

How to Authenticate User Manager via OpenLDAP

For this demonstration we are using the OpenLDAP Server provided by zFlex <http://www.zflexsoftware.com/index.php/pages/free-online-ldap>

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Step-By-Step

On the zFlex page (<http://www.zflexsoftware.com/index.php/pages/free-online-ldap>) the setup parameters are detailed as so

LDAP Server Connection Info:

Server: *www.zflexldap.com*

Port: *389*

Bind DN: *cn=ro_admin,ou=sysadmins,dc=zflexsoftware,dc=com*

Bind Password: *zflexpass*

Additionally three users have defined passwords so we will be using the OU of guests for our setup.

Other Users IDs and their passwords are:

- uid=guest1,ou=users,ou=guests,dc=zflexsoftware,dc=com
 - guest1password
- uid=guest2,ou=users,ou=guests,dc=zflexsoftware,dc=com
 - guest2password
- uid=guest3,ou=users,ou=guests,dc=zflexsoftware,dc=com
 - guest3password

Each user (and others) have CN,SN, GivenName, EmployeeType and email to form a fully qualified LDAP Entry.

Our setup configuration is as follows:

Directory Settings

Directory Settings

| | |
|--|--|
| Secure Connection Type ? | None ⌵ |
| Host ? | www.zflexldap.com |
| Port ? | 389 |
| Bind DN or Username ? | cn=ro_admin,ou=sysadmins,dc=zflexsoftware,dc=com |
| Password ? | zflexpass |
| Base DN ? | dc=zflexsoftware,dc=com |
| Status ? | Connected |

Operational Settings

Operational Settings

| | |
|---|---|
| Create Missing Extensions ? | Don't Create ⌵ |
| Manage groups locally ? | <input type="radio"/> Yes <input checked="" type="radio"/> No |
| Common Name attribute ? | cn |
| Description attribute ? | description |
| Unique identifier attribute ? | ibm-entryUUID |

User Configuration

User configuration

| | |
|---|-----------------------------|
| User DN ? | ou=users,ou=guests |
| User object class ? | inetOrgPerson |
| User object filter ? | (objectclass=inetOrgPerson) |
| User name attribute ? | uid |
| User first name attribute ? | givenName |
| User last name attribute ? | sn |
| User display name attribute ? | displayName |
| User group attribute ? | memberOf |
| User email attribute ? | mail |
| User Title attribute ? | title |
| User Company attribute ? | |
| User Department attribute ? | |
| User Home Phone attribute ? | |
| User Work Phone attribute ? | telephoneNumber |
| User Cell Phone attribute ? | |
| User Fax attribute ? | |
| User extension Link attribute ? | |

Group Configuration

Group configuration

| | |
|---|---|
| Group DN ? | <input type="text" value="ou=group,ou=guests"/> |
| Group object class ? | <input type="text" value="groupOfNames"/> |
| Group object filter ? | <input type="text" value="(objectclass=groupOfNames)"/> |
| Group members attribute ? | <input type="text" value="member"/> |

Manual Syncing

Manual Syncing can be performed by running the following command

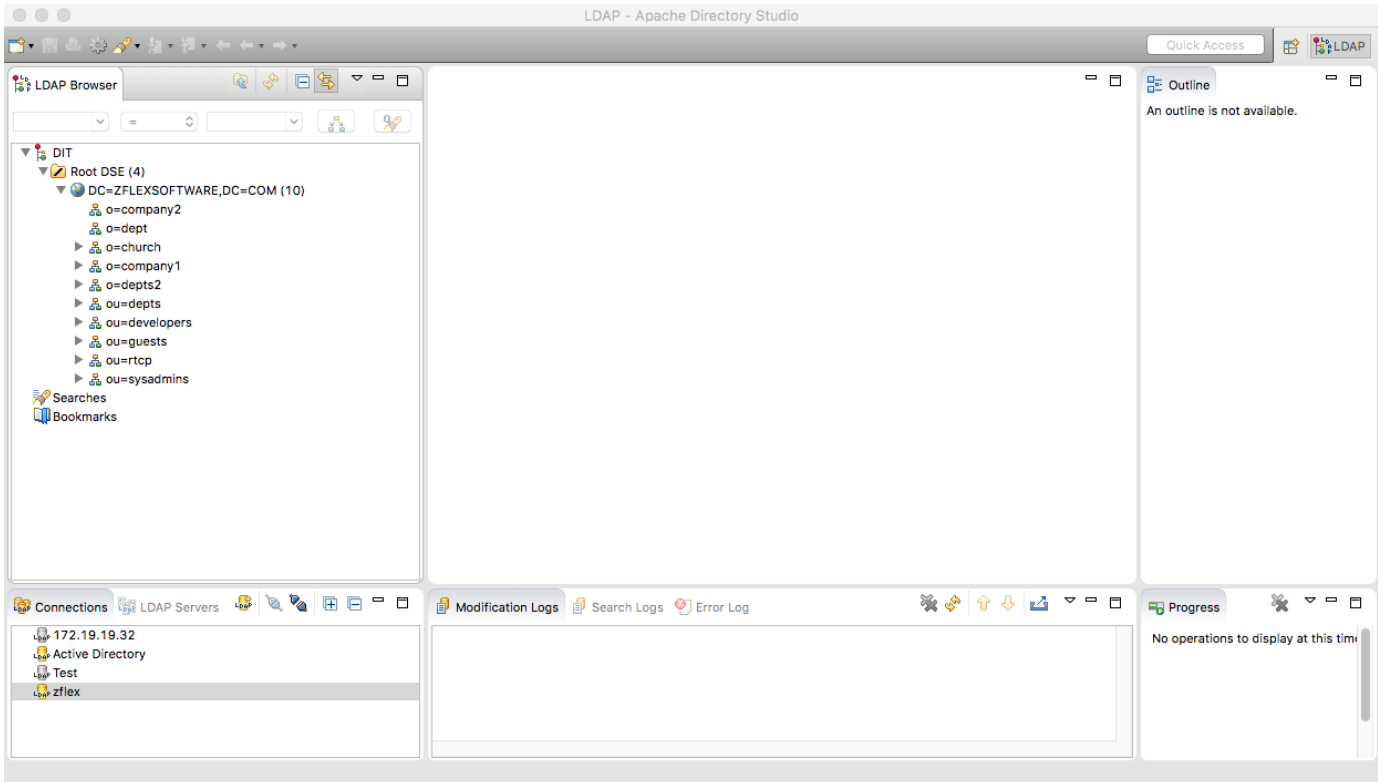
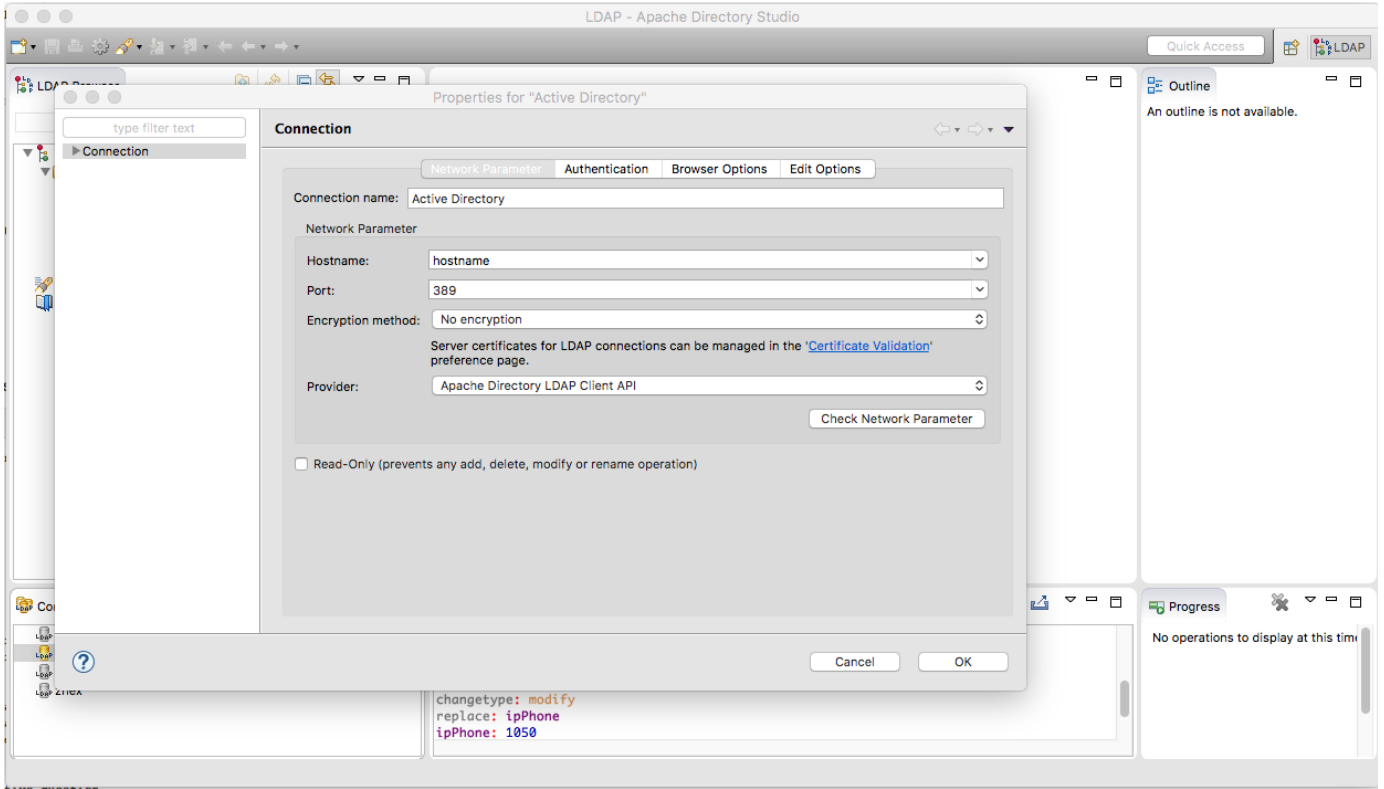
```
[root@freepbxdev4 framework]# fwconsole userman --syncall --force
Directory 'PBX Internal Directory' does not support syncing
Starting Sync on directory 'Markham Blade AD'...
Finished
Starting Sync on directory 'zflex server'...
Finished
```

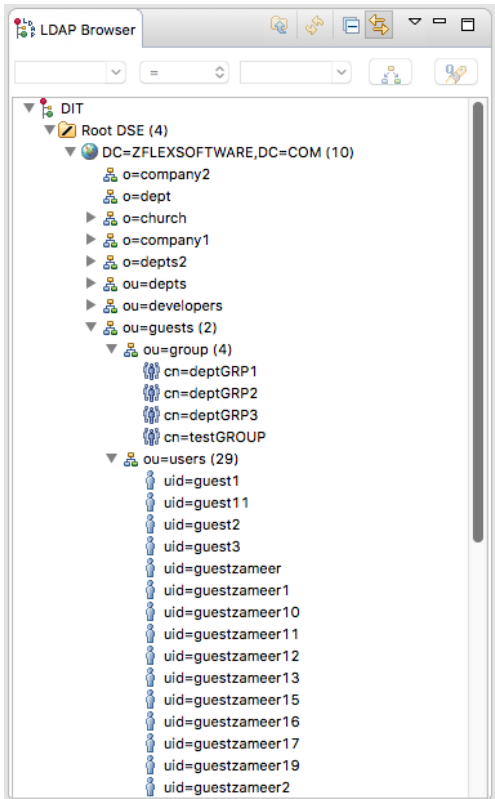
Troubleshooting

Using a directory browser

An LDAP directory browser is a great way to get a visual overview of your directory. Directory browsers can also be used to check authentication. Apache Directory Studio was used in the development of OpenLDAP in User Manager.

<http://directory.apache.org/studio/>





LDAP Browser

DN: uid=guest1,ou=users,ou=guests,DC=ZFLEXSOFTWARE,DC=COM

| Attribute | Description | Value |
|--------------------------|-------------|--|
| objectClass | | inetOrgPerson (structural) |
| objectClass | | organizationalPerson (structural) |
| objectClass | | person (structural) |
| objectClass | | top (abstract) |
| cn | | Guest Number One |
| sn | | Number One |
| departmentNumber | | 0001 |
| displayName | | Guest1 NumberOne |
| employeeNumber | | 11003 |
| employeeType | | temp |
| facsimileTelephoneNumber | | 330-333-3342 |
| givenName | | Guest |
| l | | Boston |
| mail | | guest1@zflexsoftware.com |
| mobile | | 909-983-4552 |
| pager | | 303-223-9876 |
| postalAddress | | 3088 NewMain Street |
| postalCode | | 30994 |
| street | | 403 Anywhere Lane |
| title | | Contractor1 |
| uid | | guest1 |

Using the PBX CLI

You can troubleshoot User Manager Active Directory syncing by running from the CLI with a few options

```
[root@freepbxdev4 framework]# fwconsole userman --help
```

```
  _____
 | |_____| |_____| |_____| |_____|
 | |_____| |_____| |_____| |_____|
 | |_____| |_____| |_____| |_____|
 | |_____| |_____| |_____| |_____|
 | |_____| |_____| |_____| |_____|
```

Usage:

```
userman [options]
```

Options:

```
--syncall          Synchronize all directories
--sync=SYNC        Synchronize a single directory by id (obtained from
--list)
--force            Force synchronization
--list            List directories
-h, --help        Display this help message
-q, --quiet        Do not output any message
-V, --version      Display this application version
--ansi            Force ANSI output
--no-ansi         Disable ANSI output
-n, --no-interaction Do not ask any interactive question
-v|vv|vvv, --verbose Increase the verbosity of messages: 1 for normal
output, 2 for more verbose output and 3 for debug
```

Help:

```
User Manager
```

List Directories

```
[root@freepbxdev4 framework]# fwconsole userman --list
```

```
+-----+-----+
| ID | Name |
+-----+-----+
| 9 | PBX Internal Directory |
| 2 | Markham Blade AD |
| 3 | zflex server |
+-----+-----+
```

Sync all directories

```
[root@freepbxdev4 framework]# fwconsole userman --syncall
Directory 'PBX Internal Directory' does not support syncing
Not syncing directory for another 5598 seconds
Not syncing directory for another 1998 seconds
```

Force Sync all directories

```
[root@freepbxdev4 framework]# fwconsole userman --syncall --force
Directory 'PBX Internal Directory' does not support syncing
Starting Sync on directory 'Markham Blade AD'...
Finished
Starting Sync on directory 'zflex server'...
Finished
```

Force sync a single directory with verbose logging

This will then return exactly what user manager is doing while syncing.

For certain queries an ldapsearch statement will be returned. You can copy and paste this command and run it locally to see what is returned on the search using the filters you supplied in setup

```
[root@freepbxdev4 ~]# fwconsole userman --sync 3 --force --verbose
Starting Sync on directory 'zflex server'...

Updating All Users
    ldapsearch -w zflexpass -h www.zflexldap.com -p 389 "cn=ro_admin,
ou=sysadmins,dc=zflexsoftware,dc=com" -b "ou=users,ou=guests,
dc=zflexsoftware,dc=com" -s sub "(objectclass=inetorgperson)" "ibm-
entryuuid=*" ibm-entryuuid
    Retrieving all users...
    Got 29 users
        Updating guestzameer17
        Updating guestzameer19
        Updating guestzameer16
        Updating guestzameer15
        Updating guestzameer12
        Updating guestzameer13
        Updating guestzameer20
        Updating guestzameer21
        Updating guestzameer25
        Updating guest11
        Updating guestzameer24
        Updating guestzameer23
        Updating guestzameer22
        Updating guestzameer11
        Updating guestzameer10
        Updating pham_Khanh2
        Updating guestzameer
        Updating pham_Khanh1
        Updating pham_Khanh
        Updating guest2
        Updating guest3
        Updating guestzameer1
        Updating guestzameer2
        Updating guestzameer7
        Updating guestzameer8
        Updating guestzameer5
        Updating guestzameer4
```

```
        Updating guestzameer3
        Updating guest1
Updating All Groups
    ldapsearch -w zflexpass -h www.zflexldap.com -p 389 "cn=ro_admin,
ou=sysadmins,dc=zflexsoftware,dc=com" -b "ou=group,ou=guests,
dc=zflexsoftware,dc=com" -s sub "(objectclass=groupofnames)"
    Retrieving all groups...
    Got 4 groups
    Working on testGROUP
        Adding guest3 to group
        Adding guest2 to group
        Adding guest1 to group
    Updating testGROUP
Working on deptGRP3
    Adding guest3 to group
    Adding guest2 to group
    Adding guest1 to group
    Updating deptGRP3
Working on deptGRP2
    Adding guest1 to group
    Adding guest2 to group
    Adding guest3 to group
    Updating deptGRP2
Working on deptGRP1
    Adding guest1 to group
    Adding guest3 to group
    Adding guest2 to group
    Updating deptGRP1
Finished adding users from non-primary groups
Updating Primary Groups
    User guestzameer17 missing gidnumber attribute. Cant determine
primary group
    User guestzameer19 missing gidnumber attribute. Cant determine
primary group
    User guestzameer16 missing gidnumber attribute. Cant determine
primary group
    User guestzameer15 missing gidnumber attribute. Cant determine
primary group
    User guestzameer12 missing gidnumber attribute. Cant determine
primary group
    User guestzameer13 missing gidnumber attribute. Cant determine
primary group
    User guestzameer20 missing gidnumber attribute. Cant determine
primary group
    User guestzameer21 missing gidnumber attribute. Cant determine
primary group
    User guestzameer25 missing gidnumber attribute. Cant determine
primary group
    User guest11 missing gidnumber attribute. Cant determine primary
group
    User guestzameer24 missing gidnumber attribute. Cant determine
primary group
    User guestzameer23 missing gidnumber attribute. Cant determine
```


primary group
User guestzameer22 missing gidnumber attribute. Cant determine
primary group
User guestzameer11 missing gidnumber attribute. Cant determine
primary group
User guestzameer10 missing gidnumber attribute. Cant determine
primary group
User pham_Khanh2 missing gidnumber attribute. Cant determine
primary group
User guestzameer missing gidnumber attribute. Cant determine
primary group
User pham_Khanh1 missing gidnumber attribute. Cant determine
primary group
User pham_Khanh missing gidnumber attribute. Cant determine
primary group
User guest2 missing gidnumber attribute. Cant determine primary
group
User guest3 missing gidnumber attribute. Cant determine primary
group
User guestzameer1 missing gidnumber attribute. Cant determine
primary group
User guestzameer2 missing gidnumber attribute. Cant determine
primary group
User guestzameer7 missing gidnumber attribute. Cant determine
primary group
User guestzameer8 missing gidnumber attribute. Cant determine
primary group
User guestzameer5 missing gidnumber attribute. Cant determine
primary group
User guestzameer4 missing gidnumber attribute. Cant determine
primary group
User guestzameer3 missing gidnumber attribute. Cant determine
primary group
User guest1 missing gidnumber attribute. Cant determine primary
group

Executing User Manager Hooks

Updating User guestzameer17...done
Updating User guestzameer19...done
Updating User guestzameer16...done
Updating User guestzameer15...done
Updating User guestzameer12...done
Updating User guestzameer13...done
Updating User guestzameer20...done
Updating User guestzameer21...done
Updating User guestzameer25...done
Updating User guest11...done
Updating User guestzameer24...done
Updating User guestzameer23...done
Updating User guestzameer22...done
Updating User guestzameer11...done
Updating User guestzameer10...done
Updating User pham_Khanh2...done
Updating User guestzameer...done

```
Updating User pham_Khanh1...done
Updating User pham_Khanh...done
Updating User guest2...done
Updating User guest3...done
Updating User guestzameer1...done
Updating User guestzameer2...done
Updating User guestzameer7...done
Updating User guestzameer8...done
Updating User guestzameer5...done
Updating User guestzameer4...done
Updating User guestzameer3...done
Updating User guest1...done
Updating Group testGROUP...done
Updating Group deptGRP3...done
Updating Group deptGRP2...done
Updating Group deptGRP1...done
```

Finished