



Minitab **Express**[™]
for Mac

Minitab Express for Mac Installation Guide

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Basic Installation

This section provides the basic steps in a typical installation of Minitab Express.

To install Minitab Express, follow the steps below. To renew an existing installation that has reached or is close to reaching its expiration date, see [Renewing licenses](#) on page 12.

1. Designate authorized users of multi-user licensing web pages (optional).
2. Determine installation configuration.
3. Create license files at the multi-user licensing web pages.
4. Obtain software.
5. Install software.

Note This installation guide applies only to the multi-user installation for Minitab Express.

Step 1: Designate authorized users of multi-user licensing web pages

To access the Minitab multi-user licensing web pages so that you can create the license files for the installation, you must be either the Minitab License Coordinator for your organization or an authorized user.

At the time of purchase, someone from your company was designated as the Minitab License Coordinator. That person has permission to log in to the Minitab multi-user licensing web pages to create license files. In addition, your company can have other authorized users.

If you are not sure whether you're an authorized user, contact your organization's Minitab License Coordinator. Only the License Coordinator can request additional authorized users by contacting a [Minitab sales representative or Minitab Technical Support](#).

Step 2: Determine installation configuration

All multi-user installations require Minitab License Manager, the software that manages Minitab Express based on the information in the license file. Minitab License Manager must be installed in a configuration that allows it to communicate with Minitab Express.

You can choose from several different installation configurations to suit your needs. For example, you can install Minitab License Manager on a server in a networked configuration. In a networked configuration, users access the license file on the server; therefore, each client computer does not need to be permanently assigned to a separate license file. Another option is to install Minitab License Manager and Minitab Express on each client computer in a standalone configuration, which requires a separate license file for each client computer.

The installation configuration you choose affects the number of license files you need to create and the installation procedures that you need to follow. See [Installation Configurations](#) on page 7 for detailed information that will help you to determine the best configuration for your organization.

The Minitab License Manager can run on either OS X or Windows operating systems and serve licenses to both platforms. If you already have Minitab License Manager installed on a Windows server, ensure that you have the latest version to be compatible with Minitab Express licenses.

Step 3: Create license file(s)

You need at least one license file for installation. To create license files, you use the Minitab multi-user licensing web pages. One license file *per server* is required in a networked installation. One license file *per workstation* is required in a standalone configuration. See [Installation Configurations](#) on page 7 for more information on networked and standalone configurations.

You need the following information to create a license file:

- The maximum number of simultaneous users that will be served by the license. In a standalone configuration, the maximum number of users is 1 for each license. To determine the number of users in a networked configuration, see [Number of license files](#) on page 10.
- The MAC address of each computer that will host a license. This is a unique identifier assigned to internal network interface adapters (for example, Ethernet or Wi-Fi) installed on your computer.

To obtain the MAC address:

- From the Apple menu, select **System Preferences**.
- Select **Network**.
- From the left sidebar, select the network interface that you are using. Select either **Ethernet** or **Wi-Fi**.

Note Do *not* select Thunderbolt Ethernet or USB Ethernet because they are external adapters whose MAC address will not work.

- Click **Advanced** on the bottom right.
- Select the **Hardware** tab.
- The MAC address for the network interface will be displayed in the form: xx:xx:xx:xx:xx:xx. For example, 3c:09:3a:6c:18:ac. When you create your license file, enter the MAC address without the formatting characters; remove colons or dashes (for example, 3c093a6c18ac).

For information on how to obtain a computer's MAC Address, see

<https://support.minitab.com/installation/frequently-asked-questions/license-fulfillment/locate-my-computers-mac-address/>

To create license files

1. Go to <https://it.minitab.com/support/licensing/multi-user/customer-entitlement-summary.aspx>.
2. Log in as an authorized user.
3. Complete the necessary steps to create the license file(s).

Step 4: Install software

Install Minitab Express and Minitab License Manager based on the installation configuration that you determined in step 2. You can install Minitab License Manager on a server in a networked configuration or on each client computer in a standalone configuration.

System requirements

You can find the latest system requirements for Minitab Express and the Minitab License Manager at

<https://www.minitab.com/products/express/system-requirements/>.

To install in a networked configuration

1. Ensure that you have administrative privileges to install Minitab License Manager on the server and Minitab Express on each workstation.
2. Ensure that the license file is available on the server (for example, in the Downloads folder). See [Create License File\(s\)](#) on page 5 for more information.
3. Install Minitab License Manager on the server. You will be asked to select the license file during the installation. The installation process creates a copy of the license file in /Library/Application Support/Minitab/LicenseManager.
4. Delete the license file or save the file in the event that you need to reinstall the Minitab License Manager at a later time.
5. Install Minitab Express on each workstation.
 - You need to specify the name or IP Address of your Minitab License Manager server during installation.
 - Minitab Express chooses the first available port between 27000 and 27009. If your License Coordinator specified a different port within the license file, check **Specify port number**, and enter that port number.

To install in a standalone configuration

1. Ensure that you have administrative privileges to install Minitab License Manager and Minitab Express on each workstation.
2. Ensure that the license file is available on the workstation (for example, in the Downloads folder).
3. Install Minitab License Manager on each workstation. You will be asked to select the license file during the installation.
4. The installation process creates a copy of the license file in /Library/Application Support/Minitab/LicenseManager.
5. Delete the license file or save the file in the event that you need to reinstall the Minitab License Manager at a later time.
6. Install Minitab Express on each workstation.
 - When prompted for the name of the Minitab License Manager, enter *@localhost*.
 - Minitab Express chooses the first available port between 27000 and 27009.

Installation Configurations

The previous section explained how to install the multi-user version of Minitab products. This section provides a more in-depth explanation of the client-server model and the possible installation configurations.

Multi-user installation

The multi-user versions of Minitab products are based on a client-server installation model. Minitab Express (the client software) is installed on individual workstations. Minitab License Manager (the server software) is installed on a server. Every time the client software is started, it communicates with the server to ensure that a license is available.

Typically, Minitab License Manager is installed on a single server. The client software can be installed on an unlimited number of workstations. Minitab License Manager ensures that the number of concurrent users never exceeds the licensed number of seats.

For example, an organization purchased 100 licenses of Minitab Express and configured Minitab License Manager to control all 100 licenses. Minitab Express was installed on 300 workstations. Even though the client software has been installed on 300 workstations, Minitab License Manager will allow only 100 instances of the client software to run concurrently.

When the client software is started, it requests a license from Minitab License Manager. If a license is available, it is sent to the client and the software starts successfully. If a license is not available, an error message is displayed.

Configuration options

Networked configuration

To set up a networked configuration, install Minitab License Manager on a server. A license file is requested during the installation process. You need to provide the license file that was created during the procedure detailed in Basic Installation. Minitab License Manager is installed to `/Library/Application Support/Minitab/LicenseManager`. The installation program makes a copy of the license file, places it in the installation directory, and names the file `minitab.lic`.

The Minitab License Manager installation creates OS X daemons called "minitab" and "lmgrd". These license manager services start automatically when they are installed and will remain running even if the system is rebooted. When the daemon starts, it checks the Minitab License Manager installation directory for the license file. If the license file is valid, the daemons start successfully.

Install the client software, Minitab Express, on as many workstations as necessary. During installation, you need to provide the name of the server or IP Address on which Minitab License Manager is installed.

Standalone configuration

In a standalone configuration, Minitab products do not depend on accessing a network server. Instead, the Minitab License Manager server software is installed on the same workstation as the client software, Minitab Express. Minitab License Manager starts two daemons that are required to run on each standalone workstation. When Minitab Express starts, it checks the Minitab License Manager service that is on the same workstation, regardless of network connectivity. An individual license file must be created for each workstation.

Mixed configurations

You can use a combination of networked and standalone configurations. For example, you can install Minitab Express on 20 workstations that are connected to the network and also install Minitab Express on 5 standalone workstations that are not connected to the network.

For information on mixed installation configurations and license files, see [Number of license files](#) on page 10.

Minitab License Manager

All multi-user installation configurations require the installation of the Minitab License Manager, the server software that manages the use of Minitab Express. The Minitab License Manager ensures that the number of concurrent users does not exceed the licensed number of seats, based on the information in the license file.

The Minitab License Manager service starts its daemons automatically when you install it. However, you may need to restart the Minitab License Manager service in some cases, such as when you make changes to the license file. You can restart the Minitab License Manager through several ways.

To re-run the Minitab License Manager installer

This approach works well if you have a new license file. Simply re-run the License Manager installer and select the new license file when prompted. The install process will copy the license file to the correct location and restart the License Manager.

To manually restart the Minitab License Manager

This approach works if you edit or replace the license file in-place. You need to be logged in as an administrator and ensure that the file permissions and owner are maintained.

1. Navigate to `/Library/Application Support/Minitab/LicenseManager`.
2. Edit or replace the license file.
3. Double-click the **Restart License Manager.command** script (in the same folder). It will restart the License Manager, which will cause it to read in the new license file. You will be prompted to enter your password.

To uninstall the Minitab License Manager

To uninstall the Minitab License Manager:

1. Navigate to the `/Library/Application Support/Minitab/LicenseManager` area.
2. Double-click the **LicenseManager_Uninstall.pkg** file.
3. This will shut down the license manager server components and delete associated files.

License Files

License files are required for the installation of Minitab multi-user products. This section provides general background information on license files, including what they are, where they are created and stored, and how they are used.

Using license files

What is a license file?

A license file is a text file named minitab.lic. The file does not have a .txt extension, but you can open it in a standard text editor. If you edit the license file, ensure that you do not change file types, character sets, or formats. The license file contains information about the licenses that your organization purchased. This information includes the expiration date, the number of licenses, and the computer's MAC address.

After you create a license file at the Minitab multi-user licensing web pages, save it to the computer on which you will install the Minitab License Manager, the server software that manages the use of Minitab Express based on the information in the license file.

Sample license file

```
SERVER this_host 0A1B2C3D4E5F
VENDOR minitab
USE_SERVER
PACKAGE Minitab_Suite minitab 1.1 COMPONENTS="Minitab:19 \
minitabexpress:1" OPTIONS=SUITE SIGN="08D7 41DE B6CF 4131 2330 \
5C94 7F1D F544 3DF4 BAE3 C11C 5FC9 D03D 3B43 D803 14B8 4A50 \
D1AC ADCC 4CD7 E7AF E4F7 907A DCD1 556B E7D2 4708 D941 B1CD \
8615" SIGN="08D7 41DE B6CF 4131 2330 5C94 7F1D F544 3DF4 BAE3 \
C11C 5FC9 D03D 3B43 D803 14B8 4A50 D1AC ADCC 4CD7 E7AF E4F7 \
907A DCD1 556B E7D2 4708 D941 B1CD 8615"
INCREMENT Minitab_Suite minitab 1.1 01-dec-2020 100 DUP_GROUP=UH \
SUITE DUP_GROUP=UH ISSUER=Minitab SIGN="0A06 A210 1374 7941 \
4BDF 55B7 49C0 388C BD51 2A31 2D7D 253B AB1A 4B55 CC41 1F44 \
1F66 B62A 03C7 4FB5 2D80 1A74 342F 5C7C 18A4 E471 0945 5795 \
D5FE D9E7"
```

In the sample license file above, the terms in bold specify the following information:

0A1B2C3D4E5F

The unique MAC address of the computer for which this license file was created.

Minitab:19 minitabexpress:1

The name of the product for which the license file was created.

01-dec-2020

The expiration date of the license file.

100

The number of users allowed to concurrently run Minitab.

Each license file is created for a single computer. The computer is identified in the license file by its MAC address. The license file cannot be used on a computer that does not have its MAC address specified in the license file.

The Minitab Express product is sold as a Suite, which allows users to access Minitab Express as well as Minitab 19. The license file will contain a Package line and an Increment line for the Minitab Suite product. When the Minitab Express client software is launched and a license is checked out from the server, a license for Minitab 19 is also checked out for that client.

How license files are used

During the installation of Minitab License Manager, you need to provide the license file. The License Manager will create a copy of the license file in /Library/Application Support/Minitab/LicenseManager. The Minitab License Manager service is then installed. The service reads the license file and then starts.

Note After you install Minitab License Manager, you can delete the license file.

Authorized users can create license files at the Minitab multi-user Licensing web pages. See [Create License Files](#) on page 5 for more information.

Number of license files

You need one license file for each Minitab License Manager that you install. In a typical networked configuration, Minitab License Manager is installed on a single server. In this case, only one license file is needed. For example, Minitab License Manager is installed on a single server that will serve all 100 licenses. You need to create a single license file for all 100 seats.

You can also divide your licenses among multiple servers, if desired. For example, Minitab License Manager is installed on two servers, one for 75 users in Department A and the other for 25 users in Department B. This installation configuration requires two license files: one file for 75 seats and another file for 25 seats.

In a standalone configuration, Minitab License Manager must be installed on each workstation. As a result, a unique license file is required for each installation of Minitab License Manager. For example, a small computer training lab has 10 computers that are not networked. You need to install Minitab Express and Minitab License Manager on all 10 computers. This installation configuration requires 10 license files, one for each computer.

You can have a combination of networked and standalone installations. You need to create a single license file for the server and a separate license file for each standalone workstation. For example, an organization purchases 100 licenses for Minitab Express. They want 10 standalone installations in the computer lab. A single server will host the remaining 90 licenses. This installation configuration requires 11 license files: one for the server and one for each of the 10 standalone workstations.

Adding a second product or additional users to your license file

When you purchase both Minitab Express and Companion, you must initially create two separate license files at the multi-user licensing web pages, one for each product. However, to install both products, you need to merge the two license files into one file. After you download both license files, append the contents of one license file to the other license file.

You can also add additional users to your license, which also involves appending the contents of your new license file to the existing file.

To append an additional product to a license file

You need to be logged in as an administrator to perform the following steps.

1. At <https://it.minitab.com/support/licensing/multi-user/customer-entitlement-summary.aspx> , create a separate license file for the additional product.
2. Save the new license file. Do not overwrite the existing license file in /Library/Application Support/Minitab/LicenseManager.
3. Open the new license file for the additional product in a text editor.
4. Copy everything from the INCREMENT line down.
5. Close the new license file.
6. Open the original license file in /Library/Application Support/Minitab/LicenseManager in a text editor.
7. Paste the copied contents of the new license file to the end of the original license file.
8. Save the license file.
9. Double-click the Restart License Manager.command script file. You may be prompted to enter your password. The script will restart the license manager. See [To manually restart the Minitab License Manager](#) on page 8 for more information.
10. To verify your changes:
 - Open a terminal window.
 - Type the following command: `lmutil lmstat -c "/Library/Application Support/Minitab/LicenseManager/minitab.lic" -a`

Example of a license file with appended product

```
SERVER this_host 0A1B2C3D4E5F
VENDOR minitab
USE_SERVER
PACKAGE Minitab_Suite minitab 1.1 COMPONENTS="Minitab:19 \
    minitabexpress:1" OPTIONS=SUITE SIGN="08D7 41DE B6CF 4131 2330 \
    5C94 7F1D F544 3DF4 BAE3 C11C 5FC9 D03D 3B43 D803 14B8 4A50 \
    D1AC ADCC 4CD7 E7AF E4F7 907A DCD1 556B E7D2 4708 D941 B1CD \
    8615" SIGN="08D7 41DE B6CF 4131 2330 5C94 7F1D F544 3DF4 BAE3 \
    C11C 5FC9 D03D 3B43 D803 14B8 4A50 D1AC ADCC 4CD7 E7AF E4F7 \
    907A DCD1 556B E7D2 4708 D941 B1CD 8615"
INCREMENT Minitab_Suite minitab 1.1 01-dec-2020 DUP_GROUP=UH \
    SUITE DUP_GROUP=UH ISSUER=Minitab SIGN="0A06 A210 1374 7941 \
    4BDF 55B7 49C0 388C BD51 2A31 2D7D 253B AB1A 4B55 CC41 1F44 \
    1F66 B62A 03C7 4FB5 2D80 1A74 342F 5C7C 18A4 E471 0945 5795 \
    D5FE D9E7"
INCREMENT companion minitab 5 01-dec-2020 8 VENDOR_STRING="limited \
    term, limited users, borrowing enabled" DUP_GROUP=UH \
    ISSUER=Minitab ISSUED=01-dec-2018 BORROW=26280 \
    NOTICE="Customer ID: 01234 License Coord ID: 56789 \
    RENIO1234" SN="STDORD31415 01234INC" START=01-dec-2018 \
    SIGN="1EA6 00D1 E785 EEA9 F026 63B5 BBA0 B8B0 CAB9 \
    91CA A57A D123 D9DD 0372 A1CD 136F 12F4 ABCB EA0A 3AD9 A71F \
    F014 7B78 A683 6EB2 FCC6 9685 0D66 6355 441C"
```

To append additional users to a license file

You need to be logged in as an administrator to perform the following steps.

1. At <https://it.minitab.com/support/licensing/multi-user/customer-entitlement-summary.aspx> , create a separate license file for the additional users.
2. Save the new license file to your system. Do not overwrite the existing license file in /Library/Application Support/Minitab/LicenseManager.

3. Open the new license file for the additional users in a text editor.
4. Copy everything from the INCREMENT line down.
5. Close the license file.
6. Open the original license file in /Library/Application Support/Minitab/LicenseManager in a text editor.
7. Paste the copied contents of the new license file to the end of the original license file.
8. Save the license file.
9. Double-click the Restart License Manager.command script file. You may be prompted to enter your password. The script will restart the license manager. See [To manually restart the Minitab License Manager](#) on page 8 for more information.
10. To verify your changes:
 - Open a terminal window.
 - Type the following command: `lmutil lmstat -c "/Library/Application Support/Minitab/LicenseManager/minitab.lic" -a`
11. Look for the line that includes `Total of x licenses issued` and confirm that `x` is equal to the total number of licenses (original + added).

Example of a license file with appended users

```
SERVER this_host 0A1B2C3D4E5F
VENDOR minitab
USE_SERVER
PACKAGE Minitab_Suite minitab 1.1 COMPONENTS="Minitab:19 \
    minitabexpress:1" OPTIONS=SUITE SIGN="08D7 41DE B6CF 4131 2330 \
    5C94 7F1D F544 3DF4 BAE3 C11C 5FC9 D03D 3B43 D803 14B8 4A50 \
    D1AC ADCC 4CD7 E7AF E4F7 907A DCD1 556B E7D2 4708 D941 B1CD \
    8615" SIGN="08D7 41DE B6CF 4131 2330 5C94 7F1D F544 3DF4 BAE3 \
    C11C 5FC9 D03D 3B43 D803 14B8 4A50 D1AC ADCC 4CD7 E7AF E4F7 \
    907A DCD1 556B E7D2 4708 D941 B1CD 8615"
INCREMENT Minitab_Suite minitab 1.1 01-dec-2020 16 DUP GROUP=UH \
    SUITE DUP GROUP=UH ISSUER=Minitab SIGN="0A06 A210 1374 7941 \
    4BDF 55B7 49C0 388C BD51 2A31 2D7D 253B AB1A 4B55 CC41 1F44 \
    1F66 B62A 03C7 4FB5 2D80 1A74 342F 5C7C 18A4 E471 0945 5795 \
    D5FE D9E7"
PACKAGE Minitab_Suite minitab 1.1 COMPONENTS="Minitab:18 \
    minitabexpress:1" OPTIONS=SUITE SIGN="08D7 41DE B6CF 4131 2330 \
    5C94 7F1D F544 3DF4 BAE3 C11C 5FC9 D03D 3B43 D803 14B8 4A50 \
    D1AC ADCC 4CD7 E7AF E4F7 907A DCD1 556B E7D2 4708 D941 B1CD \
    8615" SIGN="08D7 41DE B6CF 4131 2330 5C94 7F1D F544 3DF4 BAE3 \
    C11C 5FC9 D03D 3B43 D803 14B8 4A50 D1AC ADCC 4CD7 E7AF E4F7 \
    907A DCD1 556B E7D2 4708 D941 B1CD 8615"
INCREMENT Minitab_Suite minitab 1.1 01-dec-2020 3 DUP GROUP=UH \
    SUITE DUP GROUP=UH ISSUER=Minitab BORROW=26280 SIGN="019C 819E \
    D67F 1253 CAF3 5DE5 824D 433E 5365 B022 C549 8E67 50E2 3912 \
    1692 1549 A7F9 353F 1211 91CF 31A0 D80D 95FF B5E2 D5C5 C0FB \
    14E2 429E EFCC B734"
```

Renewing licenses

To avoid "checkout failed" error messages that are caused by expired license files, renew your organization's Minitab Express license before it expires.

1. Your organization's License Coordinator must purchase a new license for your organization.

2. An authorized user must log in and generate new license files at <https://it.minitab.com/support/licensing/multi-user/customer-entitlement-summary.aspx>. See [Step 3: Create license file\(s\)](#) on page 5 for more information about creating license files.
3. Restart the Minitab License Manager installer and select the new license file when prompted.

Note License files are created with an expiration date. Minitab Express will not start if the license is expired.

Advanced Topics

Checking for updates

Minitab Express automatically checks for updates every month and gives each user the ability to manually check for updates at any time.

To manually check for updates

1. Open Minitab Express.
2. Choose **Minitab Express > Check for Updates**.
3. Follow the instructions for installing the update.

License manager utility

Flexera Software provides the `lmutil` utility for performing license management tasks. This utility can be found in: `/Library/Application Support/Minitab/LicenseManager`.

`lmutil` is a command line tool that must be run in a Terminal window. For more information about `lmutil`, refer to the FlexNet Publisher License Administration Guide distributed by Flexera Software LLC. Detailed instructions can be found in the "Using License Administration Tools" section.

You can use this utility to check the status of Minitab License Manager and to help you monitor network licensing activities, such as the number of licenses in use and who is using them. You can also review configuration settings. See [Check Minitab License Manager status and settings](#) on page 18 for more information.

Specifying ports

Minitab Express uses two ports for communication between the workstation and the server: the license manager (`lmgrd`) port and the vendor daemon (`minitab`) port. You can modify the license file to specify which port numbers Minitab Express should use.

Specifying ports manually is useful when you need to identify them as open ports on firewalls. When communication appears to be blocked, configure these open ports on any firewall on or between the workstation and server, including software firewalls such as Mac OS X firewall. See [FLEXnet error 96](#) on page 20 for more information.

You can specify both the license manager and vendor daemon ports in the same license file. Make a backup of your license file before you edit it.

To specify a license manager port

The license manager (`lmgrd`) automatically chooses the first available port between 27000 and 27009 each time the Minitab License Manager service starts. You can set this port number to a permanent value.

You need to be logged in as an administrator to perform the following steps.

1. Open the license file in `/Library/Application Support/Minitab/LicenseManager` in a text editor.
2. Type the port number after the MAC address on the first line. Leave a space between the MAC address and port number, as shown in the example below.
3. Save the file.
4. Restart the Minitab License Manager service to re-read the license file. See [To manually restart the Minitab License Manager](#) on page 8.
5. To verify your change, open the Minitab License Manager log file, `out.txt`, which is located at `/Library/Application Support/Minitab/LicenseManager/log`, in a text editor.
6. Locate the line that includes `lmgrd tcp-port`.
7. Make sure that the port number on this line is correct. For example, `lmgrd tcp-port 27001`.

Example of license file with specified license manager port of 27001:

```
SERVER this_host 0A1B2C3D4E5F 27001
VENDOR minitab
USE_SERVER
PACKAGE Minitab_Suite minitab 1.1 COMPONENTS="Minitab:19 \
minitabexpress:1" OPTIONS=SUITE SIGN="08D7 41DE B6CF 4131 2330 \
5C94 7F1D F544 3DF4 BAE3 C11C 5FC9 D03D 3B43 D803 14B8 4A50 \
D1AC ADCC 4CD7 E7AF E4F7 907A DCD1 556B E7D2 4708 D941 B1CD \
8615" SIGN="08D7 41DE B6CF 4131 2330 5C94 7F1D F544 3DF4 BAE3 \
C11C 5FC9 D03D 3B43 D803 14B8 4A50 D1AC ADCC 4CD7 E7AF E4F7 \
907A DCD1 556B E7D2 4708 D941 B1CD 8615"
INCREMENT Minitab Suite minitab 1.1 01-dec-2020 16 DUP_GROUP=UH \
SUITE_DUP_GROUP=UH ISSUER=Minitab SIGN="0A06 A210 1374 7941 \
4BDF 55B7 49C0 388C BD51 2A31 2D7D 253B AB1A 4B55 CC41 1F44 \
1F66 B62A 03C7 4FB5 2D80 1A74 342F 5C7C 18A4 E471 0945 5795 \
D5FE D9E7"
```

To specify a vendor daemon port

The vendor daemon (`minitab`) port is dynamically assigned from a wide range of port numbers each time the Minitab License Manager service starts. You can set this port number to a permanent value.

You need to be logged in as an administrator to perform the following steps.

1. Open the license file in `/Library/Application Support/Minitab/LicenseManager` in a text editor.
2. Type `port=` and the port number at the end of the second line ("`port`" is case-sensitive). Leave a space between `minitab` and `port=`.
3. Save the file.
4. Restart the Minitab License Manager service to re-read the license file. See [To manually restart the Minitab License Manager](#) on page 8.
5. To verify your change, open the Minitab License Manager log file, `out.txt`, which is located at `/Library/Application Support/Minitab/LicenseManager` in a text editor.
6. Locate the line that includes `minitab` using `TCP=port`.
7. Make sure that the port number on this line is correct. For example, `minitab using TCP=port 3000`.

Example of license file with specified vendor daemon port of 3000:

```
SERVER this_host 0A1B2C3D4E5F
VENDOR minitab port=3000
USE_SERVER
PACKAGE Minitab_Suite minitab 1.1 COMPONENTS="Minitab:19 \
minitabexpress:1" OPTIONS=SUITE SIGN="08D7 41DE B6CF 4131 2330 \
```

```

5C94 7F1D F544 3DF4 BAE3 C11C 5FC9 D03D 3B43 D803 14B8 4A50 \
D1AC ADCC 4CD7 E7AF E4F7 907A DCD1 556B E7D2 4708 D941 B1CD \
8615" SIGN="08D7 41DE B6CF 4131 2330 5C94 7F1D F544 3DF4 BAE3 \
C11C 5FC9 D03D 3B43 D803 14B8 4A50 D1AC ADCC 4CD7 E7AF E4F7 \
907A DCD1 556B E7D2 4708 D941 B1CD 8615"
INCREMENT Minitab_Suite minitab 1.1 01-dec-2020 3 DUP_GROUP=UH \
SUITE DUP_GROUP=UH ISSUER=Minitab BORROW=26280 SIGN="019C 819E \
D67F 1253 CAF3 5DE5 824D 433E 5365 B022 C549 8E67 50E2 3912 \
1692 1549 A7F9 353F 1211 91CF 31A0 D80D 95FF B5E2 D5C5 C0FB \
14E2 429E EFCC B734"

```

Options file

You can use the options file to control various license system options for the Minitab License Manager, such as reserving or excluding licenses for a person or group.

To use an options file

You need to be logged in as an administrator to perform the following steps.

1. Open a new file in TextEdit.
2. Change the file format to plain text. Choose **Format > Make Plain Text**.
3. Type your settings with the appropriate syntax, as documented in the FlexNet Publisher License Administration Guide distributed by Flexera Software LLC. See the bottom of this topic for an example options file.
4. Choose **File > Save...** and browse to the same folder as minitab.lic (/Library/Application Support/Minitab/LicenseManager/Log).
5. In **Save As**, type *minitab.opt*.
6. Click **Save**.
7. Restart the Minitab License Manager service. See [To manually restart the Minitab License Manager](#) on page 8.
8. To verify that the options file is successfully implemented, open the Minitab License Manager log file, out.txt, at /Library/Application Support/Minitab/LicenseManager in a text editor.
9. Locate the line that includes `Using options file:<path_to_options_file>`. If this text is present, the options file has been successfully implemented.

If a minitab.opt file is present, the Minitab License Manager service reads it and implements the settings in the file.

In the example below of an options file, line 1 prevents the user tjones from using Minitab Express. Line 2 creates a group named "quality" and defines members of that group. Line 4 reserves three licenses for the quality group.

```

EXCLUDE minitabexpress USER tjones
GROUP quality jsmith bmiller awilson
RESERVE 3 minitabexpress GROUP quality

```

Customizing your deployment

For detailed instructions on customizing the deployment of Minitab Express, see the Deployment Guide for Minitab Express at

https://www.minitab.com/uploadedFiles/Documents/install-guides/Minitab_Express_Deployment_Guide-EN.pdf.

Troubleshooting

This section provides information for troubleshooting problems related to licensing and installing Minitab products.

Log files

Minitab Express and Minitab License Manager each generate log files or write to system log files. These log files can be used for troubleshooting.

Installation log file

The installation process writes log information to the Console application. In the left pane, look under **FILES > /var/log** and select **install.log**.

Update log file

Minitab Express update operations will write error information to a log file. This information will go into one of two logs:

- ~/Library/Logs/SparkleUpdateLog.log
 - You can also access this log information in the Console application. In the left pane, choose **FILES > ~/Library/Logs**, then select **SparkleUpdateLog.log**.
- Console log
 - Under **SYSTEM LOG QUERIES**, select **All Messages**.

To isolate the log messages:

1. Open the Console application.
2. Select the associated log area.
3. Select **Clear Display** from the title bar.
4. Perform the update operation.
5. The log will show messages associated with the update operation.

Minitab License Manager log file

Minitab License Manager is the server software that controls the use of your license. It generates a log file that is updated with events, such as license check-ins, check-outs, and error messages. The log file is named out.txt and is located at /Library/Application Support/Minitab/LicenseManager/Log.

To read the Minitab License Manager log file, open it in a text editor.

To reset the size of the Minitab License Manager log file (for example, when it gets too large), restart the Minitab License Manager. For more information, see [To manually restart the Minitab License Manager](#) on page 8

Note For detailed information on the Minitab License Manager log file, refer to the [FlexNet Publisher License Administration Guide](#) distributed by Flexera Software LLC.

Check Minitab License Manager status and settings

You can check the status of Minitab License Manager to help you monitor network licensing activities, such as the number of licenses in use and who is using them. You can also review configuration settings.

1. Create a new Terminal window.
2. To navigate to Minitab License Manager folder, type:
`cd/Library/Application\Support/Minitab/LicenseManager.`
3. Type the following command: `lmutil lmstat -c minitab.lic -a`
4. You will see a list of the licenses that are available and currently in use.

Note You may also be able to enter the following command in a Terminal window, from any location, to see the same information:
`lmutil lmstat -a`

For example, if you have 50 total licenses and 33 are in use, you will see this information:

```
Users of minitabexpress: (Total of 50 licenses used; Total of 33 licenses in use)
```

Specific details about each license are also listed:

```
jsmith LAB MAC (v1.0) (LAB MAC/27000 302), start Fri 3/1 4:15
```

jsmith is the user name, LAB MAC is the computer name, and 27000 is the license manager port.

FLEXnet license errors

You may encounter several types of FLEXnet error messages that indicate that you cannot check out a license. These messages are formatted in general as follows:

```
FLEXNET License Error Number: Error text.
```

For example:

```
FLEXNET License Error -97-121-0: Check out failed
```

Some of the errors that you may encounter are listed below. For a complete list of possible error codes, see the [FlexNet Publisher License Administration Guide](#).

FLEXnet error 15

Possible cause	Explanation
The server name that was provided during the installation of Minitab Express on the client computer is not valid.	The server name that was provided during the installation of Minitab Express on the client computer is used to locate that server on the network. Make sure that the server name is valid. For instructions on locating the server name, see https://support.minitab.com/installation/frequently-asked-questions/minitab-license-manager/change-default-location-where-minitab-companion-look-for-license-manager/ .

FLEXnet error 25

Possible cause	Explanation
You are using Minitab Express with an invalid license file.	The license file that is managed by Minitab License Manager supports some other Minitab product. To resolve this, you need to create a new license file for Minitab Express.

FLEXnet error 34

Possible cause	Explanation
The date differs in excess of 24 hours between the client computer and the Minitab License Manager server.	If the date difference is greater than 24 hours, Minitab License Manager will refuse to grant the license. Reset the clock on the client computer.

FLEXnet error 68

Possible cause	Explanation
The license file is not configured to allow for borrowing.	Not all licenses are borrow-enabled. Borrow-enabled licenses will have "borrow-enabled" within the text of the license file.

FLEXnet error 92

Possible cause	Explanation
The MAC address in the license file does not match the MAC address of the Minitab License Manager server.	The MAC address in the license file must match the MAC address of an enabled network adapter on Minitab License Manager. See License Files on page 9 for more information.

FLEXnet error 95

Possible cause	Explanation
You are browsing to a license file in a standalone configuration.	Your license type may not support this method. In the Find License dialog box, instead of choosing Specify the License File , choose Specify the License Server System . Type the server name. For example, type <i>@localhost</i> .

FLEXnet error 96

Possible cause	Explanation
Firewalls or network configurations are blocking communications between the client computer and the Minitab License Manager server.	The client computer must be able to communicate with the Minitab License Manager server over two ports: the Minitab License Manager (lmgrd) port and the minitab vendor daemon (minitab) port. You can use Network Utility to test communications. See the Minitab License Manager log file on page 17 to determine which port numbers are used. See Specifying ports on page 14 to manually configure ports.
The Minitab License Manager service is not running on the license server.	The Minitab License Manager service must be running to process license requests for Minitab Express.

FLEXnet error 97

Possible cause	Explanation
The MAC address in the license file does not match the MAC address of the Minitab License Manager server.	The MAC address in the license file must match the MAC address of an enabled network adapter on Minitab License Manager. See License Files on page 9 for more information.
The license expired.	The expiration date for your license is specified in the license file. Minitab Express is not usable after the expiration date. See License Files on page 9 for more information.
The network adaptor on the Minitab License Manager server is disabled.	The network adaptor card must be enabled for the Minitab License Manager server to verify the MAC address. Without this, Minitab Express cannot start. This issue is most commonly encountered with laptop computers that may change the status of a network card under various conditions.
The license file was modified.	You can make a few valid changes to the license file, such as specifying a port number. Most other changes will corrupt the license file, making it unusable to Minitab License Manager.
The date is incorrect on the computer that runs Minitab License Manager software.	Minitab Express installations are sensitive to the computer's date.
The Minitab License Manager service is not running on the license server.	The Minitab License Manager service must be running to provide license requests for Minitab Express.
Minitab License Manager is using a different communication port than expected.	Multiple FLEXlm license managers may be running on this server, which caused the Minitab License Manager to use a different port. See To specify a license manager port on page 14 to manually configure ports.

Minitab License Manager fails to start

The Minitab License Manager service may fail to start. You can use the Activity Monitor app to check if the daemons are running:

1. Run the Activity Monitor application (for example, type Activity Monitor into Spotlight).
2. Select **View > All Processes** to show all processes.
3. Click the **Process Name** header in the list to sort the results by process name.
4. Look for processes titled **Imgrd** and **minitab**. Both should be running. There may be multiple Imgrd processes running, depending on what other apps are on your system.

If the processes are not running, look in the Console log for any error messages that occurred during startup. You can also run the Restart License Manager command script in /Library/Application Support/Minitab/LicenseManager to attempt to restart the license manager processes. Also, view the Console log at this time to look for errors.

Possible cause	Explanation
The license file (minitab.lic) is not in the installation directory.	Minitab License Manager expects the license file to be in /Library/Application Support/Minitab/LicenseManager. If the license file is not in this location, re-install the Minitab License Manager. You will be prompted for your license file again.
The license file is not named correctly.	The license file must be named "minitab.lic" (unless this default value was modified later). Make sure that the file is not named minitab.lic.txt (a common mistake). Confirm that the file does not end with .txt.
Extra text is in the license file.	Some text editors may add unwanted content to your file. Also, make sure the file was not saved as a rich text document or that unnecessary UTF-8 characters were not added to the file.
Minitab License Manager server has non-ANSI characters in its name.	For best results, install Minitab License Manager to a computer with only ANSI characters in its name.

Web site errors

Access Denied

If you try to log in to the Minitab multi-user license management web pages and you are not an authorized user, the Access Denied error message may appear. For more information, see [Step 1: Designate authorized users of multi-user licensing web pages](#) on page 4.

Unable to Proceed: Entitlements Not Available

If you log in to the multi-user license management web pages to create license files and there are no valid orders for your organization, the message `Unable to Proceed: Entitlements Not Available` appears. Contact your Minitab Sales Representative.

Online resources

The following online resources are available:

- Troubleshooting solutions at <https://support.minitab.com/installation/>
- The latest downloads for Minitab multi-user products at <https://www.minitab.com/downloads/>
- The latest documentation for Minitab multi-user products at <https://www.minitab.com/support/documentation/>
- The FlexNet Publisher License Administration Guide at <https://www.minitab.com/uploadedFiles/Documents/license-management/FlexNetLicenseAdminGuide.pdf>

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