

QuickBooks Enterprise Solutions

Linux Database Server Manager Installation and Configuration Guide

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Software Version 9.0

Document Revision 1.0

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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 Release 9.0 on your Linux server.

To install and set up the QuickBooks Enterprise Solutions Release 9.0 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

Visit our Support website at www.qbes.com/support for support options and answers to frequently asked questions. Enterprise Solutions offers a Full Service Plan that includes product upgrades, technical support 24 hours a day, interactive training tools, and data protection services. Intuit reserves the right to limit each telephone contact to one hour and to one incident. Additional terms and conditions apply.

You can also visit the QuickBooks Enterprise Solutions User Community at www.qbes.com/livecommunity to connect with other Enterprise Solutions users and experts to ask questions and share advice.

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 on a Windows client computer can access the QuickBooks company files to perform Enterprise Solutions operations and request data.

QuickBooks Enterprise Solutions 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*.

Important

The Linux Database Server Manager software on the Linux server and the QuickBooks Enterprise Solutions application on a Windows client must be the same release (for example, Linux Database Server Manager Release 9.0 and QuickBooks Enterprise Solutions Release 9.0).

Components

The Linux Database Server Manager consists of the following components:

- **The database files and the QuickBooks database service** (`qbdbmgrn_19`) enable QuickBooks Enterprise Solutions users to read and write data from the QuickBooks company files located on the Linux server.
- **The qbmonitord program** (which uses the `qbdbfilemon` service) 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` program creates a new one.

The **qbmonitord program** listens on IANA registered TCP/IP port 8019 to communicate with a QuickBooks client and then returns the TCP/IP port being used by the QuickBooks database service. See **qbportallocator** and **QBGLOBALAPPCONFIG.INI** below.

- **The qbmonitord configuration file** (`qbmonitord.conf`) specifies the directories that the `qbmonitord` program monitors. These directories contain the QuickBooks company files.

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

- The **qbportallocator program** searches for free TCP/IP ports on the system. These are the ports that the QuickBooks database service uses to communicate with QuickBooks clients.
- The **QBGLOBALAPPCONFIG.INI** file contains the default TCP/IP ports that are used by the QuickBooks database service. You can edit this file to change the default port numbers.

System Requirements

The following table provides the hardware and software requirements for 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-0.1.7-7.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 might 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.qbes.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 8019 and the first free port in the range 55333 to 55337. If all ports in this range are used by other applications, the Linux Database Server Manager uses port 56719. Make sure that all these ports are open on the firewall.

If you do not want to open multiple ports on the firewall, you can open port 8019 and port 55333 only. However, if port 55333 is already in use by another application, QuickBooks Enterprise Solutions will not work properly.

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

Important

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 on page 12](#)
- [Upgrading from Linux Database Server Manager Release 8.0 on page 15](#)
- [Upgrading from Linux Database Server Manager Release 7.0 on page 17](#)
- [Running the Linux Database Server Manager Services on page 19](#)
- [Logging Error Messages on page 20](#)
- [Uninstalling the Linux Database Server Manager on page 21](#)
- [Updating the Linux Database Server Manager on page 22](#)

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.

If you are upgrading from Linux Database Server Manager Release 8.0, follow the instructions in [Upgrading from Linux Database Server Manager Release 8.0 on page 15](#). If you are upgrading from Linux Database Server Manager Release 7.0, follow the instructions in [Upgrading from Linux Database Server Manager Release 7.0 on page 17](#).

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

- 1 On the Linux server, become the root user.
- 2 Insert the QuickBooks Enterprise Solutions CD-ROM in the server's CD-ROM drive and navigate to `/cd_mount_point/LinuxDBServer` (where `cd_mount_point` is the CD-ROM mount directory).

Note If your Linux server does not have a CD-ROM drive, copy the `LinuxDBServer` directory from the CD-ROM drive on an accessible computer to your Linux server. You can also download the software from the QuickBooks Enterprise Solutions website: www.qbes.com/linux.

- 3 The Linux Database Server Manager RPM package is signed so that you can verify the integrity of the package with the GPG public key. The public key is included in the `LinuxDBServer` directory.
 - a 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
```

- b** Type the following command and press Enter to verify the signature of the Linux Database Server Manager RPM with Intuit:

```
rpm -K packagename
```

where *packagename* is the name of the Linux Database Server Manager RPM package, for example `qbdbm-19.0-2.i386.rpm`.

If the package contains a valid signature from Intuit, the command returns `gpg ok`.

- 4** Install the Linux Database Server Manager RPM. 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-19.0-2.i386.rpm`.

For a list of the files installed by the RPM, refer to [What files get installed on my Linux server? on page 25](#).

- 5** Create a directory to store your QuickBooks company files.

Important

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 33](#). 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.

- 6** Copy your QuickBooks company files to the directory you created in [step 5](#).

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.

- 7 Edit the `/opt/qb/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
```

Important

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

- 8 Edit the `/opt/qb/util/QBGLOBALAPPCONFIG.INI` file if you need to change the default TCP/IP ports that the QuickBooks database service uses. The default port settings work in most cases, however, you can customize these settings to fit your specific needs.

Important

Make sure your new port settings do not conflict with other services or processes.

- 9 Restart the `syslog` daemon to start outputting log messages to the `qbdbfilemon.log` file. Type the following command and press Enter:

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

For more information about log messages, refer to [Logging Error Messages on page 20](#).

Upgrading from Linux Database Server Manager Release 8.0

If you are upgrading your Linux Database Server Manager software from Release 8.0 to Release 9.0, follow the steps below to update the software correctly.

◆ **To upgrade from Linux Database Server Manager 8.0:**

- 1 On the Linux server, become the root user.
- 2 Insert the QuickBooks Enterprise Solutions CD-ROM in the server's CD-ROM drive and navigate to `/cd_mount_point/LinuxDBServer` (where `cd_mount_point` is the CD-ROM mount directory).

Note

If your Linux server does not have a CD-ROM drive, copy the `LinuxDBServer` directory from the CD-ROM drive on an accessible computer to your Linux server. You can also download the software from the Enterprise Solutions website: www.qbes.com/linux.

- 3 The Linux Database Server Manager RPM package is signed so that you can verify the integrity of the package with the GPG public key. The public key is included in the `LinuxDBServer` directory.
 - a 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
```
 - b Type the following command and press Enter to verify the signature of the Linux Database Server Manager RPM with Intuit:

```
rpm -K packagename
```

where *packagename* is the name of the Linux Database Server Manager RPM package, for example `qbdbm-19.0-2.i386.rpm`.
If the package contains a valid signature from Intuit, the command returns `gpg ok`.
- 4 In a terminal window, type the following command and press Enter to stop the `qbdbfilemon` service:

```
service qbdbfilemon stop
```

- 5 Type the following command and press Enter to stop the `qbdbmgrn_18` service:

```
service qbdbmgrn_18 stop
```

- 6 Type the following command and press Enter to upgrade the Linux Database Server Manager software:

```
rpm -Uvh packagename
```

where *packagename* is the name of the RPM package on the CD-ROM. For example: `qbdbm-19.0-3.i386.rpm`.

- 7 Type the following command and press Enter to restart the syslog daemon and begin logging error messages to the `qbdbfilemon.log` file.

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

The upgrade process does not delete the `/opt/qbes8` directory. You can delete this directory manually.

Upgrading from Linux Database Server Manager Release 7.0

If you are upgrading your Linux Database Server Manager software from Release 7.0 to Release 9.0, follow the steps below to update the software correctly.

Note Release 9.0 includes the following filename and directory differences:

- The `qbmonitord` service is named `qbdbfilemon`.
- The `qbmonitord.log` file is named `qbdbfilemon.log`.
- The `qbmonitord` program and the `qbmonitord.conf` file are stored in the `/opt/qb/util` directory.
- The database server files are stored in the `/opt/qbes9` directory.

◆ **To upgrade from Linux Database Server Manager 7.0:**

- 1 On the Linux server, become the root user.
- 2 Insert the QuickBooks Enterprise Solutions CD-ROM in the server's CD-ROM drive and navigate to `/cd_mount_point/LinuxDBServer` (where `cd_mount_point` is the CD-ROM mount directory).

Note If your Linux server does not have a CD-ROM drive, copy the `LinuxDBServer` directory from the CD-ROM drive on an accessible computer to your Linux server. You can also download the software from the QuickBooks Enterprise Solutions website: www.qbes.com/linux.

- 3 The Linux Database Server Manager RPM package is signed so that you can verify the integrity of the package with the GPG public key. The public key is included in the `LinuxDBServer` directory.

- a 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
```

- b** Type the following command and press Enter to verify the signature of the Linux Database Server Manager RPM with Intuit:

```
rpm -K packagename
```

where *packagename* is the name of the Linux Database Server Manager 9.0 RPM package, for example `qbdbm-19.0-2.i386.rpm`.

If the package contains a valid signature from Intuit, the command returns `gpg ok`.

- 4** In a terminal window, type the following command and press Enter to stop the `qbmonitord` service:

```
service qbmonitord stop
```

- 5** Type the following command and press Enter to upgrade the Linux Database Server Manager software:

```
rpm -Uvh packagename
```

where *packagename* is the name of the RPM package on the CD-ROM. For example: `qbdbm-19.0-3.i386.rpm`.

- 6** Type the following command and press Enter to restart the syslog daemon and begin logging error messages to the `qbdbfilemon.log` file.

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

The upgrade process copies your existing `Release 7.0 qbmonitord.conf` file to the new location (`/opt/qb/util`) and renames the `qbmonitord.conf` file in the `/opt/qbes7/util` directory with the `.save` extension (`qbmonitord.conf.save`). If you want to preserve this file, move it to a new location before deleting the `/opt/qbes7` directory and subdirectories.

Running the Linux Database Server Manager Services

When you install the Linux Database Server Manager RPM, the `qbdbfilemon` service and the `qbdbmgrn_19` service are set to run automatically at system startup. The `qbdbfilemon` service continually monitors the directories that contain your QuickBooks company files on your Linux server. The `qbdbmgrn_19` service runs the database server.

◆ **To check that the services are configured to run at system startup:**

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

```
chkconfig --list | grep qbdb
```

The following output shows that `qbdbfilemon` and `qbdbmgrn_19` are configured to start automatically at system run levels 3, 4, and 5 on Fedora:

```
qbdbfilemon 0:off 1:off 2:off 3:on 4:on 5:on 6:off
qbdbmgrn_19 0:off 1:off 2:off 3:on 4:on 5:on 6:off
```

The following output shows that `qbdbfilemon` and `qbdbmgrn_19` are configured to start automatically at system levels 3 and 5 on SUSE:

```
qbdbfilemon 0:off 1:off 2:off 3:on 4:off 5:on 6:off
qbdbmgrn_19 0:off 1:off 2:off 3:on 4:off 5:on 6:off
```

◆ **To stop the services manually:**

In a terminal window, type each command and press Enter:

```
service qbdbfilemon stop
service qbdbmgrn_19 stop
```

◆ **To start the services manually:**

In a terminal window, type each command and press Enter:

```
service qbdbfilemon start
service qbdbmgrn_19 start
```

Logging Error Messages

The Linux Database Server Manager uses the Linux syslog utility. All error log messages for the qbmonitord program are output to the file `/var/log/qbdbfilemon.log`.

Important

You must restart the syslog daemon after you install the Linux Database Server Manager RPM to enable logging to the `qbdbfilemon.log` file. Refer to [step 9](#) of the installation procedure on [page 14](#).

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

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

To view more than the last 10 lines, type:

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

For detailed information about the error messages in the `qbdbfilemon.log` file, refer to [What do the error messages mean?](#) on [page 35](#).

Error messages for the database server are output to the `/var/log/qbdbm_19.log` file. The `qbdbmgrn_19` service creates the `qbdbm_19.log` file.

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 qbdbfilemon service:

```
service qbdbfilemon stop
```

- 3 Type the following command and press Enter to stop the qbdbmgrn_19 service:

```
service qbdbmgrn_19 stop
```

Important

You must stop the qbdbfilemon and the qbdbmgrn_19 services before uninstalling the Linux Database Server Manager.

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

```
rpm -e packagename
```

where *packagename* is the name of the RPM package you want to delete, for example `qbdbm-19.0-2.i386.rpm`.

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 Release 9.0 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 25](#).

To upgrade from Linux Database Server Manager Release 8.0 to Release 9.0, follow the instructions in [Upgrading from Linux Database Server Manager Release 7.0 on page 17](#).

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: www.qbes.com/linux.
- 3 In a terminal window, type the following command and press Enter to stop the qbdbfilemon service:

```
service qbdbfilemon stop
```

- 4 Type the following command and press Enter to stop the qbdbmgrn_19 service:

```
service qbdbmgrn_19 stop
```


- 5 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 updated Release 9.0 RPM package you downloaded from the QuickBooks Enterprise Solutions website.

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



Frequently Asked Questions

This appendix lists frequently asked questions and provides helpful tips.

How do I contact Technical Support?

Go to the QuickBooks Support website at www.qbes.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 19.0, Release 2 that runs on the i386 platform:

```
qbdbm-19.0-2.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.

By default, the database files are installed in the `/opt/qbes9` directory. `qbmonitord`, `qbportallocator`, `qbmonitord.conf`, and

`QBGLOBALAPPCONFIG.INI` are installed in the `/opt/qb/util` directory. All files are owned by the user `root` and the group `root`.

The `/opt/qbes9/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: www.qbes.com/linux.

Why does installation stop with a package conflict error?

If you see the error: `file /opt/qb/util/qbmonitord` from install of `qbdbm-19.0-8` conflicts with file from package `qbdbm-18.0.8`, you are trying to install Linux Database Server Manager 9.0 with the `rpm -ivh` command but Linux Database Server Manager 8.0 is still installed. Either:

- Upgrade your Linux Database Server Manager 8.0 software to 9.0 (if you no longer want to run 8.0). Refer to [Upgrading from Linux Database Server Manager Release 8.0 on page 15](#).
- Install Linux Database Server Manager 9.0 with the command `rpm -ivh --replace files` if you want to run both Linux Database Server Manager 9.0 and 8.0 on your Linux server. Refer to [Running Linux Database Server Manager 9.0 and 8.0 on page 27](#).

Can I run different Releases on the Linux server?

You can run Linux Database Server Manager 7.0, 8.0, and 9.0 concurrently on your Linux server. Follow the appropriate procedure below.

Running Linux Database Server Manager 9.0 and 8.0

Use this procedure to install Linux Database Server Manager 9.0 if you want to run Linux Database Server Manager 9.0 and 8.0 or Linux Database Server Manager 9.0, 8.0, and 7.0 concurrently. You *must* have Linux Database Server Manager 8.0 installed.

Note To *upgrade* your Linux Database Server Manager 8.0 software to Linux Database Server Manager 9.0 (you will no longer run Linux Database Server Manager 8.0), refer to [Upgrading from Linux Database Server Manager Release 8.0 on page 15](#).

◆ **To install Linux Database Server Manager 9.0 together with Linux Database Server Manager 8.0:**

- 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 service:

```
service qbdbfilemon stop
```

- 3 Type the following command and press Enter to stop the qbdbmgrn_18 service:

```
service qbdbmgrn_18 stop
```

- 4 Insert the QuickBooks Enterprise Solutions CD-ROM in the server's CD-ROM drive and navigate to `/cd_mount_point/LinuxDBServer` (where `cd_mount_point` is the CD-ROM mount directory).

Note If your Linux server does not have a CD-ROM drive, copy the `LinuxDBServer` directory from the CD-ROM drive on an accessible computer to your Linux server. You can also download the software from the QuickBooks Enterprise Solutions website: www.qbes.com/linux.

- 5 The Linux Database Server Manager RPM package is signed so that you can verify the integrity of the package with the GPG public key. The public key is included in the `LinuxDBServer` directory.

- a 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
```

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

```
rpm -K packagename
```

where *packagename* is the name of the Linux Database Server Manager RPM package, for example `qbdbm-19.0-2.i386.rpm`.

If the package contains a valid signature from Intuit, the command returns `gpg ok`.

- 6 Type the following command and press Enter to install the Linux Database Server Manager 9.0 software:

```
rpm -ivh --replacefiles packagename
```

where *packagename* is the name of the RPM package on the CD-ROM. For example: `qbdbm-19.0-3.i386.rpm`.

- 7 Type the following command and press Enter to restart the syslog daemon and begin logging error messages to the `qbdbfilemon.log` file.

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

Running Linux Database Server Manager 9.0 and 7.0

Use this procedure to install Linux Database Server Manager 9.0 if you want to run Linux Database Server Manager 7.0 and 9.0 concurrently but do *not* have Linux Database Server Manager 8.0 installed.

To *upgrade* your Linux Database Server Manager 7.0 software to Linux Database Server Manager 9.0 (you will no longer run Linux Database Server Manager 7.0), refer to [Upgrading from Linux Database Server Manager Release 7.0 on page 17](#).

◆ **To install Linux Database Server Manager 9.0 together with Linux Database Server Manager 7.0**

- 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 service:

```
service qbmonitord stop
```

- 3 Insert the QuickBooks Enterprise Solutions CD-ROM in the server's CD-ROM drive and navigate to `/cd_mount_point/LinuxDBServer` (where `cd_mount_point` is the CD-ROM mount directory).

Note

If your Linux server does not have a CD-ROM drive, copy the `LinuxDBServer` directory from the CD-ROM drive on an accessible computer to your Linux server. You can also download the software from the QuickBooks Enterprise Solutions website: www.qbes.com/linux.

- 4 The Linux Database Server Manager RPM package is signed so that you can verify the integrity of the package with the GPG public key. The public key is included in the `LinuxDBServer` directory.
 - a 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
```

- b** Type the following command and press Enter to verify the signature of the Linux Database Server Manager RPM with Intuit:

```
rpm -K packagename
```

where *packagename* is the name of the Linux Database Server Manager RPM package, for example `qbdbm-19.0-2.i386.rpm`.

If the package contains a valid signature from Intuit, the command returns `gpg ok`.

- 5** Install the Linux Database Server Manager RPM. 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-19.0-2.i386.rpm`.

Important

In Linux Database Server Manager 9.0, the **qbmonitor** service is named **qbdbfilemon**. To run both Linux Database Server Manager 9.0 and 7.0 at the same time, both the **qbdbfilemon** service and the **qbmonitor** service must be running. The **qbdbfilemon** service is started automatically after installation and at system startup but the **qbmonitor** service is not. You must start the **qbmonitor** service manually.

The Linux Database Server Manager 9.0 installation process copies your existing Release 7.0 `qbmonitor.conf` file to the new location (`/opt/qb/util`) and renames the `qbmonitor.conf` file in the `/opt/qbes7/util` directory with the `.save` extension (`qbmonitor.conf.save`). The `/opt/qb/util/qbmonitor.conf` file is used by both Linux Database Server Manager 7.0 and 9.0.

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.
- Windows client computers can resolve the host name or IP address of the Linux server. Refer to [Host Name Resolution on page 10](#).
- The directory and any subdirectories that contain the company files are listed in the `qbmonitord.conf` file.
- Both the `qbdbfilemon` and the `qbdbmgrn_19` services are running.
- Port 8019 and one of the ports in the range 55333 through 55337, or 56719 are open on both the Linux sever and the Windows client. If you change the default port settings in the `GBGLOBALAPPCONFIG.INI` file, make sure the new ports are open.

[Table 3 on page 35](#) and [Table 4 on page 36](#) provide a list of error messages you may encounter when using the Linux Database Server Manager.

How do I change the default port numbers?

The `QBGLOBALAPPCONFIG.INI` file contains the default TCP/IP ports that the QuickBooks database service uses to communicate with QuickBooks clients.

The QuickBooks database service uses port 8019 and the first free ports in the range 55333 to 55337. If all ports in this range are used by other applications, the QuickBooks database service uses port 56719.

The default port settings work in most cases, however, you can customize these settings to fit your specific needs.

◆ **To change the TCP/IP port numbers:**

- 1 Open the `/opt/qb/util/QBGLOBALAPPCONFIG.INI` file.
- 2 Change the value of the `StartPortNumber` field to the port number you want to use. For example:

```
StartPortNumber=62000
```

Important

Make sure that the port number you want to use is available.

- 3 Save and close the file.
- 4 Restart the `abdbmgrn_19` service:

```
service qbdbmgrn_19 restart
```

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/qbdfilemon.log` file on the Linux server.

[Table 4 on page 36](#) 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> program 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. All directories that store company files must be listed in this file. Edit the <code>qbmonitord.conf</code> file to list the directories. Add each directory on a separate line. Refer to step 7 of the installation procedure on page 14 .
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/qb/util</code> directory.
Error creating meta file.	The <code>qbmonitord</code> program was not able to create the <code>qbdir.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 the qbmonitord program and no <code>qmdir.dat</code> file exists.</p> <p>Specify the directory in the <code>qbmonitord.conf</code> file (refer to step 7 of the installation procedure 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:</p> <p>Check that the database server is running on the Linux server (in a terminal window, type <code>ps -ef grep qbdbmgrn_19</code>).</p> <p>Check that communication is not blocked by a firewall on either the Linux server or the Windows client.</p> <p>Check that the Windows client is able to resolve the host name or IP address of the Linux server. Refer to Host Name Resolution on page 10.</p>

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