

# **Essbase External Authentication via LDAP**

LDAP, which stands for Lightweight Directory Access Protocol, is a client-server protocol for accessing a directory service. For OS/400, external authentication via LDAP is supported by ShowCase® Essbase® 6.5.1 and above.

This document will help you enable external authentication for LDAP on the iSeries. It includes:

- Tasks to complete before you begin
- Starting the Directory (LDAP) Server
- Introduction to Distinguished Names
- Working with suffixes
- Verifying LDAP users on the Directory (LDAP) Server
- Adding an entry to the Essbase CFG file
- Adding LDAP users to Essbase with Application Manager

## **Before You Begin**

Before you begin, you should:

- ▶ Have a basic understanding of LDAP and how you will use it in your organization. For more information, see:

<http://publib.boulder.ibm.com/series/v5r1/ic2924/index.htm?info/rzahy/rzahyovrco.htm>

- ▶ Add users to the System Distribution Directory in preparation for publishing them to your LDAP Server (Directory Server). You can do this on the iSeries with the ADDDIRE command, or with the WRKDIRE command (use Option 1 to add).

*Note:* As an alternative to using the iSeries to add users to the System Distribution Directory, you can add users via the IBM SecureWay Directory Management Tool. For instructions, see <http://publib.boulder.ibm.com/series/v5r1/ic2924/index.htm?info/rzahy/rzahyovrco.htm>

- ▶ Configure your LDAP Server (Directory Server). During this process, you will publish the System Distribution Directory entries (users) to the Directory Server using Operations Navigator. (Operations Navigator must be installed on a PC that is connected to your system.) For instructions, see:

[http://www-912.ibm.com/s\\_dir/slkbases.nsf/1ac66549a21402188625680b0002037e/e5c18df989d9310686256bb9004e1caa?OpenDocument=0,LDAP,Basics](http://www-912.ibm.com/s_dir/slkbases.nsf/1ac66549a21402188625680b0002037e/e5c18df989d9310686256bb9004e1caa?OpenDocument=0,LDAP,Basics)

*Note:* There is no requirement that your Essbase and LDAP servers reside on the same system. If the two are located on different systems, you can still setup external authentication via LDAP given that the LDAP Server node is reachable from the Essbase Server node.

- ▶ Install Essbase 6.51 or later. This is the minimum version required for LDAP support.

## **Using LDAP**

The following functions must be performed using an LDAP client, such as the IBM SecureWay Directory Management Tool or the LDAP client shipped with your iSeries system. They can not be performed using Essbase.

- Adding, deleting, or modifying the LDAP Server Database.
- Changing the password of an LDAP profile.

## **Starting the Directory (LDAP) Server**

Many of the procedures in this chapter require that the OS/400 Directory (LDAP) Server be running. You may want to check if the server is already running.

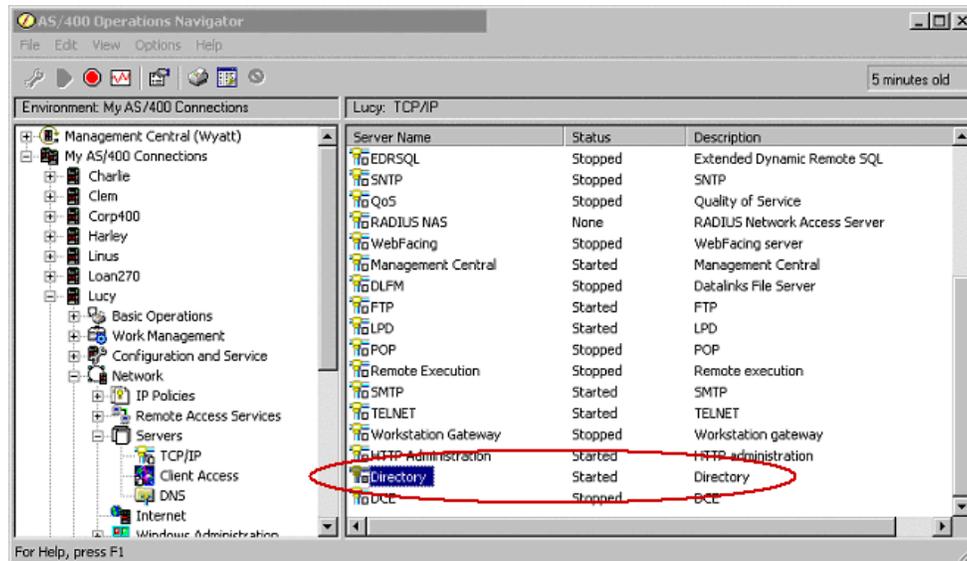
### ***To check if the server is running***

- ▶ On the iSeries, type the command NETSTAT \*CNN. In the Local Port column, locate the LDAP entry. (You can also find it by searching for port 389, which is the default LDAP port.) The server is running if it says Listen in the State column.

OR

- ▶ Open Operations Navigator.
- ▶ Expand the server you want to work with.
- ▶ Expand Network.
- ▶ Expand Servers.
- ▶ Highlight TCP/IP. You will see a list of servers in the right-hand pane.
- ▶ The Status column for the Directory Server should say Started. See Figure 1-1.

Figure 1-1  
Working with the Directory Server



### To start the server

- ▶ You can start the Directory Server from the Operations Navigator console.
- OR
- ▶ At an iSeries command line type the STRTCPSVR(\*DIRSRV) command.

## Distinguished Names

As part of your LDAP directory service setup, your directory server database should have entries (user profiles for instance) arranged in a hierarchical structure that reflects geographic or organizational boundaries. A typical LDAP Server identifies these entries using unique names called Distinguished Names (DN). A DN may have several parts specified by several keywords. These parts must be specified properly before the LDAP Server can locate an entry in its database. Here are two DN examples:

- **Example 1.** cn=John Doe, cn=Engineers, ou=mycity, o=mycompany
- **Example 2.** uid=John Doe, ou=Students, o=myschool, dc=edu

To allow the LDAP Server to manage part of an LDAP directory, you must specify part of the DN (such as cn=Engineers, ou=mycity, o=mycompany). This part is referred to as the suffix, and it excludes the user name portion (such as the cn or uid parameter). The server can access all objects below the specified suffix in the directory hierarchy.

For example, if an LDAP server contained the directory shown in Example 1, it would need to specify the suffix `cn=Engineers, ou=mycity, o=mycompany` in its configuration to answer client queries regarding "John Doe."

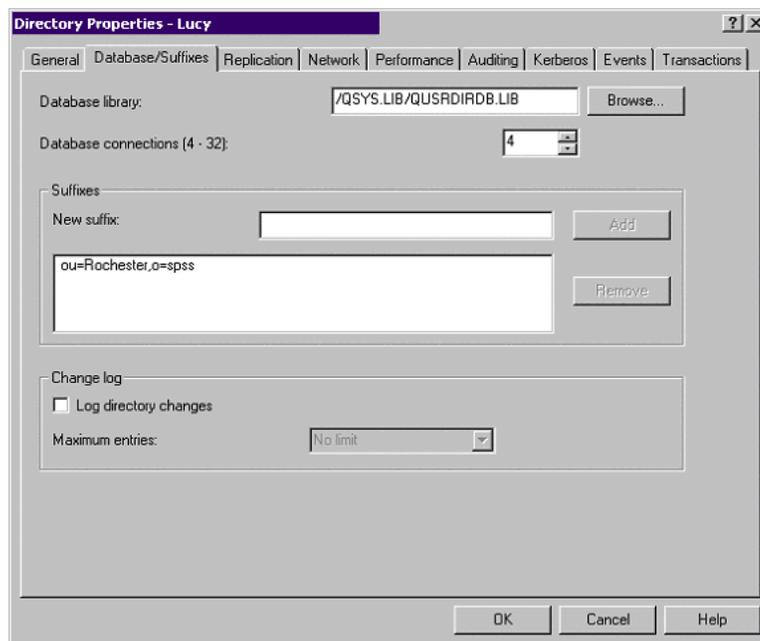
As part of the LDAP setup for Essbase, you will place this suffix in the Essbase CFG file (see Adding an Entry to the Essbase CFG file).

## Working with Suffixes

To add, remove, or verify suffixes, use Operations Navigator:

- ▶ Open Operations Navigator.
- ▶ Expand the server you want to work with.
- ▶ Expand Network.
- ▶ Expand Servers.
- ▶ Highlight TCP/IP. You will see a list of servers in the right-hand pane. (See Figure 1-1.)
- ▶ Right-click on the Directory Server, and select Properties.
- ▶ On the Databases/Suffixes tab, you can add, remove, or verify your suffixes.

Figure 1-2  
Verifying a suffix

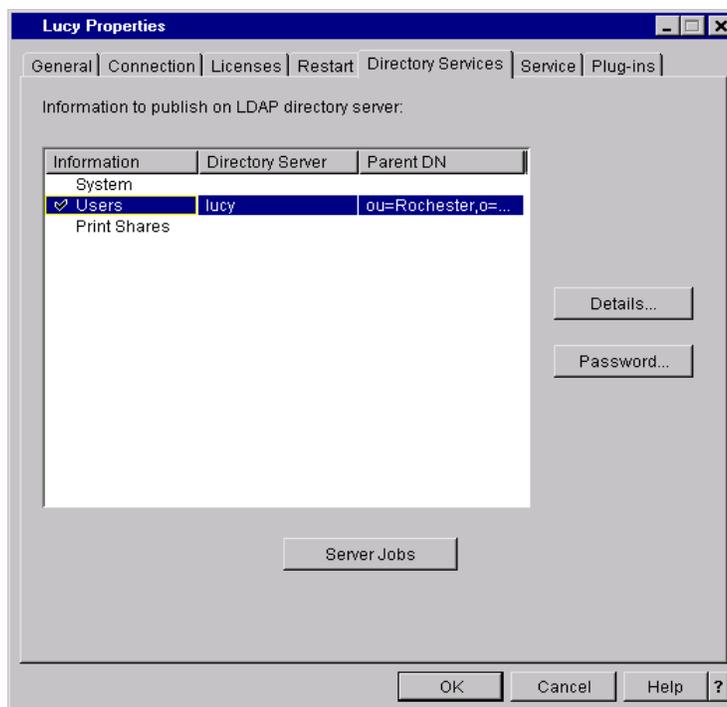


## Verifying LDAP Users on the Directory Server

Before users can be authenticated via LDAP, they must exist on the Directory Server and in Essbase. This section helps you verify that users exist on the Directory Server. To add LDAP users to Essbase, see “Adding LDAP Users to Essbase” on p. 8.

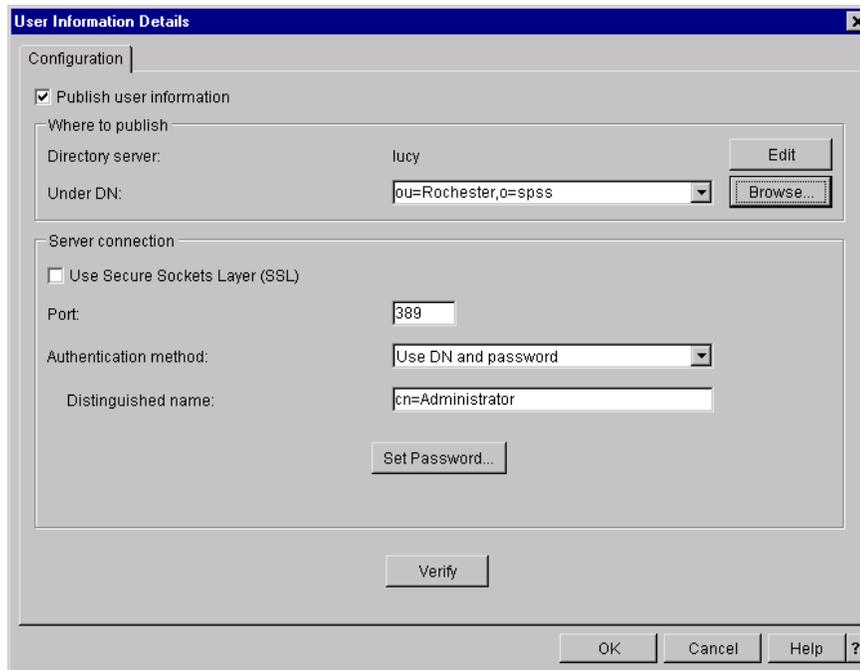
- ▶ In Operations Navigator, right-click on your Essbase server, and choose Properties.
- ▶ On the Directory Services tab, highlight Users and click Details.

Figure 1-3  
Getting details on users for the directory server



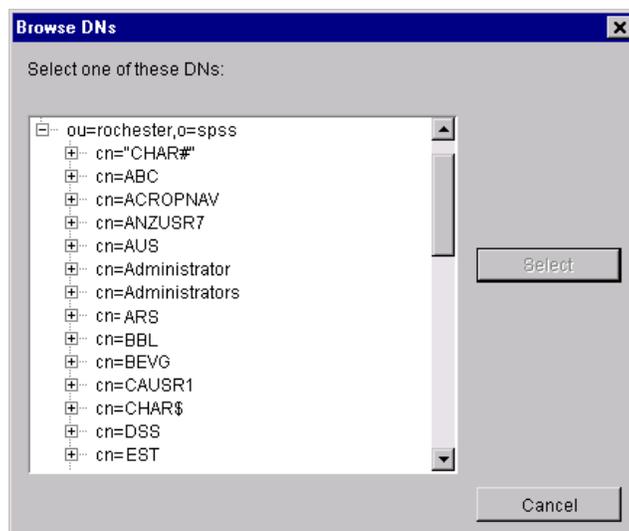
- ▶ On the Configuration tab, choose the suffix you configured, and click Browse.

**Figure 1-4**  
Choosing your suffix to verify users



- In the Browse DNs dialog box, when you expand your suffix entry, you should see all the users you added to your Directory Server.

**Figure 1-5**  
Verifying users on the Directory Server



- If no users exist, you can populate your Directory Server using the instructions in “Before You Begin” on p. 1.

## Configuring Essbase to Allow External Authentication via LDAP

Before you continue, install Essbase 6.51 or later. This is the minimum version required for LDAP support. From here, the basic steps in configuring Essbase to use LDAP are:

- Add an entry to the Essbase CFG file.
- Add LDAP users to Essbase via Application Manager.

### Adding an Entry to the Essbase CFG File

The keyword that indicates to ShowCase Essbase that external authentication is available is AUTHENTICATIONMODULE. You can find additional information on this keyword in the *Hyperion Technical Reference*. ShowCase Essbase supports all elements for this keyword as described by Hyperion except for *library-name*. Since ShowCase Essbase does not use a library (or a DLL), this parameter is not needed and is ignored. However, an *x* must be used as a placeholder. Following is an example.

```
AUTHENTICATIONMODULE LDAP X 10  
OU=ROCHESTER,O=SPSS@OURSERVER.SPSS.COM:389
```

- The LDAP parameter indicates LDAP is used for external authentication.
- X is the placeholder for the LDAP library-name.
- 10 indicates maximum wait time in seconds before the request is aborted. Your value may be different.
- OU=ROCHESTER,O=SPSS is the suffix portion of the DN. Specify your unique suffix here.
- @ is a required key that indicates the beginning of a LDAP Server Name. The LDAP Server name (or IP Address) must follow this entry.
- OURSERVER.SPSS.COM is the LDAP Server that authenticates login requests. Specify your LDAP Server name here.
- 389 is the LDAP Server port on OURSERVER.SPSS.COM. Specify your LDAP port number here.

#### To Edit the Essbase CFG File

- ▶ Start the Directory Server. See “Starting the Directory (LDAP) Server” on p. 2.
- ▶ To add the AUTHENTICATIONMODULE entry to your CFG file, use the iSeries EDTF command:  
EDTF FILE(ESSBASELIB/CFG) (MBR/ESSBASE)  
  
where ESSBASELIB is your Essbase installation library.
- ▶ To insert a new line into the file, enter ‘I’ on the line next to an existing entry.
- ▶ Add your AUTHENTICATIONMODULE entry, using the example above as a guide.

Here is what your data may look like:

\*\*\*\*\*Beginning of Data\*\*\*\*\*

```
____ AUTHENTICATIONMODULE LDAP X 10 CN=ENGINEERS,OU=ROCHESTER,O=SPSS@OURSERVER.SPSS
.COM:389
```

\*\*\*\*\*End of Data\*\*\*\*\*

- ▶ Press F3 to save the file and exit.
- ▶ Stop the Essbase OLAP Server (ENDESSSVR) and restart it (STRESSSVR) to initialize your changes.

## Adding LDAP Users to Essbase

- ▶ Start the Directory Server. See “Starting the Directory (LDAP) Server” on p. 2.
- ▶ To use external authentication of users instead of assigning an Essbase password for logins, use Application Manager to add LDAP users to Essbase and enable external authentication for them. For step-by-step instructions, open the *Database Administrator’s Guide* (accessible via the *Hyperion Essbase Information Map*) and follow the steps in the *Creating a New User* and *Managing External Authentication* topics.

In the New User dialog box, enter the user name. For a list of valid user names, follow the instructions in “Verifying LDAP Users on the Directory Server” on p. 5. See Figure 1-5 for an example.

Be sure to select External in the Authentication section instead of Native. Type LDAP for Protocol. You may also specify valid parameters in the Parameter field, but this is not required. See Figure 1-6.

Figure 1-6  
Adding a user to LDAP

The screenshot shows the 'New User' dialog box with the following details:

- Server:** 172.20.6.67
- Username:** JDoe
- Authentication:**
  - Native (with Password and Confirm Password fields)
  - External (with Protocol: LDAP and Parameters fields)
- User Must Change Password at Next Login
- Username Disabled
- User Type:**
  - Supervisor
  - User
- Create/Delete Users, Groups
- Create/Delete Apps