

Configuring Embedded LDAP Authentication





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For HP product models:

LaserJet 4345mfp, LaserJet 9040mfp, LaserJet 9050mfp, LaserJet 9500mfp, and Digital Sender 9200C

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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.



Address C D:\SUPPORT		
Folders	×	Name
🕑 Desktop		Files Currently on the CD
🗉 My Documents		(Diracia)
🖃 😼 My Computer		
🖃 🥯 Local Disk (C:)		
Cij9500mfp		
🖃 🚞 Documents and Settings		

c. Double click the **SUPTOOLS.MSI** file.



d. Select **Next** at the Welcome to the Windows Support Tools Setup Wizard.

🛱 Windows Support Tools	Setup Wizard	×
	Welcome to the Windows Support Tools Setup Wizard This wizard helps you to reinstall or remove the Windows Support Tools. Warning: This setup cannot reinstall shared files if they are in use. Before proceeding, we recommend that you close any programs you may be running. Click Cancel to quit this setup wizard and then close any programs you have running. Click Next to continue with this reinstallation.	
	< <u>₿</u> ack <u>N</u> ext > <u>C</u> ancel]

e.	After reading the licensing agreement, select the I Agree radial butt and click Next.	on
🙀 Wir	ndows Support Tools Setup Wizard	×
En	nd User License Agreement Read the End-User License Agreement carefully and select either "I Agree" or "I Disagree".	7
Mi EN IM (" so so so so m TE US	icrosoft Windows XP Support Tools ND-USER LICENSE AGREEMENT APORTANT-READ CAREFULLY: This End-User License Agreement 'EULA'') is a legal agreement between you (either an individual r a single entity) and Microsoft Corporation for the Microsoft oftware product identified above, which includes computer oftware and may include associated media, printed materials, online'' or electronic documentation, and Internet-based ervices ("Product"). An amendment or addendum to this EULA bay accompany the Product. YOU AGREE TO BE BOUND BY THE ERMS OF THIS EULA BY INSTALLING, COPYING, OR OTHERWISE SING THE PRODUCT. IF YOU DO NOT AGREE, DO NOT INSTALL OR	
	< <u>B</u> ack <u>N</u> ext > <u>C</u> ancel	

f. Enter your name and organization; then click $\ensuremath{\textit{Next}}.$

User Information		5
Supply your user monnation.		
Enter your name, organization.		
N <u>a</u> me:		
User		
Organization:		
Hewlett-Packard		
	< Back	Next > Cancel

n iype	5
install all of the Windows Support Tools, or just a portion.	l
tallation type. Typical installation meets the needs of most use	ers.
rada too for server and newtone management.	
if you are a server or network administrator.	

g. Select **Complete** for the installation type; then click **Next**.

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

Please select an approp	riate destination directory for W	/indows Support To	ols.
nstall Windows Support T	ools to:		
C:\Program Files\Suppor	t Tools\		Br <u>o</u> wse
Available space on local H	hard disks:		
Valuesa	Disk Size	Available	Required
volume			the second se
C:	55GB	42GB	11MB
C:	55GB	42GB	11MB
C:	55GB	42GB	11MB
C:	55GB	42GB	11MB

i. Click **Finish** to complete the installation.



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**.





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.

📾 C:\WINDOWS\system32\cmd.exe	- 🗆 🗙
Microsoft Windows XF [Version 5.1.2600] (C) Copyright 1985-2001 Microsoft Corp.	1
C:\Documents and Settings\jmmcdonald.AMERICAS>nslookup AMERICAS.HPQCORP.NET DNS request timed out. timeout was 2 seconds. *** Can't find server name for address 16.88.97.243: Timed out Server: cacgcam01.americas.cpqcorp.net Address: 16.92.3.243	
Name: AMERICAS.HPQCORP.NET	

Step 2: Setting up LDP

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

Run		<u>? ×</u>
5	Type the name of a program, fold Internet resource, and Windows v	er, document, or will open it for you.
Open:	Idp.exe	•

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



- 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**.
 - W 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.

Connect	×
Server:	
Port: 389	Connectionles:
Cancel	<u>0</u> K

- d. From the LDP menu, select **Connection** ® **Bind**.
- e. In the Bind window, input username, password, and domain name; then click **OK**.

User	jmmcdonald	
Password:	******	
Domain:	AMERICAS	-
(NTLM/Kerbe	erosì	<u>C</u> ancel

- f. On the LDP screen, find and copy the Base DN.
 - W The Base DN is normally listed within "defaultNamingContext."

ld = ldap_op	pen("16.88.97.11", 389);
Established	connection to 16.88.97.11.
Retrieving b	ase DSA information
Result <0>:	(null)
Matched DN	ls:
Getting 1 en	tries:
>> Dn:	
1:	> currentTime: 6/28/2005 15:51:42 Mountain Standard Time Mountain Daylid
1:	> subschemaSubentry: CN=Aggregate.CN=Schema.CN=Configuration.DC=
1:	> dsServiceName: CN=NTDS Settings.CN=IDBGCAM03.CN=Servers.CN=S
3:	> namingContexts: CN=Configuration,DC=cpqcorp,DC=net; CN=Schema,C
1	> defaultNamingContext: DC=americas,DC=cpqcorp,DC=net;
1	> schemaNamingContext: CN=Schema,CN=Configuration,DC=cpgcorp,DC
1:	> configurationNamingContext: CN=Configuration,DC=cpgcorp,DC=net;
1:	> rootDomainNamingContext: DC=cpqcorp,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.
 - W Use (&(objectclass=person)(displayname="customer last name, first name letter"*)) as the LDP Filter. For example, (&(objectclass=person)(displayname=mcdonald, j*))
 - W Select **Subtree** for the Scope.
 - W Click Options.

Search		×
Base <u>D</u> n:	DC=americas,DC=cpqcorp,DC=ne	t i
<u>F</u> ilter:	(&(objectclass=person)(displayname	e=mcdonald, j*)
Scope:		
Bas	e C <u>D</u> ne Level • Subtreg	<u>R</u> un
Option	15	Close
Option		<u>C</u> lose

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

<u>T</u> ime limit:	0	<u>0</u> K
<u>S</u> ize limit:	0	Cancel
Timeout (s):	0	
Timeout (<u>m</u> s):	0	
<u>P</u> age size	16	
<u>A</u> ttributes:		
Search Call Type C Async. Sync. C Timed Sync.		ttributes O <u>nly</u> hase <u>r</u> eferrals isplay Results
C Extended C Paged	Sort Keys	Controls

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

Search			
Base <u>D</u> n:	DC=americas,DC=cpqcorp,DC=	net	
Eilter: (&(objectclass=person)(displayname=mcdonald			
Scope: C <u>B</u> as	e 🤉 🖸 ne Level 📀 Subtred	Run	
Option	15		

- i. On the LDP screen, locate the user DN from the returned results. Copy it for use in the Embedded Web Server (EWS).
 - W The Search Prefix begins after the individual user CN.

r name, incontaio@ip.com,
1> canonicalName: americas.cpqcorp.net/Accounts/Users/US/jmcdonald@hp.com;
>> Dn: CN=joseph.mcdonald@hp.com,OU=US,OU=Users,OU=Accounts,DC=americas,DC=cpqcorp,DC=net
4> objectClass: top; person; organizationalPerson; user;
1> cn: joseph.mcdonald@hp.com;
1> distinguishedName: CN=joseph.mcdonald@hp.com,OU=US,OU=Users,OU=Accounts,DC=americas,DC
1> name: joseph.mcdonald@hp.com;
1> canonicalName: americas.cpqcorp.net/Accounts/Users/US/joseph.mcdonald@hp.com;
>> Dn: CN=joshua.mcdonald@hp.com,OU=US,OU=Users,OU=Accounts,DC=americas,DC=cpqcorp,DC=net
4> objectClass: top; person; organizationalPerson; user;
1> cn: joshua.mcdonald@hp.com;
1> distinguishedName: CN=joshua.mcdonald@hp.com,OU=US,OU=Users,OU=Accounts,DC=americas,DC
1> name: joshua.mcdonald@hp.com;
1> canonicalName: americas.cpqcorp.net/Accounts/Users/US/joshua.mcdonald@hp.com;
>> Dn: CN=julie.mcdonald@hp.com,OU=US,OU=Users,OU=Accounts,DC=americas,DC=cpqcorp,DC=net

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.

>> DnsCN=joshua.mcdonald@hp.com;OU=US,OU=Users,OU=Accounts,DC=americas,DC=c; 4> objectClass: top; person; organizationalPerson; user; 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, IDBGCAM03 was the server name discovered.

g. Leave the LDAP Server Bind Method at **Simple** unless configuring SSL.

Information Sett	ings Digital Sending Networ	rking	
Configure Device	LDAP Authenticatio	n	
Alerts AutoSend	Accessing the LDAP Server		Help
Security Authentication Manage	LDAP Server Bind Method: LDAP Server:		
LDAP Authentication Edit Other Links	Port:	689	
Device Information Language	Bind Prefix: Bind and search Root:	cn OU=US;OU=Users;OU=Accounts;DC=americas;DC=cr	
Date & Time Wake Time	Searching the Database		
Otherlinks	Match the name entered with the LDAP attribute of	cn	
hp instant support Order Supplies Product Support	Hetneve the device user's email address using attribute of and name using the attribute of	mail	
	Test	laisbiaiturame	
			Apply Cancel

- h. Input **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.



- W 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.
 - W This is usually set as displayName.



- W Paste the attribute into the "Retrieve the device and name using the attribute of" box.
- k. Click Test.

Date & Time		
Wake Time	Searching the Database	
	Match the name entered with the LDAP attribute of	(cn
Other Links	Retrieve the device user's	
hp instant support Order Supplies	email address using attribute of	mail
Product Support	and name using the attribute of	displayName
	Test	
		Anniv Cancel
		Apply Caller

1. The Test LDAP Authentication screen appears. Input your username and password; then click **OK**.

gs Digital Sending	Networking
Test LDAP Auth	entication
Test LDAP authentication by enter	ing the user's credentials (as the device user would do) of a person who has proper access rights.
Credentials	
Username:	
ioshua mcdonald@hn.com	
Joonda.modonana@np.com	
Password:	
Password:	
Password:	

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.

		Help
Accessing the LDAP Server		
_DAP Server Bind Method:	Simple	
LDAP Server:	IDBGCAM03	
Port	389	
Bind Prefix:	cn	
Bind and search Root:	OU=US;OU=Users;OU=Accounts;DC=americas;DC=cr	
Searching the Database		
Match the name entered with the LDAP attribute of	cn	
Retrieve the device user's email address using attribute of	maii	
and name using the attribute of	displayName	
Tect		

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**.

Information Sett	ings Digital Sending Networking
Configure Device	Authentication Manager
E-mail Server	He
Alerts	Authentication method
AutoSend	
Security	Use external Digital Send Service software (Havailable)
Authentication Manager	© Use internal LDAP
LDAP Authentication	Require user authentication for
Edit Other Links	Copy
Device Information	🔽 Scan to Email
Language	✓ Scan to Fax
Date & Time	Scan to Network Folder
Wake Time	
	Apply Cancel

Hint

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.

	Authentica	tion Required	
User Name:			
Password:			
L	ОК	Cancel	

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