

# 实验3

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## 环境配置

安装 openldap:

```
[Rx.Sh] ~
$R(x)dx = sudo pacman -S openldap
[sudo] reverier 的密码:
对不起, 请重试。
[sudo] reverier 的密码:
正在解析依赖关系...
正在查找软件包冲突...

软件包 (1)      新版本  净变化   下载大小
core/openldap  2.6.2-2  4.60 MiB  1.52 MiB

下载大小:      1.52 MiB
全部安装大小:  4.60 MiB

:: 进行安装吗? [Y/n]
:: 正在获取软件包.....
openldap-2.6.2-2-x86_64          1557.9 KiB   3.71 MiB/s 00:00 [-----] 100%
(1/1) 正在检查密钥环里的密钥      [-----] 100%
(1/1) 正在检查软件包完整性        [-----] 100%
(1/1) 正在加载软件包文件          [-----] 100%
(1/1) 正在检查文件冲突            [-----] 100%
(1/1) 正在检查可用存储空间        [-----] 100%
:: 正在处理软件包的变化...
```

千辛万苦修改配置，将 slapd 进程跑起来：

```
[Rx.Sh] ~
$R(x)dx = sudo systemctl restart slapd

[Rx.Sh] ~
$R(x)dx = sudo systemctl status slapd
● slapd.service - OpenLDAP Server Daemon
   Loaded: loaded (/usr/lib/systemd/system/slapd.service; disabled; vendor preset: disabled)
   Active: active (running) since Mon 2022-06-20 13:53:37 CST; 1s ago
     Docs: man:slapd
           man:slapd-config
           man:slapd-mdb
   Main PID: 53222 (slapd)
    Tasks: 2 (limit: 18932)
   Memory: 3.4M
   CGroup: /system.slice/slapd.service
           └─53222 /usr/lib/slapd -d 0 -u ldap -g ldap -h "ldap:/// ldapi:///"

6月 20 13:53:37 Reverier-Arch systemd[1]: Starting OpenLDAP Server Daemon...
6月 20 13:53:37 Reverier-Arch slapd[53222]: @(#) $OpenLDAP: slapd 2.6.2 (May 29 2022 09:54:34) $
                        openldap
6月 20 13:53:37 Reverier-Arch slapd[53222]: slapd starting
6月 20 13:53:37 Reverier-Arch systemd[1]: Started OpenLDAP Server Daemon.

[Rx.Sh] ~
$R(x)dx =
```

通过 phpLDAPadmin 方便管理 LDAP 服务器：

类型	namingContext	monitorruntimeconfig	supportedcontrol
config	cn=config	TRUE	ManageDsaIT Control Pre-Read Controls Post-Read Controls
ldif		TRUE	ManageDsaIT Control Pre-Read Controls Post-Read Controls
monitor	monitor	TRUE	ManageDsaIT Control
dnssrv		FALSE	ManageDsaIT Control
ldap		TRUE	
mdb	dc=wooooo,dc=tech	TRUE	Assertion Control ManageDsaIT Control NO OP Control Simple Paged Results Manipulation Control Extension Pre-Read Controls Post-Read Controls Subentries in LDAP LDAP ease.modify restrictions 1.3.6.1.4.2.1.4
meta		TRUE	
asynctrans		TRUE	
null		TRUE	Assertion Control ManageDsaIT Control NO OP Control Simple Paged Results Manipulation Control Extension Subentries in LDAP Pre-Read Controls Post-Read Controls LDAP ease.modify restrictions
passwd		TRUE	
perl		TRUE	
relay		TRUE	
sock		TRUE	
sql		TRUE	Assertion Control ManageDsaIT Control NO OP Control True Delete Simple Paged Results Manipulation Control Extension

使用命令行添加根节点以解决 This base cannot be created with PLA.

```

$R(x)dx = sudo vim slapd.conf

[Rx.Sh] # /etc/openldap
$R(x)dx = sudo systemctl restart slapd

[Rx.Sh] # /etc/openldap
$R(x)dx = ldapadd -f base.ldif -x -D cn=Manager,dc=wooooo,dc=tech -W
Enter LDAP Password:
adding new entry "dc=wooooo,dc=tech"

[Rx.Sh] # /etc/openldap
$R(x)dx = cat base.ldif

File: base.ldif

dn: dc=wooooo,dc=tech
o: ldap
objectclass: dcObject
objectclass: organization

[Rx.Sh] # /etc/openldap
$R(x)dx =

```

向 ldap 的配置文件中添加各种模块：

```
[Rx.Sh] # /etc/openldap
$R(x)dx = for i in /etc/openldap/schema/*.schema
    echo include $i ^C

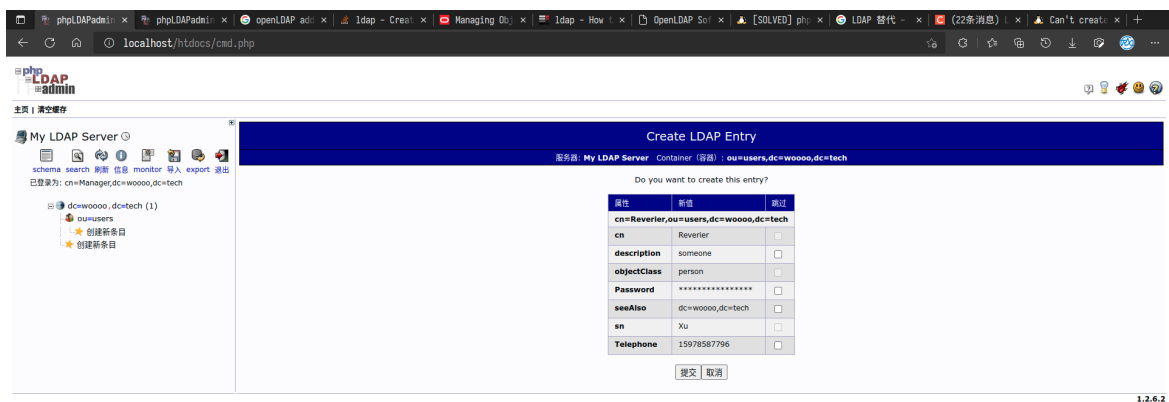
[Rx.Sh] # /etc/openldap
$R(x)dx = sudo vim slapd.conf

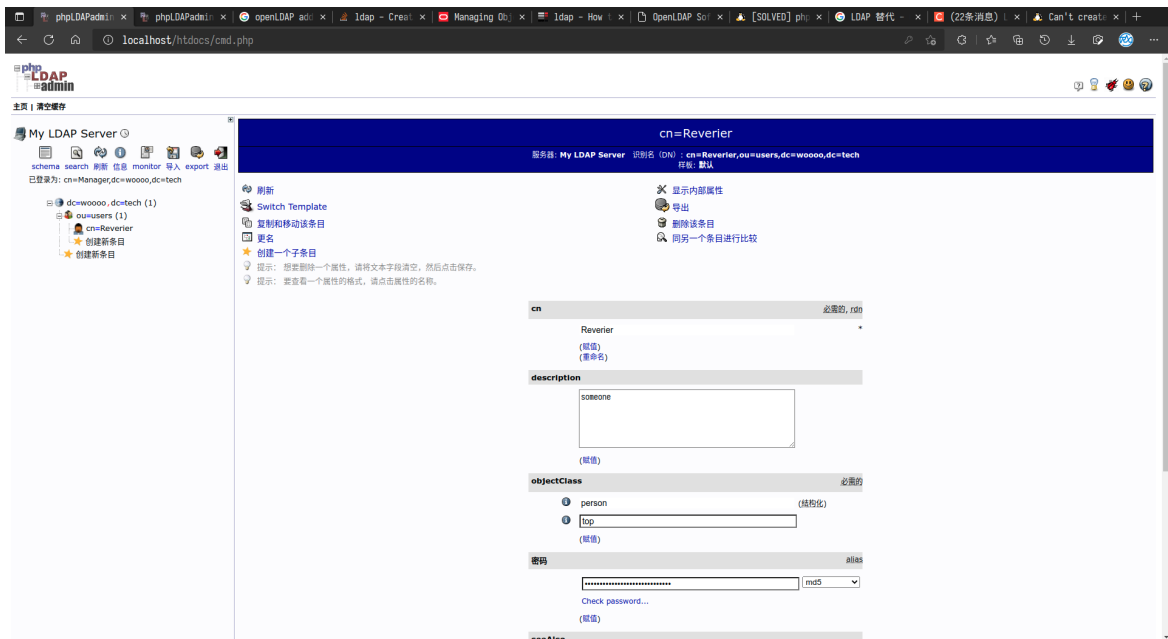
[Rx.Sh] # /etc/openldap
$R(x)dx = for i in /etc/openldap/schema/*.schema
    sudo bash echo include $i >> ./slapd.conf ^C

[Rx.Sh] # /etc/openldap
$R(x)dx = sudo fish
Welcome to fish, the friendly interactive shell
Type `help` for instructions on how to use fish
root@Reverier-Arch /o/openldap# for i in /etc/openldap/schema/*.schema
    echo include $i >> ./slapd.conf
end
root@Reverier-Arch /o/openldap# vim ./slapd.conf
root@Reverier-Arch /o/openldap#

[Rx.Sh] # /etc/openldap
$R(x)dx =
```

使用默认person结构进行一些增差删改工作：





## 为nginx配置基本认证模块

使用实验2的部分：

```
server {
    listen 8080;
    listen [::]:8080;
    server_name localhost;

    root /var/www/html;
    location / {
        index index.html index.htm index.php;
    }

    location ~ /\.php$ {
        auth_basic "authentication";
        auth_basic_user_file conf.d/htpasswd;
        # 404
        try_files $fastcgi_script_name =404;

        # default fastcgi_params
        include fastcgi_params;

        # fastcgi settings
    }
}

/etc/nginx/sites-available/basic_auth [*] 20,26 Top
```

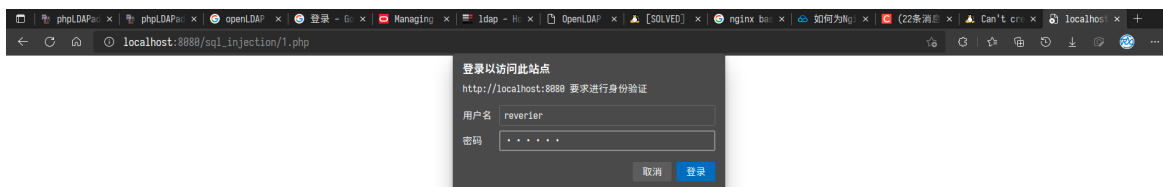
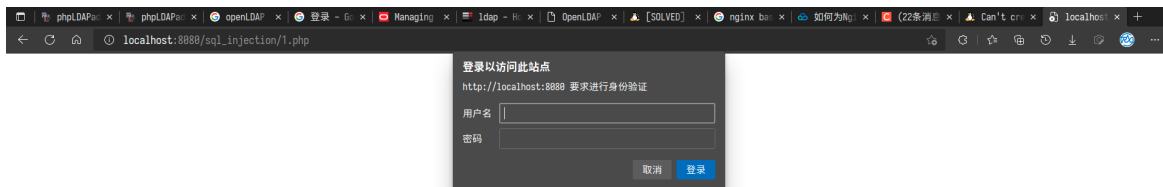
```
root@x:~# cat -A htpasswd
File: htpasswd
reverier:$apr1$2JvE87WE$1TKDKFUghzs/sluJepHvU0

[Rx.Sh] # /etc/nginx/conf.d
root@x:~# sudo nginx -t
2022/06/20 15:23:45 [warn] 72658#72658: could not build optimal types_hash, you should increase either types_hash_max_size: 1024 or types_hash_bucket_size: 64; ignoring types_hash_bucket_size
nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
nginx: configuration file /etc/nginx/nginx.conf test is successful

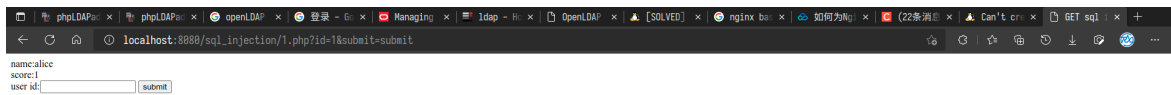
[Rx.Sh] # /etc/nginx/conf.d
root@x:~# sudo nginx -s reload
2022/06/20 15:23:49 [warn] 72747#72747: could not build optimal types_hash, you should increase either types_hash_max_size: 1024 or types_hash_bucket_size: 64; ignoring types_hash_bucket_size
2022/06/20 15:23:49 [notice] 72747#72747: signal process started

[Rx.Sh] # /etc/nginx/conf.d
root@x:~#
```

可以发现身份认证模块生效：



能够正常使用。



## 配置radius

```
[Rx.Sh] # /etc/openldap
$R(x)dx = sudo pacman -S freeradius
[sudo] reverier 的密码:
正在解析依赖关系...
正在查找软件包冲突...

软件包 (1)          新版本  净变化  下载大小
community/freeradius 3.2.0-2 10.01 MiB 2.00 MiB

下载大小:          2.00 MiB
全部安装大小:      10.01 MiB

:: 进行安装吗? [Y/n]
:: 正在获取软件包.....
  freeradius-3.2.0-2-x86_64           2043.6 KiB   6.40 MiB/s 00:00 [-----] 100%
(1/1) 正在检查密钥环里的密钥          [-----] 100%
(1/1) 正在检查软件包完整性            [-----] 100%
(1/1) 正在加载软件包文件              [-----] 100%
(1/1) 正在检查文件冲突                [-----] 100%
(1/1) 正在检查可用存储空间            [-----] 100%
:: 正在处理软件包的变化...
(1/1) 正在安装 freeradius              [-----] 100%
freeradius 的可选依赖
```

在 `/etc/raddb/mods-config/files/authorize` 中配置帐号，并进行测试：

```
NEW HORIZONTAL VERTICAL FIND WATCH TERMINATE KILL

    Cleartext-Password = "hello"
Received Access-Reject Id 115 from 127.0.0.1:1812 to 127.0.0.1:60591 length 20
(0) -: Expected Access-Accept got Access-Reject

[Rx.Sh] /etc/openldap 15:39:16
$R(x)dx = sudo vim /etc/raddb/mods-config/files/authorize

[Rx.Sh] /etc/openldap 19s 15:39:46
$R(x)dx = sudo systemctl restart freeradius.service

[Rx.Sh] /etc/openldap 15:39:53
$R(x)dx = radtest bob hello 127.0.0.1 0 testing123
Sent Access-Request Id 221 from 0.0.0.0:51696 to 127.0.0.1:1812 length 73
    User-Name = "bob"
    User-Password = "hello"
    NAS-IP-Address = 127.0.1.1
    NAS-Port = 0
    Message-Authenticator = 0x00
    Cleartext-Password = "hello"
Received Access-Accept Id 221 from 127.0.0.1:1812 to 127.0.0.1:51696 length 32
    Reply-Message = "Hello, bob"

[Rx.Sh] /etc/openldap 15:39:55
$R(x)dx =
```

能够正常进行身份识别。