

Release Notes



IBM[®] Tivoli[®] Identity Manager LDAP Adapter

Version 5.0.7

First Edition (Mar 27, 2012)

This edition applies to version 5.0 of Tivoli Identity Manager 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 Directory Integrator-based LDAP Adapter Installation and Configuration Guide

Adapter Features and Purpose

The LDAP Adapter is designed to create and manage LDAP accounts. The adapter runs in “agentless” mode and is preconfigured to manage the iNetOrgPerson schema on Tivoli Directory Server and SunOne Directory Servers, but can be configured to manage other directories. The LDAP Customization White Paper, packaged with this adapter, contains information about the customization process.

IBM recommends the installation of this adapter (and the prerequisite Tivoli Directory Integrator) on each node of an Identity Manager WebSphere cluster. A single copy of the adapter can handle multiple Identity Manager Services. The optimum deployment configuration is based, in part, on the topology of your network domain, but the primary factor is the planned structure of your Identity Manager Provisioning Policies and Approval Workflow process. Please refer to the Identity Manager Information Center for a discussion of these topics.

The Identity Manager adapters are powerful tools that require administrator level authority. Adapters operate much like a human system administrator, creating accounts, permissions and home directories. 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 (root) permissions.

Contents of this Release

Adapter Version

Component	Version
Release Date	March 27, 2012
Adapter Version	5.0.7
Component Versions	Adapter Build: 5.0.1005 Profile: 5.0.1010 AL Version: 5.0.1005 Connector: N/A (uses the LDAP connector from Tivoli Directory Integrator) Dispatcher: 5.125
Documentation	Directory Integrator-Based LDAP Adapter Installation and Configuration Guide SC23-6152-00 LDAP Adapter Customization Guide

New Features

Enhancement # (FITS)	Description
	Items included in current release
	None
	Items included in 5.0.6 release
MR102009450	LDAP: Adding pwdChangeTime attribute to LDAP RMI Adapter See "Configuration Notes" for additional information.
N/A	Removal of Unnecessary comments and commented code This version of the adapter does not include the commented code in the Adapter AL's. Also unnecessary comments have been removed from the AL's of the LDAP Adapter.
	Items included in 5.0.5 release
MR052109192	Support removal of the pwdReset attribute within a password change transaction. (See additional detail under "MR052109192" in the Configuration Notes section of this document.)
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 5.0.4 release
	None

Enhancement # (FITS)	Description
	Items included in 5.0.3 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 5.0.2 release
N/A	Enhanced adapter to allow use of SSL between connector and LDAP. Option is on the Service Form in Identity Manager.
	Items included in 5.0.1 release
	Initial release for Tivoli Identity Manager v5.0

Closed Issues

INTERNAL#	APAR#	PMR# / Description
		Items closed in current version
	IV13792	<p>LDAP Adapter fails when user's CN includes a comma.</p> <p>Customer can now add User ID having comma in the value for example User ID = abc,xyz</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 IV13792" in the Configuration Notes section of this document.)</p>
		Items closed in 5.0.6 version
		None
		Items closed in 5.0.5 version
	IZ77422	<p>PMR 83862,7TD,000</p> <p>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>

INTERNAL#	APAR#	PMR# / Description
		Items closed in 5.0.4 version
36846	N/A	<p>N/A</p> <p>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</p> <p>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 LDAP adapter 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 5.0.3 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 5.0.2 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 5.0.1 version
		None

Known Issues

INTERNAL#	APAR#	PMR# / Description
		<p>Editing adapter profiles on UNIX or Linux.</p> <p>The adapter profile JAR file may contain ASCII files created using MS-DOS ASCII format (i.e. schema.dsml, CustomLabels.properties, and service.def). If you edit a MS-DOS ASCII file in Unix you will often see the characters ^M at the end of each line. This is the extra character 0x0d that is used to indicate a new line of text in MS-DOS. There are tools, such as dos2unix, that can be used to strip out the ^M character. In addition, there are text editors that will ignore the ^M character.</p> <p>If you are using the vi editor, you can strip out the ^M character as follow:</p> <p>From the vi's command mode:</p> <pre>:%s/^M//g</pre> <p>followed by pressing Enter. The ^M (or Ctrl-M) typed to show it here should actually be entered by pressing ^v^M in sequence. (The ^v preface tells vi to use the next keystroke literally instead of taking it as a command.)</p>

Installation and Configuration Notes

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

Corrections to Installation Guide

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

Upgrading from version 4.6.0 through 4.6.2 of this adapter

The 4.6.0 through 4.6.2 version of the adapter has a different OID (Object ID) for 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.

Configuration Notes

The following configuration notes apply to this release:

Updating Adapters from Version 4.6

Tivoli Directory Integrator version 6.1.1 is a prerequisite to run the 5.0 adapters. To upgrade the adapter from a Tivoli Identity Manager 4.6 installation, perform the following:

1. If the Tivoli Directory Integrator is not version 6.1.1, take the appropriate actions to upgrade it.
2. Install all the adapter's components, as described in the installation guide, on the Tivoli Directory Integrator version 6.1.1. The installer will replace any previous installation.
3. Import the adapter profile into the Tivoli Identity Manager 5.0.

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;
```

APAR IV13792 - LDAP Adapter fails when user's CN includes a comma.

Customer can now add User ID having comma in the value for example User ID = abc,xyz.

1. With this fix customer should not provide \ backward slash before comma through the account form.
2. If User base DN is ou=users,dc=com then on resource, cn=abc\,xyz, ou=users,dc=com entry is created but the value of cn will remain abc,xyz on LDAP resource.
3. **Filter Recon:**
 - a. If customer want to do filter recon then filter query should be (eruid=abc,xyz)
 - b. In AL, for searching group membership we use

```
ret.filter = "(" + "(objectclass=" + work.getString("grpObjectClass") + ") (" + MEMBER + "=" + work.getString("memberdn") + ") )";
```
 - c. If username has comma then we used search filter

```
ret.filter = "(" + "(objectclass=" + work.getString("grpObjectClass") + ") (" + MEMBER + "=" + Amita\5C\2CLele + ") )";
```

\5C is hexadecimal value of back slash (\) and \2C is hexadecimal value of comma (,)
 - d. This search filter is used in Add and Search AL in the Link Criteria of ConLDAPMembership connector.

MR052109192 - LDAP: Supporting removal of the pwdReset attribute within a password change

This version of the adapter is enhanced to support pwdReset attribute. This attribute get set on resource for each person/user entry when its password is being changed by Admin user and password policy is Enabled.

A new option has been introduced in adapter to make it configurable. It is on Account Form with a label "Force a password change at next logon?". Possible value for this option is either TRUE or FALSE. When this option is set to TRUE/Checked on the Account Form, adapter will set the value of pwdReset attribute to TRUE and it is set to FALSE/Unchecked on the Account Form, adapter will set the value of pwdReset attribute to FALSE.

Value of pwdReset attribute is dependent on one more option, i.e. "Password policy enabled on directory server?", which is being added as Service Configuration parameter on Service Form. Value of this option decides the way adapter will handle pwdReset attribute. Adapter will consider and set/reset the value of pwdReset attribute ("Force a password change at next logon?") only if "Password policy enabled on directory server?" option is set to TRUE.

Note:

- a. pwdReset attribute is supported only on IBM Directory Server and it has been tested with IBM Directory Server v6.2. This attribute is not supported for any version of Sun Directory Server.
- b. While suspend operation adapter will not consider the value of pwdReset attribute.
- c. pwdReset will get set/reset only if "Password policy enabled on directory server?" is selected on Service Form. However, adapter will reconcile the value of pwdReset attribute irrespective of the value of "Password policy enabled on directory server?".

Following is an example demonstrating the usage of this attribute.

Service Configuration - "Password policy enabled on directory server?" is set to TRUE on Service form.

- a. Add Operation - When a new user account is requested with "Force a password change at next logon?" option selected on the Account Form, adapter will set the value for pwdReset attribute to TRUE. If the value is set to FALSE on Account Form adapter will set the value for pwdReset attribute to TRUE.
- b. Modify Operation - While modify operation, whatever the value of "Force a password change at next logon?" option is on account form will get set on resource.
- c. Password Change Operation - While change password operation, whatever the value of "Force a password change at next logon?" option is on account form (ITIM LDAP), will get set on resource.
- d. Suspend Operation - While Restore operation adapter will not set/reset the value of pwdReset attribute.
- e. Restore Operation - While restore operation, whatever the value of "Force a password change at next logon?" option is on account form (ITIM LDAP), will get set on resource.
- f. Reconciliation Operation - Adapter will reconcile the value of pwdReset attribute for each account, irrespective of the value of "Password policy enabled on directory server?".

MR102009450 - LDAP: Adding pwdChangeTime attribute to LDAP RMI Adapter

This version of the adapter is enhanced to support pwdChangedTime attribute. This attribute get set on resource for each person/user entry when its password is being changed by Admin user and password policy is Enabled.

The value for this attribute is in the ZULU format. It is on Account Form with a label "Last Password Changed TimeStamp".

The pwdChangedTime attribute is a read/write attribute in IBM Directory Server v6.2 whereas it is ReadOnly in case of Sun One Directory Server v6.3. Value of pwdChangedTime attribute can only be modified in IBM Directory Server with Password Policy enabled.

Value of pwdChangedTime attribute is dependent on one more option, i.e. "Password policy enabled on directory server?", which is present as Service Configuration parameter on Service Form. Value of this option decides the way adapter will handle pwdChangedTime attribute. Adapter will consider and change the value of pwdChangedtime attribute ("Last Password Changed TimeStamp") only if "Password policy enabled on directory server?" option is set to TRUE.

Notes:

- pwdChangedTime will get change on IBM Directory Server only if "Password policy enabled on directory server?" is selected on Service Form. However, adapter will reconcile the value of pwdChangedTime attribute irrespective of the value of "Password policy enabled on directory server?" for both IBM Directory Server and Sun One Directory Server.
- In case of SunOne Directory Server v6.3, the value for pwdChangedTime will get updated on resource for each person/user entry when its password is being changed only when the value for usePwdChangedTime attribute on resource is "on". Value for usePwdChangedTime on resource is either on/off present under schema cn=config. To retrieve the value for pwdChangedTime for the user/person, set the value for usePwdChangedTime as " on" on resource directly.
- The value for pwdChangedTime attribute is changed on IBM Directory Server basically to prevent the password for a particular account from expiring by setting the pwdChangedTime attribute to a date far in the future when setting the userPassword attribute. The following example sets the time to midnight, January 1, 2200.

```
ldapmodify -D cn=root -w ? -k
dn:uid=wasadmin,cn=users,o=ibm
changetype:modify
replace:pwdChangedTime
pwdChangedTime:22000101000000Z
```

Following is an example demonstrating the usage of this attribute.

Service Configuration - "Password policy enabled on directory server?" is set to TRUE on Service form

- a. Add Operation - When a new user account is requested with value for "Last Password Changed Timestamp" on the Account Form, adapter will not set the value for pwdChangedTime attribute on resource. It will return a WARNING "pwdChangedTime attribute not supported during add operation."
- b. Modify Operation - While modify operation, whatever the value of "Last Password Changed Timestamp" option is on account form will get set on resource (only in case of IBM Directory Server with Password Policy enabled.)
- c. Reconciliation Operation - Adapter will reconcile the value of pwdChangedTime attribute for each account, irrespective of the value of "Password policy enabled on directory server?".

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, you 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,dc=com
3. Load the sampleuid.ldif file.
(for example, from command line run: ldapadd -D "cn=root" -w *PASSWORD* -c -f sampleuid.ldif)

Identity Manager Setup

Perform these steps from the Identity Manager 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, dc=com" and 'Group Container DN' set to "ou=Groups, o=IBM, dc=com"
 - b. Create a LDAP Profile service with 'User Container DN' set to "ou=Home Entertainment, ou=Austin, o=IBM, dc=com" and 'Group Container DN' set to "ou=Groups, o=IBM, dc=com"
 - c. Create a LDAP Profile service with 'User Container DN' set to "ou=Widget Division, ou=Austin, o=IBM, dc=com" and 'Group Container' set to "ou=Groups, o=IBM, dc=com"
2. Perform reconciliations on all the services

Customizing or Extending Adapter Features

The Identity Manager adapters can be customized and/or extended. The type and method of this customization may vary from adapter to adapter.

Getting Started

Customizing and extending adapters requires a number of additional skills. The developer must be familiar with the following concepts and skills prior to beginning the modifications:

- Tivoli Identity Manager administration
- Tivoli Directory Integrator management
- Tivoli Directory Integrations assemblyline development
- LDAP schema management
- Working knowledge of Java scripting language
- Working knowledge of LDAP object classes and attributes
- Working knowledge of XML document structure

Note: If the customization requires a new Tivoli Directory Integrator connector, the developer must also be familiar with Tivoli Directory Integrator connector development and working knowledge of Java programming language.

Tivoli Identity Manager Resources:

Check the “Learn” section of the [Tivoli Identity Manager Support web site](#) for links to training, publications, and demos.

Tivoli Directory Integrator Resources:

Check the “Learn” section of the [Tivoli Directory Integrator Support web site](#) for links to training, publications, and demos.

Tivoli Identity Manager Adapter Development:

Adapter Development Tool

The Adapter Development Tool, ADT, is a tool used by IBM Tivoli Identity Manager (ITIM) customers and consultants to create custom TIM adapters. It reduces adapter delivery time by about 50% and it helps in the development of custom adapters. The Adapter development tool is available on the [IBM Open Process Automation Library](#) (OPAL).

Support for Customized Adapters

The integration to the Identity Manager server – the adapter framework – is supported. However, IBM does not support the customizations, scripts, or other modifications. If you experience a problem with a customized adapter, IBM Support may require the problem to be demonstrated on the GA version of the adapter before a PMR is opened.

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 and can be installed on any platform supported by the Tivoli Directory Integrator product. IBM recommends installing Tivoli Directory Integrator on each node of the ITIM WAS Cluster and then installing this adapter on each instance. Supported Tivoli Directory Integrator versions include:

Tivoli Directory Integrator 6.1.1 Fix Pack 9

Managed Resource:

IBM Tivoli Directory Server v6.0, v6.1 and 6.2
SunOne Directory v6.3 (using GroupOfNames)

IBM Tivoli Identity Manager:

Identity Manager v5.0

IMPORTANT NOTE:

This adapter might be configured to work with other Directory Servers or SunOne with GroupOfUniqueNames. See the “LDAP Adapter Customization White Paper” for information on customizing this adapter.

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