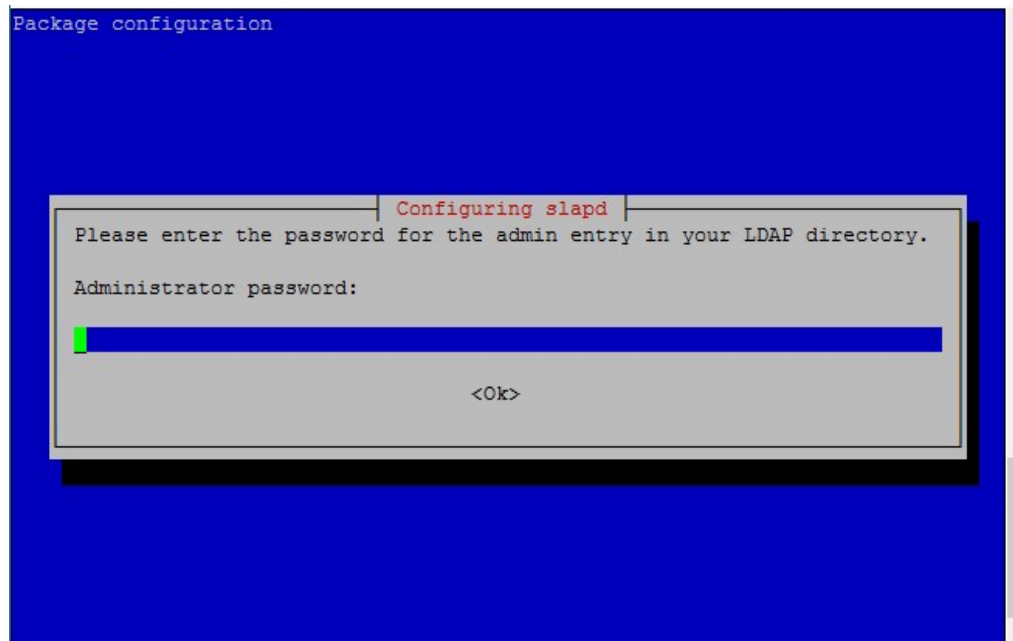


How to Install OpenLDAP

- Sudo apt-get update
- Sudo apt-get install slapd ldap-utils



Reconfiguring OpenLDAP

- Sudo dpkg-reconfigure slapd

```
Package configuration
```

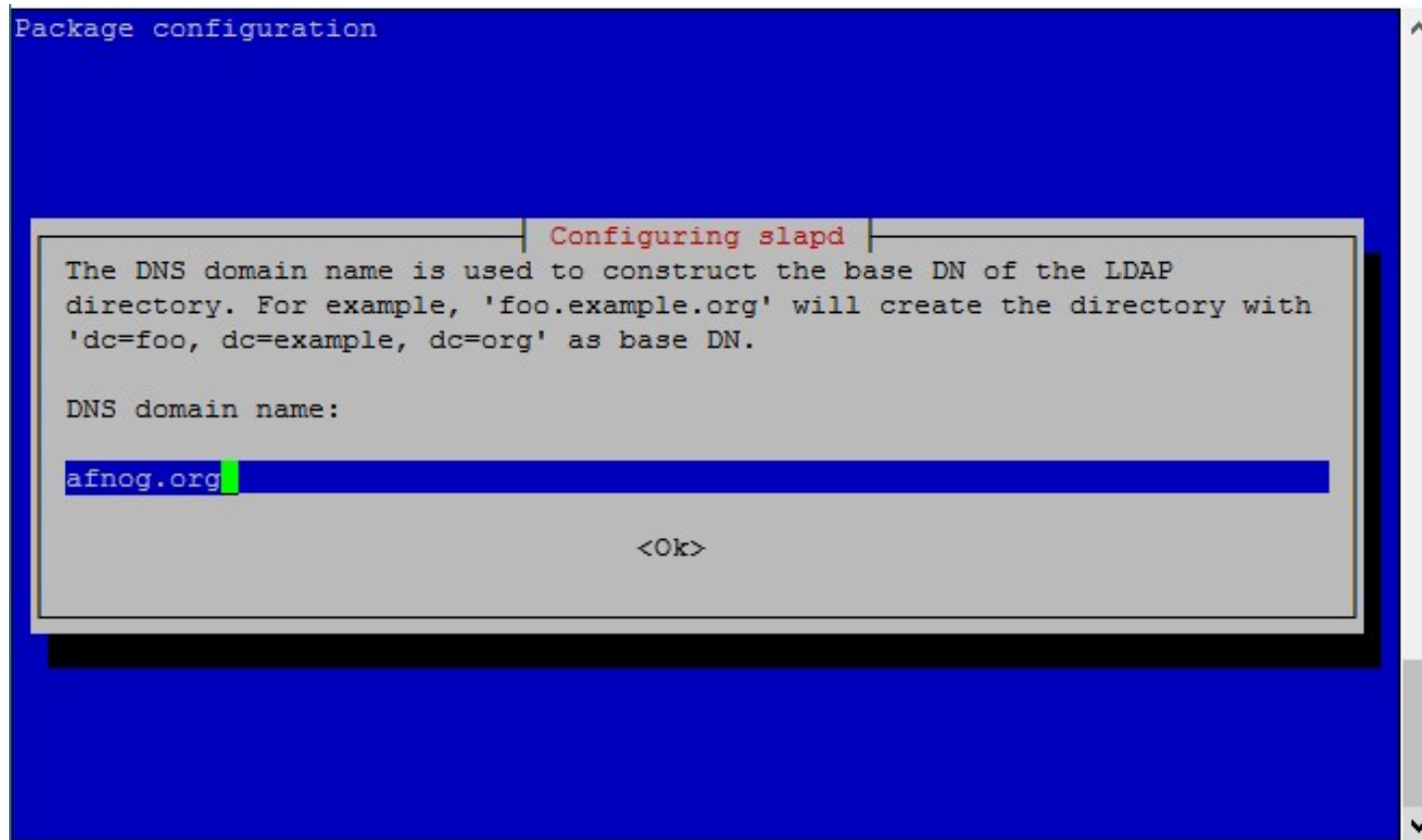
Configuring slapd

If you enable this option, no initial configuration or database will be created for you.

Omit OpenLDAP server configuration?

<Yes> **<No>**

Reconfiguring OpenLDAP Continue



Reconfiguring OpenLDAP Continue

Package configuration

Configuring slapd

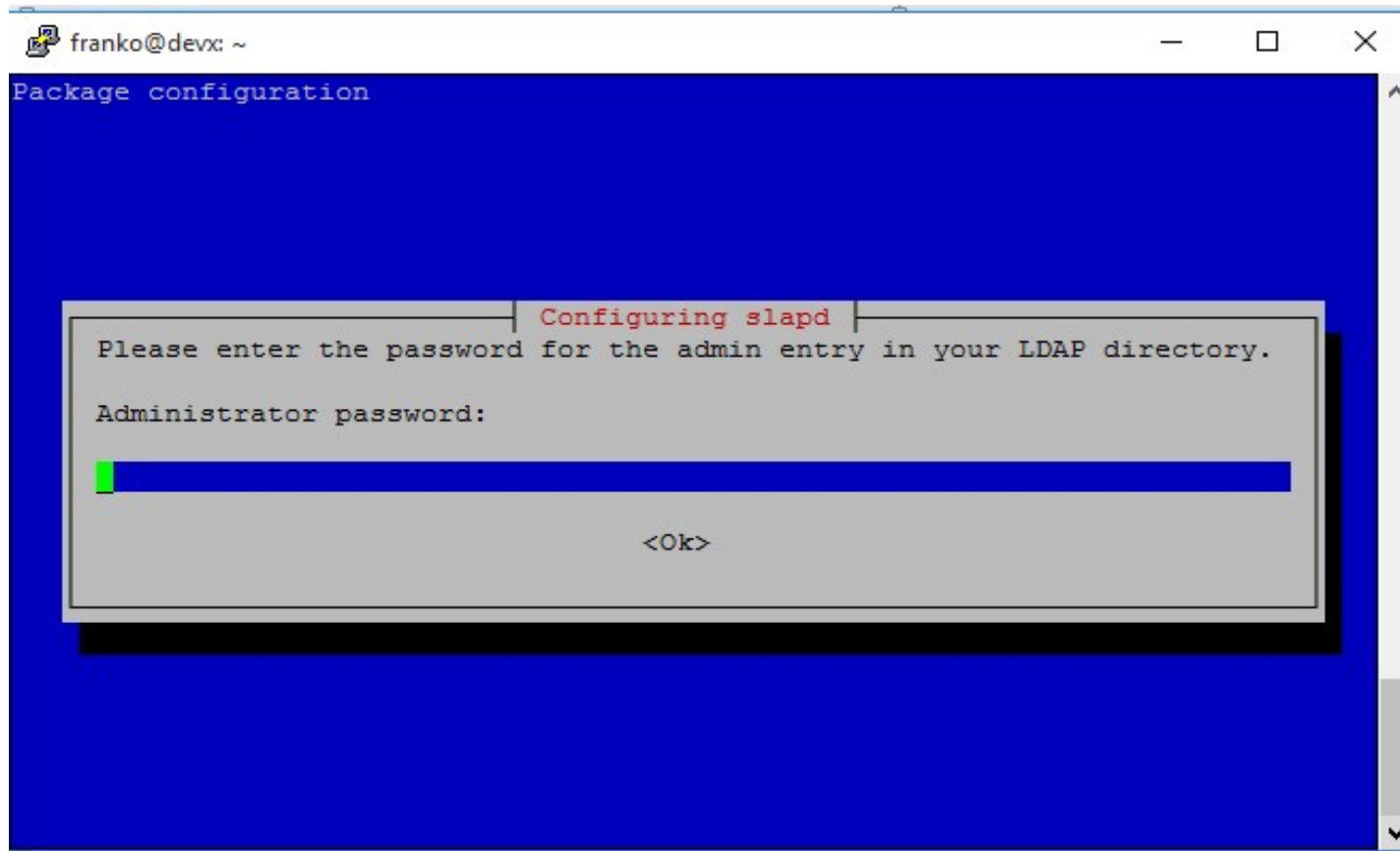
Please enter the name of the organization to use in the base DN of your LDAP directory.

Organization name:

afnog.org

<Ok>

Reconfiguring OpenLDAP Continue



Reconfiguring OpenLDAP Continue

```
Package configuration
┌─────────────────── Configuring 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.

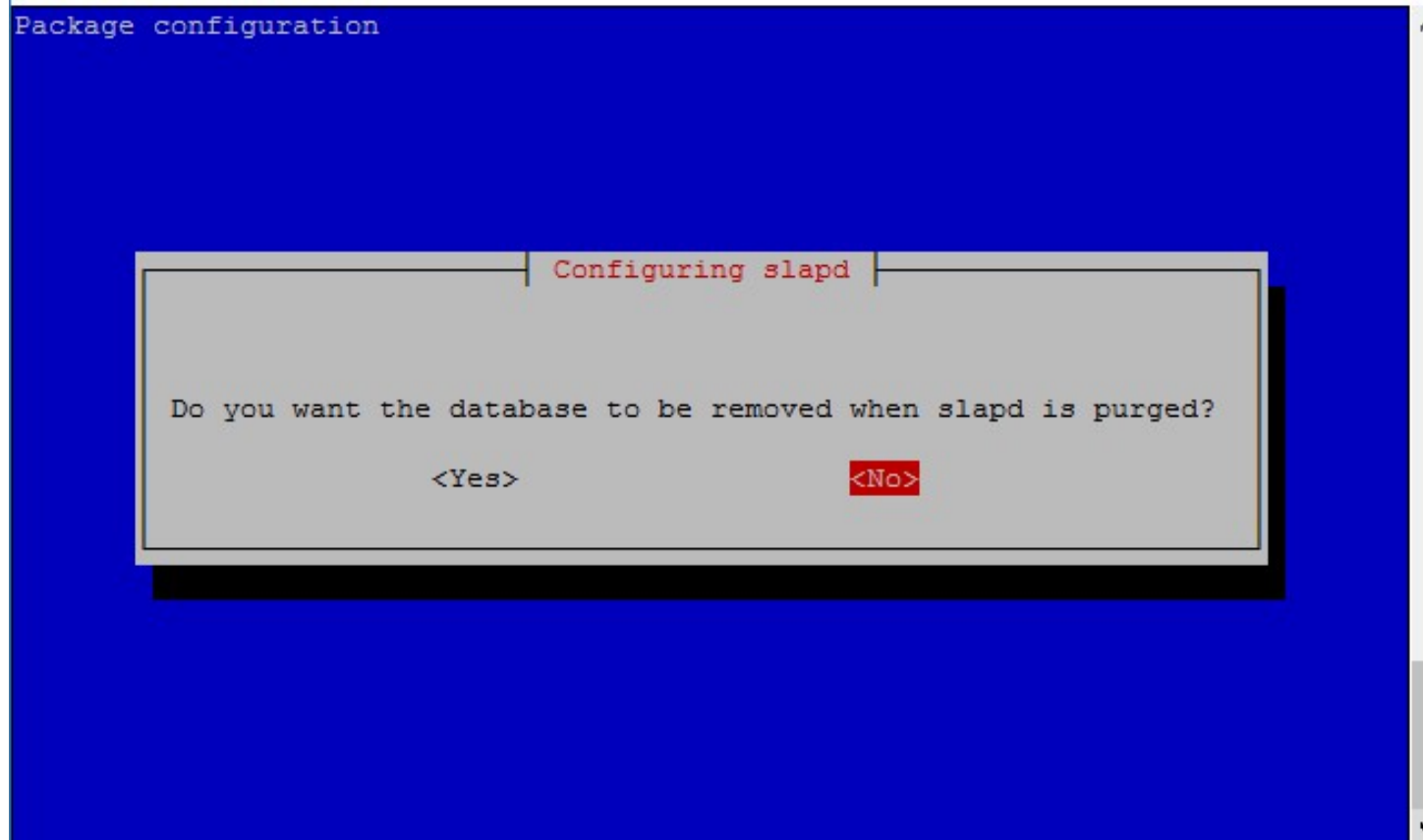
In any case, you should review the resulting database configuration for
your needs. See /usr/share/doc/slapd/README.Debian.gz for more details.

Database backend to use:

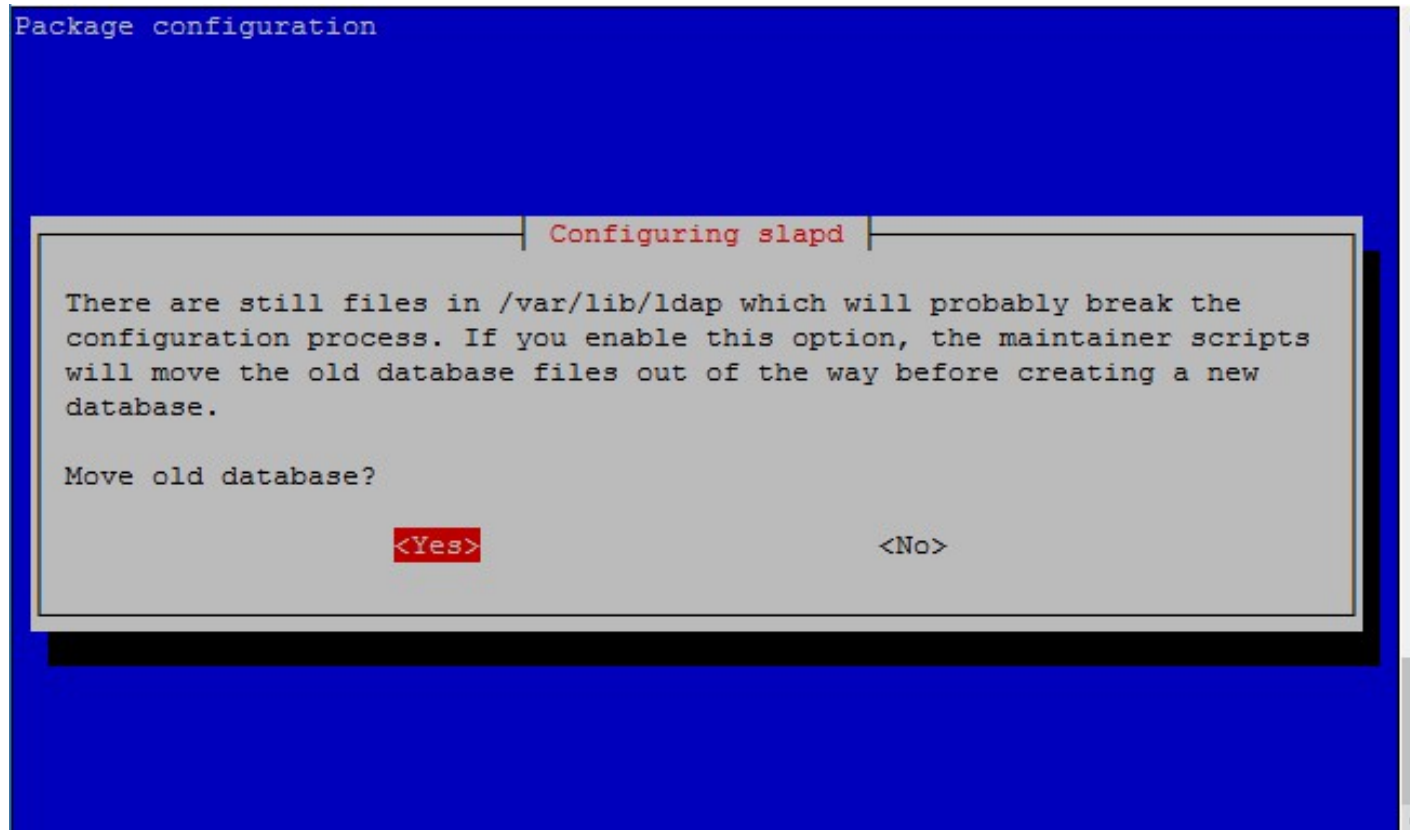
                BDB
                HDB
                MDB

                <Ok>
```

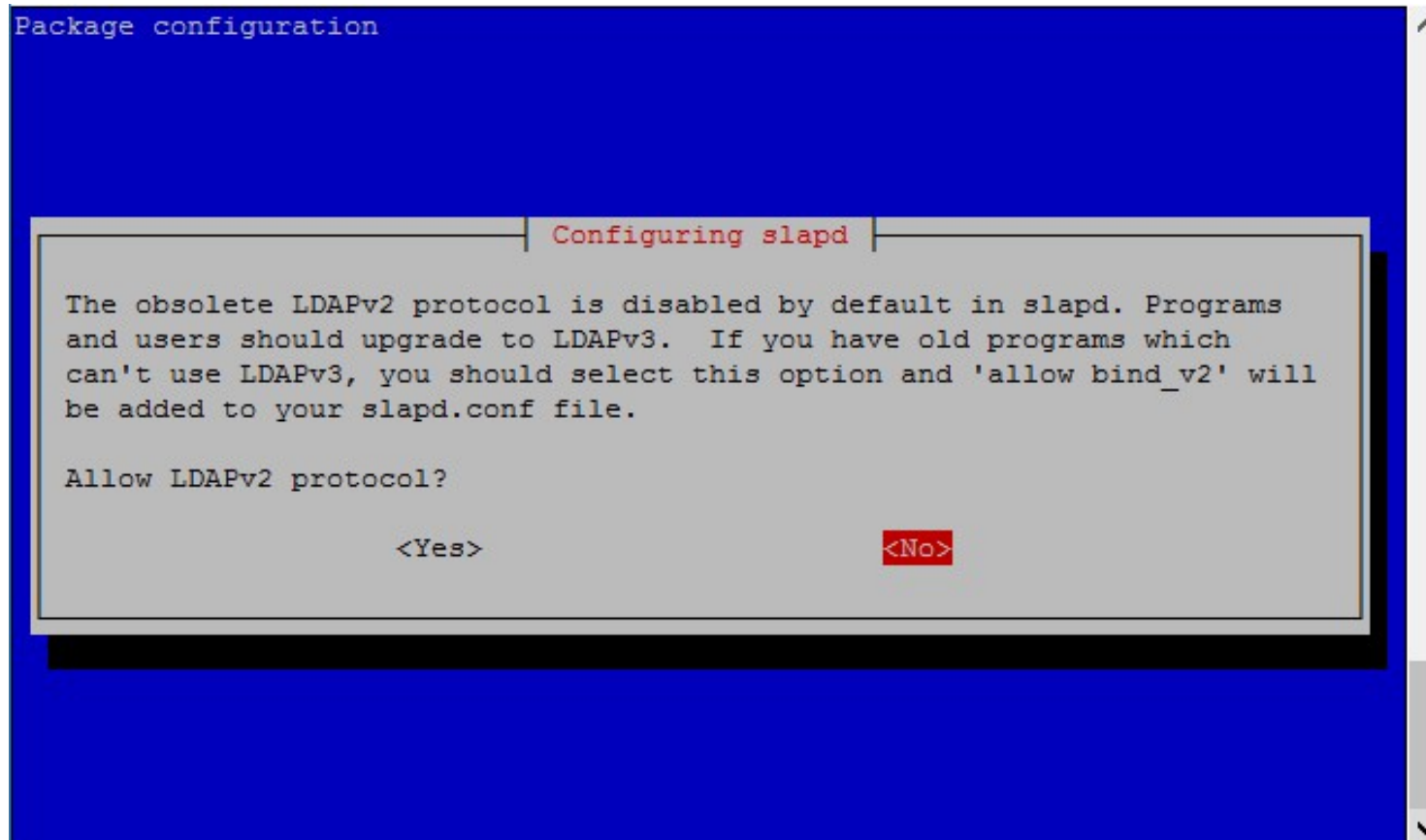
Reconfiguring OpenLDAP Continue



Reconfiguring OpenLDAP Continue



Reconfiguring OpenLDAP Continue



Installing and configuring PhpLdapAdmin

- `Apt-get install apache2`
- `Apt-get -y install php5 libapache2-mod-php5`
- `Service apache2 restart`
- `Apt-get install phpldapadmin`
- `Vi /etc/phpldapadmin/config.php`
- Search for the following sections and modify them accordingly.

configuring PhpLdapAdmin continue

- Change the red value to the way you will be referencing your server, either through domain name or IP address.

```
$servers->setValue('server', 'host', '192.168.85.132');
```

configuring PhpLdapAdmin continue

- Edit the following entry to reflect the name you selected (ours is "afnog.org" as you recall):

```
$servers->setValue('server', 'base', array('dc=afnog,dc=org'));
```

configuring PhpLdapAdmin continue

- The next value to modify will use the same domain components that you just set up in the last entry. Add these after the "cn=admin" in the entry below:

```
$servers->setValue('login', 'bind_id', 'cn=admin,dc=afnog,dc=org');
```

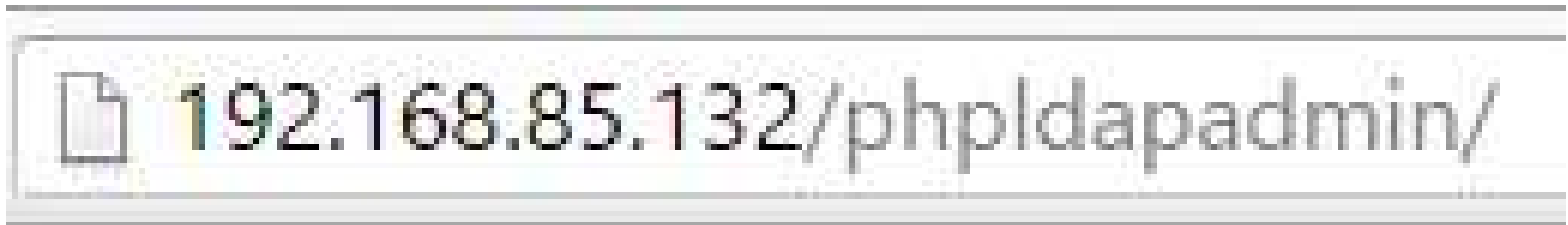
configuring PhpLdapAdmin continue

- Search for the following section about the "*hidetemplatewarning*" attribute. We want to uncomment this line and set the value to "true" to avoid some annoying warnings that are unimportant.

```
$config->custom->appearance['hide_template_warning'] = true;
```

configuring PhpLdapAdmin continue

- Login to the PhpLdapAdmin page using a browser with your IP Address followed by phpldapadmin



configuring PhpLdapAdmin continue

- Click on login in your left pane and enter your ldap admin password

Authenticate to server My LDAP Server

Warning: This web connection is unencrypted.

Login DN:

 cn=admin,dc=afnog,dc=org

Password:



Anonymous

Authenticate

configuring PhpLdapAdmin continue

- If successfully logged in, you should see an interface as below



The screenshot displays the PhpLDAPAdmin web interface. At the top left is the logo for 'phpLDAPadmin'. Below the logo is a navigation bar with links for 'Home', 'Purge caches', and 'Show Cache'. The main content area is divided into two panels. The left panel, titled 'My LDAP Server', shows a list of actions: 'schema', 'search', 'refresh', 'info', 'import', 'export', and 'logout'. Below these actions, it indicates the user is logged in as 'cn=admin' and shows a tree view of the LDAP directory structure, including 'dc=afnog, dc=org (1)' and 'cn=admin'. A star icon next to 'cn=admin' is labeled 'Create new entry here'. The right panel, titled 'Authenticate to server', displays a message: 'Successfully logged into server.'

configuring PhpLdapAdmin continue

- **Create Organizational Units , Groups, Users**
- **Click on the “Create new entry here” link on the left-hand side**
- **Click on the “Generic: Organizational Unit” template as below**
- **We will be asked to create a name for our organizational unit.**
- **Type Groups and repeat the same procedure to create users group as well.**
- **Slides on the next slide demonstrate the process**

configuring PhpLdapAdmin continue

Create Object

Server: My LDAP Server Container: dc=afnog,dc=org

Select a template for the creation process

Templates:

-  Courier Mail: Account
-  Courier Mail: Alias
-  Generic: Address Book Entry
-  Generic: DNS Entry
-  Generic: LDAP Alias
-  Generic: Organisational Role
-  **Generic: Organisational Unit**
-  Generic: Posix Group
-  Generic: Simple Security Object
-  Generic: User Account
-  Kolab: User Entry
-  Samba: Account
-  Samba: Domain
-  Samba: Group Mapping
-  Samba: Machine
-  Sendmail: Alias
-  Sendmail: Cluster
-  Sendmail: Domain
-  Sendmail: Relays
-  Sendmail: Virtual Domain
-  Sendmail: Virtual Users
-  Thunderbird: Address Book Entry
-  Default

configuring PhpLdapAdmin continue

Create Object

Server: **My LDAP Server** Container: **dc=afnog,dc=org**
Template: **Generic: Organisational Unit (ou)**

New Organisational Unit (Step 1 of 1)

Organisational Unit

alias, required, rdn, hint

*

Create Object

configuring PhpLdapAdmin continue

- Click on Commit to save changes

Create LDAP Entry

Server: **My LDAP Server** Container: **dc=afnog,dc=org**

Do you want to create this entry?

Attribute	New Value	Skip
ou=groups,dc=afnog,dc=org		
objectClass	organizationalUnit	<input type="checkbox"/>
Organisational Unit	groups	<input type="checkbox"/>

configuring PhpLdapAdmin continue

- When you are done, you should see the configuration as shown on your left hand side.



configuring PhpLdapAdmin continue

- Create Groups
- We can create two different groups that could be used to organize users into different “access” groups based on their privileges they require.
- Those groups are “admin” and “user” groups.
- In the main pane, click on the “Create a child entry” within the groups category.
- We will choose the “Generic: Posix Group” Category
- The next slide shows the guidelines for creating those groups.

configuring PhpLdapAdmin continue

- Click on the “Generic: Posix Group” highlighted in yellow colour

The screenshot displays the PhpLdapAdmin interface for an LDAP entry named "ou=groups". The header bar is dark blue with the entry name in white. Below the header, the server information is shown: "Server: My LDAP Server", "Distinguished Name: ou=groups,dc=afnog,dc=org", and "Template: Default".

A list of actions is provided, including "Refresh", "Switch Template", "Copy or move this entry", "Rename", "Create a child entry" (highlighted in yellow), "Show internal attributes", "Export", "Delete this entry", "Compare with another entry", and "Add new attribute".

Two hints are displayed: "Hint: To delete an attribute, empty the text field and click save." and "Hint: To view the schema for an attribute, click the attribute name.".

The "objectClass" section is highlighted in grey and labeled "required". It contains a list of object classes: "organizationalUnit (structural)" and "top". A text input field contains the value "top", and a "(add value)" link is visible below it.

configuring PhpLdapAdmin continue

Create Object

Server: **My LDAP Server** Container: **ou=groups,dc=afnog,dc=org**
Template: **Generic: Posix Group (posixGroup)**

New Posix Group (Step 1 of 1)

GID Number

alias, required, hint, ro

500

Group

alias, required, rdn

admin *

Users

alias, hint

Create Object

configuring PhpLdapAdmin continue

- Both groups after creation will look as below in the left hand side



The screenshot displays the PhpLdapAdmin web interface. At the top, it shows a laptop icon and the text "My LDAP Server" with a clock icon. Below this is a navigation bar with icons and labels for "schema", "search", "refresh", "info", "import", "export", and "logout". The user is logged in as "cn=admin". The main area shows a tree view of the LDAP directory structure:

- dc=afnog, dc=org (3)
 - cn=admin
 - ou=groups (2+)
 - cn=admin
 - cn=user
 - ou=users
 - Create new entry here

configuring PhpLdapAdmin continue

- Click on the “view 2 children” as highlighted in yellow

ou=groups

Server: **My LDAP Server** Distinguished Name: **ou=groups,dc=afnog,dc=org**
Template: **Default**

-  Refresh
-  Switch Template
-  Copy or move this entry
-  Rename
-  Create a child entry
-  Hint: To delete an attribute, empty the text field and click save.
-  **View 2 children**
-  Hint: To view the schema for an attribute, click the attribute name.
-  Show internal attributes
-  Export
-  Delete this entry
-  Compare with another entry
-  Add new attribute
-  Export subtree

configuring PhpLdapAdmin continue

- The output of the view 2 childres is as shown below

```
ou=groups,dc=afnog,dc=org
```

Entries found: **2**

(0 seconds)



cn=admin

```
dn      cn=admin,ou=groups,dc=afnog,dc=org
cn      admin
gidNumber 500
objectClass posixGroup
         top
```



cn=user







```
dn      cn=user,ou=groups,dc=afnog,dc=org
cn      user
gidNumber 501
objectClass posixGroup
         top
```

- Create Users
- Next, we will create users to put in these groups. Start by clicking on “ou=users” category. Click on Create a child entry.
- We will choose “Generic: User Account” for these entries
- We will be given a lot of fields to fill out:

- The picture below shows the template to be filled

Select a template for the creation process

Templates:

-  Courier Mail: Account
-  Courier Mail: Alias
-  Generic: Address Book Entry
-  Generic: DNS Entry
-  Generic: LDAP Alias
-  Generic: Organisational Role
-  Generic: Organisational Unit
-  Generic: Posix Group
-  Generic: Simple Security Object
-  **Generic: User Account**
-  Kolab: User Entry
-  Samba: Account
-  Samba: Domain
-  Samba: Group Mapping
-  Samba: Machine
-  Sendmail: Alias
-  Sendmail: Cluster
-  Sendmail: Domain
-  Sendmail: Relays
-  Sendmail: Virtual Domain
-  Sendmail: Virtual Users
-  Thunderbird: Address Book Entry
-  Default

New User Account (Step 1 of 1)

Common Name alias, required, rdn

*

First name alias



GID Number alias, required, hint

*

Home directory alias, required

*

Last name alias, required

*

Login shell alias

Password

alias, hint



md5 ▾

(confirm)

[Check password...](#)

UID Number

alias, required, hint, ro

User ID

alias, required

*

[Create Object](#)

Do you want to create this entry?

Attribute	New Value	Skip
cn=Test User1,ou=users,dc=afnog,dc=org		
Common Name	Test User1	<input type="checkbox"/>
First name	Test	<input type="checkbox"/>
GID Number	501	<input type="checkbox"/>
Home directory	/home/users/tuser1	<input type="checkbox"/>
Last name	User1	<input type="checkbox"/>
Login shell	/bin/sh	<input type="checkbox"/>
objectClass	inetOrgPerson posixAccount	<input type="checkbox"/>
Password	*****	<input type="checkbox"/>
UID Number	1000	<input type="checkbox"/>
User ID	tuser1	<input type="checkbox"/>