

Building an Authentication Server with OpenLDAP

LPIC-2: Linux Engineer (202-450)

Objectives:

At the end of this episode, I will be able to:

1. Describe OpenLDAP and its uses.
2. Install and configure an OpenLDAP server.

Additional resources used during the episode can be obtained using the download link on the overview episode.

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- Building an Authentication Server with OpenLDAP
 - Introduction to OpenLDAP
 - Installing slapd
 - Installing phpLDAPadmin
 - Introduction to OpenLDAP
 - <https://www.openldap.org/>
 - Lightweight Directory Access Protocol (LDAP)
 - *slapd*: Stand-alone LDAP Daemon
 - Useful for
 - Authentication
 - Organization
 - Asset Tracking
 - Address Book
 - Installing slapd
 - `sudo apt -y install slapd ldap-utils`
 - Provide an admin password
 - View default configuration
 - `sudo slapcat`
 - *slapd* Configuration File
 - `/etc/ldap/slapd.conf`
 - Launch the guided configuration
 1. `sudo dpkg-reconfigure slapd`
 2. Omit OpenLDAP server configuration? No
 3. DNS domain name: lab.itpro.tv
 4. Organization name: ITProTV
 5. Assign an admin password
 6. Remove slapd database when OpenLDAP is removed? No
 7. Move old database: Yes
 8. Verify: `sudo slapcat`
 - Introduction to phpLDAPadmin
 - <http://phpldapadmin.sourceforge.net/>
 - Open source PHP front-end to OpenLDAP
 - Allows managing one or more *slapd* servers
 - Installing phpLDAPadmin
 1. Install required packages
 - `sudo apt-get install phpldapadmin -y`
 2. Configure OpenLDAP Server details
 - `sudoedit /etc/phpldapadmin/config.php`
 - Look for "Define your LDAP servers"

3. Disable Apache 2 default site and restart

- `sudo a2dissite 000-default.conf`
- `sudo systemctl restart apache2`

- Allow OpenLDAP through a firewall

- Ports

- 389 for LDAP
- 80 and 443 for phpLDAPadmin

- Example

- `sudo ufw allow ldap`
- `sudo ufw allow 80/tcp`
- `sudo ufw allow 443/tcp`

Example: /etc/phpldapadmin/config.php

```
$servers->setValue('server','name','Directory-Server');
$servers->setValue('server','host','10.222.0.53');
$servers->setValue('server','base',array('dc=lab,dc=itpro,dc=tv'));
$servers->setValue('login','auth_type','session');
$servers->setValue('login','bind_id','cn=admin,dc=lab,dc=itpro,dc=tv');
$servers->setValue('auto_number','min',array('uidNumber'=> 10000,'gidNumber'=>10000));
```