

Release Notes



IBM® Tivoli® Identity Manager LDAP Adapter

Version 4.6.10

Tenth Edition (June 30, 2010)

This edition applies to version 4.6 of this Adapter and to all subsequent releases and modifications until otherwise indicated in new editions.

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Preface

Welcome to the IBM Tivoli Identity Manager LDAP Adapter.

These Release Notes contain information for the following products that was not available when the IBM Tivoli Identity Manager manuals were printed:

- IBM Tivoli Identity Manager LDAP Adapter Installation and Configuration Guide

Adapter Features and Purpose

The LDAP Adapter is designed to create and manage LDAP accounts. The adapter is preconfigured to manage the iNetOrgPerson schema on IBM (IDS) and SunOne Directory Servers with simple one-level OU structures, but can be configured to manage other schemas and directories. The LDAP Customization White Paper, packaged with this adapter, contains information about the customization process. Customizing the adapter requires skills in the following areas: IBM Identity Manager (ITIM), IBM Tivoli Directory Integrator (TDI), and LDAP directories.

IBM recommends the installation of this Adapter (and the prerequisite Tivoli Directory Integrator) on each node of an Identity Manager WAS cluster. A single copy of the adapter can handle multiple Services of similar or varied LDAP types. The optimum deployment configuration is based, in part, on the OU structure of your directory, but the primary factor is the planned structure of your Identity Manager Provisioning Policies and Approval Workflow process. Please refer to the Identity Manager Policy, Organization & Administration Guide for a discussion of these topics.

The LDAP Adapter is a powerful tool that requires Administrator Level authority. The Adapter operates much like a human system administrator, creating and modifying accounts. Operations requested from the Identity Manager server will fail if the Adapter is not given sufficient authority to perform the requested task. IBM recommends that this Adapter run with administrative permissions.

Contents of this Release

Adapter Version

Component	Version
Release Date	June 30, 2010
Adapter Version	4.6.10
Comm. Libraries	Adapter Build: 5.0.1008 AL version: 4.6.1018 Connector: N/A (uses the LDAP connector from Tivoli Directory Integrator) Dispatcher: 5.123
Documentation	LDAP Adapter Installation and Configuration Guide v4.6.0 SC32-1754-00

New Features

Enhancement # (FITS)	Description
	Items included in current release
MR121809696	Provide a Rename Utility that runs on Unix. Profile Rename utility packaged with LDAP Adapter is enhanced to work on Unix Operating Systems also. A new script (LdapProfile-rename.sh) file has been packaged with Profile Rename Utility should be used to run the utility on Unix Systems. Steps to run the utility on Unix Systems are mentioned in "ProfileRename-README.txt" packaged with LDAP adapter.
MR1210082329	LDAP Adapter is certified to work with IBM Tivoli Directory Server v6.2.
	Items included in 4.6.8 release
	None
	Items included in 4.6.8 release
MR1007084315	Adapter should return warning instead of error when restoring already active user. For more information, see "Status Codes on Suspend and Restore Functions" in the Configuration section of this document.
N/A	Internal Enhancements: <ul style="list-style-type: none"> • Add page size option on service form • Add group class name on service form • Fix rename profile utility to change object class names in ALs. • Remove Commented out code from ALs. For more information, see the Configuration section of this document
N/A	Performance improvements. For more information, see the Configuration section of this document
	Items included in 4.6.7 release
	None
	Items included in 4.6.6 release
	None
	Items included in 4.6.5 release
	Added support for TDI 6.1
	Added support for TDI 6.1 on zOS. and zLinux Please see additional instructions in the zOS subdirectory of this distribution.

Enhancement # (FITS)	Description
	Items included in 4.6.4 release
	None
	Items included in 4.6.3 release
	Added selectable naming attribute on the Service Form. Changed the search to reconcile subtree. Expanded LDAP Customization Guide.
	Items included in 4.6.2 release
	None
	Items included in 4.6.1 release
	None
	Items included in 4.6.0 release
	New adapter.

Closed Issues

Internal#	APAR#	PMR# / Description
		Items closed in current version
	IZ77422	<p>PMR 83862,7TD,000 Not able to use CN as ldapUserRDN.</p> <p>Adapter was not returning the value of CN attribute to ITIM when there is only one value for CN on the resource and CN has been used as User RDN attribute on Service Form. Reconciliation request was not able to complete successfully because ITIM was not able to store the user entry in LDAP as CN is a required attribute in account class on ITIM side. This defect has been fixed in this release.</p> <p>NOTE: This fix slightly changes the behavior of adapter. Carefully test compatibility with your custom LDAP adapters.</p> <p>(See additional detail under "APAR IZ77422" in the Configuration Notes section of this document.)</p>
		Items closed in 4.6.9 version
36846	N/A	<p>N/A Naming attribute CN/uid on resource and ITIM not in sync in certain scenarios.</p> <p>Add and Modify operation contains wrong script ,which results in not setting the naming attribute(CN or UID) value on resource. This was the internal defect. Fixing this defect in Add/Modify AL also need some changes in SearchAL logic such that values of all resource side attributes should get mapped to ITIM side attributes properly.</p>
36847	N/A	<p>N/A Update LDAP customization guide so that it matches with the other enhancements done to the adapter.</p> <p>I) PMR 73809,227,000 - LDAP customization document requires changes in the steps mentioned under "Assembly Lines rename procedure" section.</p> <p>II) Query - Customizing the LDAP Adapter according to the "im50-ldap-adap-cust.pdf" Guide does not work.Updated Chapter 7, page 17 with appropriate details</p> <p>III) Query - Constant Values defined within the LDAPAdapterUtils package are used all over the place, but do not pick up changes to the Adapter ObjectClass definitions. E.g. The Input Map of the conLDAPUser connector in the LDAPSearch AL defines "Packages.com.ibm.di.utils.LDAPAdapterUtils.TIM_USER_ACCOUNT" as the entry ObjectClass value. This returns the (hardcoded?) value of "erLDAPUserAccount" instead of the customized User Account objectclass name</p> <p>IV) Query - LDAP Adapter contains a "hard coded" list of return attributes</p>

Internal#	APAR#	PMR# / Description
36848	N/A	<p>N/A</p> <p>TDI LDAP Adapter - changes to attribute mapping logic so that it is easier to customize the adapter.</p> <p>In previously released LDAPAdapter if user wants to customized adapter say adding the support for one more attribute in objectclass,user needs to add that attribute in attribute map of AL and then have appropriate mapping i.e advance or direct mapping.</p> <p>For this reason we have done changes in attribute mapping in this release .Now from this release of LDAP adapter if the user wants to support one attribute of objectclass having direct mapping then there is no need of adding that attribute in attribute map of AL, this has been taken care by including '*' in the attribute map of Add,Modify,Search AL. The '*' here means whatever the attributes and their value are there in one entry will get copied/cloned, as it is, in the other entry.</p> <p>For Example, Say it is a search AL and mapping is Input Map (CONN -> WORK mapping), and we have used * in mapping, ITDI will take all the attributes from CONN entry and create corresponding attributes with the same name in Work entry. Suppose we have 2 attributes in CONN entry (cn and sn) and we put * in mapping, it will create cn and sn in WORK entry with respective values.</p> <p>Note : User needs to add the attribute to Attribute map of AL if it has advanced mapping i.e some extra processing is required for that attribute.</p>
		Items closed in 4.6.8 version
36189 36188 36190 35456 34452		<p>CMVC 36189 - Incorrect Error messages when User Modify (suspend, restore etc) and Delete operations fails.</p> <p>CMVC 36188 - LDAP internal Defect: Containers get reconciled while doing a filtered recon in LDAP Adapter.</p> <p>CMVC 36190 - User was not getting deleted from group's member list while user delete operation.</p> <p>CMVC 36191 - Suspend and Restore operations were not working properly when TIM and resource LDAP are same.</p> <p>CMVC 35456 - LDAP Service fails to add group.</p> <p>CMVC 34452 - recon with 1 group per user is 100x slower than with 0 groups.</p>

Internal#	APAR#	PMR# / Description
		Items closed in 4.6.7 version
N/A	N/A	Updating the Release Notes to include important information about upgrading this adapter from version 4.6.2 (or below). See “Corrections to the Installation Guide” section in this document.
		Items closed in 4.6.6 version
	IZ01098	87690,999,760 The search filter attribute does not get passed to the LDAP Connector. Beginning in this release, the ITIM Recon filter will be passed to the LDAP Connector to optimize the query. In prior versions of the adapter, the filtering was performed by the Dispatcher.
N/A	IY97803	06196,7TD,000 LDAP RMI Adapter connection leak. (documentation error) See corrections to the Installation Guide (below)
		Items closed in 4.6.5 version
N/A	IY93167	47629,005,000 Null pointer exception may occur if custom adapter assembly lines do not setting reason code on each results page.
N/A	N/A	57222,7TD,000 Error message in the log file incorrectly reports that the account is not a member of any group.
N/A	IY91137	48306,999,760 Attributes getting suppressed in Log. Replaced TDI standard logging to mask passwords in the log file.

Internal#	APAR#	PMR# / Description
		Items closed in 4.6.4 version
N/A	IY91137	27902,999,760 Password is logged as plain text in IBMDI.LOG
N/A	IY91393	46211,005,000 Filtered recon on RMI LDAP adapter does not work with special characters.
		Items closed in 4.6.3 version
		None
		Items closed in 4.6.2 version
N/A	N/A	N/A Change to the directory OID for the adapter schema. NOTE: special upgrade instructions apply. Please see “Corrections to Installation Guide” section below.
		Items closed in 4.6.1 version
		None (dispatcher update)
		Items closed in 4.6.0 version
		None

Known Issues

Internal#	APAR#	PMR# / Description
		NOTE: Installation on zOS and zLinux require special installation of the Dispatcher. Please see zSystem folder of this distribution.

Installation and Configuration Notes

See the IBM Tivoli Identity Manager "LDAP Adapter Installation Guide" for detailed instructions.

Corrections to Installation Guide

The following corrections to the Installation Guide apply to this release:

This release contains an additional installation program not mentioned in the Installation and Configuration Guide. If you are running TDI on platforms other than Linux or Windows, please run the java-based install as directed below. Run this installation program on the server in which Tivoli Directory Integrator is installed.

setup.jar Installation program for other platforms.

NOTE: the setup.jar is a java-based installer. Please ensure that java is installed and properly configured for your system. Launch the install with the following command.

Java -jar setup.jar

Upgrading from version 4.6.0 through 4.6.2 of this adapter

This version of the adapter has changed the OID (Object ID) of the adapter schema attributes. The prior version of the adapter and all account data must be removed before installing a new version of the adapter. Optionally, the procedure below can be used to avoid the need to remove the old adapter. Perform these steps before installing the new adapter version.

When upgrading from LDAP Adapter v4.6.2 (or lower), the OID for object class erLDAPRMIService must be changed to "1.3.6.1.4.1.6054.3.139.1.4" in LDAP prior to importing the new profile. To accomplish this task on the IBM Directory Server, perform the following steps:

1. Login into the "IBM Directory Server" machine.
2. Stop the "IBM Directory Server" process or service.
3. Locate the "V3.modifiedschema" file. This file contains TIM and Adapters schemas. The file is located under the "etc" directory of the TIM LDAP instance home directory. For example, on Windows platform, if the TIM LDAP instance name is "itimldap" and the instance location is "C:\", then the "V3.modifiedschema" file will be located in the "C:\idsslapd-itimldap\etc" directory.
4. Save a copy of the "V3.modifiedschema" file (i.e. V3.modifiedschema.SAVE).
5. Edit the "V3.modifiedschema" file.
 - a. Search for "erLDAPRMIService"
 - b. Change "1.3.6.1.4.1.6054.3.139.1.3" to "1.3.6.1.4.1.6054.3.139.1.4". Note: the double quotes are not part of the OID.
 - c. The line looks like this:
 - d. (1.3.6.1.4.1.6054.3.139.1.4 NAME 'erldaprmiservice' SUP top STRUCTURAL MUST (erDSName \$ erPassword \$ erServiceName \$ erServiceUid \$ erURL)

```
MAY ( description $ ergroupsContainerDN $ erITDIurl $ erLdapUserRDN  
$ eruserContainerDN ) )
```

6. Save the your changes.
7. Start IDS.

Chapter 2: Installing the Adapter (entire section replacement)

Installing the adapter (Section)

For zOS installation, see “Installing on a zOS below.”

The LDAP Adapter uses the Tivoli Directory Integrator LDAP connector. This connector is available with the base Tivoli Directory Integrator product. Because the Tivoli Directory Integrator LDAP connector is already installed, you only need to install the RMI Dispatcher. The RMI Dispatcher installer is included in the LDAP Adapter compressed file.

The RMI Dispatcher has several different types of installer binaries. Select the one appropriate for your operating system.

For Linux operating systems only: DispatcherInstall_linux.bin
For Windows operating systems only: DispatcherInstall_win.exe
For all operating systems: DispatcherInstall.jar

Note: All directory paths and binaries for this procedure apply to Windows operating systems. Change them as needed for other operating systems.

To run the installer:

1. Download the LDAP Adapter compressed file from the IBM Web site. Contact your IBM account representative for the Web address and download instructions.
2. Extract the contents of the compressed file into a temporary directory and navigate to that directory.
3. Start the installation program using the DispatcherINSTALL file in the temporary directory. For example on a Windows operating system, select Run... from the Start menu and type C:\Temp\Dispatcher_win.exe in the Open field.

Note: If you are running the Tivoli Directory Integrator on platforms other than Linux or Windows operating systems, run the Java-based installer. Use the java.exe that comes with Tivoli Directory Integrator to launch the install. The java.exe located in the ITDI_HOME\jvm\jre\bin directory.

Issue the command: ITDI_HOME\jvm\jre\bin/java -jar DispatcherInstall.jar

4. In the Welcome window, click Next.
5. In the License Agreement window, review the license agreement and decide if you accept the terms of the license. If you do, click Accept, and then click Next.
6. In the Tivoli Directory Integrator Based Adapter Installer window, specify the location where Tivoli Directory Integrator is installed. You can accept the default location, or click Browse to specify a different directory. Then, click Next.
7. If this is the first Tivoli Directory Integrator-based adapter installation, you are prompted in the Adapter Solution Directory panel to specify the adapters solution directory to be used for the Tivoli Directory Integrator-based Tivoli Identity Manager adapters. If the adapters solution

directory has been specified during a previous Tivoli Directory Integrator-based adapter installation, the prompt is not displayed.

8. In the confirmation window that displays the components that are to be installed and the upgrades that are to be completed, click Install to begin the installation. Otherwise, click Back to make changes.
9. In the Installation Completed window, click Finish to exit the program.

Installing on a zOS

1. Locate the delivered dispatcher or adapter compressed file.
2. Extract the contents of the compressed file into a temporary directory and navigate to that directory.
3. From the temporary directory, locate and navigate to the zSystem directory.
4. Under the zSystem directory, locate the following two files:
 - a. Dispatcher.tar
 - b. instDispatcher_zOS.sh

Note: Dispatcher.tar is a binary UNIX tar file and instDispatcher_zOS.sh is a UNIX shell script in EBCDIC format.

5. Transfer the two files to the zOS workstation where the adapter is to be installed. Both files must be copied to the same directory.
6. Set the execution flag on instDispatcher_zOS.sh:

```
chmod +x instDispatcher_zOS.sh
```

7. Run the installer by issuing the command:

```
./instDispatcher_zOS.sh
```

8. You will be prompted to enter the following information:
 - a. TDI home directory.
 - b. Your TDI solution directory.

Make sure you have the above information available and the Dispatcher.tar is located in the same directory before you continue.

9. Note that the installer will make the following updates to the ITDI_HOME directory:
 - a. Create the itim_listener.properties in the ITDI_HOME directory.
 - b. Update the global.properties file in the ITDI_HOME/etc directory.

Note: The above updates must be made in order for the Dispatcher to function. If any of the updates fail due to write permissions on the ITDI_HOME directory, contact the zOS system administrator and request the above files to be updated.

For your information:

- A copy of itim_listener.properties is located under your TDI solution directory.
- The solution.properties, under your TDI solution directory, is the updated global.properties file.

Configuration Notes

The LDAP Adapter is designed to work with simple directory configurations. It is expected that most implementations of Identity Manager will customize this adapter. The “LDAP Adapter Customization White Paper” has been provided (in this adapter distribution) to assist in the customization process.

When initially installed the adapter has the following design features:

- The IBM Tivoli Identity Manager v4.6 Adapter for LDAP is designed to work with “cn” or “uid” attribute as the RDN for the LDAP accounts. If your LDAP accounts use a different RDN attribute, the adapter must be customized to work with your directory. Please refer to the “LDAP Customization White Paper” for additional information.

Status Codes on Suspend and Restore Operations

The status code behavior has changed in this release.

The Adapter behavior has been changed for suspend and restore operations due to MR1007084315. Adapter will return warning in case a request is fired to restore an active user or suspend a already suspended user. Earlier version of the adapter was returning a failure for the same operations.

Performance Improvements

In earlier version of adapter Recon was very slow when each user had an association to a group with a large membership. The root cause of this issue was the user connector, which was returning all the attributes of the group. The fix was to return a specific list of attributes that are required and expected from the membership connector. Following are the sample statistics that shows the performance improvement:

Throughput before change for 100k users:	111 accounts/minute
Throughput after change for 100k users:	12500 accounts/minute

Profile Rename Utility – modifying ObjectClass

The Profile Rename utility has been updated to allow changes in object class names in ALs. When changing objectClass, the following manual steps are required to the object class names in Assembly Lines:

1. Unjar the LdapProfile.jar file using the following command
`jar -xvf LdapProfile.jar`
2. Open LDAPAdd.XML in text editor.
3. Replace all occurrences of "erLDAPUserAccount" to newUserObjClass
4. Replace all occurrences of "erLdapGroupAccount" to newGroupObjClass
5. Replace all occurrences of "erLdapContainerAccount" to newConatainerObjClass
6. Replace all occurrences of "erLdapGroupContainerAccount" to newGroupConatainerObjClass
(Applicable to LDAP Adapter for TIM v51)
7. Repeat steps 4.3 to 4.5 for all assembly lines (i.e. for all AssemblyLine XMLs)
8. Repackage the LdapProfile.jar using following command:
`jar -cvf LdapProfile.jar LdapProfile`

APAR IZ77422 - PMR 83862,7TD,000 sev2 not able to use CN as ldapUserRDN

Adapter was not returning the value of CN attribute to ITIM when there is only one value for CN on the resource and CN has been used as User RDN attribute on Service Form. Reconciliation request was not able to complete successfully because ITIM was not able to store the user entry in LDAP as CN is a required attribute in account class on ITIM side. This defect has been fixed in this release.

There is a change in the behavior of adapter. Earlier version of the adapter was not returning any value for CN attribute if there is only one value which got mapped to ERUID. In this version, if there is only one value for CN attribute on resource, then adapter will map it to both ERUID and CN (of Account Object Class on ITIM side).

For instance, if following is an entry on resource LDAP,

```
Dn: cn=tuser3,ou=users,dc=com
objectclass: inetorgperson; organizationalperson; person; top;
sn: tuser3sn;
cn: tuser3;
```

then adapter will map "tuser3" to ERUID and to CN also. So entry stored in ITIM LDAP will be like

```
Dn:
erglobalid=9113975423632247385,ou=orphans,erglobalid=000000000000000000
00,ou=ibm,dc=com
eruid: tuser3;
ercreatedate: 201006281214Z;
sn: tuser3sn;
erparent:
erglobalid=9113850732946037237,ou=services,erglobalid=000000000000000000
000,ou=ibm,dc=com;
objectclass: top; erLDAPUserAccount; erManagedItem; inetorgperson;
organizationalPerson; person; erAccountItem;
erglobalid: 9113975423632247385;
cn: tuser3;
eraccountstatus: 0;
erservice:
erglobalid=9113850732946037237,ou=services,erglobalid=000000000000000000
000,ou=ibm,dc=com;
erldapcontainername: ou=users,dc=com;
```

However, if there are more than one values on the resource for CN and CN is used as User RDN attribute on Service Form then adapter will map one value(which is used as RDN value in DN on resource LDAP) of CN attribute to ERUID and rest of the values to CN. For instance, if following is an entry on resource LDAP,

```
Dn: cn=user5,ou=users,dc=com
objectclass: inetorgperson; organizationalPerson; person; top;
sn: snval1; snval2;
cn: cnval2; cnval3; user5;
```

then adapter will map "tuser5" (from the list of CN values) to ERUID and all other values to CN. So entry stored in ITIM LDAP will be like

```
Dn:
erglobalid=9113975423903405991,ou=orphans,erglobalid=000000000000000000
00,ou=ibm,dc=com
```



```
eruid: user5;
ercreatedate: 201006281214Z;
sn: snval1; snval2;
erparent:
erglobalid=9113850732946037237,ou=services,erglobalid=000000000000000000
000,ou=ibm,dc=com;
objectclass: top; erLDAPUserAccount; erManagedItem; inetorgperson;
organizationalPerson; person; erAccountItem;
erglobalid: 9113975423903405991;
cn: cnval2; cnval3;
eraccountstatus: 1;
erservice:
erglobalid=9113850732946037237,ou=services,erglobalid=000000000000000000
000,ou=ibm,dc=com;
erldapcontainername: ou=users,dc=com;
```

Sample LDIF File

The LDAP Adapter is packaged with a sample LDIF file that contains a directory schema compatible with the default behavior of the LDAP adapter. Once your directory is loaded with this set of users and organizations, the customer will be able to create 3 services and reconcile the accounts therein.

Please follow the steps below to load this data, create the Services and perform the Reconciliation.

LDAP Server setup

Perform these steps on the LDAP server you will be managing through ITIM Express:

1. Unpack the sampleuid.ldif file (shipped with the adapter)
2. Create the suffix o=ibm,c=us
3. Load the sampleuid.ldif file.
(for example, from command line run: `ldapadd -D "cn=root" -w PASSWORD -c -f sampleuid.ldif`)

ITIM Express setup

Perform these steps from the ITIM Express user interface:

1. Create 3 services for the 3 organizational units in the sampleuid.ldif file:
 - a. Create a LDAP Profile service with 'User Container DN' set to "ou=In Flight Systems, ou=Austin, o=IBM, c=US" and 'Group Container DN' set to "ou=Groups, o=IBM, c=US"
 - b. Create a LDAP Profile service with 'User Container DN' set to "ou=Home Entertainment, ou=Austin, o=IBM, c=US" and 'Group Container DN' set to "ou=Groups, o=IBM, c=US"
 - c. Create a LDAP Profile service with 'User Container DN' set to "ou=Widget Division, ou=Austin, o=IBM, c=US" and 'Group Container' set to "ou=Groups, o=IBM, c=US"
2. Perform reconciliations on all the services

Supported Configurations

Installation Platform

The IBM Tivoli Identity Manager Adapter was built and tested on the following product versions.

Adapter Installation Platform:

This adapter installs into Tivoli Directory Integrator (TDI) and may be installed on any platform supported by the TDI product. IBM recommends installing TDI on each node of the ITIM WAS Cluster and then installing this adapter on each instance of TDI.

TDI 6.1.1 with FixPack 3 or higher

Managed Resource:

IBM Tivoli Directory Server (IDS) v6.0, v6.1, and v6.2
SunOne Directory v6.3 (using GroupOfNames)

IBM Tivoli Identity Manager:

ITIM Express v4.6.0 or later
ITIM v4.6.0 with FixPack 4.6.0-TIV-TIM-IF0033 (or later for use with TDI 6.1)

IMPORTANT NOTE:

This Adapter may be configured to work with other Directory Servers. Please see the "LDAP Adapter Customization White Paper" for information on customizing this adapter.

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End of Release Notes