Configuring Embedded LDAP Authentication
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Overview

Configuring embedded LDAP authentication is a technical process that involves configuring the MFP to communicate with the LDAP database. This document provides step-by-step instructions on configuring this functionality.

Required tool

It is necessary to use Microsoft LDP to configure the MFP for embedded LDAP authentication. Microsoft LDP is a support tool that ships with the Windows Support Tools contained on the Windows OS media. It allows you to connect, bind, and query an LDAP database.

Microsoft LDP can be installed and configured by following these instructions:

a. Browse to the root of the OS media, and open the Support folder.

b. Open the Tools folder.
c. Double click the SUPTOOLS.MSI file.

d. Select **Next** at the Welcome to the Windows Support Tools Setup Wizard.
e. After reading the licensing agreement, select the **I Agree** radial button and click **Next**.

![End User License Agreement](image1)

**Microsoft Windows XP Support Tools**

**END-USER LICENSE AGREEMENT**

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![User Information](image2)

f. Enter your name and organization; then click **Next**.

![User Information](image2)
g. Select **Complete** for the installation type; then click **Next**.

![Select An Installation Type](image)

h. Select **Install Now** to begin the installation.

![Destination Directory](image)
i. Click **Finish** to complete the installation.

![Image of Windows Support Tools Setup Wizard]

**Step 1: Discovering the LDAP server**

There are two key methods to discover an available LDAP server on the network.

**Method 1**

a. Open a command window by clicking on **Start → Run** and typing `cmd.exe` in the dialog box. Then press **Enter** or click **OK**.

![Image of Run dialog box for cmd.exe]
b. To determine which Windows Active Directory logon server you are logged onto, type the following: `echo %logonserver%`. This server can be used as the LDAP server.

Method 2

The following command can be used to provide a list of DNS servers.

```
n
nslookup "name of your domain" (i.e. nslookup AMERICAS.HPQCORP.NET). In a Windows Active Directory environment, a DNS server is typically running Active Directory which contains the LDAP database.
```
Step 2: Setting up LDP

a. Open LDP by clicking on **Start → Run**, and typing `ldp.exe`; then press **Enter** or click **OK**.

![Run](image)

b. From the Ldp menu, select **Connection → Connect**.

![Ldp](image)

c. In the Connect window, input the IP address or hostname of the LDAP server in the Server box; then input **389** or **3268** as the Port number. Click **OK**.

*Port 389 is the standard LDAP port. However, it may be necessary to use port 3268 when communicating with a Windows Global Catalog Active Directory Server.*
d. From the LDP menu, select **Connection → Bind**.

e. In the Bind window, input username, password, and domain name; then click **OK**.

![Bind window](image)

f. On the LDP screen, find and copy the Base DN.

*The Base DN is normally listed within “defaultNamingContext.”*

![LDP screen](image)

```
Id = ldap_open("16.68.87.11", 389);
establish_connection to 16.68.87.11.
Retrieving base DSA information...
Result <0>: (null)
Matched DNs:
Getting 1 entries:

> Dn:
1> subschemaSubentry: CN=Aggregate,CN=Schema,CN=Configuration,DC=
1> dsServiceName: CN=NTDS Settings,CN=IBM,DC=corp,DC=net
1> namingContexts: CN=Configuration,DC=corp,DC=net;
1> defaultNamingContext: DC=Americas,DC=corp,DC=net;
1> schemaNamingContext: CN=Schema,CN=Configuration,DC=corp,DC=net;
1> configurationNamingContext: CN=Configuration,DC=corp,DC=net;
1> rootDomainNamingContext: DC=corp,DC=net;
```

g. From the LDP menu, select **Browse → Search**.

h. In the Search window, paste the Base DN into the Base Dn box. Input the LDP Filter into the Filter box.

*Use `(&(objectclass=person)(displayname="customer last name, first name letter"*))` as the LDP Filter. For example, `(&(objectclass=person)(displayname=mcdonald, j*))`*

*Select **Subtree** for the Scope.*

*Click **Options**.
In the Search Options window, remove all entries in Attributes; then click **OK**.

Back in the Search window, click **Run**; then click **Close**.

On the LDP screen, locate the user DN from the returned results. Copy it for use in the Embedded Web Server (EWS).

The Search Prefix begins after the individual user CN.
Hint

Notice how the username is set up on the LDP screen. The username format is defined within the device user DN. This can be viewed in the LDP trace. The format is often in email address format, but can be defined in many different combinations.

```
>> ldp-CN:Joshua.mcdonald@hp.com,OU=US,OU=Users,OU=Accounts,DC=america,DC=hp
4:cn:Joshua.mcdonald@hp.com,1> cn:Joshua.mcdonald@hp.com
1> sn:McDonald
```

Step 3: Configure LDAP

a. Open the EWS in a web browser.
b. Select the Settings tab, and then LDAP Authentication.
c. On the LDAP Authentication screen, paste the copied Search Prefix into the Bind and search Root box.
d. Input cn into the Bind Prefix box.
e. Input 389 or 3268 in the Port box.
f. Input the LDAP server IP address or server name into the LDAP Server box.

Hint

Using the command `echo %logonserver%` earlier, IDBGAM03 was the server name discovered.

g. Leave the LDAP Server Bind Method at Simple unless configuring SSL.
h. Input \textbf{cn} into the “Match the name entered with the LDAP attribute of” field.

i. Find the device user email address in the LDP trace. Copy the attribute defining the email address.

```
1> lockoutTime: 0;
1> objectCategory: CN=Person,CN=Schema,C
5> dSCorePropagationData: 5/6/2005 1:23:14 1
ntain Standard Time Mountain Daylight Time; 7/14/16
1> lastLogonTimestamp: 6/27/2005 9:40:52 Mc
1> textEncodedORAddress: c=US;a=;p=COMP
<1> mail: joshua.mcdonald@hp.com;
```

Paste the attribute into the “Retrieve the device user’s email address using attribute of” box.

j. Find the device user display name in the LDP trace. Copy the attribute defining the display name.

```
1> givenName: Joshua;
1> distinguishedName: CN=joshua.
1> instanceType: 4;
1> whenCreated: 4/15/2004 11:0:26
1> whenChanged: 6/27/2005 9:40:52
1> displayName: McDonald, Joshua
```

Paste the attribute into the “Retrieve the device and name using the attribute of” box.

k. Click \textbf{Test}.

l. The Test LDAP Authentication screen appears. Input your username and password; then click \textbf{OK}.
**Hint**

Remember how the username was set up on the LDP screen. The username is defined within the device user DN value in the LDP trace and is not in standard Windows domain account format. The format is often your entire email address, including the @xx.xx.

m. The LDAP Authentication screen appears. Click **Apply**.

---

**Step 4: Configure the Authentication Manager**

a. From the EWS, click the **Authentication Manager** tab.

b. On the Authentication Manager screen, check the **Use internal LDAP** radial button.

c. Check all boxes under “require user authorization for.”

d. Click **Apply**.
Step 5: Use the MFP control panel

a. At the MFP, touch any option on the main screen. The screen displays a request for authentication.

Hint
Remember the username is defined within the device user DN value in the LDP trace and is often your entire email address, including the @xx.xx.

b. Use the touch screen keypad to input the authentication. Once input, click OK, and the chosen option appears; for example, the Folder screen appears.