



GET LIKewise ENTERPRISE UP AND RUNNING IN MINUTES

- Install the Likewise Console on a Windows computer and install the agent on Linux, Unix, and Mac OS X computers.
- Join Linux, Unix, and Mac OS X computers to Active Directory.
- Use Active Directory to authenticate and authorize Linux, Unix, and Mac users.
- Manage non-Windows computers within Active Directory and apply Linux- and Unix-specific group policies with the Group Policy Object Editor.

Quick Start Guide

Overview

This guide describes how to get started using Likewise 4.0. Likewise is an identity management solution that seamlessly integrates Linux, Unix, and Mac OS X computers with Microsoft Active Directory. You can use Likewise to authenticate and authorize Linux and Unix users with Active Directory, apply group policies to Linux and Unix computers with the Group Policy Object Editor, create reports, and improve security.

To quickly get you managing your Linux, Unix, and Mac OS X computers with Likewise, this guide covers only the basic aspects of installing the Likewise Agent on target Unix and Linux computers, installing the Likewise Console on a Windows administrative workstation, and joining your Linux and Unix computers to the Active Directory domain in non-schema mode.

Installing Likewise in non-schema mode does not modify your existing Active Directory schema.

For complete instructions on how to install and configure Likewise, see the Installation Guide at

http://www.likewise.com/resources/product_documentation/.

What You Need to Begin

1. A Windows administrative workstation that meets the requirements below
2. One or more Unix, Linux, or Mac OS X computers
3. An Active Directory domain controller

Overview of the Installation Process

Likewise comprises two components: The Likewise Console and the Likewise Agent.

The console runs on a Windows administrative workstation that can connect to the Active Directory domain controller and includes tools that are integrated into Active Directory Users and Computers, the Group Policy Management Console, and the Group Policy Object Editor.

The agent runs on Linux, Unix, and Mac OS computers so that you can join them to a domain and manage them within Active Directory.

You must perform the installation process in the following order:

1. Install the agent on each Unix, Linux, or Mac OS X computer that you want to join to the Active Directory domain.
2. Install the console on a Windows administrative workstation that you use to manage Active Directory.

Requirements

This section lists basic requirements. For details, see the Installation Guide.

Administrator Privileges

- Root access or sudo permission on the Unix, Linux, and Mac OS X computers that you want to join to the domain.
- Active Directory credentials that allow you to add computers to an Active Directory domain -- for example, membership in the Domain Administrators security group or the Enterprise Administrators security group.

Active Directory Requirements

- Windows 2003 SP1 or R2 Standard and Enterprise
- Windows 2000 SP4 Server

Windows Requirements for the Console

- Windows 2003 SP1 or R2

- Windows XP Professional, SP2 -- requires the Windows Admin Pack
- Windows Vista
- Microsoft .NET 2.0 Framework
- MMC 3.0 Update

Note: You cannot install MMC 3.0 on a Windows 2000 computer, and thus you cannot install the Likewise Console on a Windows 2000.

- 100 MB of free space

Unix and Linux Requirements for the Agent

- An operating system that Likewise supports, such as versions of Mac OS X, Red Hat, SUSE Linux, Fedora, CentOS, Debian, Solaris, AIX, HP-UX, and Ubuntu. For a complete list of supported platforms, see <http://www.likewisefirmware.com/>.

Install the Agent on Target Unix and Linux Computers

The steps to install the agent are the same for all Unix and Linux operating systems, but the name of the installation package is different.

1. Obtain the appropriate installation package from Likewise. For a list of supported platforms, see the release notes or www.likewisefirmware.com. The installer's name is composed of the product name, version, operating system, type, platform (32 bit or 64 bit), and control build and patch numbers. Example:

```
LikewiseEnterprise-4.0.0.1846-linux-i386-rpm-  
installer
```

Note: The examples shown are for Linux RPM-based platforms. For other platforms (Debian, HP-UX, AIX, Solaris, etc.) simply substitute the appropriate package. The installation steps are the same across all platforms. For SUSE 8.2, use a version that includes `oldlibc` in the name; example: `LikewiseEnterprise-4.0.0.1846-linux-oldlibc-rpm-i386.sh`.

2. If not handled in Step 1, copy the Likewise Agent to your Linux or Unix system. In this example, `scp` is shown using the `/tmp` directory,

but you can use any file-copy utility (wget, winscp, ncftp, copy from CD):

```
scp user@host:folder/SourceFile TargetFile
```

```
scp ddallas@10.100.1.50:tmp/Likewise* /tmp
```

3. As the root user or with sudo permission, modify the execute bit on the installer by executing the following command at the shell prompt on the Linux or Unix computer:

```
chmod a+x /tmp/Likewise*
```

4. To launch the installer, at the shell prompt, execute the following command:

```
/tmp/Likewise*
```


5. Follow the instructions in the installation wizard.

6. Make sure the following ports are open for outbound traffic:

Port	Protocol	Use
53	UDP/TCP	DNS
88	UDP/TCP	Kerberos
123	UDP	NTP
137	UDP	NetBIOS Name Service
139	TCP	NetBIOS Session (SMB)
389	UDP/TCP	LDAP
445	TCP	SMB over TCP
464	UDP/TCP	Machine password changes (typically after 30 days)

Install the Agent on a Mac OS X Computer

To install the Likewise Agent on a computer running Mac OS X, you must have administrative privileges on the Mac. Likewise supports Mac OS X 10.4 or later.

1. Log on the Mac with a local account.
2. On the **Apple** menu , click **System Preferences**.
3. Under **Internet & Network**, click **Sharing**, and then select the **Remote Login** check box.
4. Go to <http://www.likewisesoftware.com/support/> and download to your desktop the Likewise Agent installation package for your Mac.

Important: To install the agent on an Intel-based Mac, use the **i386** version of the `.dmg` package. To install the agent on a Mac that does not have an Intel chip, use the **powerpc** version of the `.dmg` package.

5. On the Mac computer, go to the Desktop and double-click the Likewise `.dmg` file.
6. In the Finder window that appears, double-click the Likewise `.mpkg` file.
7. Follow the instructions in the installation wizard.

When the wizard finishes installing the package, which includes the Likewise Agent, you are ready to join the Mac to the Active Directory domain.

Install the Console on a Windows Computer

The Likewise package that you downloaded includes `LikewiseEnterprise.EXE`, a standard MSI installer.

1. On a Windows administrative workstation that can connect to the Active Directory domain controller, run `LikewiseEnterprise.exe`.
2. Follow the instructions in the installation wizard.

3. After the wizard finishes installing the console, click **Start**, point to **All Programs**, click **Likewise**, and then click **Likewise Console**.

Join a Linux Computer to the Domain

After you install the Likewise Agent, you can join a Linux computer to an Active Directory domain by using the Likewise Domain Join Tool. The Likewise Domain Join Tool provides a graphical user interface on Gnome-compatible Linux computers for joining a domain.

Important: To join a computer to a domain, you must have the user name and password of a user who can join computers to a domain and the full name of the domain that you want to join.

1. From the desktop with root privileges, double-click the Likewise Domain Join Tool, or at the shell prompt of a Linux computer, type the following command:

```
/usr/centeris/bin/domainjoin-gui
```

2. On the Welcome panel, click **Next**.
3. On the Join Active Directory Domain panel, in the **Domain to join** box, enter the Fully Qualified Domain Name (FQDN) of the Active Directory domain.

Note: The domain join tool automatically sets the computer's FQDN by modifying the `/etc/hosts` file. For example, if your computer's name is `qaserver` and the domain is `corpqa.centeris.com`, the domain join tool adds the following entry to the `/etc/hosts` file: `qaserver.corpqa.centeris.com`. To manually set the computer's FQDN, see [Set the FQDN Manually](#).



4. Under **Organizational Unit**, you can join the computer to an OU in the domain by selecting **OU Path** and then typing a path in the **OU Path** box.

Or, to join the computer to the Computers container, select **Default to "Computers" container**.

5. Click **Next**.
6. Enter the user name and password of an Active Directory user with the right to join a machine to the Active Directory domain, and then click **OK**.

Note: If you do not use an Active Directory Domain Administrator account, you might not have sufficient privileges to change an existing machine object in Active Directory.

Join Active Directory with the Command Line

When you join a domain by using the command-line utility, Likewise uses the hostname of the computer to derive a fully qualified domain name (FQDN) and then automatically sets the computer's FQDN in the `/etc/hosts` file.

On Linux computers, the domain join command-line utility is in `/usr/centeris/bin`. On Unix and Mac OS X computers, it is in `/opt/centeris/bin`.

Important: To join a computer to a domain, you must have the user name and password of an account that has privileges to join computers to the domain and the full name of the domain that you want to join.

Join a Linux Computer to Active Directory

Execute the following command, replacing `domainName` with the FQDN of the domain that you want to join and `joinAccount` with the user name of an account that has privileges to join computers to the domain:

```
/usr/centeris/bin/domainjoin-cli join domainName  
joinAccount
```

Example: `/usr/centeris/bin/domainjoin-cli join centerisdemo.com Administrator`

Join a Unix Computer to Active Directory

Execute the following command, replacing `domainName` with the FQDN of the domain that you want to join and `joinAccount` with the user name of an account that has privileges to join computers to the domain:

```
/opt/centeris/bin/domainjoin-cli join domainName  
joinAccount
```

Example: `/opt/centeris/bin/domainjoin-cli join centerisdemo.com Administrator`

Join a Mac Computer to Active Directory

Using `sudo`, execute the following command in the Terminal, replacing `domainName` with the FQDN of the domain that you want to join and `joinAccount` with the user name of an account that has privileges to join

computers to the domain:

```
sudo /opt/centeris/bin/domainjoin-cli join domainName
joinAccount
```

Example: `sudo /opt/centeris/bin/domainjoin-cli join centerisdemo.com Administrator`

The terminal prompts you for two passwords: The first is for a user account on the Mac that has admin privileges; the second is for the user account in Active Directory that you specified in the join command.

Options and Commands

The `domainjoin-cli` command-line interface includes the following options:


Option	Description	Example
<code>--help</code>	Displays the command-line arguments.	<code>domainjoin-cli --help</code>
<code>--log {. path}</code>	Generates a log file or prints the log to the console.	<code>domainjoin-cli --log /var/log/domainjoin.log</code> <code>join centerisdemo.com Administrator</code> <code>domainjoin-cli --log .</code> <code>join centerisdemo.com Administrator</code>


The domainjoin-cli command-line interface includes the following commands:

Command	Description	Example
Query	Displays the hostname and current domain. If the computer is not joined to a domain, it displays only the hostname.	<code>domainjoin-cli query</code>
<code>setname computerName</code>	Renames the computer and modifies the <code>/etc/hosts</code> file with the name that you specify.	<code>domainjoin-cli setname RHEL44ID</code>
<code>join [--ou organizationalUnit] [--nohosts] domainName userName</code>	<p>Joins the computer to the domain that you specify by using the user account that you specify.</p> <p>You can use the <code>--ou</code> option to join the computer to an OU within the domain by specifying the path to the OU and the OU's name. When you use this option, you must also use an account that has membership in the Domain Administrators security group.</p> <p>The <code>--nohosts</code> option joins the computer to the domain without modifying the <code>/etc/hosts</code> file.</p>	<code>domainjoin-cli join --ou Engineering centerisdemo.com Administrator</code>
Leave	Removes the computer from the Active Directory domain.	<code>domainjoin-cli leave</code>

Join a Mac Computer to the Domain

To join a computer running Mac OS X 10.4 or later to an Active Directory domain, you must have administrative privileges on the Mac and privileges on the Active Directory domain that allow you to join a computer.



1. In Finder, click **Applications**. In the list of applications, double-click **Utilities**, and then double-click **Directory Access**.
2. On the **Services** tab, click the lock  and enter an administrator name and password to unlock it.
3. In the list click **Likewise**, make sure the **Enable** check box for **Likewise** is selected, and then click **Configure**.
4. Enter a name and password of a local machine account with administrative privileges.
5. On the menu bar at the top of the screen, click the **Likewise Domain Join Tool** menu, and then click **Join or Leave Domain**.
6. In the **Computer name** box, type the name of the local hostname of the Mac without the `.local` extension. Because of a limitation with Active Directory, the local hostname cannot be more than 16 characters. Also: `localhost` is not a valid name.

Tip: To find the local hostname of a Mac, on the **Apple** menu , click **System Preferences**, and then click **Sharing**. Under the **Computer Name** box, click **Edit**. Your Mac's local hostname is displayed.

7. In the **Domain to join** box, type the fully qualified domain name of the Active Directory domain that you want to join.
8. Under **Organizational Unit**, you can join the computer to an OU in the domain by selecting **OU Path** and then typing a path in the **OU Path** box.

Note: To join the computer to an OU, you must be a member of the Domain Administrator security group.

Or, to join the computer to the Computers container, select **Default to "Computers" container**.

9. Click **Join**.
10. After you are joined to the domain, you can set the display login window preference on the Mac: On the **Apple** menu , click **System Preferences**, and then under **System**, click **Accounts**.
11. Click the lock  and enter an administrator name and password to unlock it.
12. Click **Login Options**, and then under **Display login window as**, select **Name and password**.

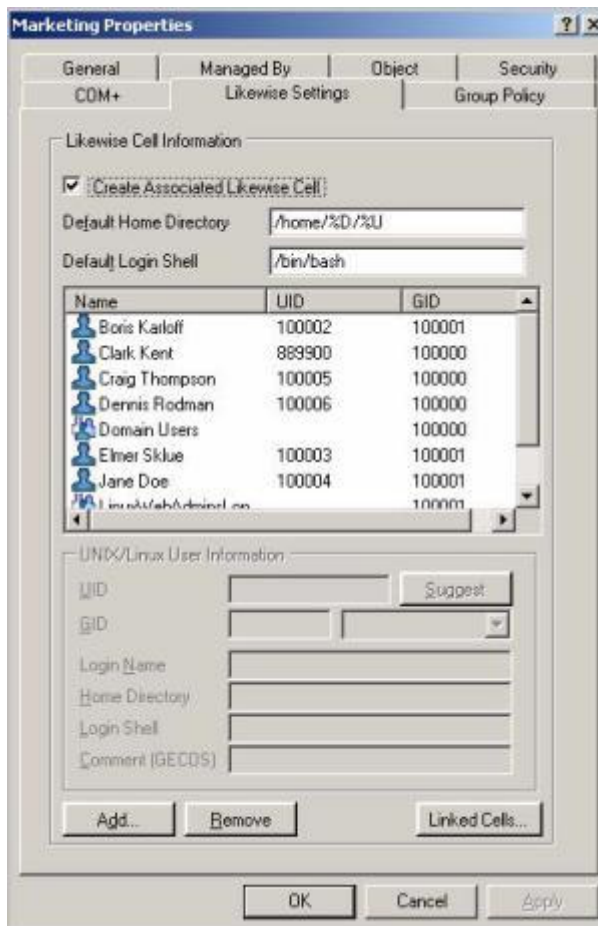
You are now ready to manage your Linux, Unix, or Mac OS X computer with Likewise. For more information, in the Likewise Console, on the **Help** menu, click **Help Contents**.

Associate a Likewise Cell with an OU

To associate a Likewise cell with a domain or an OU, you must have Active Directory administrative privileges that allow you to modify OU objects or a domain.

Important: Before you associate a cell with an organizational unit, make sure you have chosen the [schema mode](#) that you want. You cannot change the schema mode after you create a cell, including a default cell.

1. On your Windows administrative workstation, start Active Directory Users and Computers.
2. In the console tree, right-click the OU or the domain for which you want to create a cell, click **Properties**, and then click the **Likewise Settings** tab.



3. Under **Likewise Cell Information**, select the **Create Associated Likewise Cell** check box, and then click **OK**.

A cell is created, and you can now associate users with it.

Create a User

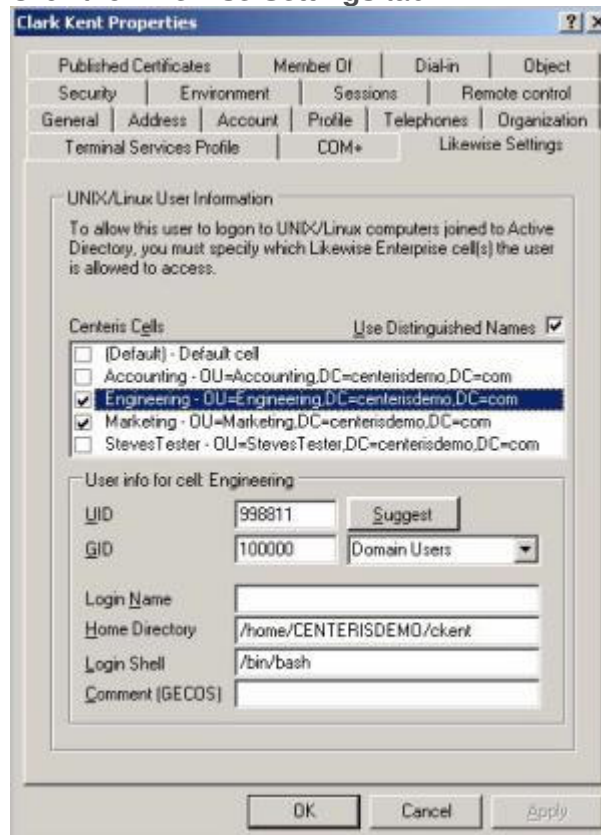
To create a Unix or Linux user account in Active Directory, you must have sufficient administrative privileges -- for example, as a member of the Enterprise Administrators group, the Domain Administrators group, or as a delegate.

1. On your Windows administrative workstation, start Active Directory Users and Computers.
2. In the console tree, right-click **Users**, point to **New**, and then click **User**.

3. Enter the name and logon name information for the user, and then click **Next**.

Tip: For more information, see [Create a New User Account in Active Directory Users and Computers Help](#).

4. In the **Password** box and the **Confirm password** box, type a password for the user, select the password options that you want, and then click **Next**.
5. Click **Finish**.
6. In the console tree, right-click the user that you just created, and then click **Properties**.
7. Click the **Likewise Settings** tab.



8. Under **Likewise Cells**, select the check box for the [cell](#) that you want to associate the user with. The user's settings can vary by cell.

Under **User info for cell**, a default value, typically 100000, is automatically populated in the **GID** box.

9. To set the UID, click **Suggest**, or type a value in the **UID** box.
10. To override the default home directory and login shell settings, in the **Home Directory** box, type the directory that you want to set for the user, and then in **Login Shell** box, type the login shell.
11. Optionally, you can set a login name for the user in the **Login Name** box and add a comment in the **Comment** box.

You use the **Login Name** box to set a login name for the user that is different from the user's Active Directory login name. If you leave the **Login Name** box empty, the user logs on Linux and Unix computers by using his or her Active Directory login name.

The user that you associated with the cell can now use his or her Active Directory credentials to log on Linux and Unix computers in the cell.

For More Information

For information about how to administer Likewise 4.0, including both the Likewise Console and the Likewise Agent, see the Likewise Administrator's Guide, available at <http://www.likewise.com>. The administrator's guide covers deploying and troubleshooting the agent, managing Linux and Unix users in Active Directory, and applying group policies.

Contact Technical Support

Please visit the Likewise support Web page at <http://www.likewise.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 solutions improve management and interoperability of Windows, Linux, and UNIX systems with easy to use software for Linux administration and cross-platform identity management.

Likewise provides familiar Windows-based tools for system administrators to seamlessly integrate Linux and UNIX systems with Microsoft Active Directory. This enables companies running mixed networks to utilize existing Windows skills and resources, maximize the value of their Active Directory investment, strengthen the security of their network and lower the total cost of ownership of Linux servers.

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.