?!

Law beats technology

- Chances are, your local privacy legislation is quite a lot better than the US laws
  - Because, well..... There are none....
- Regardless of the recent scandals, governments still have to comply to legislation.
  - If they don't you can sue.
- Companies only have to listen to shareholders
- Which would you prefer, democratic or shareholder controlled governance models?
  - Or, roll your own?

Safe harbour is dead

- EU Court has just decided to bury Safe Harbour.
- So EU → US personal data exchange now needs to be specified and explicitely accepted per case and by the user.
  - Ergo, exit Google Analytics and social media buttons (trackers) on websites.

But do it right

- Make sure you know what you are doing
  - Hosting and systems management is a specialization.
- Or hire someone to do it for you
  - When cooperating with a group of people, this can be very cost effective
- Don't host your own just because....

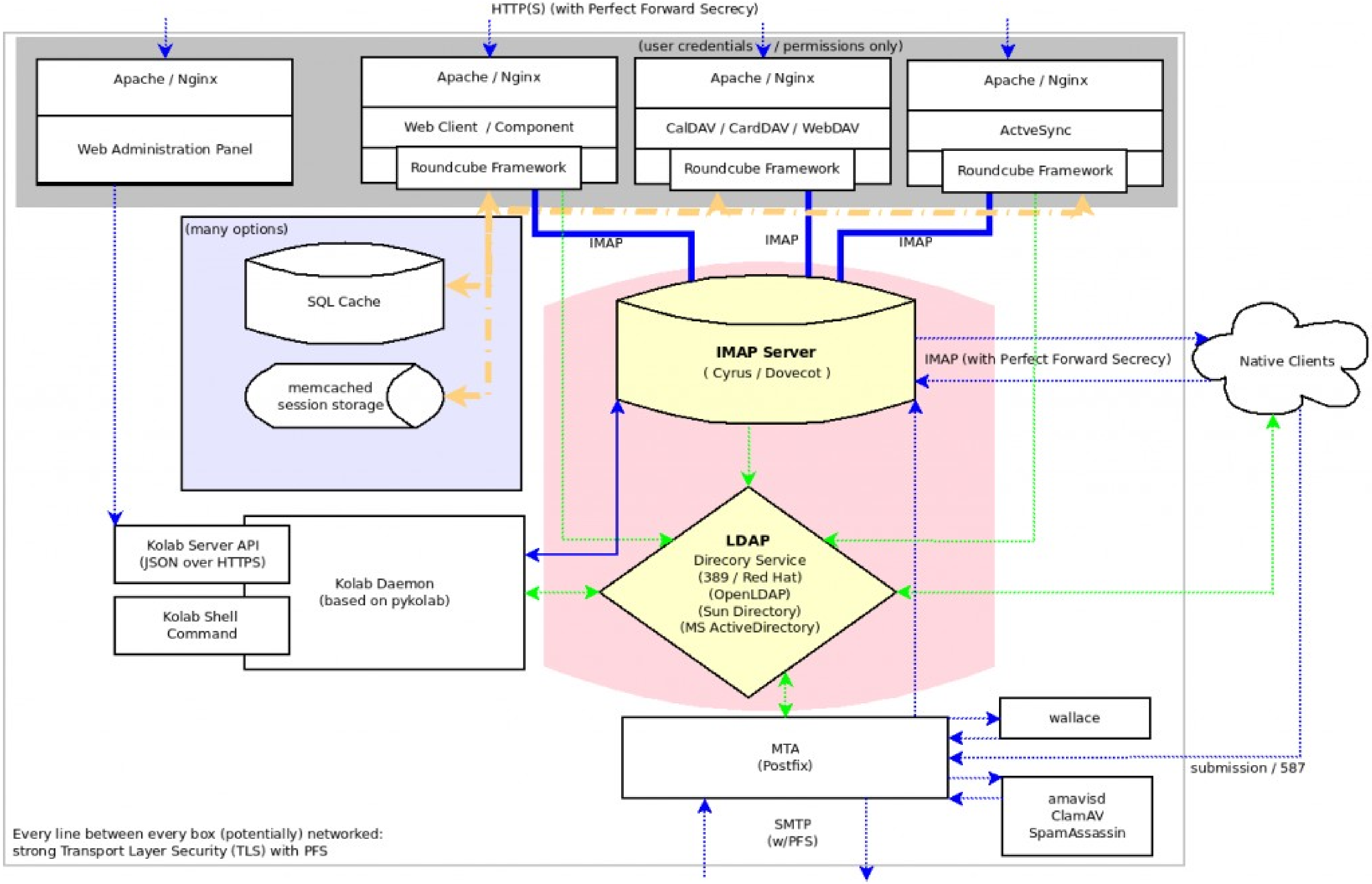
Kolab

- Created by German Bundesambt fur Sicherheit-, und Informationstechnik in 2001
  - Because they needed something they could trust themselves.
- Groupware platform with:
  - Email, calendar, todo/tasks, contacts, filestorage
- Clients
  - Roundcube, KDE Kontact
  - And Thunderbird, or even Outlook....

Other components

- The usual suspects:
  - Apache Webserver
    - Or NGINX
  - Postfix SMTP Server
  - Cyrus IMAP Server
  - MariaDB / MySQL databaseserver

Architecture



Every line between every box (potentially) networked:
strong Transport Layer Security (TLS) with PFS

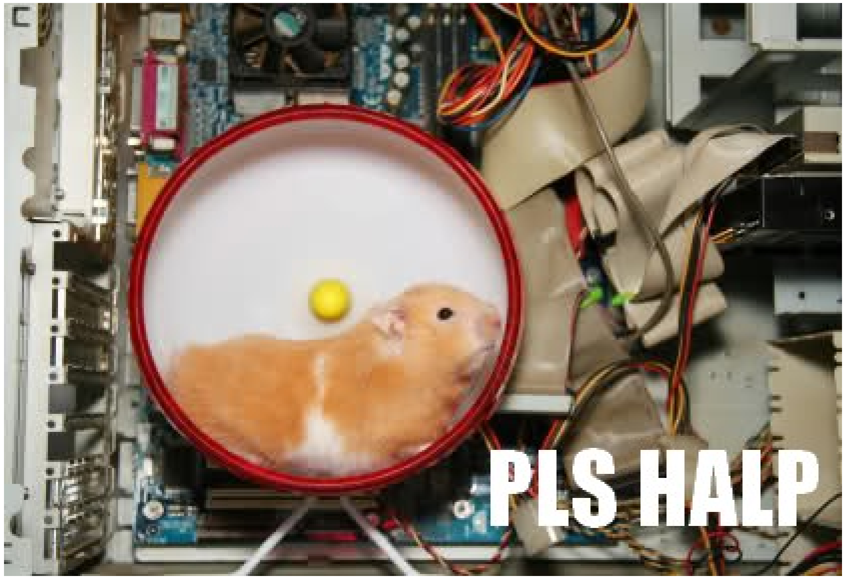
OpenNovations by DevHdR

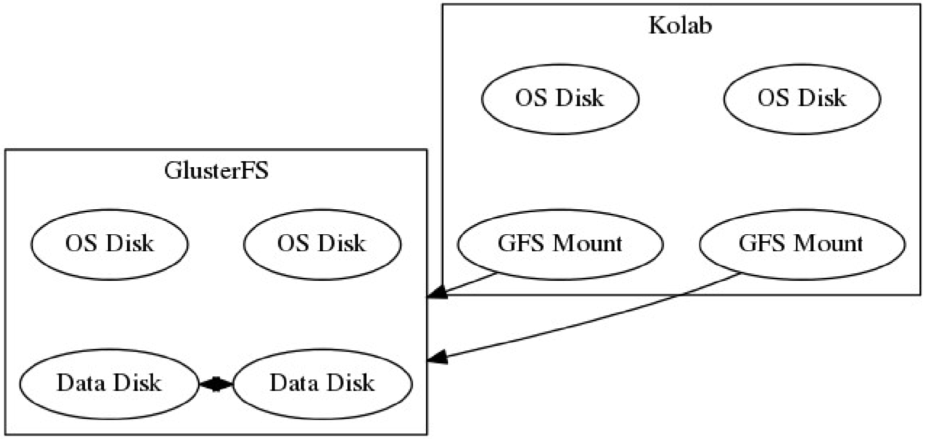
KOLAB
COLLABORATE IN CONFIDENCE

info@hcderaad.nl
www.hcderaad.nl

Planning setup

- Single machine?
  - Failover? Fallback scenario?
  - A-synchronous backups?
- Multi machine redundancy
  - Replication?





Acces vs Sync

- When does Syncing make sense?
  - Relatively small teams
  - Relatively small amounts of documents
- When does Acces-only makes sense?
  - Large teams/organizations
    - High number of document edits
  - Large amounts of frequently changing documents
- Don't ddos your own network.

Expectation management

- This workshops demo only targets a very simple SOHO single machine solution.
- However we will go over some of the considerations for more complex scenarios.
  - But really, if you need something like that, hire a professional.
  - The info in this presentation is provided as is, without any warrantly, etc, etc, etc, etc....

Decoupling and redundancy

- Key element of making a platform resilient: Have more than 1 instance/copy running
  - Easy for webservers
  - MariaDB supports it natively
  - Cyrus Murder for IMAP
- Or use file or block level synchronization
  - For relatively simple setups, this is usually enough

HA or HR?

- Do you really need High Availability
  - Which implies a fully redundant, multi-server, multi-geo-location setup?
- Or is what you want actually High Recoverability?
  - Difference in costs is quite significant.
- Basically, it boils down to:
  - How many hours of business can you survive without your files or mails?
    - If this is counted in < Minutes, go HA
    - If this is counted in > Hours, go HR

Redundancy: Application level

- MySQL / MariaDB clustering
- Cyrus Murder
- LDAP replication
- Postfix SMTP
- Apache webserver

Application level: Database

- Maria DB clustering
  - Usefulness is limited, because applications don't use Maria DB that much
    - User preferences for Roundcube (Kolab).
  - Basically most of the info in the Kolab setup is related to the files (or emails) in the system anyway.
    - So it doesn't really make sense to separate this in a redundant setup.

Application level: IMAP server

- Cyrus Murder
  - Usefulness can be quite high, but setup can be costly.
    - Need for several servers, configuration work, etc.
  - For the combination of Kolab and other software this would not be enough.
    - For Kolab alone, this is a very reasonable step, since it stores everything in IMAP anyway.
      - Besides making backups of configuration of course.
  - But also, this implies more application levels (LDAP, etc) are implemented redundantly as well.

Application level: Identity management

- LDAP replication
  - Availability is crucial, if no LDAP, not a single application can be used.
  - Can be a business demand anyway (master/slave with external LDAP server).
  - Setup varies per server type (OpenLdap, 389-server, etc).

Application level: SMTP frontends

- Postfix SMTP server:
  - Decide what you actually want to prevent or achieve
    - Mail loss
      - Setup a spare/backup MX with a large enough disk to queue messages until the primary MX is back online.
      - This is always a GOOD IDEA tm
    - Mail availability
      - Then postfix (or the SMTP frontend) is probably the least of your challenges.
      - Mail (and file) storage and distribution in the backend is.

Application level: Webserver

- Apache webserver
  - Load balancing
    - The webserver should be almost the “dumbest” component in the stack.
    - No data is stored, no data operations are being performed.
  - No webserver means no access
    - Which is annoying, but not fatal.
  - But setup 2 apache instances and put a Vagrant or Nginx proxy in front of it, and you're done.

Redundant setup: data sync

- Block level sync vs File level sync vs Object storage
  - All:
    - Setup multiple instances of exactly the same data.
    - Span acros multiple machines.
  - Block level sync: DRDB
  - File level sync: GlusterFS
  - Object storage: Ceph

Data sync: Pick your tools wisely

- For very simple setups DRDB suits just fine.
  - Handles filesystem block level updates and stores it across multiple instances.
  - Can be used with almost any type of data (because it handles the lowest possible level, block level).
- GlusterFS is especially useful for syncing files (like IMAP mail messages)
  - Less ideal for large files like databases or mail index files.
- Ceph handles it all, but might be a bit overkill....

But what about a simple snapshot?

- Sure, why not?
  - But be prepared to accept data loss on system failure
    - This can be somewhat mitigated by using frequent IMAPsyncs and/or DRDB for some filesystem partitions.
- Keep a bare/minimal clone of the original VPS/VM at hand at all times.
  - Or orchestrate the whole setup with Puppet/Chef/Ansible/etc.

Server side encryption

- Only as preventive measure from cross VPS storage layer attacks
- Has little to do with privacy.
- Use file system encryption, at least AES 256
  - Loop device mount.
  - First scramble the partition with random data

End to end encryption

- PGP and S/MIME
- Require client side plugins
- Public key exchange
- By far the best way to ensure CIA.

Put your config in git

- Track changes
- Revert issues
- Easier merging of new config files on updates

Back to reality

- There are a zillion considerations for setting up a failover/HA/redundant setup.
  - “There is no special ingredient”.

- Let's setup the server.

Setup requirements

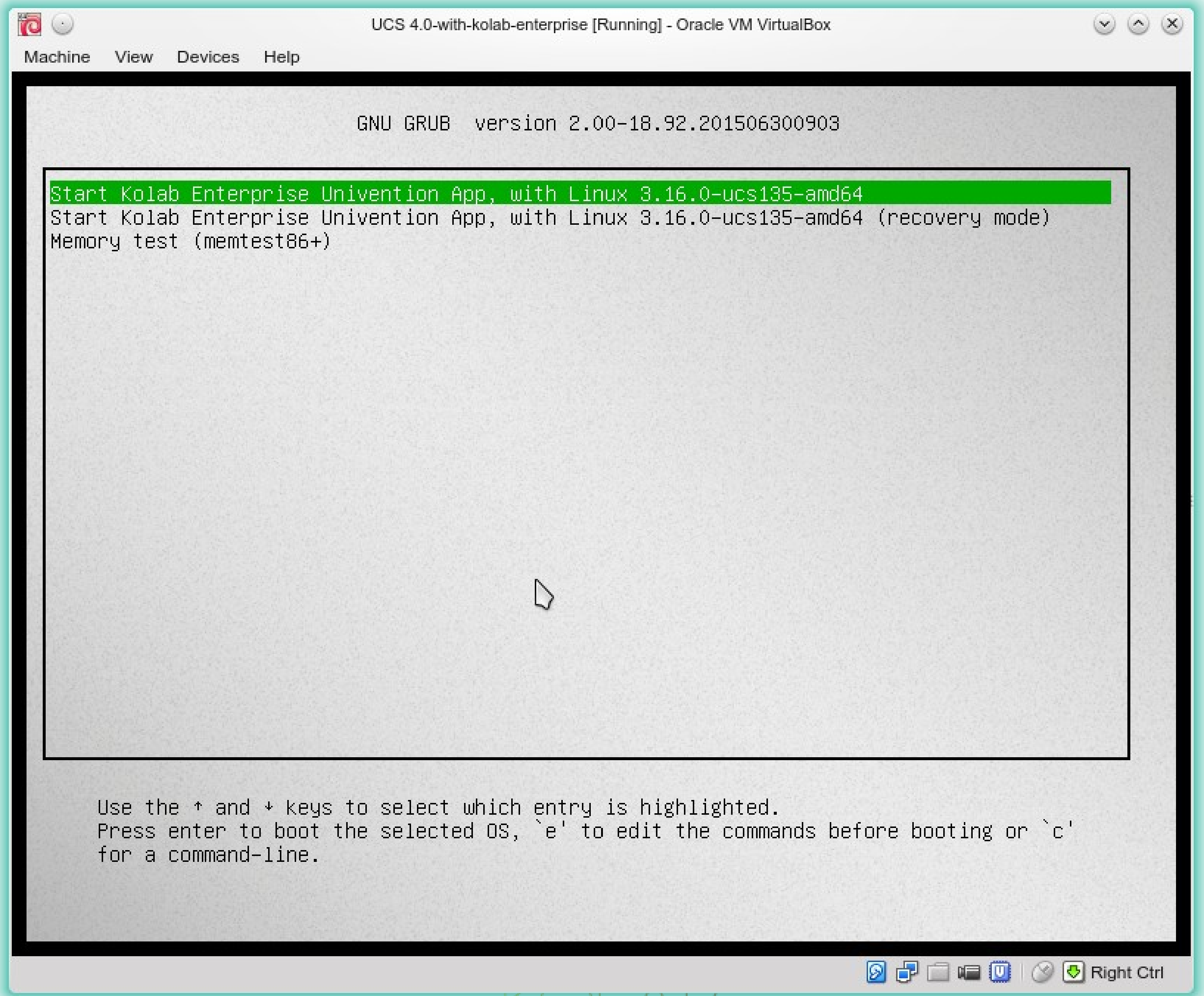
- Have a VPS ready
  - Or a VirtualBox/KVM/Xen/whatever
- Software:
  - Ubuntu 14.04 LTS
    - http://www.ubuntu.com/download/server/
  - Kolab
    - Repositories added later

Why Ubuntu and not openSUSE/CentOS, etc, etc, etc

- Well..... Quite arbitrary actually.
  - Kolab works well on it and I wanted to try something else for a change.
- Debian and Ubuntu are pretty well supported by VPS hosting providers
- All the Kool kids use it....
  - /me running away

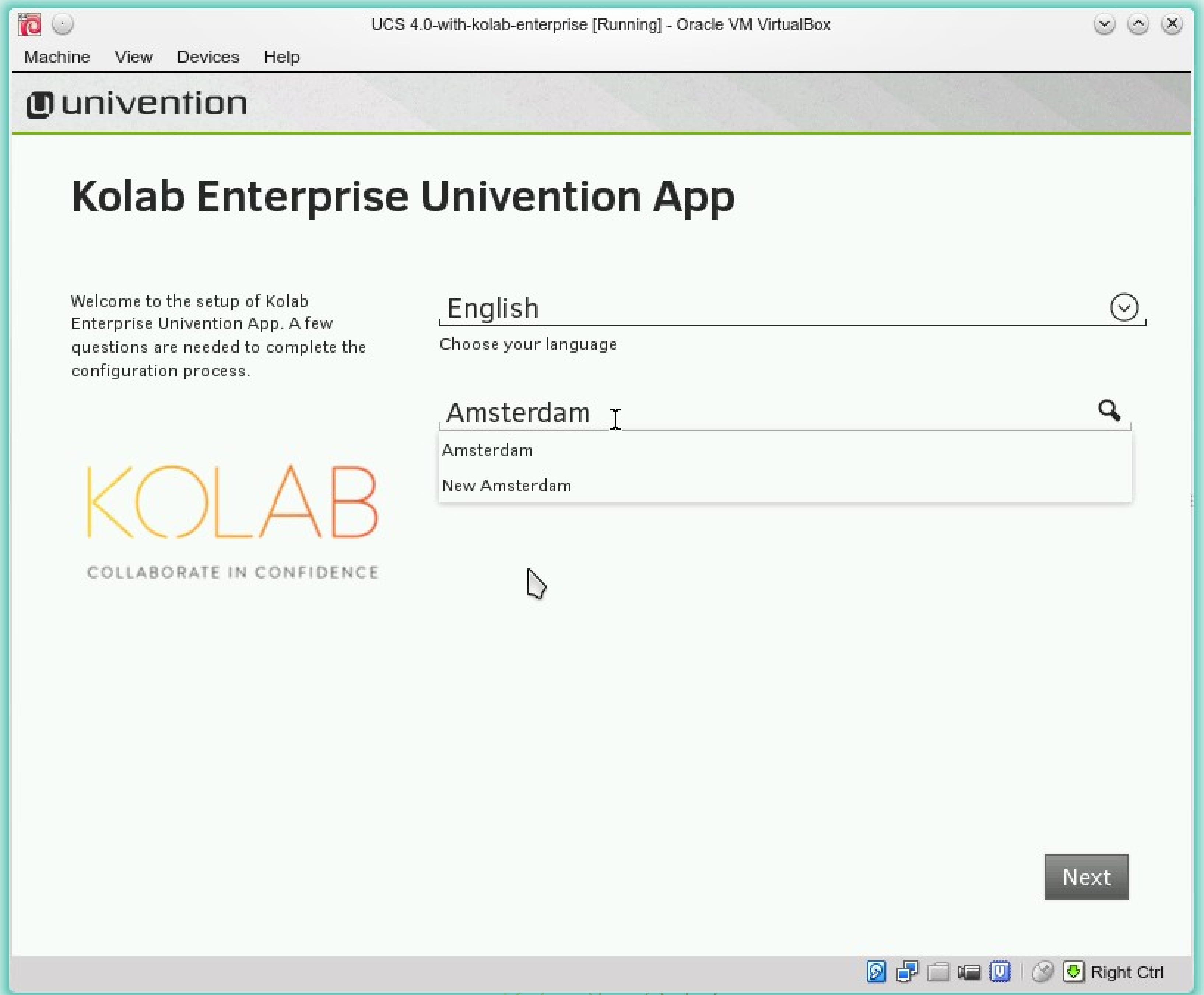
OR You can just download the Kolab image

- From the Univention App Store
- Fully preinstalled Kolab Enterprise image
  - With enterprise support only one update away!
- Costs?
  - Only E 15,- per user per YEAR.
- But let's have some fun installing everything ourselves, shall we?



UCS 4.0-with-kolab-enterprise [Running] - Oracle VM VirtualBox
Machine
View
Devices
Help
Right Ctrl

```
                    GNU GRUB  version 2.00-18.92.201506300903

 Start Kolab Enterprise Univention App, with Linux 3.16.0-ucs135-amd64
 Start Kolab Enterprise Univention App, with Linux 3.16.0-ucs135-amd64 (recovery mode)
 Memory test (memtest86+)

     Use the ↑ and ↓ keys to select which entry is highlighted.
     Press enter to boot the selected OS, `e' to edit the commands before booting or `c'
     for a command-line.
```


UCS 4.0-with-kolab-enterprise [Running] - Oracle VM VirtualBox
Machine
View
Devices
Help
univention

Kolab Enterprise Univention App

Welcome to the setup of Kolab Enterprise Univention App. A few questions are needed to complete the configuration process.

KOLAB
COLLABORATE IN CONFIDENCE

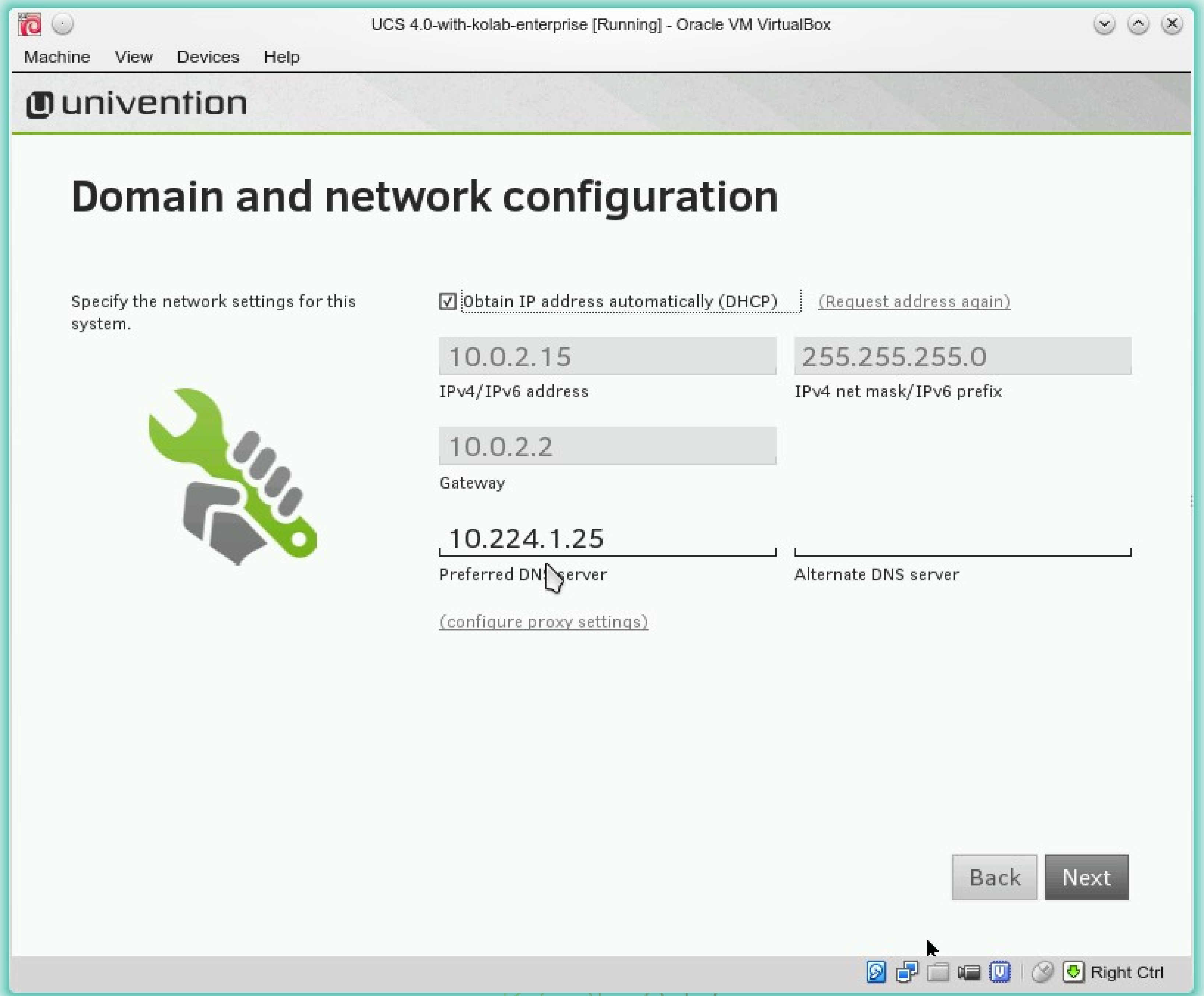
English

Choose your language

Amsterdam

Amsterdam

New Amsterdam


UCS 4.0-with-kolab-enterprise [Running] - Oracle VM VirtualBox
Machine
View
Devices
Help
univention
Back
Next
Right Ctrl

Domain and network configuration

Specify the network settings for this system.

☑ Obtain IP address automatically (DHCP) (Request address again)

IPv4/IPv6 address: 10.0.2.15

IPv4 net mask/IPv6 prefix: 255.255.255.0

Gateway: 10.0.2.2

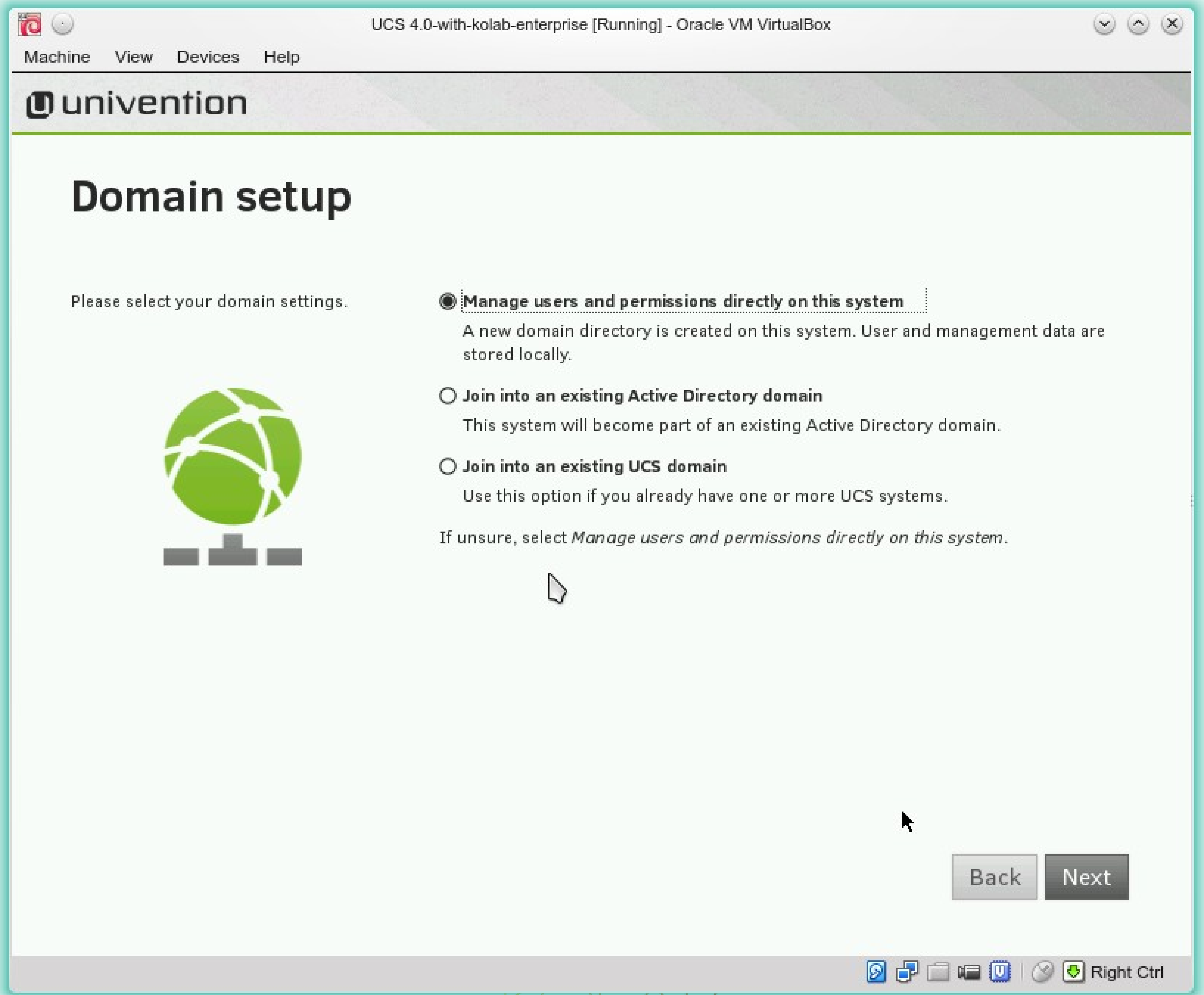
Preferred DNS server: 10.224.1.25

Alternate DNS server:

(configure proxy settings)

If you use port forwarding (NAT), proxy-servers or suchlike

- After installation, change the ports in the kolab configuration files to reflect the new servernames and ports,
  - Else the microservices for File sharing, etc, will not work.
  - Remember to (also) edit the Univention templates to prevent updates overwriting your config. Ie:
    - /etc/univention/templates/files/etc/roundcubemail/
      - kolab_files.inc.php
        - $config['kolab_files_url'] = 'https://YOURSERVERNAME/chwala';


UCS 4.0-with-kolab-enterprise [Running] - Oracle VM VirtualBox
Machine
View
Devices
Help
univention

Domain setup

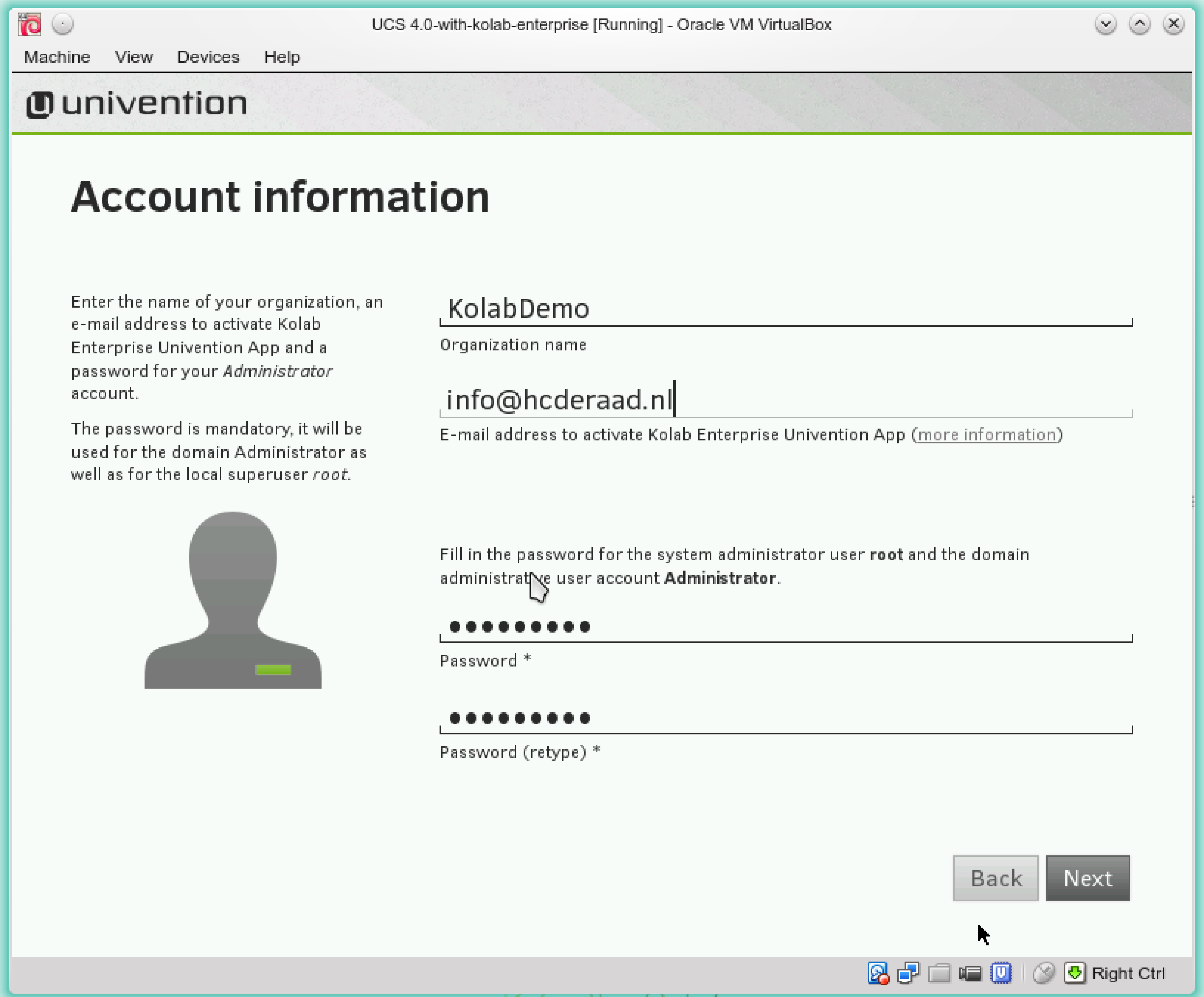
Please select your domain settings.

● **Manage users and permissions directly on this system**
A new domain directory is created on this system. User and management data are stored locally.

○ **Join into an existing Active Directory domain**
This system will become part of an existing Active Directory domain.

○ **Join into an existing UCS domain**
Use this option if you already have one or more UCS systems.

If unsure, select *Manage users and permissions directly on this system*.



UCS 4.0-with-kolab-enterprise [Running] - Oracle VM VirtualBox
Machine View Devices Help
univention

Account information

Enter the name of your organization, an e-mail address to activate Kolab Enterprise Univention App and a password for your *Administrator* account.

The password is mandatory, it will be used for the domain Administrator as well as for the local superuser *root*.

Organization name: KolabDemo

E-mail address to activate Kolab Enterprise Univention App (more information): info@hcderaad.nl

Fill in the password for the system administrator user **root** and the domain administrative user account **Administrator**.

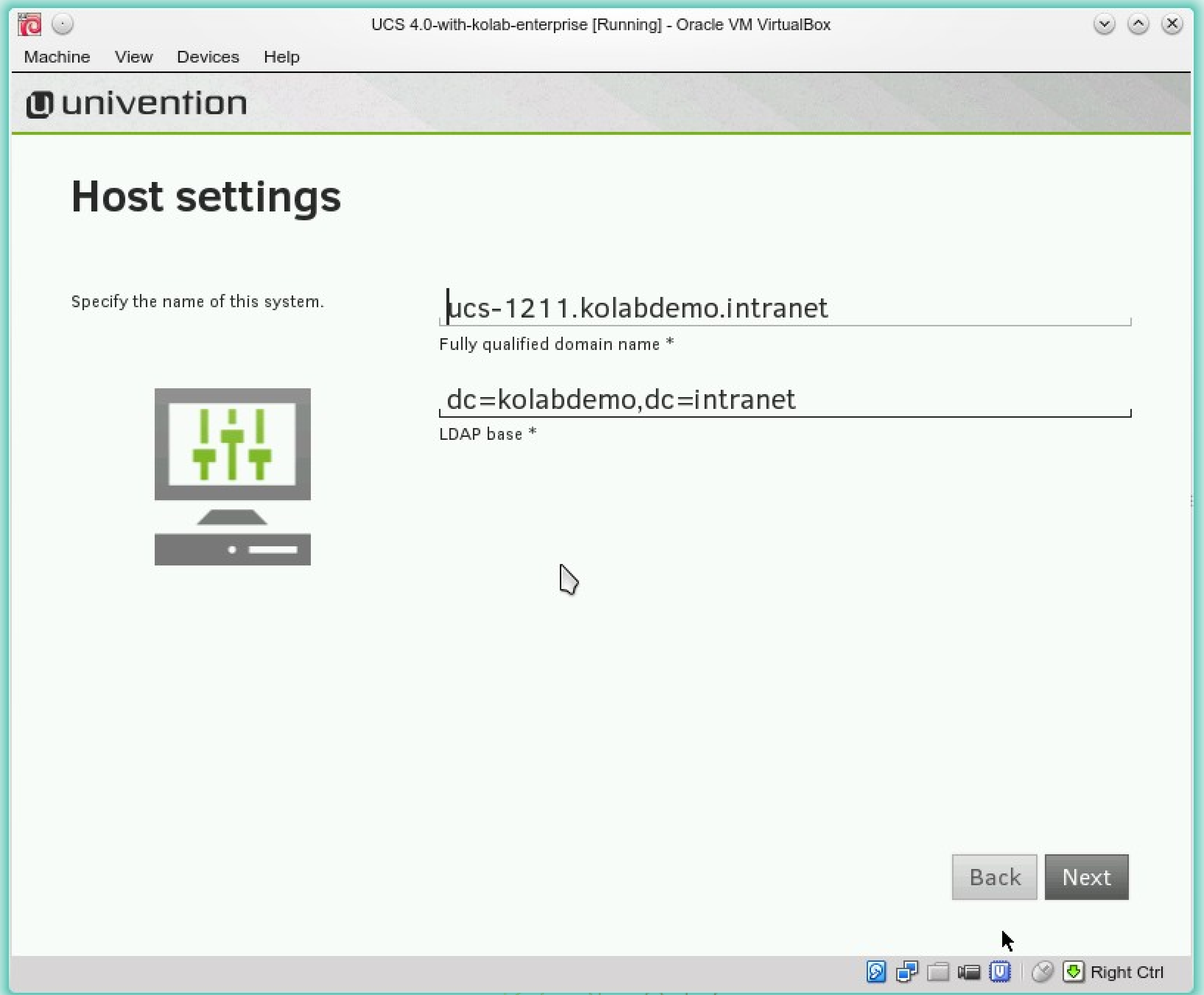
Password *: ●●●●●●●●●

Password (retype) *: ●●●●●●●●●

OpenNovations by DevHdR

KOLAB
COLLABORATE IN CONFIDENCE

info@hcderaad.nl
www.hcderaad.nl



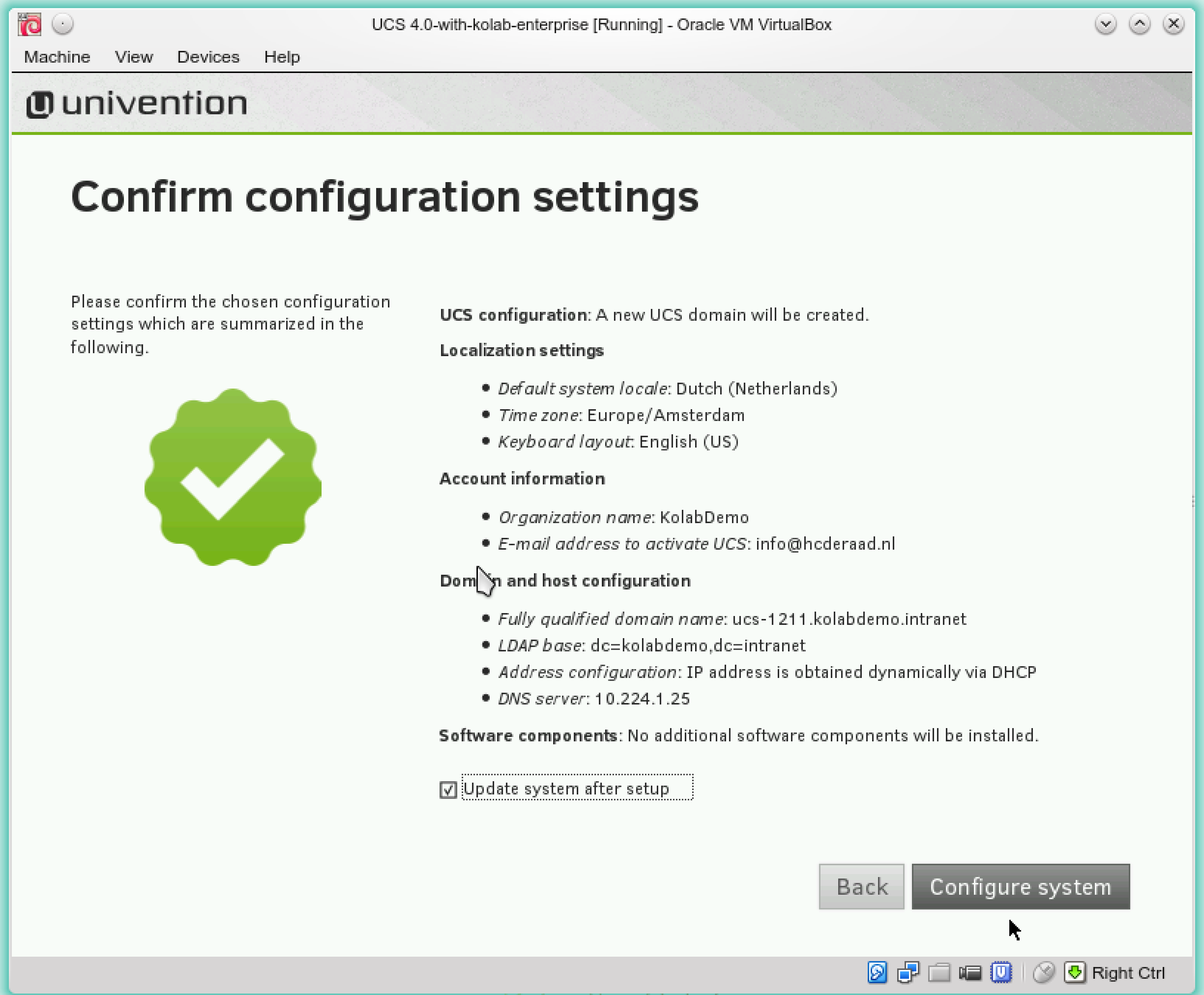
UCS 4.0-with-kolab-enterprise [Running] - Oracle VM VirtualBox
Machine
View
Devices
Help
univention

Host settings

Specify the name of this system.

Fully qualified domain name *: ucs-1211.kolabdemo.intranet

LDAP base *: dc=kolabdemo,dc=intranet



UCS 4.0-with-kolab-enterprise [Running] - Oracle VM VirtualBox
Machine
View
Devices
Help
univention

Confirm configuration settings

Please confirm the chosen configuration settings which are summarized in the following.

UCS configuration: A new UCS domain will be created.

Localization settings

- *Default system locale*: Dutch (Netherlands)
- *Time zone*: Europe/Amsterdam
- *Keyboard layout*: English (US)

Account information

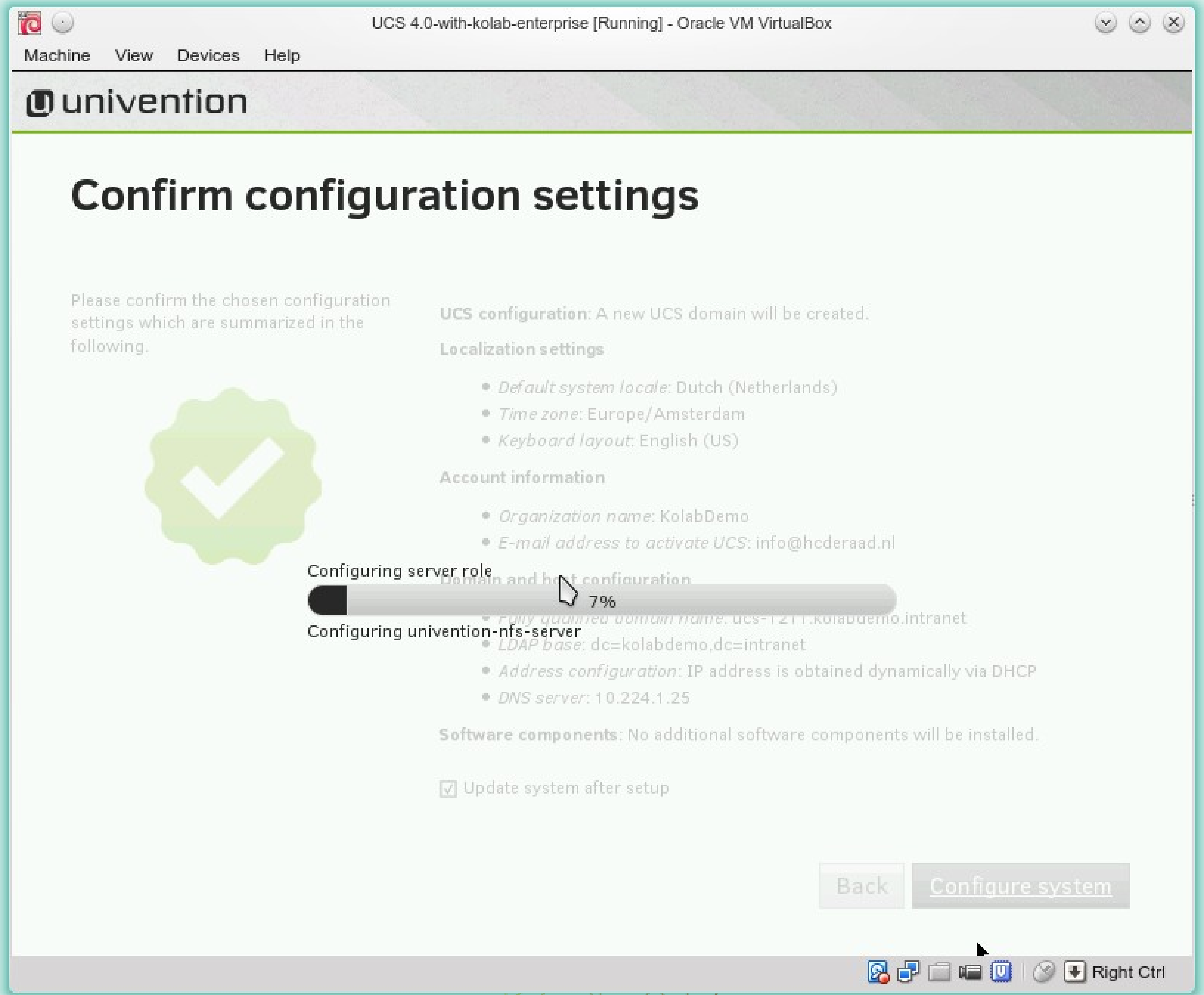
- *Organization name*: KolabDemo
- *E-mail address to activate UCS*: info@hcderaad.nl

Domain and host configuration

- *Fully qualified domain name*: ucs-1211.kolabdemo.intranet
- *LDAP base*: dc=kolabdemo,dc=intranet
- *Address configuration*: IP address is obtained dynamically via DHCP
- *DNS server*: 10.224.1.25

Software components: No additional software components will be installed.

☑ Update system after setup



UCS 4.0-with-kolab-enterprise [Running] - Oracle VM VirtualBox
Machine
View
Devices
Help
univention
Back
Configure system
Right Ctrl

Confirm configuration settings

Please confirm the chosen configuration settings which are summarized in the following.

UCS configuration: A new UCS domain will be created.

Localization settings

- *Default system locale*: Dutch (Netherlands)
- *Time zone*: Europe/Amsterdam
- *Keyboard layout*: English (US)

Account information

- *Organization name*: KolabDemo
- *E-mail address to activate UCS*: info@hcderaad.nl

Domain and host configuration

- *Fully qualified domain name*: ucs-1211.kolabdemo.intranet
- *LDAP base*: dc=kolabdemo,dc=intranet
- *Address configuration*: IP address is obtained dynamically via DHCP
- *DNS server*: 10.224.1.25

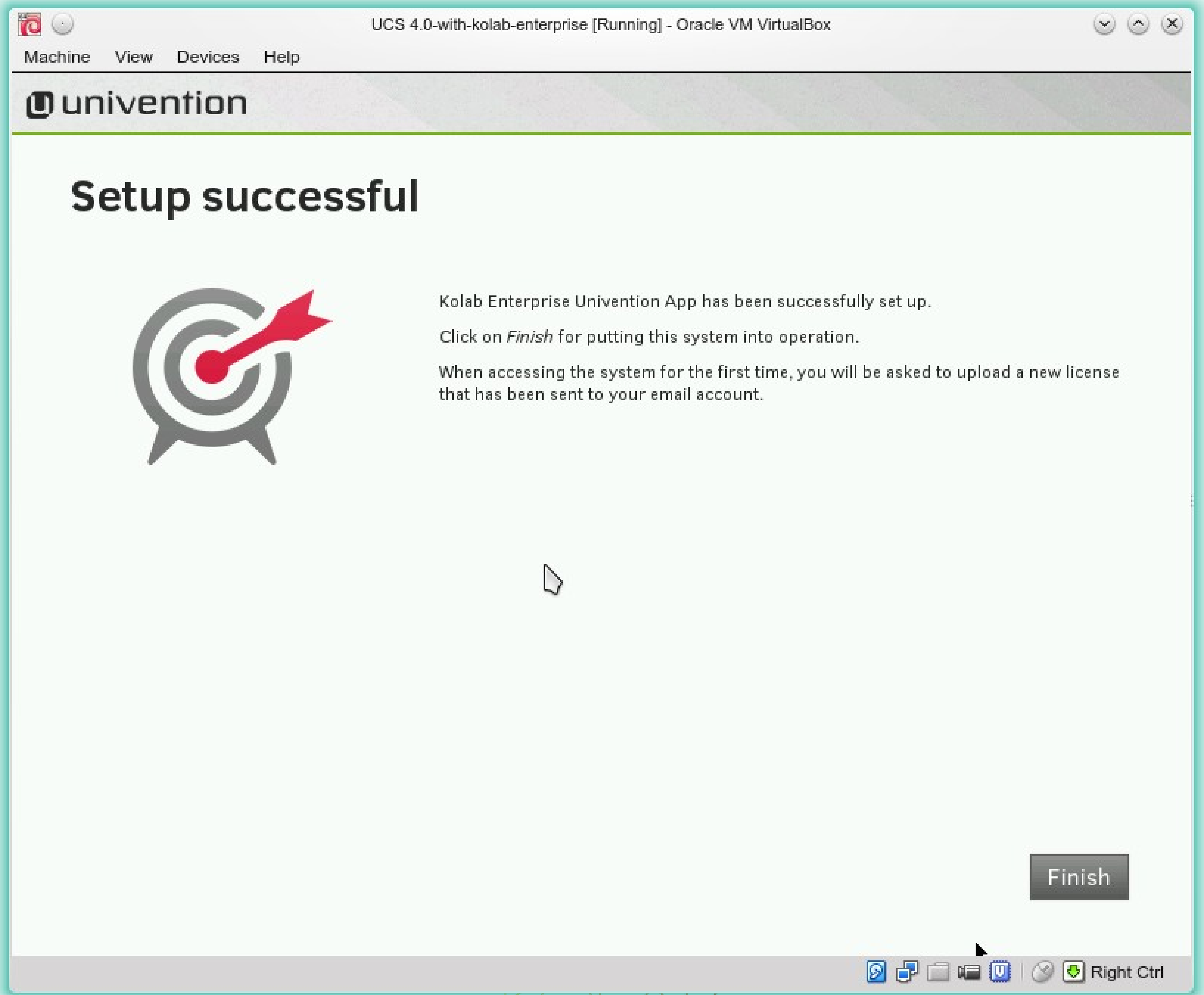
Software components: No additional software components will be installed.

☑ Update system after setup

Configuring server role

7%

Configuring univention-nfs-server

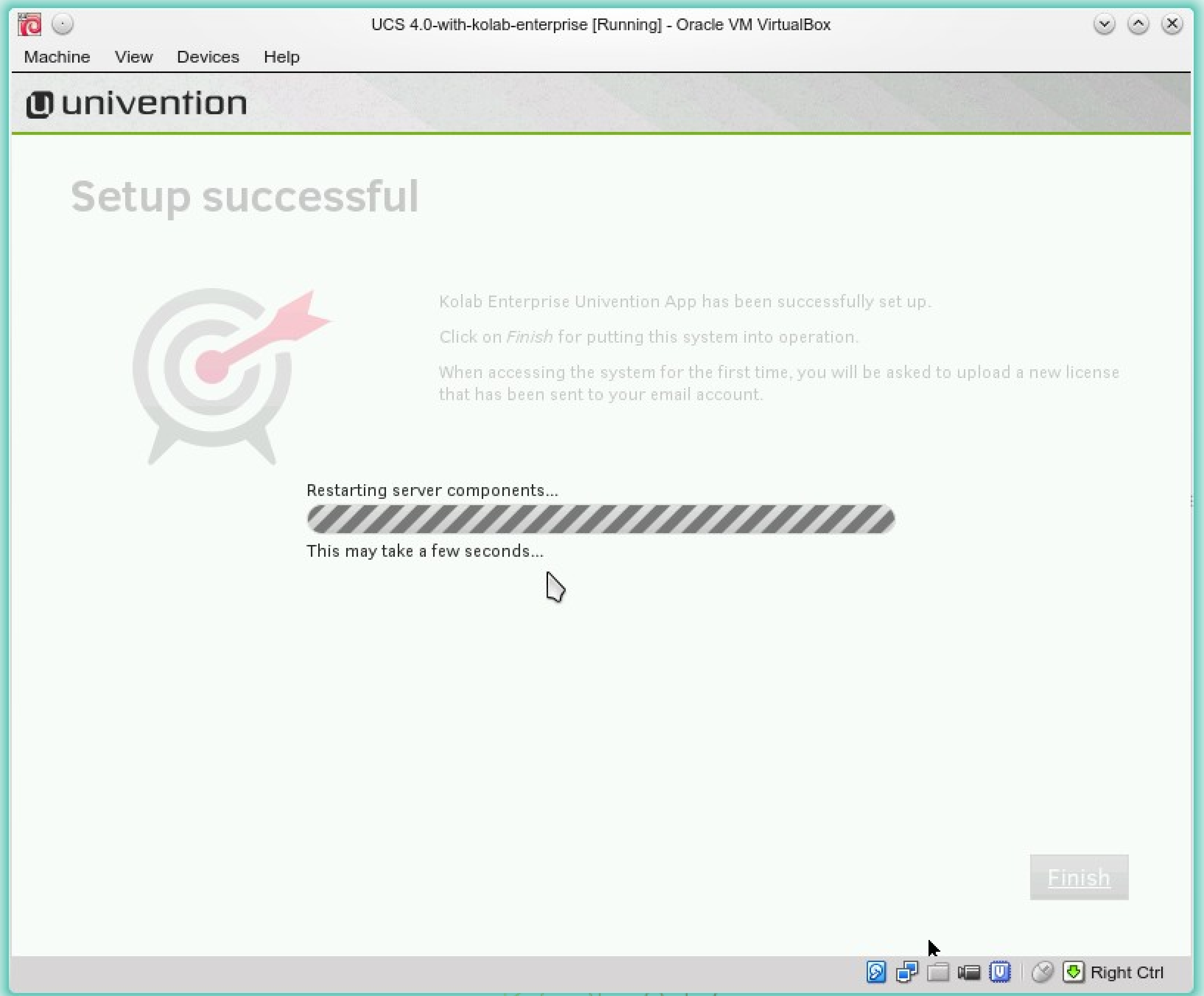

UCS 4.0-with-kolab-enterprise [Running] - Oracle VM VirtualBox
Machine
View
Devices
Help
univention
Finish
Right Ctrl

Setup successful

Kolab Enterprise Univention App has been successfully set up.

Click on *Finish* for putting this system into operation.

When accessing the system for the first time, you will be asked to upload a new license that has been sent to your email account.



UCS 4.0-with-kolab-enterprise [Running] - Oracle VM VirtualBox
Machine
View
Devices
Help
univention

Setup successful

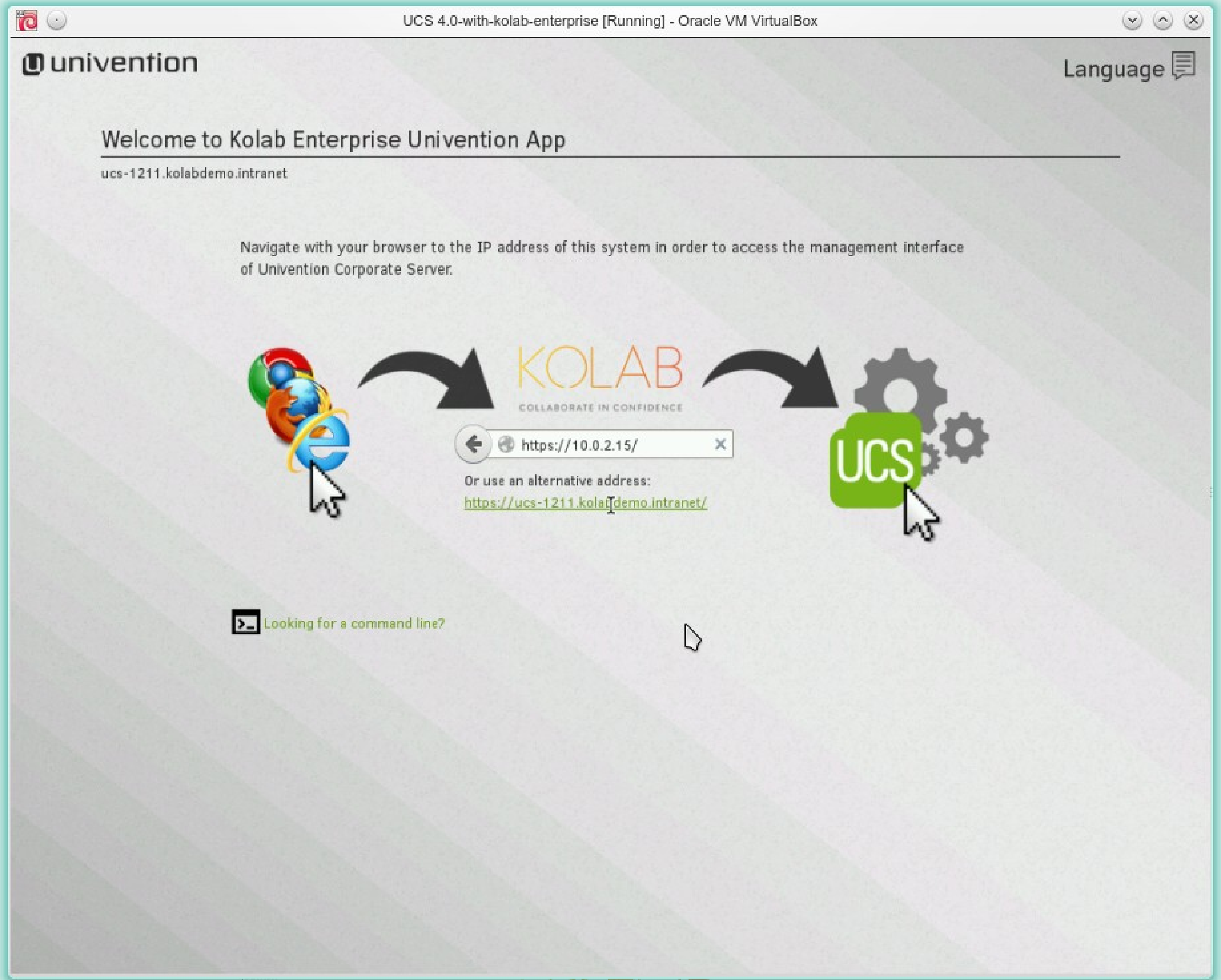
Kolab Enterprise Univention App has been successfully set up.

Click on *Finish* for putting this system into operation.

When accessing the system for the first time, you will be asked to upload a new license that has been sent to your email account.

Restarting server components...

This may take a few seconds...



UCS 4.0-with-kolab-enterprise [Running] - Oracle VM VirtualBox

univention

Language

Welcome to Kolab Enterprise Univention App

ucs-1211.kolabdemo.intranet

Navigate with your browser to the IP address of this system in order to access the management interface of Univention Corporate Server.

https://10.0.2.15/

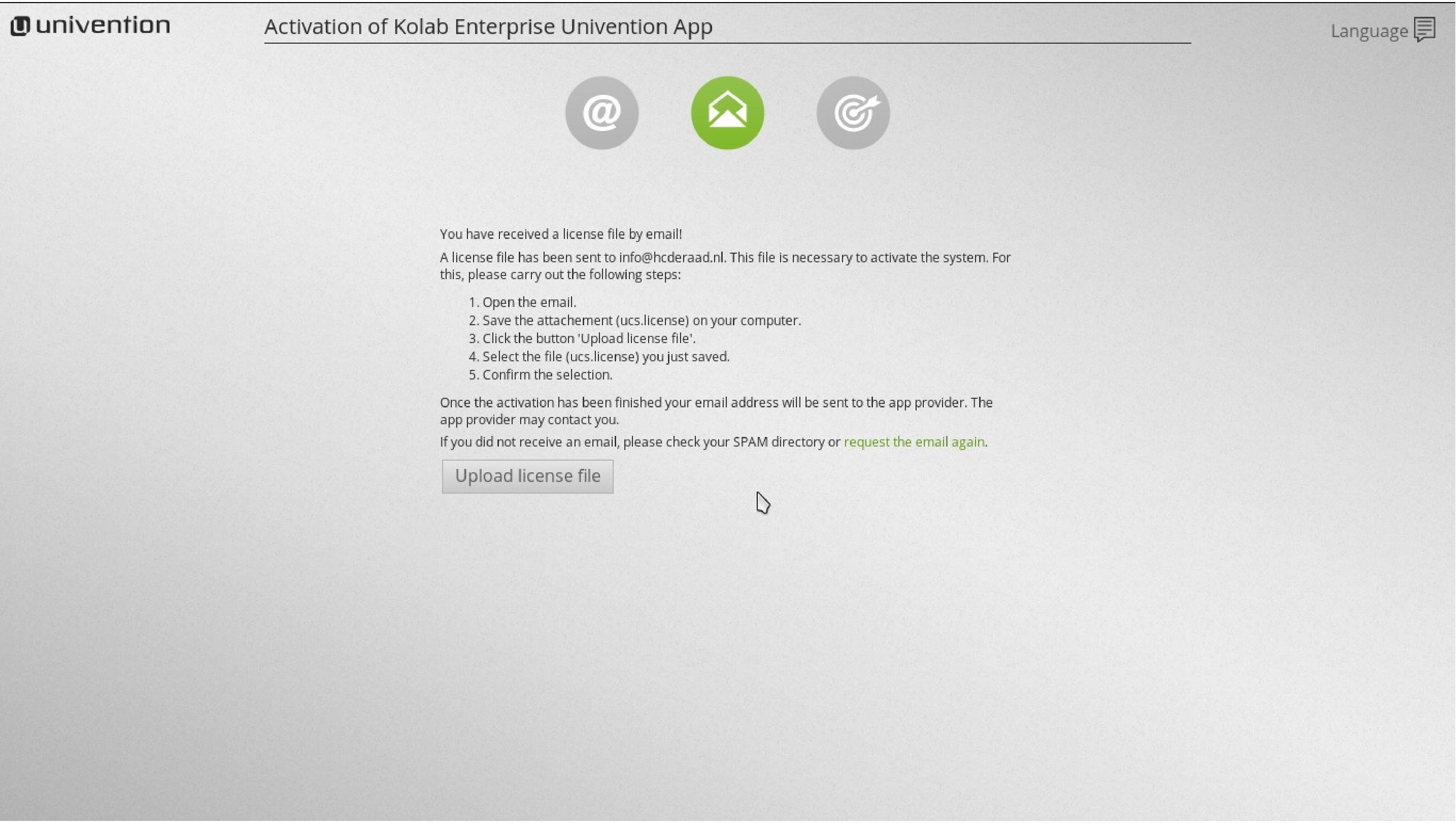
Or use an alternative address:

https://ucs-1211.kolabdemo.intranet/

Looking for a command line?

COLLABORATE IN CONFIDENCE

www.hcderaad.nl



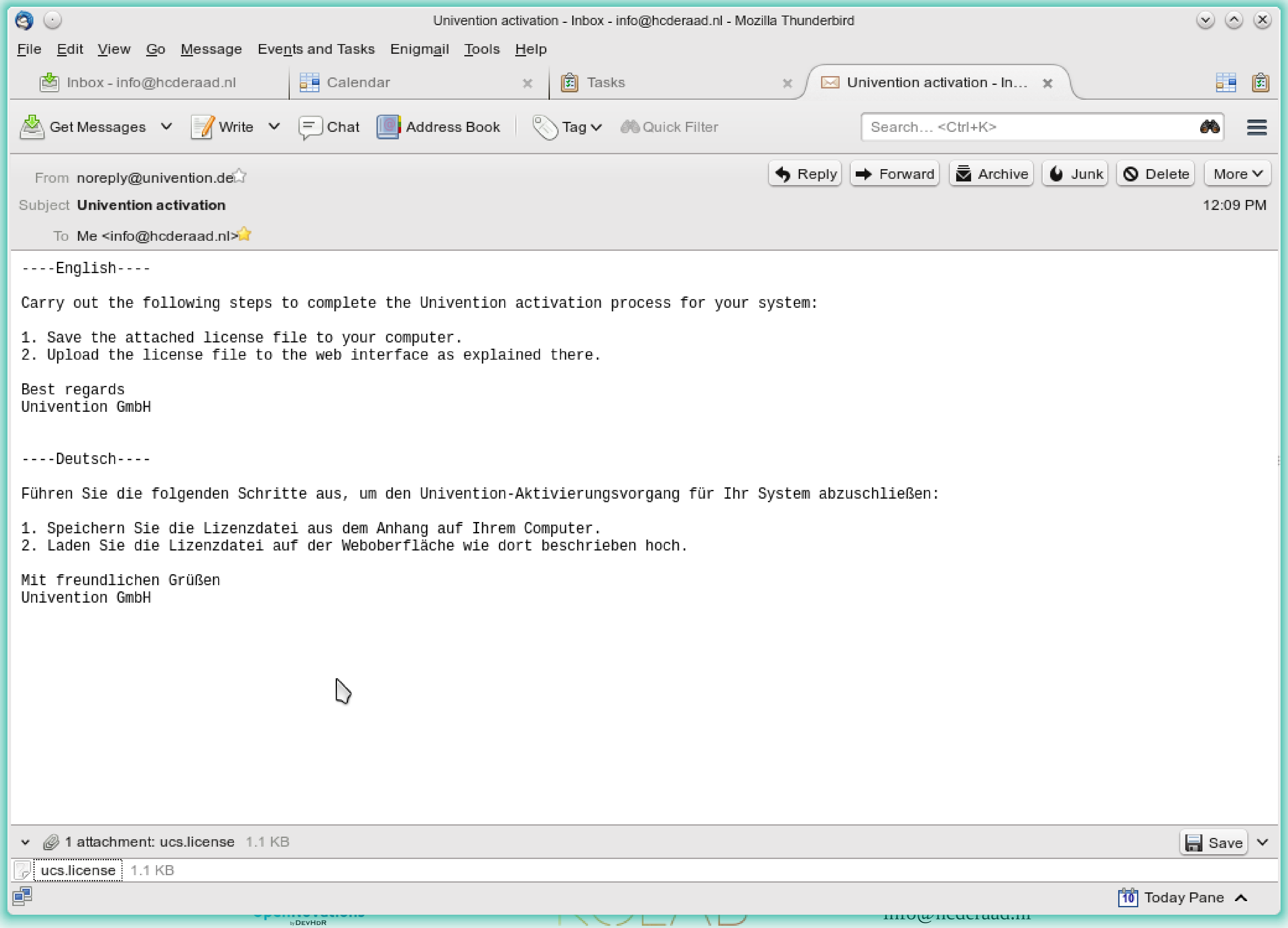
You have received a license file by email!

A license file has been sent to info@hcderaad.nl. This file is necessary to activate the system. For this, please carry out the following steps:

1. Open the email.
2. Save the attachement (ucs.license) on your computer.
3. Click the button 'Upload license file'.
4. Select the file (ucs.license) you just saved.
5. Confirm the selection.

Once the activation has been finished your email address will be sent to the app provider. The app provider may contact you.

If you did not receive an email, please check your SPAM directory or request the email again.


Univention activation - Inbox - info@hcderaad.nl - Mozilla Thunderbird
File Edit View Go Message Events and Tasks Enigmail Tools Help
Inbox - info@hcderaad.nl
Calendar
Tasks
Univention activation - In…
Get Messages
Write
Chat
Address Book
Tag
Quick Filter
Search… <Ctrl+K>
Reply
Forward
Archive
Junk
Delete
More
Today Pane
Save

From noreply@univention.de

Subject **Univention activation**

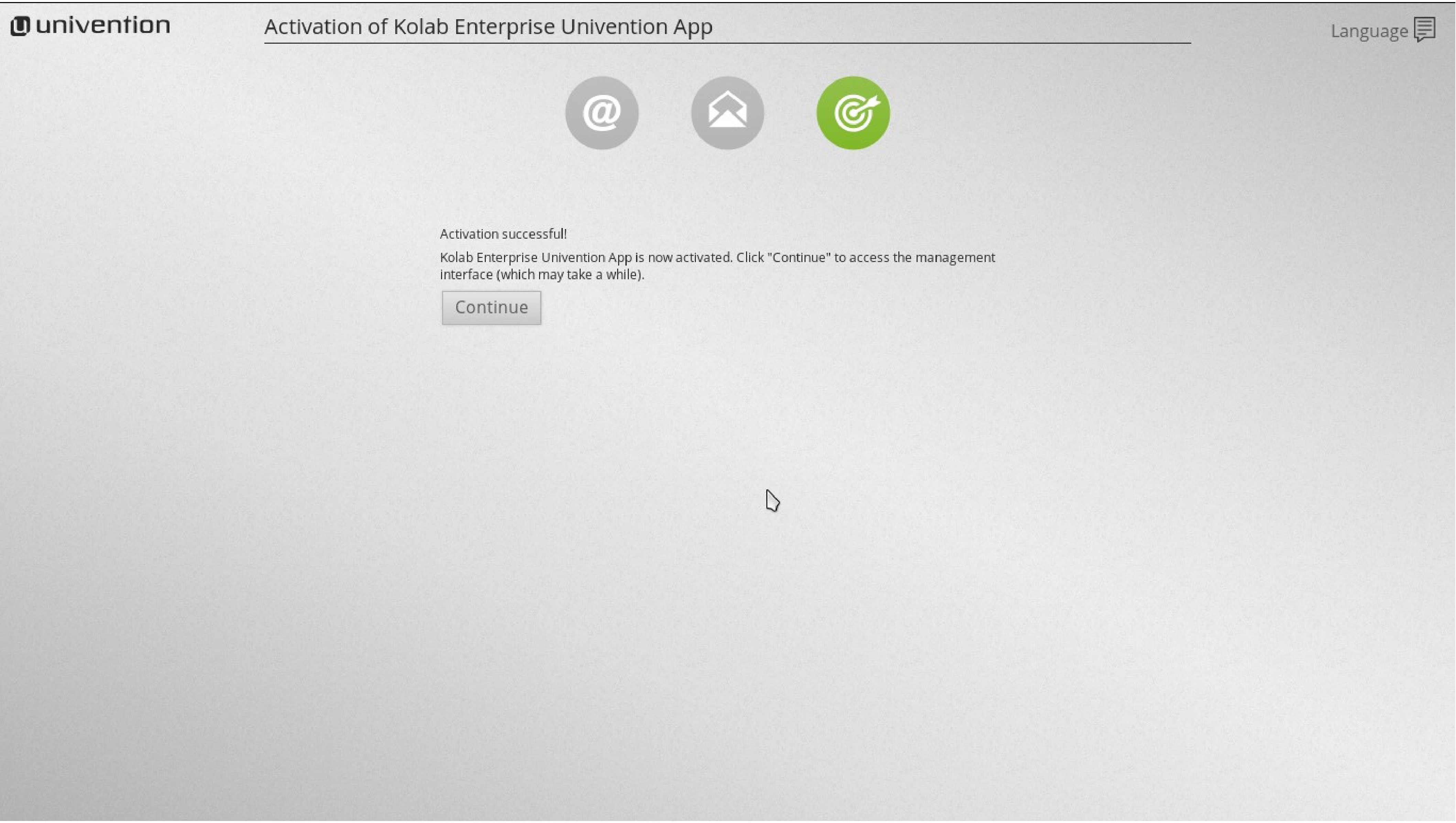
12:09 PM

To Me <info@hcderaad.nl>

```
----English----

Carry out the following steps to complete the Univention activation process for your system:

1. Save the attached license file to your computer.
2. Upload the license file to the web interface as explained there.

Best regards
Univention GmbH


----Deutsch----

Führen Sie die folgenden Schritte aus, um den Univention-Aktivierungsvorgang für Ihr System abzuschließen:

1. Speichern Sie die Lizenzdatei aus dem Anhang auf Ihrem Computer.
2. Laden Sie die Lizenzdatei auf der Weboberfläche wie dort beschrieben hoch.

Mit freundlichen Grüßen
Univention GmbH
```

1 attachment: ucs.license 1.1 KB

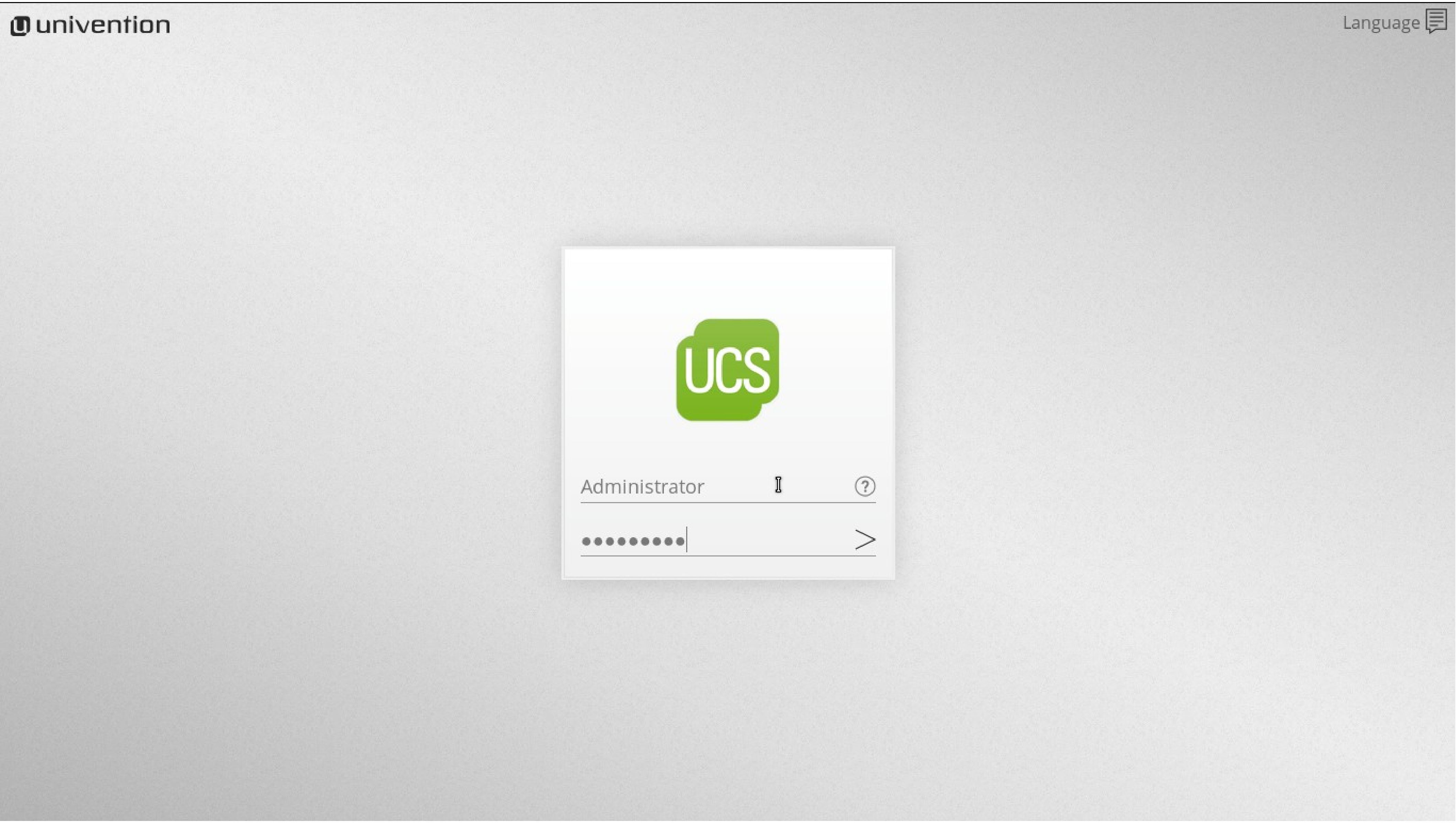
ucs.license 1.1 KB



Activation of Kolab Enterprise Univention App

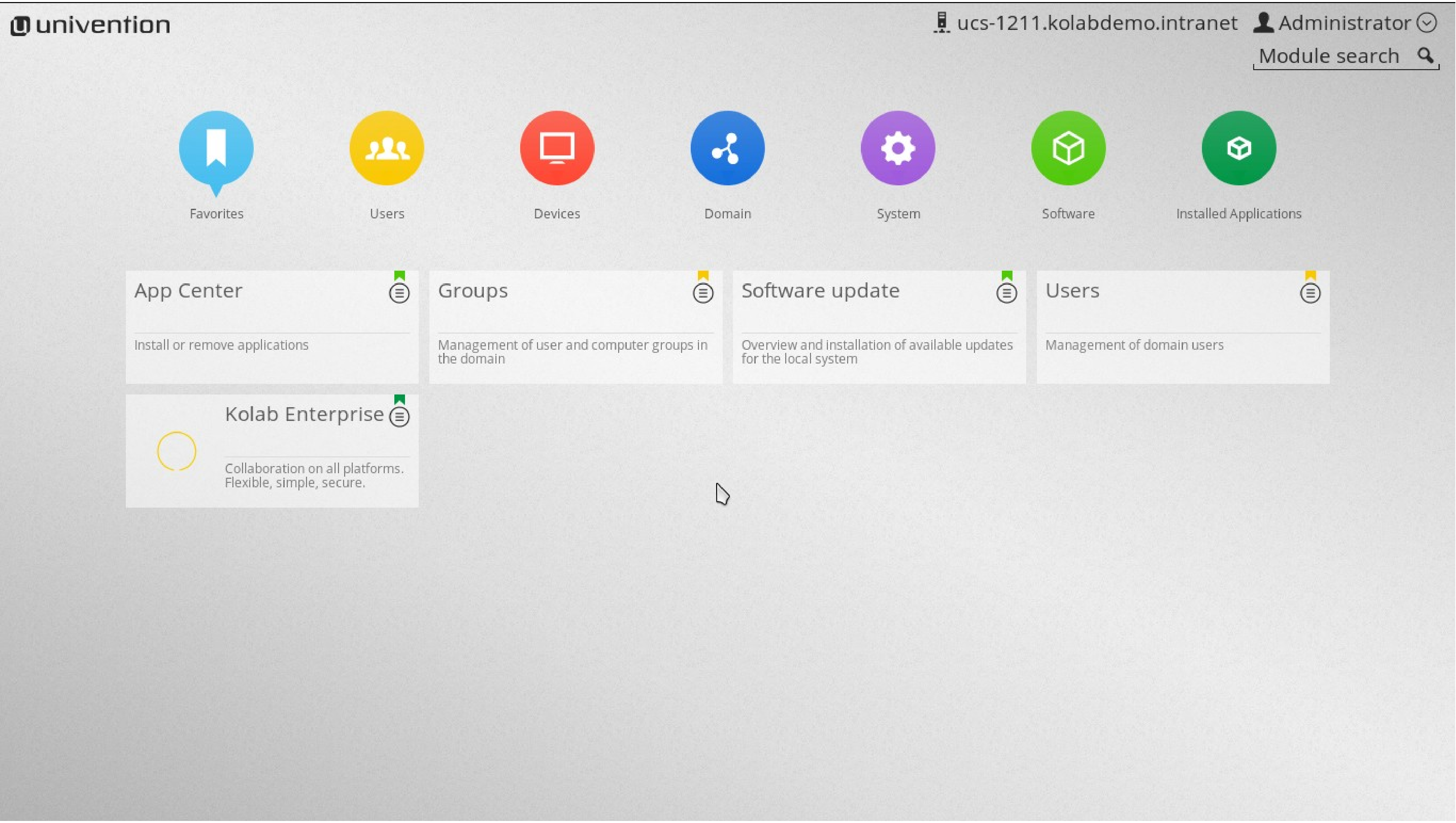
Activation successful!

Kolab Enterprise Univention App is now activated. Click "Continue" to access the management interface (which may take a while).



Administrator

●●●●●●●●●



App Center

Install or remove applications

Groups

Management of user and computer groups in the domain

Software update

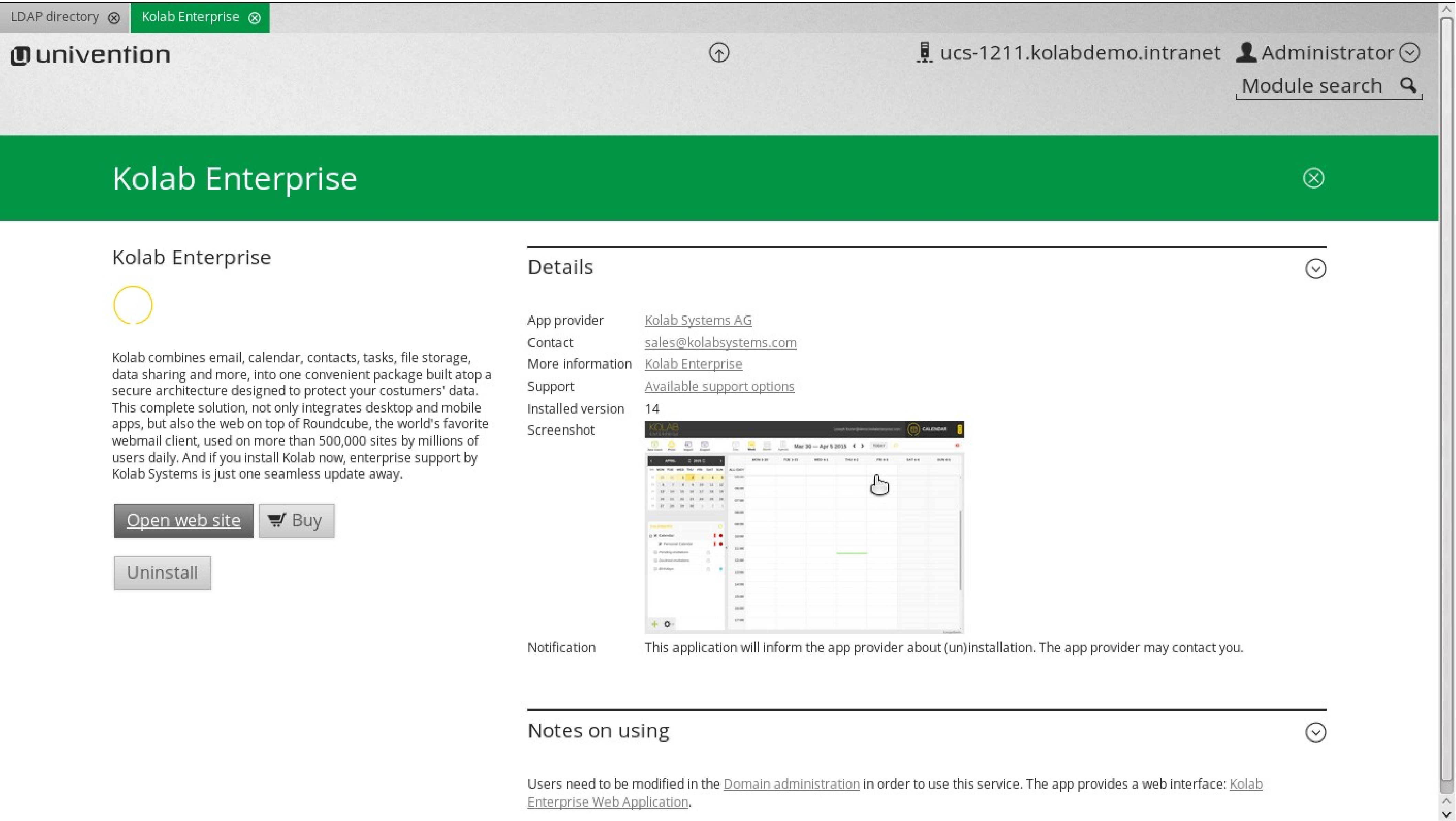
Overview and installation of available updates for the local system

Users

Management of domain users

Kolab Enterprise

Collaboration on all platforms. Flexible, simple, secure.



Kolab Enterprise

Kolab Enterprise

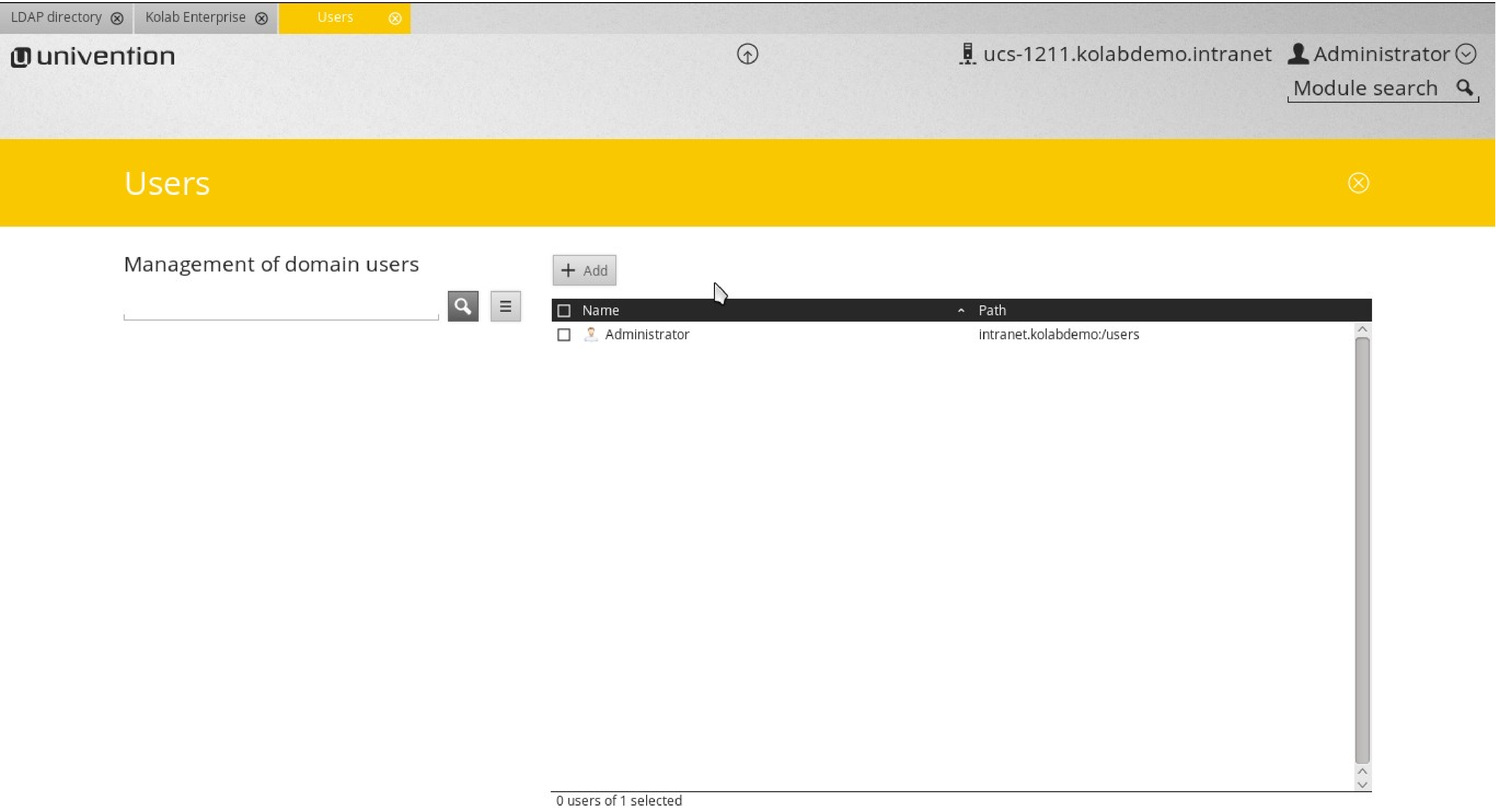
Kolab combines email, calendar, contacts, tasks, file storage, data sharing and more, into one convenient package built atop a secure architecture designed to protect your costumers' data. This complete solution, not only integrates desktop and mobile apps, but also the web on top of Roundcube, the world's favorite webmail client, used on more than 500,000 sites by millions of users daily. And if you install Kolab now, enterprise support by Kolab Systems is just one seamless update away.

Details

App provider	Kolab Systems AG
Contact	sales@kolabsystems.com
More information	Kolab Enterprise
Support	Available support options
Installed version	14
Screenshot	
Notification	This application will inform the app provider about (un)installation. The app provider may contact you.

Notes on using

Users need to be modified in the Domain administration in order to use this service. The app provides a web interface: Kolab Enterprise Web Application.

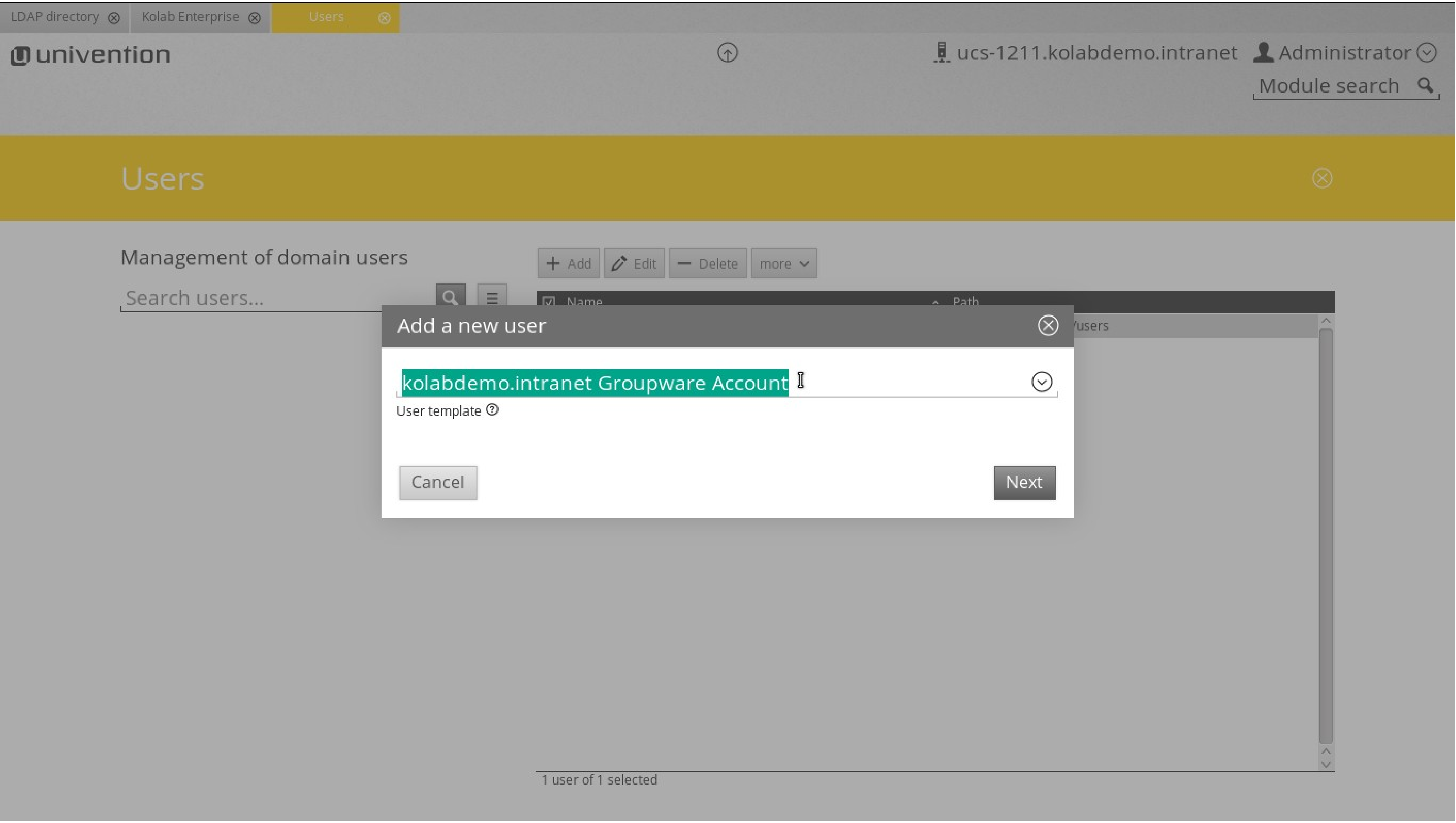


Users

Management of domain users

□ Name	Path
□ Administrator	intranet.kolabdemo:/users

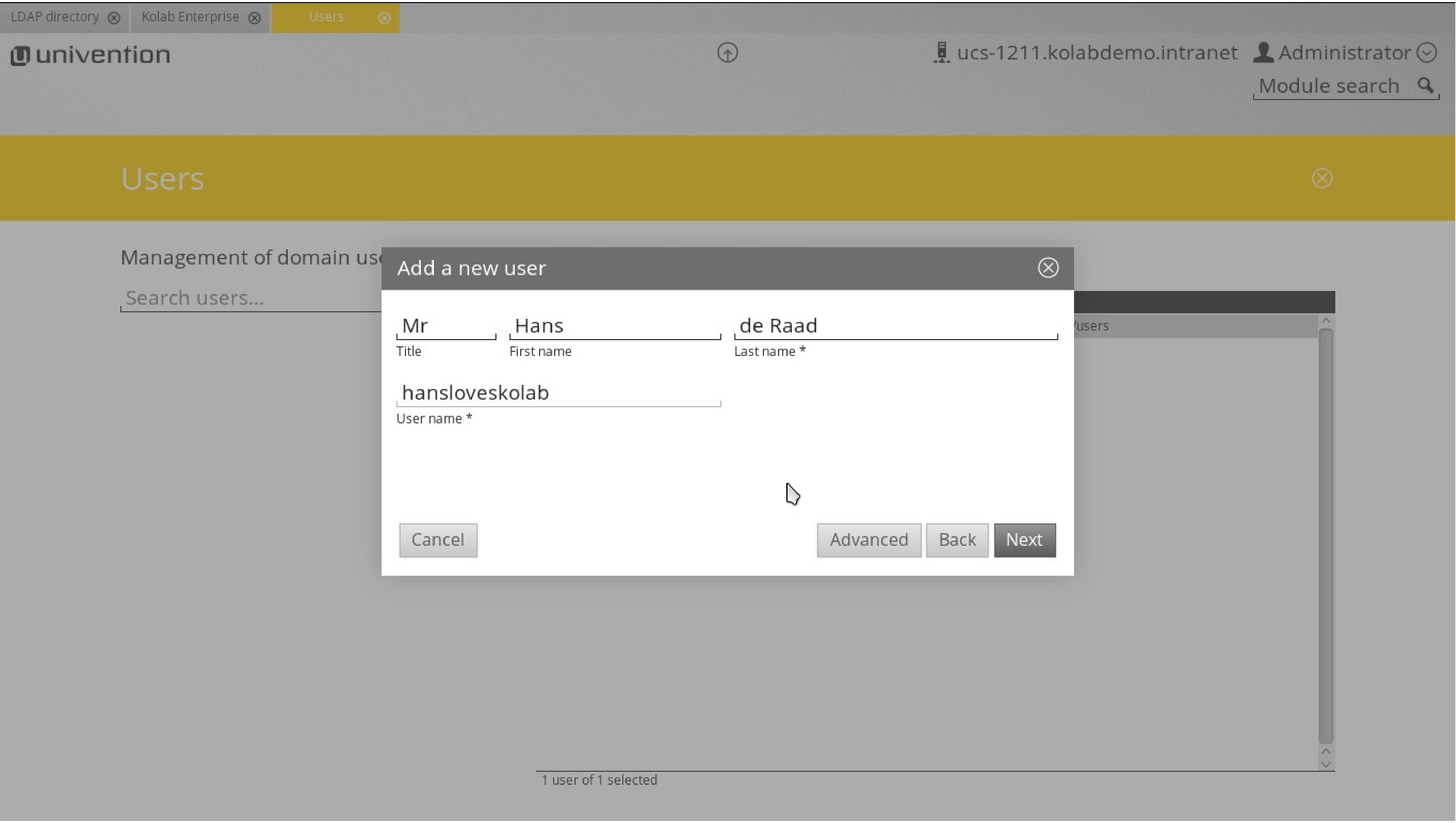
0 users of 1 selected



Add a new user

kolabdemo.intranet Groupware Account

User template

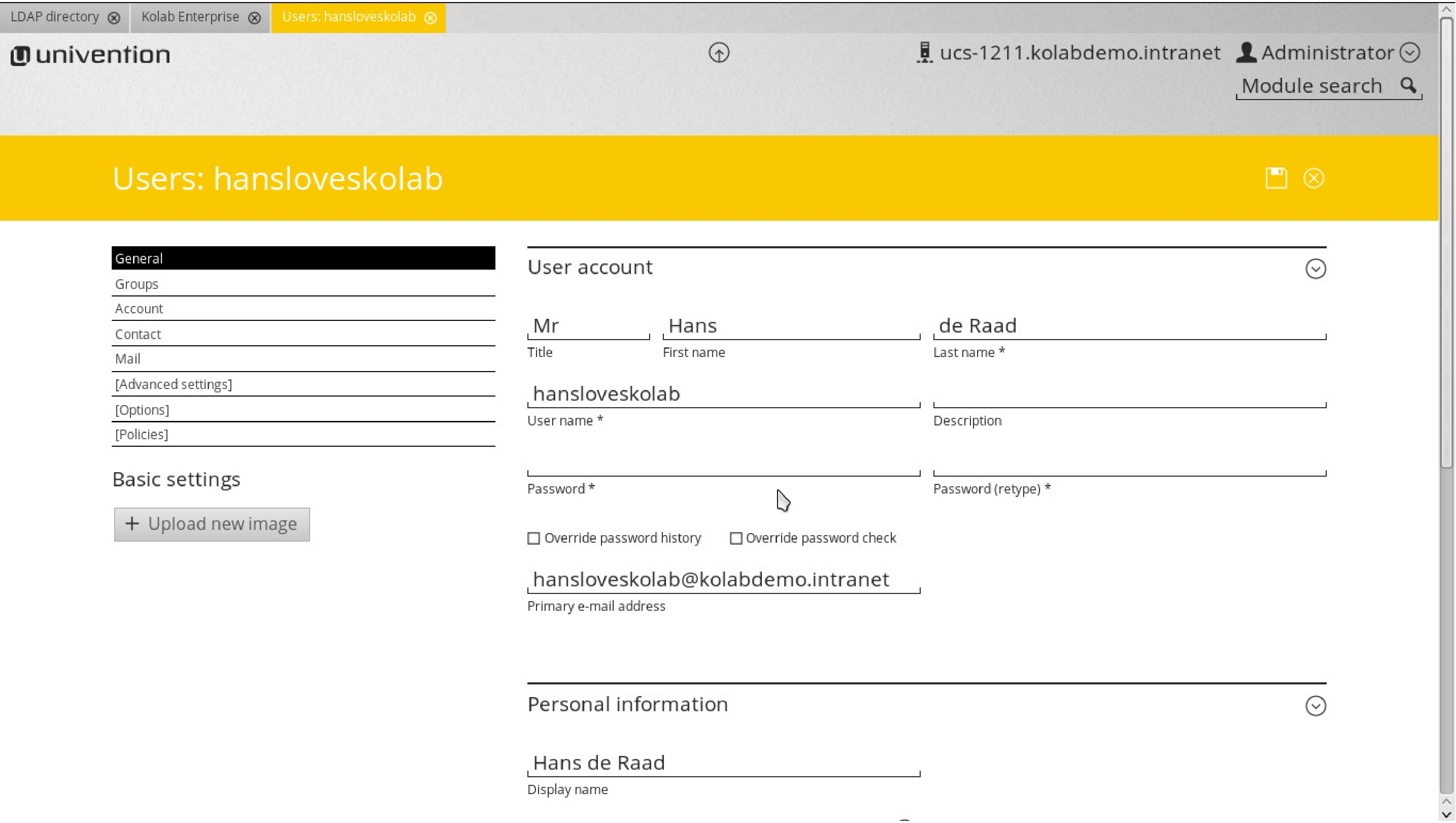


Title: Mr

First name: Hans

Last name *: de Raad

User name *: hansloveskolab



Users: hansloveskolab

User account

Title: Mr	First name: Hans	Last name *: de Raad

User name *: hansloveskolab

Description:

Password *:

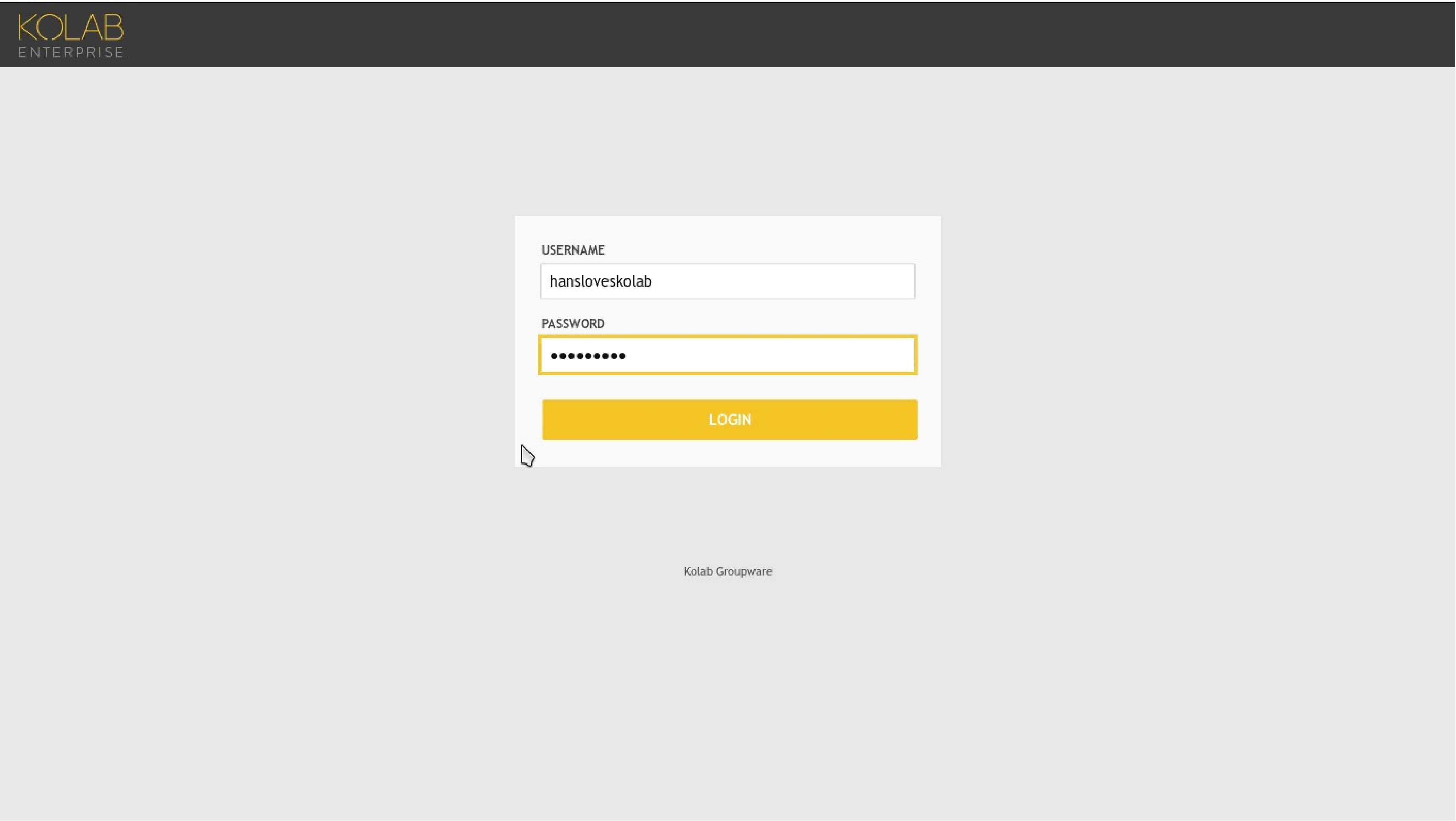
Password (retype) *:

□ Override password history □ Override password check

Primary e-mail address: hansloveskolab@kolabdemo.intranet

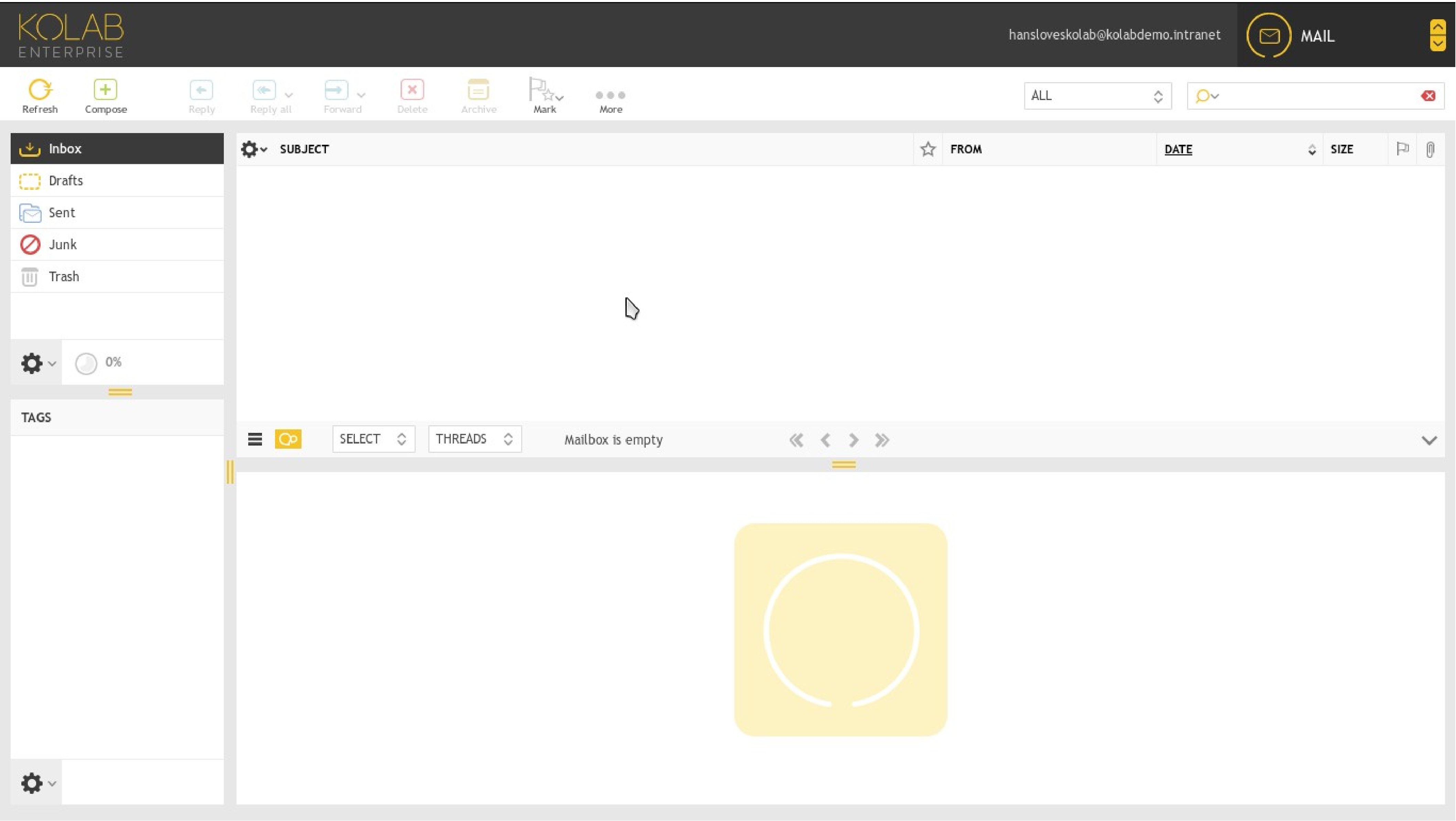
Personal information

Display name: Hans de Raad



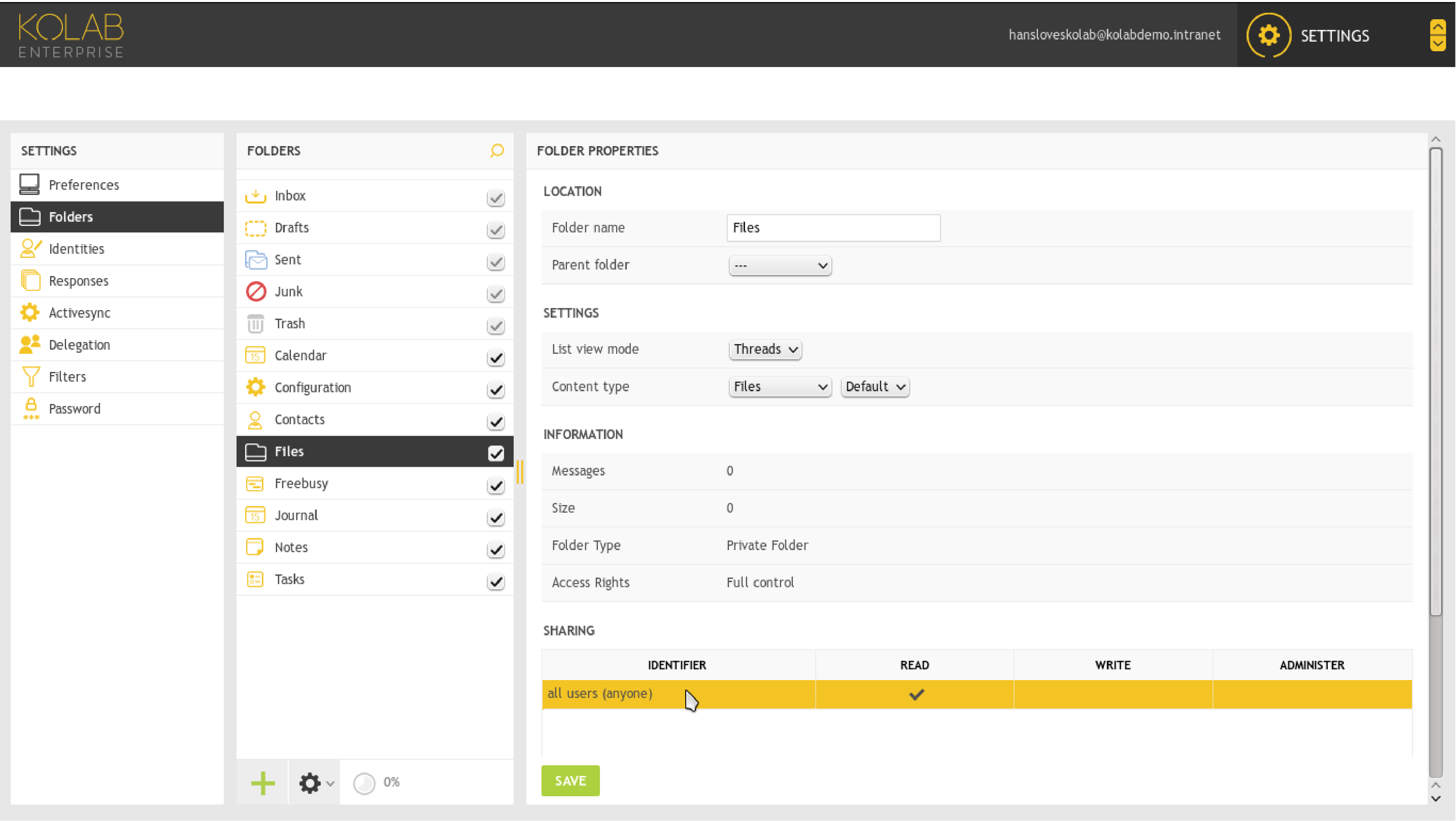
USERNAME: hansloveskolab

PASSWORD: ●●●●●●●●●



hansloveskolab@kolabdemo.intranet

Mailbox is empty



LOCATION

Folder name	Files
Parent folder	---

SETTINGS

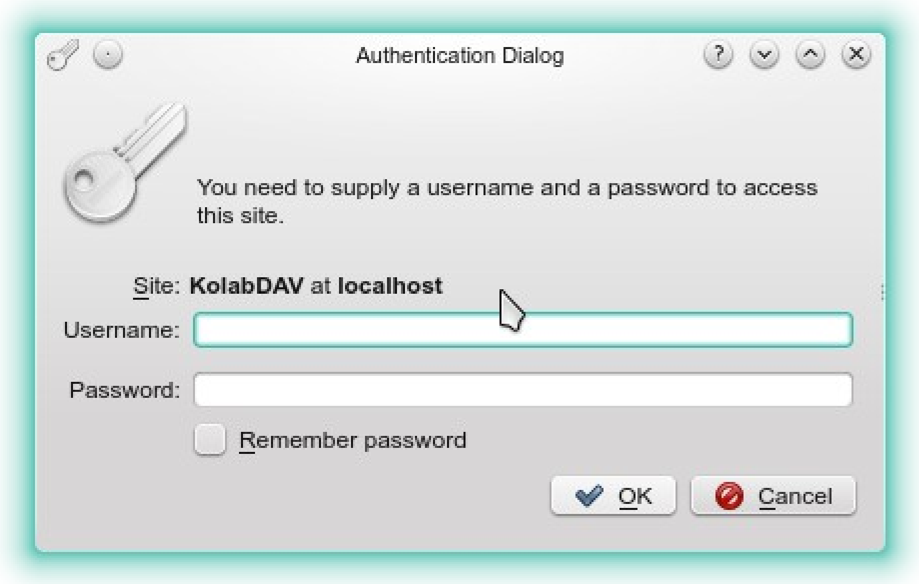
List view mode	Threads
Content type	Files Default

INFORMATION

Messages	0
Size	0
Folder Type	Private Folder
Access Rights	Full control

SHARING

IDENTIFIER	READ	WRITE	ADMINISTER
all users (anyone)	✓		



Authentication Dialog

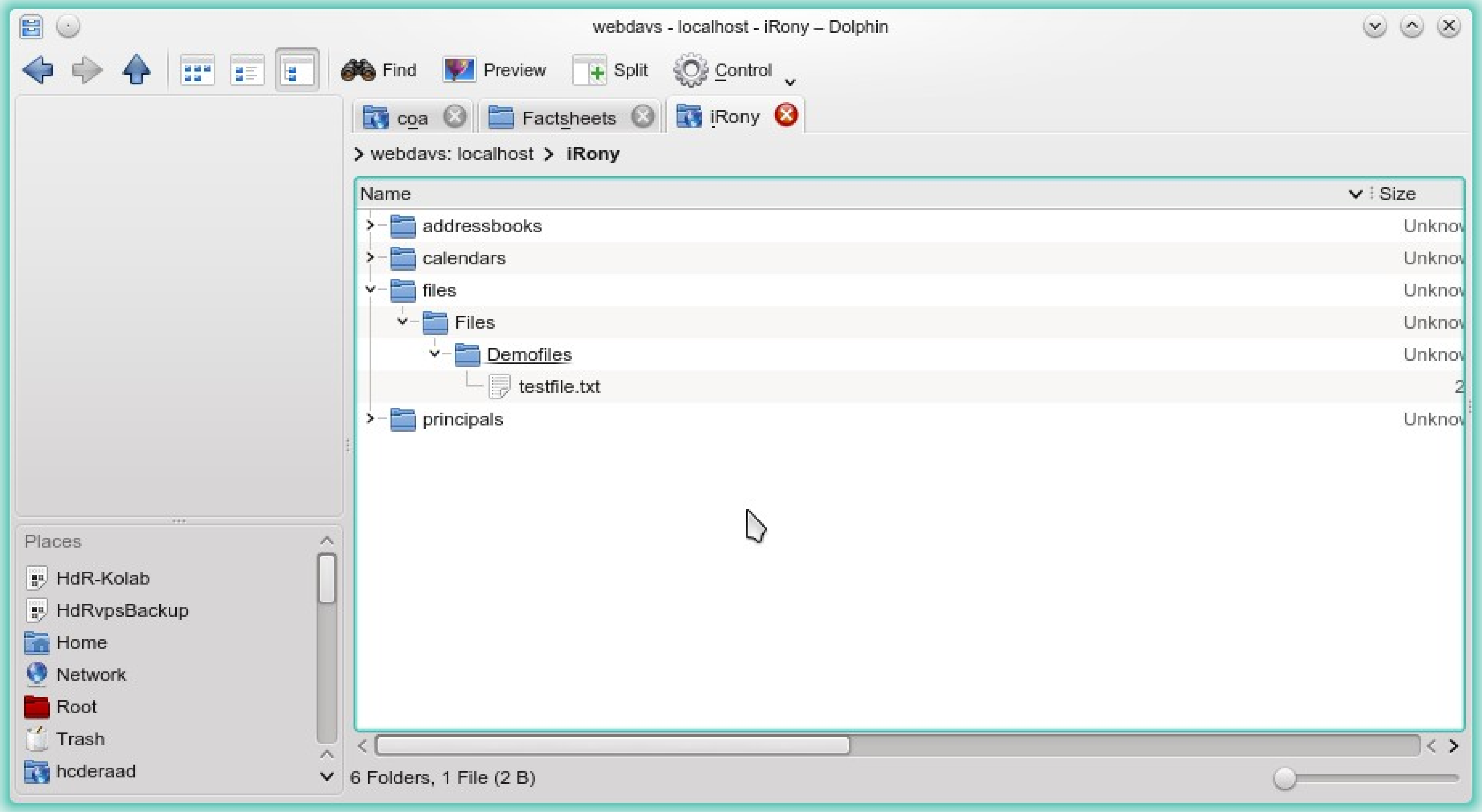
You need to supply a username and a password to access this site.

Site: **KolabDAV** at **localhost**

Username:

Password:

□ Remember password



webdavs - localhost - iRony – Dolphin

> webdavs: localhost > **iRony**

```
Name                                   Size
> addressbooks                         Unknov
> calendars                            Unknov
v files                                Unknov
  v Files                              Unknov
    v Demofiles                        Unknov
        testfile.txt                        2
> principals                           Unknov
```

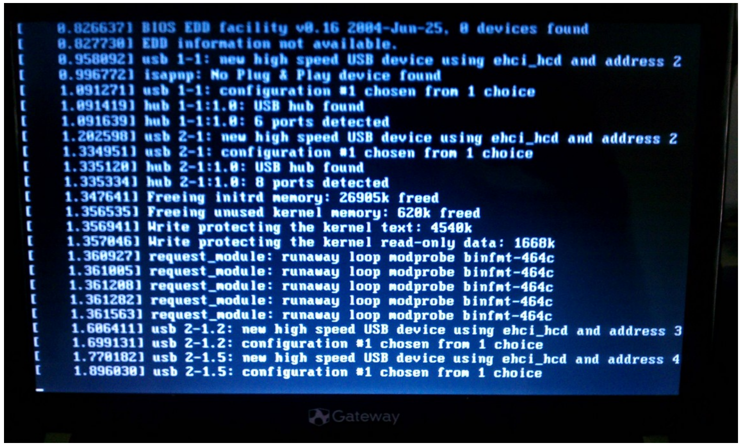
6 Folders, 1 File (2 B)

Or do it manually

- Artisan style! :-)

Install OS (1/2)

- Install Ubuntu 14.04 LTS
  - Provide a hostname (dcdemo)
  - Provide a username (dcuser)
    - And a password (dcpass01)
  - Encrypt your home directory
    - If on VPS or laptop: YES
  - Or use Encrypted LVM later in the partitioning setup
  - But beware of the performance penalty
    - And don't forget this when rebooting the server (automatic updates?).



```
[    0.826637] BIOS EDD facility v0.16 2004-Jun-25, 0 devices found
[    0.827730] EDD information not available.
[    0.958092] usb 1-1: new high speed USB device using ehci_hcd and address 2
[    0.996772] isapnp: No Plug & Play device found
[    1.091271] usb 1-1: configuration #1 chosen from 1 choice
[    1.091419] hub 1-1:1.0: USB hub found
[    1.091639] hub 1-1:1.0: 6 ports detected
[    1.202598] usb 2-1: new high speed USB device using ehci_hcd and address 2
[    1.334951] usb 2-1: configuration #1 chosen from 1 choice
[    1.335120] hub 2-1:1.0: USB hub found
[    1.335334] hub 2-1:1.0: 8 ports detected
[    1.347641] Freeing initrd memory: 26905k freed
[    1.356535] Freeing unused kernel memory: 620k freed
[    1.356941] Write protecting the kernel text: 4540k
[    1.357046] Write protecting the kernel read-only data: 1668k
[    1.360927] request_module: runaway loop modprobe binfmt-464c
[    1.361005] request_module: runaway loop modprobe binfmt-464c
[    1.361208] request_module: runaway loop modprobe binfmt-464c
[    1.361282] request_module: runaway loop modprobe binfmt-464c
[    1.361563] request_module: runaway loop modprobe binfmt-464c
[    1.606411] usb 2-1.2: new high speed USB device using ehci_hcd and address 3
[    1.699131] usb 2-1.2: configuration #1 chosen from 1 choice
[    1.770182] usb 2-1.5: new high speed USB device using ehci_hcd and address 4
[    1.896030] usb 2-1.5: configuration #1 chosen from 1 choice
_
```

Install OS (2/2)

- During OS install
  - OpenSSH and LAMP Server.
  - MySQL Root user password (dcsql01)
    - You will need that for Kolab setup
- After OS Install
  - sudo apt-get update && sudo apt-get upgrade
  - sudo apt-get install ethtool
- Be sure to add an extra network interface (bridged) in Promiscuous mode “All”.
  - /etc/network/interfaces
    - auto eth1
    - iface eth1 inet dhcp

Install and enable mod_ssl

- Install the Apache mod_ssl module
  - sudo a2enmod ssl
  - sudo a2ensite default-ssl
  - sudo service apache2 restart

- NB You should install your own certificate on your domain!

Change firewall rules

- ONLY open up TLS/SSL secured ports (and SMTP).
  - sudo ufw allow ssh/tcp
  - sudo ufw logging on
  - sudo ufw enable
  - sudo ufw allow smtp
  - sudo ufw allow https
  - sudo ufw allow 587/tcp
  - sudo ufw allow 993/tcp
- Check this with: sudo ufw status

Install Kolab (1/4)

- Add repo's:
  - https://docs.kolab.org/installation-guide/ubuntu.html
  - Add file: sudo vim /etc/apt/sources.list.d/kolab.list
  - Add contents:
    - deb http://obs.kolabsys.com/repositories/Kolab:/3.4/Ubuntu_14.04/ ./

      deb http://obs.kolabsys.com/repositories/Kolab:/3.4:/Updates/Ubuntu_14.04/ ./
  - Add GPG key
    - gpg --search devel@lists.kolab.org
      - If finding the keyserver fails at first, try again
    - gpg --export --armor devel@lists.kolab.org > devel@lists.kolab.org.key
    - sudo apt-key add devel@lists.kolab.org.key

Install Kolab (2/4)

- Change repo priority:
  - Add file: sudo vim /etc/apt/preferences.d/kolab
  - Add file contents:
    - Package: *
      Pin: origin obs.kolabsys.com
      Pin-Priority: 501
- Make sure that the Fully Qualified Domain Name is set correctly (you should not have to perform this on a VPS).
  - Run: hostname -f
  - Output should be: servername.domainname
  - Else change the hostname.

Install Kolab (3/4)
Check / change hostname

- Get the systems IP by running: ifconfig
- Edit: sudo vim /etc/hosts
  - And add the hostname following this pattern:
    - IP-Address-of-system hostname.domainname.TLD hostname
      - 123.123.123.1 dcdemo.localdomain.local dcdemo
    - Make sure to comment the 127.0.0.1 HOSTNAME entry.
- Edit: sudo vim /etc/hostname
  - dcdemo
- Restart service:
  - sudo /etc/init.d/networking restart

Install Kolab (4/4)

- Run: sudo apt-get update && sudo aptitude install kolab
  - Select “No configuration” for mailserver setup, setup-kolab will to this later
- Run: sudo setup-kolab
  - Choose new (or note down) all the passwords (!!!)
  - Make sure the FQDN is exactly as entered in /etc/hosts
- Reboot the machine
  - you shouldn't see any errors
- Test kolab by visiting the kolab-webadmin and roundcubemail.
  - Remember “https”

Setup IMAP TLS

- Add cyrus to ssl group
  - sudo usermod -a -G ssl-cert cyrus
- Configure cyrus to use the snakeoil tls certs:
  - Edit: sudo vim /etc/imapd.conf
  - Add or change the following lines:
    - tls_server_cert: /etc/ssl/certs/ssl-cert-snakeoil.pem
    - tls_server_key: /etc/ssl/private/ssl-cert-snakeoil.key
    - tls_server_ca_file: /etc/ssl/certs/ssl-cert-snakeoil.pem
    - tls_client_ca_file: /etc/ssl/certs/ssl-cert-snakeoil.pem
- NB You should install your own certificates here.

Add a user to Kolab

- Log into the kolab-webadmin
  - Username cn=Directory Administrator
  - Password noted on installation
- Goto Users
  - Add a user of type kolab-user
- Test this by login into roundcubemail with the user account
  - Send some emails, and test IMAP connectivity as well.
- Congratulations, you've got a working Kolab setup!

Yay moment!

Close firewall ports

- Close the firewall ports we've opened for testing:
  - Get the numbered firewall rules
    - sudo ufw status numbered
    - You must check the numbers after every rule deletion!
  - Then one by one delete the rules for http(NO s)/80 and 8000
    - sudo ufw delete RULENUMBER
    - Make sure you've also deleted the IPv6 entries.
  - Check, check, double check with:
    - sudo ufw status

Yay moment number 2!

Thanks for coming!

Have an awesome conference!!!

Questions?

¿

Whoami again?

Hans de Raad

info@hcderaad.nl

www.opennovations.nl

linkedin.com/in/hansderaad