

QuickBooks Enterprise Solutions

Linux Database Server Manager Installation and Configuration Guide

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Welcome

Welcome to QuickBooks Enterprise Solutions financial software. Use this guide to install and configure the QuickBooks Enterprise Solutions Linux Database Server Manager on your Linux server.

To install and set up the QuickBooks Enterprise Solutions software on a Windows client or a terminal server, refer to the *QuickBooks Enterprise Solutions Installation and Setup Guide*.

To learn how to use QuickBooks Enterprise Solutions and perform essential tasks, refer to the *QuickBooks Enterprise Solutions User Guide*.

Audience of This Guide

The *QuickBooks Enterprise Solutions Linux Database Server Manager Installation and Configuration Guide* has been prepared for a system administrator who is familiar with the Linux operating system, understands network operations, and has permissions to properly install and configure the QuickBooks Enterprise Solutions Linux Database Server Manager.

Technical Support

The QuickBooks Support Site is available at www.quickbooks.com/support. You can search the QuickBooks Support Knowledgebase or visit the QuickBooks Community and connect with other QuickBooks users and experts online.

Enterprise Solutions offers a Full Service Plan that includes product upgrades, dedicated technical support, interactive training tools, and data protection services. For members of the Full Service Plan, your dedicated support engineers are available weekdays from 5:00 a.m. to 5:00 p.m. (pacific time). Intuit reserves the right to limit each telephone contact to one hour and to one incident. Additional terms and conditions apply. To speak to a dedicated support engineer, you can either request a call-back using the in-product Help or call 1.866.340.7237.

QuickBooks Online Communities

Use the QuickBooks Online Communities (www.quickbooksgroup.com) to connect with other QuickBooks users and experts to find answers and share advice. From the communities, you can find discussion boards, blogs, and articles.

1

Preparing to Install Linux Database Server Manager

Read the following information to determine what you need to know before you install the QuickBooks Enterprise Solutions Linux Database Server Manager on your Linux Server.

What is the Linux Database Server Manager?

The Linux Database Server Manager contains the Enterprise Solutions database server, which stores the QuickBooks company files. Users running QuickBooks Enterprise Solutions Release 7.0 R8 on a Windows client computer can access the QuickBooks company files to perform Enterprise Solutions operations and request data.

QuickBooks Enterprise Solutions Release 7.0 R8 must be installed on a user's Windows client computer so they can perform Enterprise Solutions operations and request data from the Linux Database Server Manager. To install the QuickBooks Enterprise Solutions application on a Windows client, refer to the *QuickBooks Enterprise Solutions Installation and Setup Guide*.

Components

The Linux Database Server Manager consists of the following components:

- **The Database server files** enable QuickBooks Enterprise Solutions users to read and write data from the QuickBooks company files located on the Linux server.
- **The qbmonitord daemon** continually monitors the directories that contain the QuickBooks company files to ensure that each directory has a `qbdir.dat` file. When connected to a Linux server, the QuickBooks client uses the `qbdir.dat` file to generate a network definition (ND) file for each QuickBooks company file (`.qbw` and `.qba`). The ND file enables the QuickBooks client to request data and perform operations on QuickBooks company files. If a `qbdir.dat` file for a monitored directory is deleted or modified, the qbmonitord daemon creates a new one.
- **The qbmonitord configuration file** (`qbmonitord.conf`) specifies the directories that the qbmonitord daemon monitors. These directories contain the QuickBooks company files.

Each time you modify the `qbmonitord.conf` file, the qbmonitord daemon automatically re-reads the file and immediately monitors the specified directories.

System Requirements

The following table provides the hardware and software requirements for installing the Linux Database Server Manager.

Hardware and Software	Minimum	Recommended
Processor	1.2 GHz Intel Pentium III	2 GHz Intel Pentium 4
RAM	1 GB	As much as possible
Disk Space	1 GB	1 GB + additional space for the QuickBooks company files
Operating System	Open SUSE Linux Enterprise Server 10.2 Kernel 2.6.9 Fedora 6.0 (RedHat) Kernel 2.6.18 Note: Linux Database Server Manager is tested only on these operating systems.	
Required Packages	gamin-.1.7-7.fc6 (Fedora) fam 2.7.0-29 (SUSE) fam-server 2.7.0-29 (SUSE) glibc-2.5-3 libgcc-4.1.1-30 libstdc++-4.1.1-30	
File Sharing Software	Samba 2.2.12	

Table 1 System Requirements

Firewall and Antivirus Software Compatibility

If you use firewall and antivirus products, you may have to adjust settings in these products to ensure the best possible performance with Enterprise Solutions (an incorrectly-configured firewall can stop the Linux Database Server Manager from working). For the latest information from Intuit, go to www.quickbooks.com/support.

If you experience performance issues that you think are related to your firewall software, refer to the firewall documentation or contact your firewall vendor for assistance.

Important

The Linux Database Server Manager uses port 10172. Make sure that port 10172 is open on both the Linux Server and the Windows client.

Network Configuration

Enterprise Solutions allows multiple users to access QuickBooks company files on a network at the same time. To achieve the best performance:

- Make sure that your computers are networked properly. Refer to your networking software documentation for instructions.
- Make sure that your network meets the requirements specified in [Network Requirements](#), below.
- Avoid accessing QuickBooks company files from a Windows client computer that uses a hub, network bridge, or wireless network; they may affect the performance and reliability of Enterprise Solutions.
- Configure your firewalls so that they do not interfere with Enterprise Solutions. An incorrectly-configured firewall can stop Enterprise Solutions from working.

Network Requirements

The following table provides the network requirements for the Linux Database Server Manager.

Network	Minimum
Network Card	100 MBps
Switch or Router	100 MBps
Network Bandwidth	40 MBps

Table 2 Network Requirements

Configuration Recommendations

This section provides important information you need to know to correctly install and run the Linux Database Server Manager.

Case-Sensitive File Names

Unlike Windows, the filesystem used on Linux is case-sensitive. Filenames that differ only by case may prevent Enterprise Solutions from working properly. Make sure that your QuickBooks company file names are unique.

Sharing and User Permissions

The directory on your Linux server where you store the QuickBooks company files must be configured as a Samba share so that it can be mapped as a drive on your Windows client computers.

Important

Samba does not overwrite limits set by kernel-level access control such as file permissions, file system mount options, ACLs, and SELinux policies. Both the kernel and Samba must allow the user to perform an action on a file before that action can occur.

Intuit recommends that you do not use anonymous or guest level access.

Host Name Resolution

To be able to access the QuickBooks company files, Windows clients must be able to resolve the host name or IP address of the Linux server. Make sure Samba is configured correctly to use the Domain Name Server. If you do not have DNS or WINS configured and do not want to use broadcast resolution, you can list the Linux server in the Windows HOSTS file.

2

Installing and Running Linux Database Server Manager

This chapter discusses the following topics:

- [Installing the Linux Database Server Manager](#), below
- [Configuring the Linux Database Server Manager on page 13](#)
- [Running the qbmonitord Daemon on page 15](#)
- [Logging Error Messages on page 16](#)
- [Uninstalling the Linux Database Server Manager on page 17](#)
- [Updating the Linux Database Server Manager on page 18](#)

Installing the Linux Database Server Manager

Follow the procedure below to install the Linux Database Server Manager on your Linux server after you have read [Chapter 1, Preparing to Install Linux Database Server Manager on page 5](#).

Important You must be the root user to install and configure the Linux Database Server Manager.

Important On SUSE, you must have the fam-server package 2.7.0.29 or later installed on your Linux server and the fam service must be running.

◆ **To install the Linux Database Server Manager:**

- 1 On the Linux server, become the root user.
- 2 Download the Linux Database Server Manager RPM package onto your Linux server from the QuickBooks Enterprise Solutions website: <http://quickbooksenterprise.intuit.com/Linux>.

The Linux Database Server Manager RPM package is signed so that you can verify the integrity of the package with the GPG public key.

- a Download the public key onto your Linux server from the QuickBooks Enterprise Solutions website: <http://quickbooksenterprise.intuit.com/Linux>.
- b In a terminal window, type the following command and press Enter to import the public key into the *keyring* (a database of trusted keys on your Linux server):

```
rpm --import qbdbm-pubkey.asc
```

- c Type the following command and press Enter to verify the signature of the Linux Database Server Manager RMP with Intuit:

```
rpm -K packagename
```

where *packagename* is the name of the Linux Database Server Manager RPM package, for example `qbdbm-17.0-2.i386.rpm`.

If the package contains a valid signature from Intuit with the key ID `02f7461a`, the command returns `gpg ok`.

- 3 In a terminal window, type the following command and press Enter:

```
rpm -ivh packagename
```

where *packagename* is the name of the Linux Database Server Manager RPM package, for example `qbdbm-17.0-2.i386.rpm`.

For a list of the files installed by the RPM, refer to [What files get installed on my Linux server? on page 19](#).

- Important*
- 4 Create a directory to store your QuickBooks company files.
The directory that contains the QuickBooks company files must be configured as a Samba share directory. An example of how to configure a share directory is provided in [How do I create a Samba share? on page 21](#). For more detailed information, refer to the Samba documentation.
Make sure you set appropriate permissions for the directory that contains the QuickBooks company files so that your users or user group has access.
 - 5 Copy your QuickBooks company files to the directory you created in [step 4](#).
Important Unlike Windows, the filesystem used on Linux is case-sensitive. Do not create QuickBooks company file names on Linux that differ only by case.
Make sure that you set appropriate permissions for the QuickBooks company files so that your users or user group can access them.
 - 6 Configure the Linux Database Server Manager, as described in [Configuring the Linux Database Server Manager](#), below.

Configuring the Linux Database Server Manager

After you have installed the Linux Database Server Manager RPM, you must perform the following configuration as the root user:

- Specify the directories on your Linux server that contain the QuickBooks company files. Refer to [Specifying Company File Directories on page 14](#).
- Restart the syslog daemon to start outputting log messages to the `qbmonitord.log` file. Refer to [Starting qbmonitord.log Logging on page 14](#).

Specifying Company File Directories

Important To be able to access the QuickBooks company files located on the Linux server from a Windows client, you must list the directories that contain the QuickBooks company files in the `qbmonitord.conf` file.

◆ **To specify the directories that contain the QuickBooks company files:**

- 1 Open a terminal window.
- 2 Edit the `/opt/qbes7/util/qbmonitord.conf` file to list the directories that store the QuickBooks company files.

Type the full path of each directory on a separate line, for example:

```
/QBData
/QBcompanyfiles
```

The `qbmonitord` daemon monitors the directories you specified in [step 2](#). For each directory, the `qbmonitord` daemon ensures that the correct `qmdir.dat` file exists.

Important The `qbmonitord` daemon does not monitor subdirectories. Make sure you list subdirectories that contain company files in the `qbmonitord.conf` file.

Starting qbmonitord.log Logging

To start outputting log messages to the `qbmonitord.log` file, restart the `syslog` daemon after installation.

◆ **To restart the syslog daemon:**

In a terminal window, type the following command and press Enter:

```
/etc/init.d/syslog restart
```

The `syslog` daemon restarts and begins to log all `qbmonitord` messages to the `qbmonitord.log` file. Refer to [Logging Error Messages on page 16](#).

Running the qbmonitord Daemon

When you install the Linux Database Server Manager RPM, the qbmonitord daemon is set to run automatically at system startup. The qbmonitord daemon starts the qbmonitord process that continually monitors the directories that contain your QuickBooks company files on your Linux server. The qbmonitord daemon also starts the QBDBMgrN process that runs the database server.

◆ **To check that the qbmonitord daemon is configured to run at system startup:**

In a terminal window, type the following command and press Enter:

```
chkconfig --list | grep qb
```

The following output shows that qbmonitord is configured to start automatically at system run levels 2, 3, and 4 on Fedora:

```
qbmonitord 0:off 1:off 2:on 3:on 4:on 5:off 6:off
```

The following output shows that qbmonitord is configured to start automatically at system levels 3 and 5 on SUSE:

```
qbmonitord 0:off 1:off 2:off 3:on 4:off 5:on 6:off
```

◆ **To stop the qbmonitord daemon manually:**

In a terminal window, type the following command and press Enter:

```
service qbmonitord stop
```

◆ **To start the qbmonitord daemon manually:**

In a terminal window, type the following command and press Enter:

```
service qbmonitord start
```

Logging Error Messages

The `qbmonitord` daemon uses the Linux `syslog` utility. All `qbmonitord` error log messages are output to the `/var/log/qbmonitord.log` file.

Important

You must restart the `syslog` daemon after you install the Linux Database Server Manager RPM to enable logging to the `qbmonitord.log` file. Refer to [Starting qbmonitord.log Logging on page 14](#).

To view the end of the `qbmonitord.log` file and examine the output as it continues, type the following command:

```
tail -f /var/log/qbmonitord.log
```

To view more than the last 10 lines, type:

```
tail -n 100 -f /var/log/qbmonitord.log
```

For detailed information about the error messages in the `qbmonitord.log` file, refer to [What do the error messages mean? on page 23](#).

Uninstalling the Linux Database Server Manager

Before you uninstall the Linux Database Server Manager, verify that no Quickbooks company files are currently open on a Windows client.

◆ **To uninstall the Linux Database Server Manager:**

- 1 On the Linux server, become the root user.
- 2 In a terminal window, type the following command and press Enter to stop the qbmonitord daemon:

```
service qbmonitord stop
```

Important

You must stop the qbmonitord daemon before uninstalling the Linux Database Server Manager.

- 3 Type the following command and press Enter to delete the Linux Database Server Manager files:

```
rpm -e qbdbm
```

The RPM deletes all the files installed by the Linux Database Server Manager package.

Note

The uninstall process does not delete the log files or the QuickBooks company files. You can delete these files manually, if necessary.

Updating the Linux Database Server Manager

From time to time, Intuit provides an updated Linux Database Server Manager RPM package that can be downloaded from the Internet. The updated package might include new features, services, or maintenance fixes.

Before you update the Linux Database Server Manager, check the version of the Linux Database Server Manager package currently installed on your server. Refer to [What RPM version and release am I running? on page 19](#).

Important

Before you update the Linux Database Server Manager, verify that no QuickBooks company files are currently open on a Windows client.

◆ **To update your Linux Database Server Manager:**

- 1 On the Linux server, become the root user.
- 2 Download the latest Linux Database Server Manager RPM package file onto your Linux server from the QuickBooks Enterprise Solutions website: <http://quickbooksenterprise.intuit.com/Linux>.
- 3 In a terminal window, type the following command and press Enter to stop the qbmonitord daemon:

```
service qbmonitord stop
```

- 4 Type the following command and press Enter to update the Linux Database Server Manager software:

```
rpm -Uvh packagename
```

where *packagename* is the name of the RPM package you downloaded from the QuickBooks Enterprise Solutions website. For example: qbdbm-17.0-3.i386.rpm.

Note The update does not overwrite your qbmonitord.conf file.

A

Frequently Asked Questions

This appendix lists frequently asked questions and provides helpful tips.

How do I contact Technical Support?

Go to the QuickBooks Support Site at www.quickbooks.com/support. Refer to [Technical Support on page 4](#).

What RPM version and release am I running?

To see the version and release of the Linux Database Server Manager RPM you have installed, type the following command in a terminal window:

```
rpm -qa | grep qbdbm
```

The RPM package name consists of the following format:

```
packagename-version-release.platform.rpm
```

The following example shows the Linux Database Server Manager RPM Version 17.0, Release 2 that runs on the i386 platform:

```
qbdbm-17.0-2.i386.rpm
```

What files get installed on my Linux server?

To list the files that the Linux Database Server Manager RPM installs on your Linux server, type the following command in a terminal window:

```
rpm -ql packagename
```

where *packagename* is the name of the Linux Database Server Manager RPM you installed.

Note By default, the Linux Database Server Manager files are installed in the `/opt/qbes7` directory. All files are owned by the user root and the group root.

The `/opt/qbes7/doc` directory contains the *QuickBooks Enterprise Solutions Linux Database Server Manager Installation and Configuration Guide* (this document). The most up-to-date revision of this document is available from the QuickBooks Enterprise Solutions website: <http://quickbooksenterprise.intuit.com/Linux>.

Why can't users access the QuickBooks company files?

If users cannot access the QuickBooks company files from their Windows client computers, check the following:

- The Linux server is up and running.
- The directory that stores the QuickBooks company files on your Linux server is configured as a Samba share and the Samba service is running.
- The directory that stores the QuickBooks company files on your Linux server has the correct Linux user or group permissions.
- The QuickBooks company files on your Linux server have the correct Linux user or group permissions.
- The user is a valid user listed in the `smb.conf` file and in the `/etc/group` file.
- The user has a valid Samba username and password.
- The directory and any subdirectories that contain the company files are listed in the `qbmonitord.conf` file.
- The `qbmonitord` daemon is running.
- Port 10172 is open on both the Linux sever and the Windows client.

[Table 3 on page 23](#) and [Table 4 on page 24](#) provide a list of error messages you may encounter when using the Linux Database Server Manager.

How do I create a Samba share?

The directory on your Linux server that contains the QuickBooks company files must be configured as a Samba share so that it can be mapped as a drive on your Windows client computers.

The following procedure provides an example of how to create and configure a Samba share. For more detailed information about configuring a Samba share, refer to the Samba documentation.

◆ **To create a Samba share:**

- 1 On the Linux server, become the root user.
- 2 In a terminal window, type the following command to create a Linux group (this is the group name that users of QuickBooks will belong to).

```
groupadd -r groupname
```

where *groupname* is the name of the group you want to create (for example, qbusers)

- 3 Add the following line to the `/etc/group` file to list the users that will be part of the group you created in [step 2](#).

```
groupname: user1, user2, user3
```

- 4 Type the following command to add each user you specified in [step 3](#) that will be accessing QuickBooks company files stored on the share directory:

```
useradd user
```

- 5 For each user you specified in [step 4](#), type the following command to activate the Samba user account and set a password:

```
smbpasswd -a user
```

- 6 Type the following command to provide the users read/write/execute permissions to the share directory:

```
chmod -R 775 directory
```

- 7 Type the following command to change the group ownership for the share directory.

```
chgrp -R groupname directory
```

- 8 Edit the `smb.conf` file to include the following lines. By default, this file is located in `/etc/samba`.

```
[share_name]
path = /directory
comment = samba share for company files
valid users = user1 user2 user3
public = no
writable = yes
printable = no
create mask = 0765
```

Replace *share_name* with the name you want to use for the share (this is the name that your Windows clients can see). Replace *directory* with the full path of the directory you want to configure as the Samba share (the directory you created on your Linux server to store the QuickBooks company files).

- 9 Type the following command to restart the Samba daemon:

```
service smb restart
```

QuickBooks Enterprise Solutions users can now access QuickBooks company files that are located on the Linux server directly from their Windows client machines.

What do the error messages mean?

[Table 3](#), below provides a description of the error messages you may see in the `/var/log/qbmonitord.log` file on the Linux server.

[Table 4 on page 24](#) provides a description of the error messages you may see on a Windows client when trying to open a QuickBooks company file.

Server Error Message	Description
A parameter was specified with the <code>qbmonitord</code> command.	The <code>qbmonitord</code> daemon does not use any parameters.
An unexpected error occurred.	A more detailed error message accompanies this error.
The interrupt handler cannot be initialized.	An error occurred during interrupt handler initialization.
No directories found in config file.	The <code>qbmonitord.conf</code> file does not list any directories for the <code>qbmonitord</code> daemon to monitor. Edit the <code>qbmonitord.conf</code> file to list the directories. Add each directory on a separate line. Refer to Configuring the Linux Database Server Manager on page 13 .
Unable to open FAM connection.	Make sure FAM (via <code>xinetd</code>) and <code>portmapper</code> are running.
Config file could not be read.	The <code>qbmonitord.conf</code> file was not found. The <code>qbmonitord.conf</code> file is installed by default in the <code>/opt/qbes7/util</code> directory.
Error creating meta file.	The <code>qbmonitord</code> daemon was not able to create the <code>qmdir.dat</code> file in the directory listed in the configuration file (<code>qbmonitord.conf</code>). Check that the directory has the appropriate permissions.

Table 3 Linux Server Error Log Messages

Client Error Message	Description
<p>An error occurred when QuickBooks tried to access the company file. Please try again. If the problem persists, contact Intuit Technical Support and provide the following error code (-6000, -83).</p>	<p>The company file is located on the Linux server in a directory that is not being monitored by qbmonitord and no <code>qbdir.dat</code> file exists.</p> <p>Specify the directory in the <code>qbmonitord.conf</code> file (refer to Specifying Company File Directories on page 14) and then restart the QuickBooks Enterprise Solutions application on the Windows client.</p> <p>The Linux file system is case sensitive. Make sure you use the right case when specifying the name of the company file you want to access from the Windows client. For example, if you specify <code>companyB</code> instead of <code>companyb</code>, Windows can access the Linux server but the database is unable to open the file.</p>
<p>An error occurred when QuickBooks tried to access the company file. Please try again. If the problem persists, contact Intuit Technical Support and provide the following error code (-6000, -82).</p>	<p>User permissions are not configured correctly.</p> <p>Check that the company file and the directory that contains the company file have the correct Linux user or user group permissions.</p> <p>Check that the user is a valid user listed in the <code>smb.conf</code> file and the <code>/etc/group</code> file and that they have a valid Samba username and password.</p>
<p>You are trying to work with a company file that is located on another computer, but that computer needs additional installation and setup.</p>	<p>The database server is not running on the Linux server or the communication is blocked by a firewall on either the Linux server or the Windows client.</p> <p>Check that the database server is running on the Linux server (in a terminal window, type <code>ps -ef grep QBDBMgrN</code>).</p> <p>Check that port 10172 is open on both the Linux server and the Windows client.</p>

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