DAT151 – Oblig6

LDAP, Kerberos and Samba

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Contents

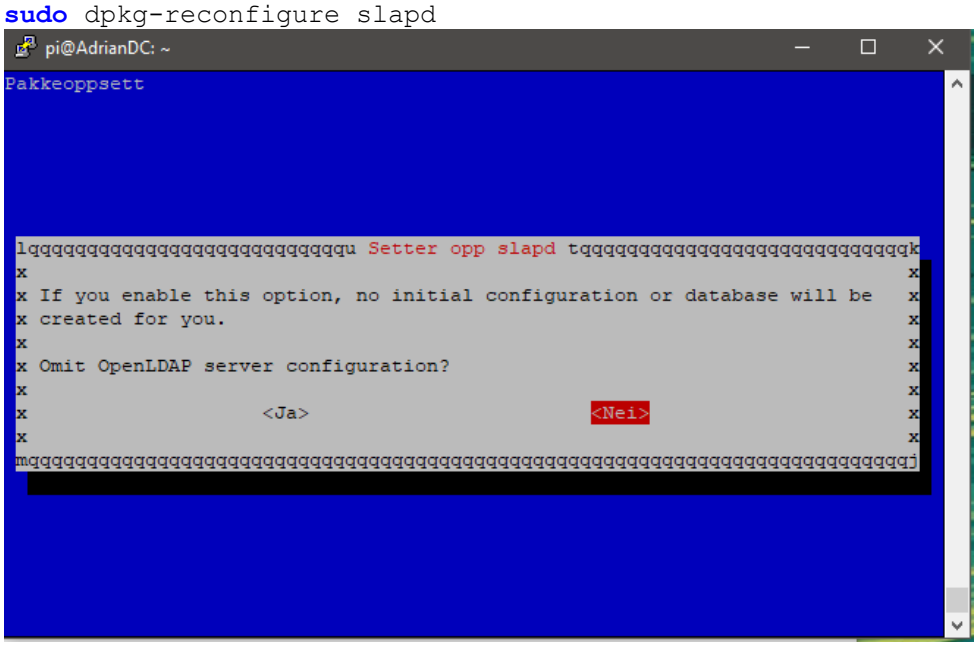
Task 1: LDAP

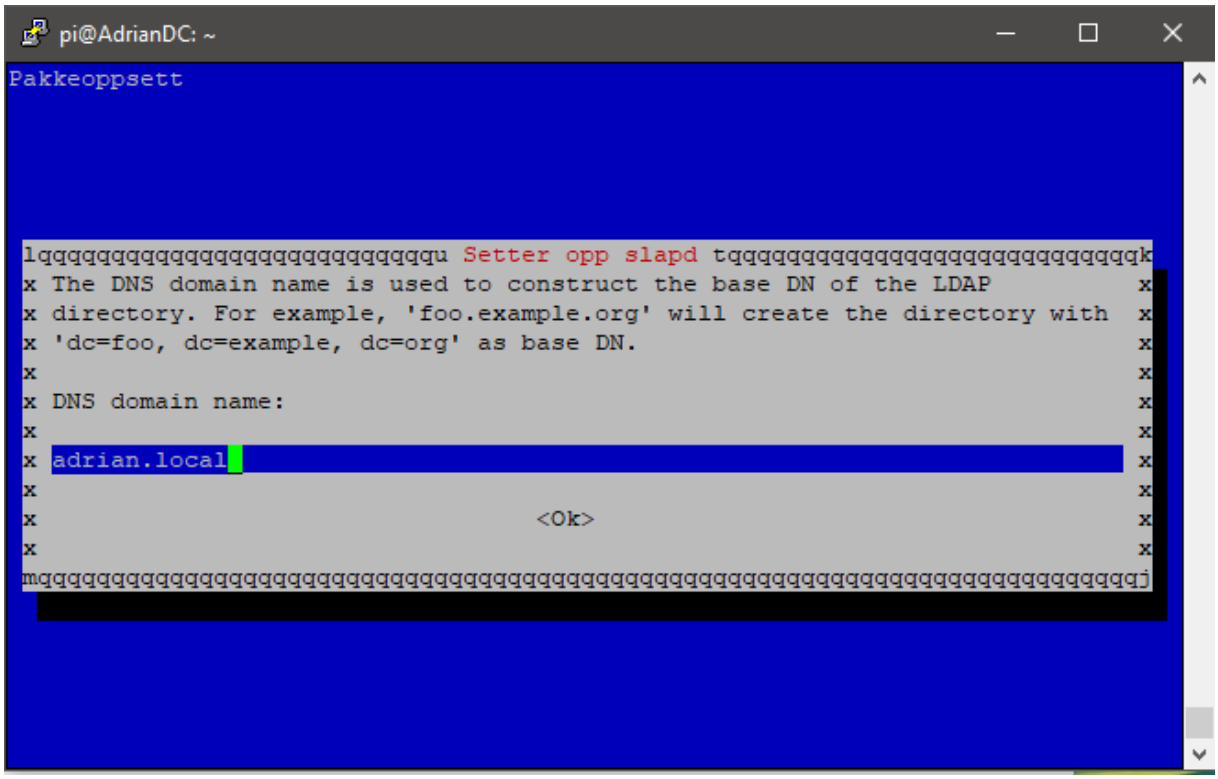
This assignment will be done with my raspberry pi devices. ‘

Installation

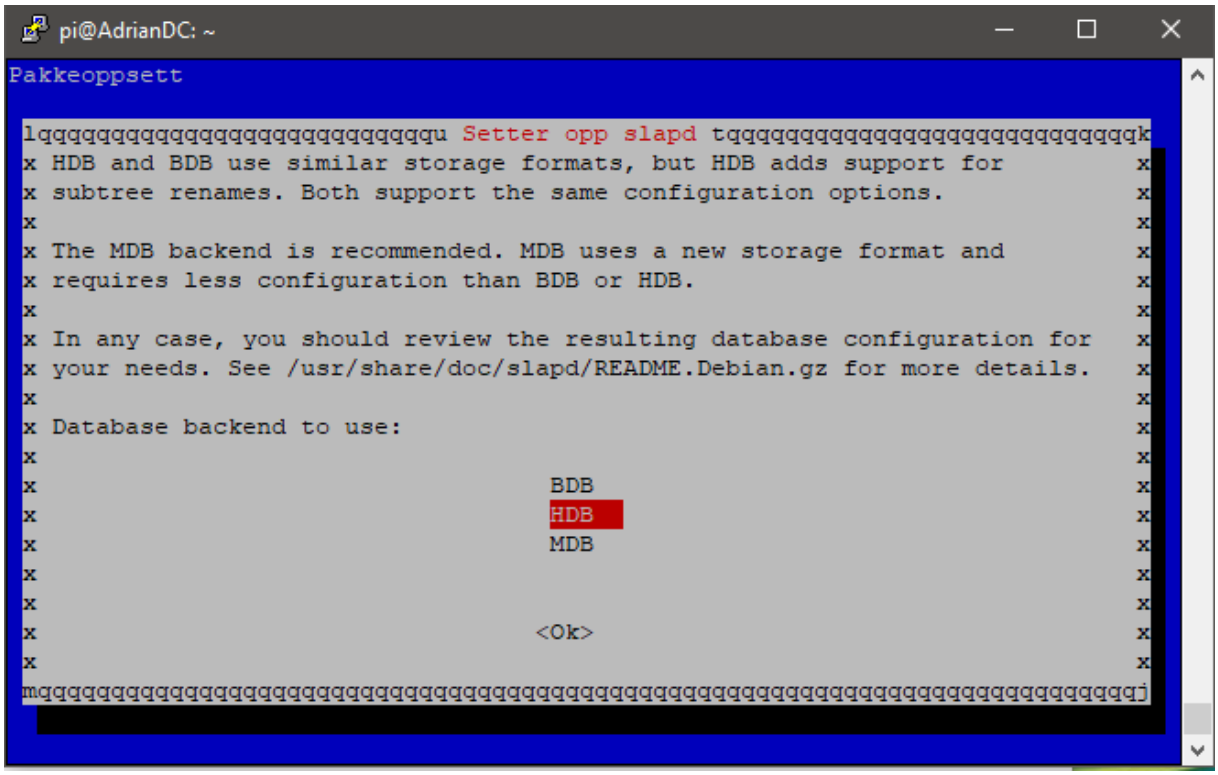
```
# Running the usual for installing
sudo apt-get update
sudo apt-get install slapd ldap-utils

# Asked for password. Giving it a long password.
```

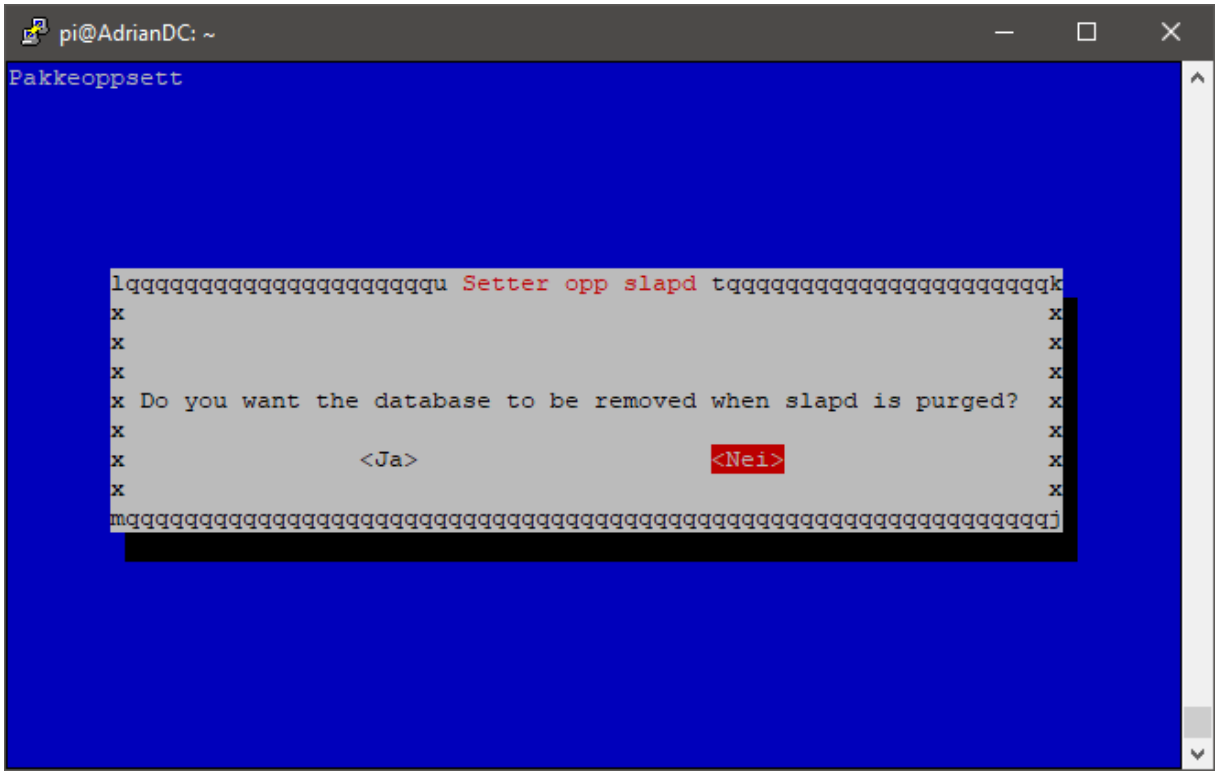

```
# Starting configuration
sudo dpkg-reconfigure slapd
```

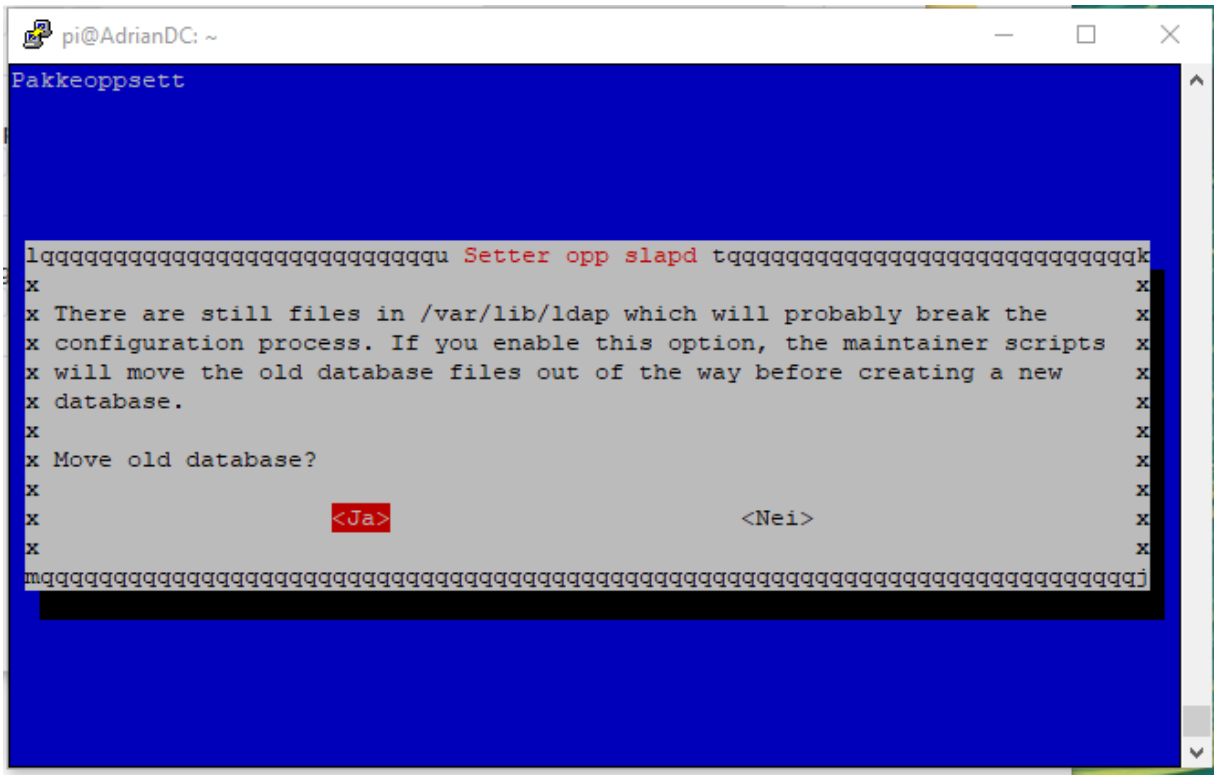



pi@AdrianDC: ~
Pakkeoppsett
Setter opp slapd
The DNS domain name is used to construct the base DN of the LDAP directory. For example, 'foo.example.org' will create the directory with 'dc=foo, dc=example, dc=org' as base DN.
DNS domain name:
adrian.local
<Ok>


pi@AdrianDC: ~
Pakkeoppsett
Setter opp slapd
Please enter the name of the organization to use in the base DN of your LDAP directory.
Organization name:
adrian
<Ok>


pi@AdrianDC: ~
Pakkeoppsett
Setter opp slapd
HDB and BDB use similar storage formats, but HDB adds support for subtree renames. Both support the same configuration options.
The MDB backend is recommended. MDB uses a new storage format and requires less configuration than BDB or HDB.
In any case, you should review the resulting database configuration for your needs. See /usr/share/doc/slapd/README.Debian.gz for more details.
Database backend to use:
BDB
HDB
MDB
<Ok>


pi@AdrianDC: ~
Pakkeoppsett
Setter opp slapd
Do you want the database to be removed when slapd is purged?
<Ja>
<Nei>



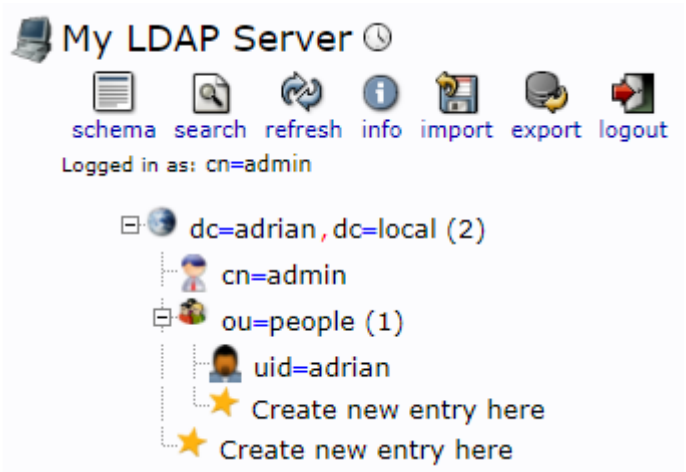
Commands

```
# Assignment 1
# This assignemt will be configured on my Raspberry pi network. AdrianDC
will be the domain controller (server) and AdrianPi will be the client.


# Installing a web user interface for ldap administration

sudo apt-get install phpldapadmin

# Checking the installation
ldapsearch -x -LLL -H ldap:/// -b dc=adrian,dc=local

dn: dc=adrian,dc=local
objectClass: top
objectClass: dcObject
objectClass: organization
o: adrian
dc: adrian

dn: cn=admin,dc=adrian,dc=local
objectClass: simpleSecurityObject
objectClass: organizationalRole
cn: admin
description: LDAP administrator
```

Adding users and Organizational Units

```
$ nano makingou.ldif
dn: ou=people,dc=adrian,dc=local
objectClass: organizationalUnit
ou: people


$ nano addAdrian.ldif
#addAdrian.ldif
dn: uid=adrian,ou=people,dc=adrian,dc=local
objectClass: top
objectClass: account
objectClass: posixAccount
objectClass: shadowAccount
cn: adrian
uid: adrian
uidNumber: 16859
gidNumber: 100
homeDirectory: /home/adrian
loginShell: /bin/bash
gecos: adrian
userPassword: {crypt}x
shadowLastChange: 0
shadowMax: 0
shadowWarning: 0


#same was done for OU first.
$ ldapadd -x -W -D "cn=admin,dc=adrian,dc=local" -f addAdrian.ldif
Enter LDAP Password:
adding new entry "uid=adrian,ou=people,dc=adrian,dc=local"

#Setting a default password
$ ldappasswd -s passord123 -W -D "cn=admin,dc=adrian,dc=local" -x
"uid=adrian,ou=people,dc=adrian,dc=local"
Enter LDAP Password:
```

Checking that the web interface shows what is expected after adding a OU and a user:



Testing

```
#Client
#(all of this is ran on a client device)
$ sudo nano /etc/hostname #Changed into the domain
$ sudo nano /etc/nsswitch.conf #Checked that ldap was enabled
$ sudo pam-auth-update
$ sudo pam-auth-update
$ sudo service nslcd stop
$ sudo service nslcd start
$ sudo service nscd stop
$ sudo service nscd start
$ su - adrian
Passord:
Du må straks endre passordet ditt (ordre fra rot)
Nytt passord:
Bekreft nytt -passord:
Ingen hjemmemappe, logger inn med HOME=/
adrian@adrian:/$

#Now we have successfully logged in from a client computer with a ldap user
```

Task 2: Kerberos

```
# kerberos server
yum install krb5-server krb5-workstation

sudo nano /etc/krb5.conf

sudo nano /var/kerberos/krb5kdc/kdc.conf

sudo kdb5_util create -s

Loading random data
Initializing database '/var/kerberos/krb5kdc/principal' for realm
'EXAMPLE.COM',
master key name 'K/M@EXAMPLE.COM'
You will be prompted for the database Master Password.
It is important that you NOT FORGET this password.
Enter KDC database master key:
Re-enter KDC database master key to verify:

sudo systemctl enable kadmin krb5kdc
sudo systemctl start kadmin krb5kdc

sudo firewall-cmd --permanent --add-service=kerberos
sudo firewall-cmd --reload


# Made a user
su user
kinit
# Got the ticket.
```

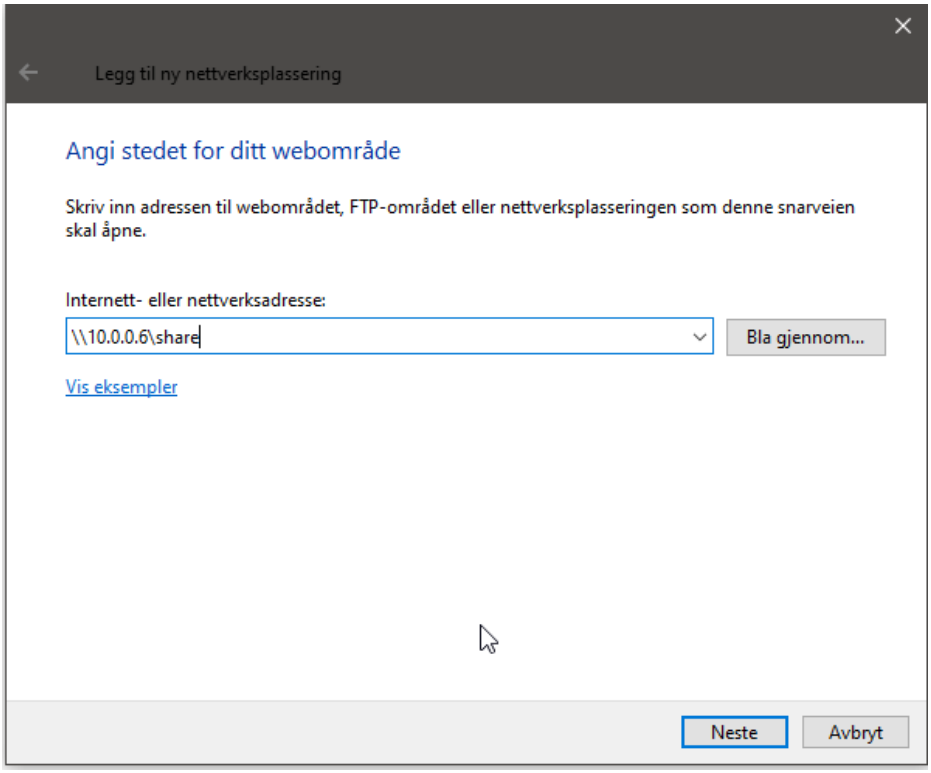
```
[user@s1 ~]$ kinit
Password for user@EXAMPLE.COM:
[user@s1 ~]$ klist
Ticket cache: KCM:1001
Default principal: user@EXAMPLE.COM

Valid starting       Expires              Service principal
03/03/2020 17:14:39  03/04/2020 17:14:39  krbtgt/EXAMPLE.COM@EXAMPLE.COM
        renew until 03/03/2020 17:14:39
[user@s1 ~]$
```

Task 3: SAMBA

Installation

```
sudo apt-get install samba samba-common-bin
sudo mkdir -m 1777 /winShare

sudo nano /etc/samba/smb.conf

[share]
Comment = Pi shared folder
Path = /winShare
Browseable = yes
Writeable = Yes
only guest = no
create mask = 0777
directory mask = 0777
Public = yes
Guest ok = yes
```

Testing



Adding a file «Tester.txt» in windows

```
/ $ cd /winShare/
/winShare $ ls -al
totalt 8
drwxrwxrwt  2 root root 4096 feb.  21 18:15 .
drwxr-xr-x 22 root root 4096 feb.  21 18:02 ..
-rwxrw-rw-  1 pi   pi      0 feb.  21 18:15 Tester.txt
```

Adding a file «Fungerer.txt» on server

```
$ touch fungerer.txt
```