

# Installation Guide

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### INSTALLING THE LIKewise ADAPTER FOR IBM TIVOLI IDENTITY MANAGER

- Install ITIM
- Install the ITIM Active Directory Adapter
- Install the Likewise ITIM Adapter
- Modify account forms
- Use ITIM to provision and maintain AD users, including Likewise-related attributes

### Abstract

This guide describes how to install the Likewise Adapter for IBM Tivoli Identity Manager (ITIM). The Likewise Adapter is a customized version of the standard ITIM Active Directory Adapter. Installing the adapter allows you to make use of ITIM to provision, maintain, and deprovision accounts in Active Directory — accounts that can also be used to log on Linux, Unix, and Mac OS X computers running the Likewise Enterprise agent.

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### Introduction

This guide describes how to install and operate the Likewise Adapter for IBM Tivoli Identity Manager, or ITIM. The guide covers installing the ITIM adapter and modifying it to make use of new attributes provided by the Likewise Adapter. The guide also explains how to use ITIM to provision, maintain, and de-provision users in Active Directory.

**Important:** The Likewise Adapter supports only version 5 of ITIM. It also supports only Likewise Enterprise *schema-mode* deployments that use the *default* cell. If you have deployed Likewise in non-schema mode or are using multiple cells, these deployment options are not supported by the adapter.

The target audience is network directory administrators who use ITIM to manage users and accounts. The guide assumes that you have a working knowledge of ITIM and Active Directory as well as familiarity with Likewise Enterprise.

### Overview of the Installation Process

The installation and deployment process typically proceeds in the following order:

1. Install IBM Tivoli Identity Manager, version 5.0 or later.
2. Install the IBM Active Directory Adapter.
3. Install the Likewise Adapter for ITIM.
4. Modify Active Directory Adapter forms to make use of new Likewise-related attributes.
5. Use ITIM with its modified forms to provision, maintain, and de-provision users in Active Directory.

### Installing IBM Tivoli Identity Manager

ITIM must be installed before installing any other software. The Likewise Adapter supports only version 5 of ITIM. If you have not yet installed this software, refer to IBM documentation, especially the *Tivoli Identity Manager Rapid Install Option Installation and Configuration Guide* (IBM publication #SC23-9470-00).

## Installing the IBM Tivoli Active Directory Adapter

The Likewise Adapter for ITIM *customizes* the standard ITIM Active Directory Adapter. The standard adapter must be installed and configured before it can be customized. If you have not yet installed this software, refer to the *Tivoli Identity Manager Active Directory Installation and Configuration Guide* (IBM publication #SC23-6175-00).

After you run the setup program for the standard ITIM Active Directory Adapter, you will need to import the adapter profile into ITIM and to create an Active Directory service that makes use of the adapter profile. To do this, you will need to know the location of the *adprofile.jar* file that is distributed with the adapter *setup.exe* program. **Copy this file to a location where you can modify it before importing it into ITIM.** After you copy the file, import it from its new (writable) location. If you do not do this (for example, you import it directly from a distribution CD) you might lose some configuration data when importing the customized version of this file in a later step. After importing the profile, create the Active Directory service as described in pages 13 and 14 of the IBM document mentioned above.

If you have previously installed the standard ITIM Active Directory Adapter and have already imported its profile and created the service, you should try to figure out the original location of the *adprofile.jar* file when it was imported into ITIM. If you can place the Likewise version of this file at the original location, you will be able to maintain your original configuration information.

These issues are described in the section titled *Upgrading the Active Directory Adapter* (page 61) of the IBM document.

After the standard AD adapter has been installed and configured, you should verify that it is operating properly. Use ITIM to create a user and to add an Active Directory account to the user. Verify that it properly creates an account in Active Directory and that you can log on a Windows computer using that account.

# Installing the Likewise Adapter for Tivoli Identity Manager

The Likewise Adapter for ITIM consists of two files: *adprofile.jar* and *exschema.txt*. These files have to be placed into the appropriate ITIM directories in order to extend the standard Active Directory Adapter. You should have received copies of these files along with this document. If you have not, please contact Likewise product support ([support@likewise.com](mailto:support@likewise.com)).

First, determine the location where you installed the standard ITIM Active Directory Adapter. By default, this location is *c:\tivoli\agents\ADAgent*. Place the Likewise adapter's *exschema.txt* file in the *data* directory where the standard adapter is installed, for example, in *c:\tivoli\agents\ADAgent\data*. Using the Windows administrative tools, restart the Tivoli Active Directory Agent service. After restarting the service, if you look at the agent log file, typically in *c:\tivoli\agents\ADAgent\log\WinADAgent.log*, you should see entries indicating that extended schema attributes have been added.

Second, find the location of the original *adprofile.jar* file. As mentioned in the previous section, it is important that this file be in a location where it can be modified. Rename this file to *adprofile.jar.old*. Now, copy the Likewise version into this location. Run ITIM with an administrative account and go to *Configure System->Manage Service Types*. Click on the *Import...* button and specify the location of the new *adprofile.jar* file. Click on *OK* to import it.

You will need to restart the Tivoli Active Directory Agent service again in order for it to recognize its new profile. Once the service has been restarted, new Active Directory attributes should be available to ITIM.

### Modify ITIM Active Directory Forms

In order to make use of the new, Likewise-related attributes added by the Likewise Adapter, you will typically want to modify the standard Active Directory Adapter forms to allow you access to these attributes.

To do this, run ITIM with an administrative account and go to *Configure System->Design Forms*. When the forms design applet appears, double-click on *Account* in the left-hand pane. It will expand to show you the various account-related forms in ITIM. One of these should be the *Windows AD Account* form. If this form does not appear it is because something failed while installing the standard Active Directory Adapter or the Likewise adapter. Consult the previous two sections as well as the IBM document referenced in those sections.

Double-click on *Windows AD Account* to display and modify this form. On the right-hand pane you should see several tabs, each with a series of attributes listed in it. We will add a new tab and populate it.

1. Click on *Tab->Add Tab* (or on the associated icon).
2. Click on *Tab->Rename Tab*. When the prompt appears, type “\$tab.ad.likewise”. This label will be replaced by “Likewise Settings” at run-time.
  - a. On the top right pane, scroll to the end of the attribute list. When you double-click on attributes, they will be added to the new tab. *uid*
  - b. *gecos*
  - c. *uidnumber*
  - d. *gidnumber*
  - e. *unixhomedirectory*
  - f. *loginshell*
3. As you double-click on attributes, you will see them added to the new tab, each preceded by a dollar sign. These labels will be replaced at run-time by more user readable text.
4. Click on *Form->Save Form Template*.

Your screen should look like this:

The screenshot displays the configuration interface for a Windows AD Account. The main area is divided into several tabs: \$tab.ad.limits, \$tab.ad.settings, \$tab.ad.extensions, \$tab.ad.likewise, \$tab.ad.account, \$tab.ad.user, \$tab.ad.password, \$tab.ad.wts, and \$tab.ad.mailbox. The \$tab.ad.user tab is active, showing a table of attributes:

Attribute Name	Data Type
\$uid	[ TextField ]
\$gecos	[ TextField ]
\$uidnumber	[ TextField ]
\$gidnumber	[ TextField ]
\$unixhomedirectory	[ TextField ]
\$loginshell	[ TextField ]

On the right side, the 'Attribute List' panel shows a scrollable list of attributes, including eraccesslastcertifieddate, eraccessrecertificationlastact, eradbadlogincount, eradcannotbedelegated, eraddistinguishedname, eradehomemdb, and eradpassword. Below this is the 'Properties' panel, which has two tabs: 'Format' and 'Constraint'. The 'Format' tab is active, showing the following properties:

Property	Value
Name	uid
Data Type	Directory String
Label	\$uid
Size	
Rows	
Cols	
Width	
Height	
Read-Only on M...	<input type="checkbox"/>
Direction	inherit
Hide on Modify	<input type="checkbox"/>

At this point, you've defined enough information to allow ITIM to manage the attributes needed by Likewise Enterprise.

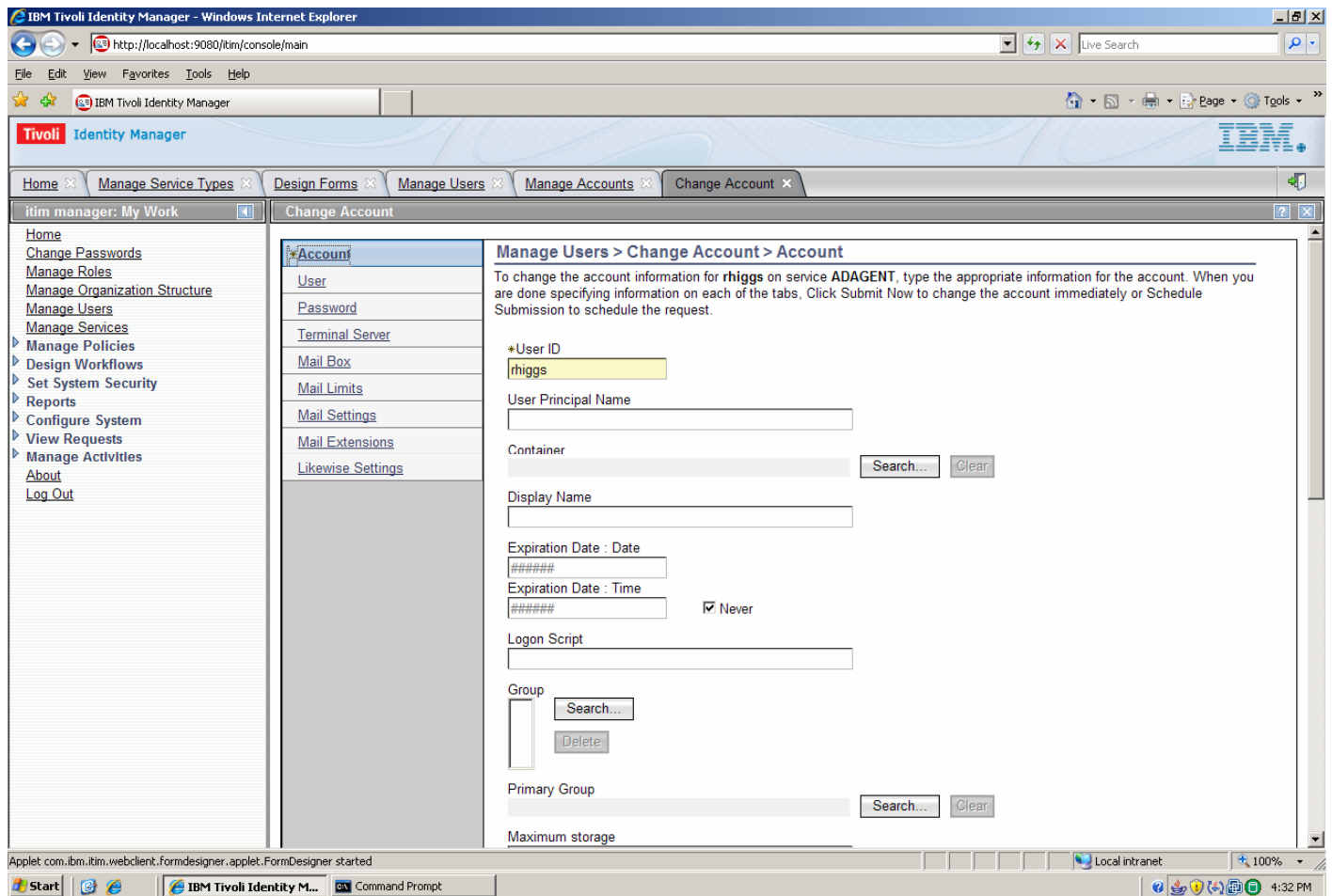
## Using ITIM to Provision and Manage Accounts

Now that the standard AD account form has been modified, you can add new AD accounts that include the attributes needed by Likewise Enterprise or you can change existing accounts to provide values for the additional attributes.

Before adding a new AD account or changing an existing one, you should first determine what values you want to set for the Likewise-related attributes. The following table describes the various attributes and how to determine their values:

Attribute	Value
<i>uid</i>	If you want to log on your Likewise-enabled computers using NT-style usernames (DOMAIN\username), leave this field blank. If you want to log on without the DOMAIN\ prefix, treat this field as an alias field. The user will logon with whatever value is specified here – for example, <i>john</i> .
<i>gecos</i>	This field is used as a general description field for the user. Many Unix systems place the user's full name in this field. You can put whatever you want here or leave it blank.
<i>uidnumber</i>	This is a unique number used by Unix systems to identify users. It is critical that this number be carefully assigned with no duplicates. You can use an existing unique value, for example, an employee ID number, or come up with some other mechanism for unique ID assignment.
<i>gidnumber</i>	This is the ID number of the Likewise-enabled group that should be used as the user's Unix primary group. You should run the Likewise Cell Manager or the Windows Active Directory Users And Computers (ADUC) console to find groups enabled in the Likewise default cell and note the gidNumber of an appropriate group. You may, for example, always want to set this attribute to the gidNumber of the <i>Domain Users</i> group.
<i>unixhomedirectory</i>	The disk path to be used as the user's home directory. This is typically set to <i>/home/USERNAME</i> , where USERNAME is replaced by the user's account name or <i>uid</i> alias (as mentioned above).
<i>loginShell</i>	The disk path of the Unix shell to be used by the user, for example, <i>/bin/bash</i> .

Having determined what values you will use for a particular user, run ITIM and go to the *Manage Users* screen. Add a new user or click on the small triangle to the right of an existing user and click on *Accounts* then click on the *Search* button. If the user already has an AD account, select the account and click on *Change* or click on *Request* to request a new AD account for the user. Either operation ultimately leads to a screen that looks like this:



Click on the *Likewise Settings* link to bring up the associated form. Enter the values you determined earlier and click on *Submit Now* or *Schedule Submission*. Your submission will ultimately be processed and the necessary changes will be made to Active Directory. You can click on *View Requests* and determine when your request has been processed by ITIM and whether or not it succeeded.

**Note:** A request might succeed “with warnings,” indicating that something did not work as planned. You can open up the request and

read the warning messages to determine what failed. The standard IBM Active Directory Adapter expects to be able to configure Microsoft Exchange attributes; if Exchange is not installed, the adapter will generate benign errors that can be safely ignored.

## Contact Technical Support

For either post-sales technical support or for free technical support during an evaluation period, please visit the Likewise support Web page at <http://www.likewisoftware.com/support/>. You can use the support page to register for support, submit incidents, and receive direct technical assistance.

Technical support may ask for your Likewise version, Linux version, and Microsoft Windows version. To find the Likewise product version, in the Likewise Console, on the menu bar, click **Help**, and then click **About**.

### ABOUT LIKEWISE

Likewise Software is an open source company that provides audit and authentication solutions designed to improve security, reduce operational costs and help demonstrate regulatory compliance in mixed network environments. Likewise Open allows large organizations to securely authenticate Linux, Unix and Mac systems with a unified directory such as Microsoft Active Directory. Additionally, Likewise Enterprise includes world-class group policy, audit and reporting modules.

Likewise Software is a Bellevue, WA-based software company funded by leading venture capital firms Ignition Partners, Intel Capital, and Trinity Ventures. Likewise has experienced management and engineering teams in place and is led by senior executives from leading technology companies such as Microsoft, F5 Networks, EMC and Mercury.