



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 domain credentials to authenticate and authorize Linux, Unix, and Mac users.
- Manage non-Windows computers within Active.

Likewise Enterprise Quick Start Guide

Overview

This guide describes how to get started using Likewise Enterprise 5.0 or later. Likewise seamlessly integrates Linux, Unix, and Mac OS X computers with Microsoft Active Directory to authenticate and authorize Linux and Unix users with their Active Directory domain credentials, apply group policies to Linux and Unix computers with the Group Policy Object Editor, create access reports, and help improve security and regulatory compliance.

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 Management 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 Likewise Enterprise Installation and Administration 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 console on a Windows administrative workstation that you use to manage Active Directory.
2. Create a default cell, or associate a cell with an organizational unit, and then provision a user with Linux and Unix access.
3. Install the agent on each Unix, Linux, or Mac OS X computer that you want to join to the Active Directory domain.

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 Server 2008

- Windows 2000 SP4 Server

Windows Requirements for the Console

- Windows 2003 SP1 or R2
- Windows Server 2008
- 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 computer.

- 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.likewise.com/>.

Install the Console on a Windows Computer

The Likewise package 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.

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

Create a Default Cell

Likewise gives you the option of defining a default cell. It handles mapping for computers that are not in an OU with an associated cell. The default cell can contain the mapping information for all your Linux, Unix, and Mac computers. By default, all Unix and Linux computers are joined to the default cell, and all members of the Domain Users group in Active Directory are allowed to access the default cell.

Although Likewise Enterprise does not require a default cell, this guide assumes you will create one. Alternatively, you can associate a cell with an organizational unit; for more information, see the Likewise Enterprise Installation and Administration Guide.

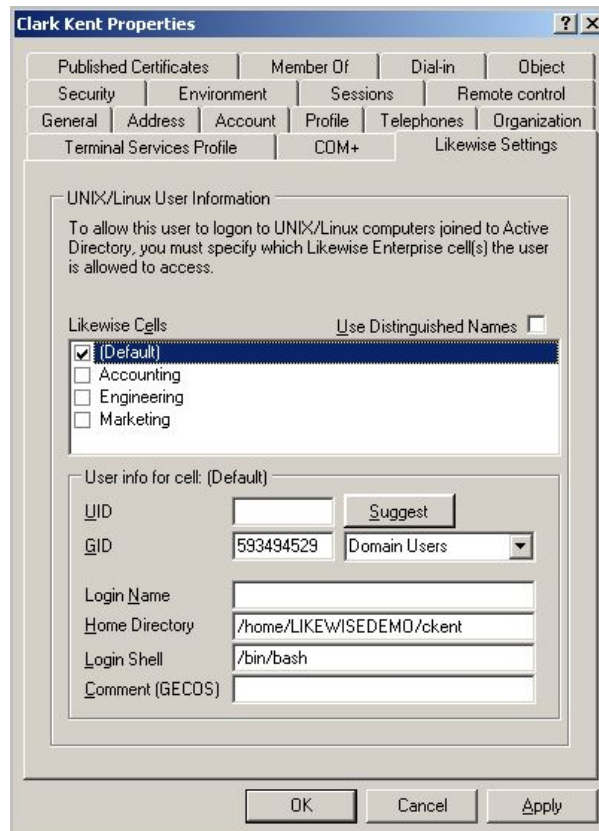
To create a default cell, in the Active Directory Users and Computers console tree, right-click the name of the domain, click **Properties**, click the **Likewise Settings** tab, and then click **Create Associated Likewise Cell**.

Provision a User with Linux or Unix Access

To provide an Active Directory user with Unix, Linux, or Mac access, 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 the user that you want, and then click **Properties**.
3. Click the **Likewise Settings** tab.
4. Under **Likewise Cells**, select the check box for the default cell.

Note: If a default cell does not appear under Likewise Cells, see [Create a Default Cell](#) earlier in this manual.



5. Under **User info for cell**, to set the UID, click **Suggest**, or type a value in the **UID** box.

Note: The user's settings can vary by cell.

6. In the **GID** box, a default value, typically the GID for the Domain Users group, is automatically populated in the **GID** box.
7. 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 that you want.
8. 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.

Install the Agent on Linux or Unix with the Shell Script

You can install the Likewise Enterprise agent by using a shell script that contains a self-extracting executable. The file name of the shell script installer ends in `sh`. Example: `LikewiseIdentityServiceOpen-5.0.0.3499-linux-i386-rpm.sh`.

Note: The examples shown are for Linux RPM-based platforms. For other Linux and Unix platforms -- such as Debian, HP-UX, AIX, and Solaris -- simply substitute the appropriate installer. The installer's name includes the product name, version and build numbers, operating system, computer type, and platform type. For Linux computers running kernel version 2.3 or earlier, see the Likewise Enterprise Installation and Administration Guide.

Perform the following procedure with the root account.

1. Download or copy the shell script to your Linux or Unix computer's desktop.

Important: If you FTP the file to the desktop of the target Linux or Unix computer, you must select binary, or BIN, for the transfer. Most FTP clients default to AUTO or ASCII, but the installer includes some binary code that will become corrupted in AUTO or ASCII mode.

2. Change directories to the desktop.
3. As root, change the mode of the installer to executable:

```
chmod a+x LikewiseIdentityServiceOpen-5.0.0.3499-  
linux-i386-rpm.sh
```

Tip: To view information about the installer or to view a list of command-line options, run the following command:

```
./LikewiseIdentityServiceOpen-5.0.0.3499-linux-  
i386-rpm.sh --help
```

4. As root, run the installer:

```
./LikewiseIdentityServiceOpen-5.0.0.3499-linux-  
i386-rpm.sh
```

5. Follow the instructions in the installer.
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)
3268	TCP	Global Catalog search

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. Obtain the Likewise agent installation package for your Mac from Likewise Software and place it on your desktop.

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

2. Log on the Mac with a local account.
3. On the **Apple** menu , click **System Preferences**.
4. Under **Internet & Network**, click **Sharing**, and then select the **Remote Login** check box. Turning on Remote Login lets you access the Mac with SSH after you install Likewise.

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, you are ready to join the Mac to an Active Directory domain.

Join a Computer to Active Directory

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.

The location of the domain join command-line utility is as follows:

```
/opt/likewise/bin/domainjoin-cli
```

Important: To run the command-line utility, you must use a **root** account. To join a computer to a domain, you must have the user name and password of an Active Directory account that has privileges to join computers to the domain and the full name of the domain that you want to join.

Before Joining a Domain

To join a domain, the computer's name server must be able to find the domain and the computer must be able to reach the domain controller. You can make sure the name server can find the domain by running this command:

```
nslookup domainName
```

You can verify that your computer can reach the domain controller by pinging it:

```
ping domainName
```

Join a Linux or Unix Computer to Active Directory

Execute the following command as root, 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/likewise/bin/domainjoin-cli join domainName  
joinAccount
```

Example: `/opt/likewise/bin/domainjoin-cli join
likewisedemo.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/likewise/bin/domainjoin-cli join domainName  
joinAccount
```

Example: `sudo /opt/likewise/bin/domainjoin-cli join
likewisedemo.com Administrator`

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

Join a Linux or Unix Computer to an Organizational Unit

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

```
/opt/likewise/bin/domainjoin-cli join --ou  
organizationalUnitName domainName joinAccount
```

Example: `/opt/likewise/bin/domainjoin-cli join --ou
Engineering likewisedemo.com Administrator`

Log On with AD Credentials

After the Likewise agent has been installed and the Linux or Unix computer has been joined to a domain, you can log on interactively with your Active Directory credentials. For example, you can log on by using the form `DOMAIN\username`.

1. On a Linux computer, log out of the current session.
2. Log on the system console by using an Active Directory user account in the form of `DOMAIN\username`, where `DOMAIN` is the Active Directory short name.

Note: When you log on from the command line, you must use a slash to escape the slash character, making the logon form `DOMAIN\\username`.

Example with ssh: `ssh likewisedemo.com\\hoenstiv@localhost`

For More Information

For more information, in the Likewise Console, on the **Help** menu, click **Help Contents**. Additional documentation is available at <http://www.likewisesoftware.com>.

Contact Technical Support

Please visit the Likewise support Web page at <http://www.likewisesoftware.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.

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