



# ChromLab Software User Management Edition

**User Guide**  
Version 6.1





# **ChromLab Software, User Management Edition**

## **User Guide**

**Version 6.1**



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# Chapter 1 Introduction

ChromLab Software, User Management Edition enables ChromLab users to manage access to their ChromLab projects.

When enabled, User Management Edition provides the necessary features to create user and group accounts and to set permission levels on NGC systems as well as ChromLab projects and subprojects and the data files within them.

In User Management Edition, the ChromLab administrator has the option to designate a central computer as the host of a shared ChromLab database. Other ChromLab computers and NGC systems that have access to the subnet on which the central computer resides can access the shared database. In this environment, data can be shared among the ChromLab computers and NGC systems.

## Finding Out More

After you install NGC Chromatography Systems and ChromLab Software documentation from the NGC Chromatography Systems Software USB drive, you can access installed NGC guides and tutorials on the Help menu in any ChromLab view.

More information about the NGC chromatography systems and ChromLab software is available from the following sources.

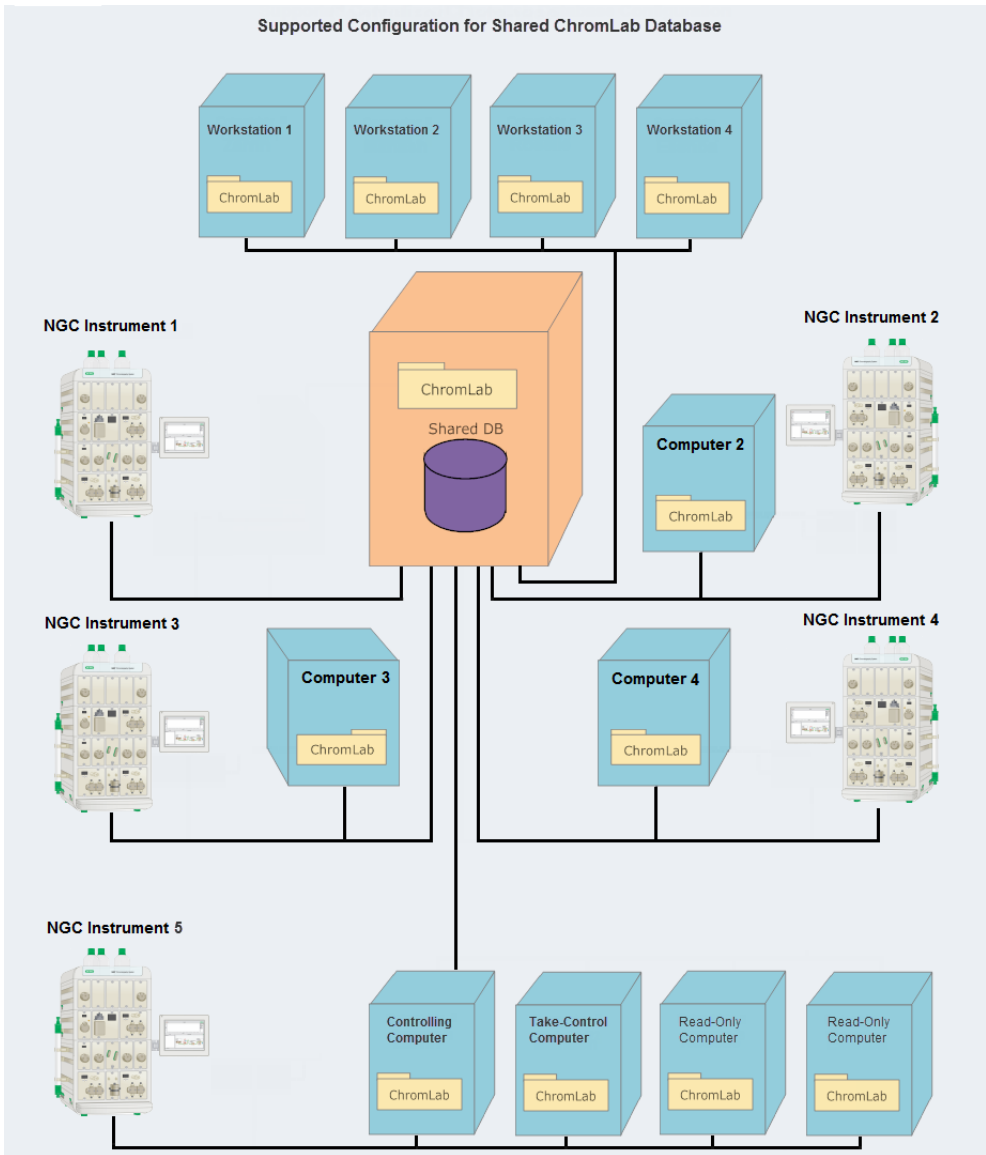
- The NGC Chromatography Systems and ChromLab Software Installation Guide is available on the NGC Chromatography Systems Software USB drive. This document explains how to set up your environment, set up and install the NGC instrument in the lab, and install ChromLab software and connect ChromLab to the NGC system.
- The NGC Chromatography Systems and ChromLab Software Instrument Guide is available on the NGC Chromatography Systems Software USB drive. This document details the modules that comprise the NGC instrument and includes information about priming, plumbing, troubleshooting, and maintaining the NGC system.
- The NGC Chromatography Systems and ChromLab Software User Guide is available on the NGC Chromatography Systems Software USB drive. This document explains how to use ChromLab software to control the NGC instrument, run protein separations and other operations manually, program methods to automate purification runs, evaluate the results, and print experiment reports.

**Note:** Click the Bio-Rad logo in the upper right corner of any ChromLab window to launch the Bio-Rad website.

## Chapter 2 Preparing to Share the ChromLab Database

You can install ChromLab software on a central computer on your local network and share data among multiple users, ChromLab computers, and NGC systems.

The following diagram illustrates supported shared ChromLab database configurations.



In the shared environment, one installation of ChromLab software is designated as the host of the shared database. The shared database can serve any of the following configurations.

- **Multiple ChromLab workstations**

A ChromLab workstation has ChromLab Software, User Management Edition installed but is not connected to an NGC system. From this computer you can create methods and save them to the shared database. You can also access, view, and edit ChromLab data files that are saved on the shared database.

- **One NGC system connected to the central ChromLab computer**

Data from the connected NGC system are saved to the shared database and are accessible to users with the appropriate permission level from any computer running ChromLab software.

- **Multiple ChromLab computers and NGC systems**

Computers running ChromLab software (known in this document as ChromLab computers) and the NGC systems can access and use the shared database. Each ChromLab computer can connect to any available NGC system on the network, operate it, and save data to the shared database. Data from the NGC systems are also saved to the shared database.

- **Multiple ChromLab computers connected to one NGC system**

Multiple ChromLab computers can simultaneously connect to the same NGC system. Take control access to the NGC system is granted at the user and group level. A user with Take Control access can log into any computer and take control of the system. This is useful in the event that the controlling computer is locked or the user performing a run is not available and there is an immediate need to stop the instrument. In this environment, only one ChromLab computer can control an NGC system at a time. All other NGC computers have View access to the system.

**Note:** View access applies only to users or groups connecting to an NGC system through a ChromLab computer. Any user can take control of the NGC system using the system's touch screen. The touch screen is never in View mode.

## Preparing Your Site

**Note:** You can upgrade ChromLab software standard or User Management Edition from version 3.x or higher to version 6.1. If you are running an earlier version of ChromLab software, you must first upgrade to one of these versions before you can upgrade to ChromLab 6.1.

Preparing your site to share a ChromLab database requires the following tasks:

1. Verify the site requirements for the central computer.  
See the next section, [Site Requirements](#).
2. Verify that the central computer meets the hardware and software requirements.  
See [System Requirements on page 13](#).
3. Install or upgrade ChromLab software on the central and remote computers.

For detailed instructions about installing or upgrading ChromLab software and connecting to the NGC system, see the NGC Chromatography Systems and ChromLab Software Installation Guide.

### Site Requirements

The room and power requirements for installing NGC systems and ChromLab software in a shared database environment are the same as those for local installations.

**Note:** Ensure that the network hosting the ChromLab computers and NGC systems supports Internet Protocol version 4 (IPv4).

For specific information, see the chapter Preparing the ChromLab Computer in the NGC Chromatography Systems and ChromLab Software Installation Guide.

## System Requirements

The system requirements for the central ChromLab computer or server are very similar to those for the local and remote installation of ChromLab with the differences bolded in this table.

**Table 1. Minimum system requirements for a shared ChromLab database**

Hardware and Software	Minimum Requirement
	One of the following: <ul style="list-style-type: none"> <li>■ Microsoft Windows 10 Pro (64-bit only)</li> <li>■ Microsoft Windows 10 Enterprise (64-bit only)</li> <li>■ <b>Operating system</b> Microsoft Windows Server 2012 R2</li> <li>■ Microsoft Windows Server 2016</li> </ul>
Processor	<b>Intel Pentium IV with EM64T support or equivalent,</b> 3.0 GHz minimum
RAM	<b>8 GB</b>
Hard disk space	<b>500 GB minimum</b> <b>Note:</b> ChromLab installs Microsoft SQL Server 2014 Express. This application requires 6 GB of disk space.
File system	<b>NTFS (New Technology File System)</b>
Optional peripherals (Required only if an NGC system is connected to the central computer.)	<b>USB 3.0 high speed ports (2 minimum)</b> Mouse Keyboard 2 gigabit Ethernet port (1 minimum)
<b>Important:</b> Do not install User Management Edition on a Windows Server computer that you plan to upgrade to, or that has, a newer version of Microsoft SQL Server installed.	





## Chapter 3 Preparing the Central Computer and NGC Systems

To ensure that the NGC systems can successfully connect to the central ChromLab computer, they all must have access to the subnet on which the central computer resides.

**Important:** If an NGC system is connected by an ethernet communication cable to a ChromLab computer that is not the central computer, disconnect the cable from the ChromLab computer and connect the NGC system to the network. See the NGC Chromatography Systems and ChromLab Software Installation Guide for information about connecting your NGC system to the network. Ensure the network can access the subnet on which the central computer resides.

Before setting up the shared database, determine which computer will host the shared database. Choose a clean computer (one that does not have an existing installation of ChromLab) to host the shared database.

### Notes:

- Bio-Rad strongly suggests that you host the shared database on a dedicated computer or server that is regularly backed up.
- Ensure that all remote computers and NGC systems have access to that computer.
- If installing on a Windows Server computer, ensure that it is dedicated to the ChromLab installation. ChromLab requires and installs Microsoft SQL Server 2014 and is not supported on any other version of this software.

## Preparing the Central Computer and NGC Systems

Preparing the central computer and the NGC systems requires the following tasks. This chapter explains these tasks in detail.

1. Install ChromLab software on the central computer and all remote computers and NGC systems.

See [NGC Chromatography Systems and ChromLab Software Installation Guide](#).

2. (Optional) Restore ChromLab data into the ChromLab database on the central computer.

See [Backing Up and Restoring ChromLab Data to the Central Computer on page 17](#).

3. Verify that all NGC systems and remote ChromLab computers can access the subnet on which the central ChromLab computer will reside.

See your system or network administrator for information about subnets and setup.

4. Assign a static IP address to the central ChromLab computer.

See your system administrator for information about assigning a static IP address to the central computer.

5. Verify or assign a unique system name to each NGC system.

See [Verifying Each NGC System Name Is Unique on page 22](#).

6. Verify or assign a static IP address to each NGC system.

See [Setting a Static IP Address on Each NGC System on page 20](#).

7. Verify that the central computer can access each NGC system.

See [Verifying that All NGC Systems Can Reach the Central Computer on page 23](#).

## Backing Up and Restoring ChromLab Data to the Central Computer

Bio-Rad recommends that you activate ChromLab Software, User Management Edition on a clean computer (one that does not have ChromLab installed). After you install ChromLab software on the clean computer and upgrade your existing ChromLab databases to version 6.1, use ChromLab Administration to back up your largest database and restore it onto the central computer. You can also use ChromLab Administration to set a reminder to back up the NGC database on a daily, weekly, or monthly basis.

**Important:** Restoring backup data overwrites existing ChromLab data. Perform this task only once, and carefully select the database to back up and restore.

### Backing Up ChromLab Data on the Remote Computer

Perform the backup procedure on the remote ChromLab computer.

#### To back up a ChromLab database

1. Verify that you have upgraded ChromLab to version 6.1.
2. On the remote computer, determine the size of the NGC database.
  - a. Navigate to C:\ProgramData\Bio-Rad\NGC\Database.
  - b. Right-click on the Database folder and select Properties.
  - c. On the General tab, note the Size value.

Ensure that the disk on which you plan to save the backup zip file has free disk space that is at least equal to the size of the NGC database.

3. On the Start menu, select ChromLab > ChromLab Administration and log into ChromLab Administration.
4. In ChromLab Administration, select the Backup and Restore tab.

5. In the Backup section, click Browse to browse to a location into which to save the NGC backup (.bak) file.

**Note:** Ensure that the central computer can access the target location.

6. Click Backup.

ChromLab displays a status bar of the backup progress. Depending on the size of your database, the backup can take some time.

7. When the backup completes, close ChromLab Administration.

### Setting a Backup Reminder on the Remote Computer

You can set a reminder to back up the central database. The reminder appears on the ChromLab computer at the time interval you set. From the ChromLab Administration Backup Reminder dialog box, you can open ChromLab Administration and perform the backup.

Alternatively, you can close the reminder dialog box and perform the backup at another time.

#### To set a reminder to back up the central database

1. Open ChromLab Administration and select the Backup and Restore tab.
2. In the Backup Reminder section, verify the Set Reminder checkbox is selected.
3. Use the up and down arrows to set the numeric interval for the reminder and select either Daily, Weekly, or Monthly from the dropdown list.
4. Click Apply.

#### To stop receiving reminders to back up the database

- ▶ In the Backup Reminder section, clear the Set Reminder checkbox and click Apply.

## Restoring ChromLab Data to the Central Computer

**Important:** Restoring backup data overwrites existing ChromLab data. Ensure the central computer does not have existing ChromLab data.

Perform this task on the central ChromLab computer. Ensure the computer has free disk space that is at least equal to the size of the backup file.

### To restore ChromLab data to the central ChromLab computer

1. Verify that you have installed ChromLab 6.1 on the central computer.
2. On the Start menu, select ChromLab > ChromLab Administration.
3. In the Restore section, click Browse to browse to the location where you saved the NGC backup (.bak) file.
4. Click Restore.

ChromLab displays a status bar of the restore progress. Depending on the size of your database, the restore can take some time.

5. When the restore completes, close ChromLab Administration.

## Setting a Static IP Address on Each NGC System

**Note:** Bio-Rad strongly recommends that you set a static IP address on each NGC system that connects to the central computer. Alternatively, you can record and use its system name to verify its connection to the central computer.

**Important:** The NGC system must restart to apply the IP address changes.

### To set a static IP address on the NGC system

1. On the instrument touch screen, select System Information on the dropdown menu.

The System Information dialog box appears.

2. In the General tab, click Configure beside System IP Address.

The Configure IP Address dialog box appears.

Configure IP Address

Obtain an IP address automatically

Use the following IP address:

IP Address: 10.2.52.233

Subnet Mask: 255.255.254.0

Default Gateway: 10.2.52.1

DNS Server: 10.42.18.140

Help OK Cancel

3. In the Configure IP Address dialog box, select Use the following IP address and provide the IP address, subnet mask, default gateway, and DNS server information specific to your site.

**Tip:** See your system or network administrator for the appropriate IP settings.

- IP address — the specific numeric address for the NGC system.
  - Subnet mask — the numeric filter used to define the subnet to which the IP address belongs.
  - Default gateway — (required only if you plan to install the shared ChromLab database on a separate subnet or access the NGC system from ChromLab computers that are on another subnet) this is the IP address of the node that allows communication between the subnets.
  - DNS Server — the IP address of the node that translates a server name to its IP address.
4. Click OK.

A message appears explaining that the NGC system must restart.

5. Click Yes to save the changes and restart the system.

The NGC system shuts down and restarts.

6. To verify that the IP address changed successfully, open the System Information dialog box from the dropdown menu and view System IP Address in the General tab.

## Verifying Each NGC System Name Is Unique

Each NGC system that connects to the central ChromLab computer must have a unique system name. Locate the NGC system's name and, if necessary, change the name so that it is unique.

### To locate the NGC system name

1. On the instrument touch screen, select System Information on the dropdown menu.

The System Information dialog box appears displaying the General tab.

2. Locate and record the system name and system IP address information in the General tab.
3. Close the System Information dialog box.

If two or more NGC systems have the same name, you must change one name so that each is unique.

### To change the NGC system name

1. On the instrument touch screen, select System Settings on the dropdown menu.

The System Settings dialog box appears.

2. Select the System Name tab.
3. On the System Name tab, type a new name for the system and click OK to save the change and close the System Settings dialog box.
4. To verify that the name changed successfully, open the System Information dialog box from the dropdown menu and view System Name in the General tab.



## Verifying that All NGC Systems Can Reach the Central Computer

### To verify that all NGC systems can reach the central computer

1. On the central ChromLab computer, open a command prompt window.
2. At the prompt, type

```
> ping <NGC_IP_address>
```

If the NGC system can reach the central computer, a response similar to the following appears:

```
Pinging <NGC_system_name>
```

```
Reply from <data from local IP Address> time<1ms
```

3. Perform [Step 2](#) for each NGC system and remote computer you plan to connect to the central computer.
4. Exit the command prompt window.

**Important:** If you experience a problem accessing an NGC system from the central computer, contact your system or network administrator and verify the network configuration, routing, firewall, and antivirus settings are correct. See [Appendix A, Troubleshooting Shared Database Connection Issues](#) for more information.



# Chapter 4 Activating User Management Edition on the Central Computer

When ChromLab is installed, by default it is set to run in standard mode (that is, only the local database is available). It continues to run in this mode until a user with ChromLab Administrator privileges activates ChromLab Software, User Management Edition.

The workflow for activating User Management Edition on the central computer consists of the following tasks. This chapter explains these tasks in detail.

1. Create an NGC database backup folder on the central computer.  
See [Creating an NGC Database Backup Folder on page 39](#).
2. Change the default admin password in ChromLab Administration.  
See [Changing the ChromLab Default Password on page 41](#).
3. Activate User Management Edition on the central computer.  
See [Activating User Management Edition on the Central Computer on page 29](#).
4. Create ChromLab users and groups on the central computer and assign access levels to NGC systems.  
See [Next Steps on page 33](#).

**Important:** In order to use ChromLab after User Management Edition has been activated on the remote computers, users must log in to the shared database. This requires each user to have a valid user name and password. You must create users after you activate User Management Edition on the central computer. For more information, see [Chapter 7, Managing ChromLab Users and Groups in User Management Edition](#).

## Creating an NGC Database Backup Folder

ChromLab automatically backs up the existing NGC database when you activate User Management Edition. If you have not previously backed up your NGC database, consider creating the database backup folder at this time.

**Note:** Even if you are installing ChromLab for the first time, the system backs up the empty NGC database. A new, empty NGC database requires approximately 75 MB of free disk space.

Perform this task on all computers on which you plan to activate User Management Edition.

### To create the NGC database backup folder

1. Determine the size of the NGC database.
  - a. Navigate to C:\ProgramData\Bio-Rad\NGC\Database.
  - b. Right-click the Database folder and select Properties.
  - c. On the General tab, note the Size value.

Ensure that the disk on which you plan to save the backup zip file (the target disk) has free disk space that is at least equal to the size of the NGC database.

2. On the backup computer, right-click the target folder and select New > Folder.
3. Rename the new folder, for example, NGC Database Backup.

## Changing the ChromLab Default Password

You activate User Management Edition through the ChromLab Administration tool. The first time you launch ChromLab Administration on each computer you must change the default admin password before continuing.

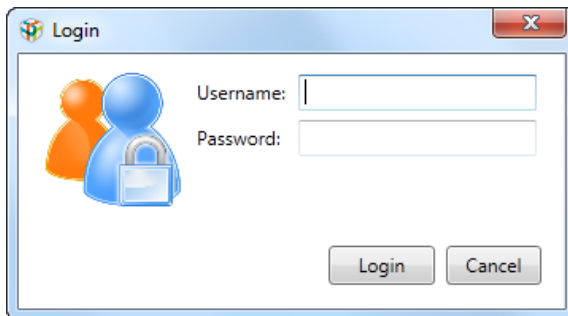
**Note:** You cannot activate User Management Edition while either ChromLab software or the NGC system is in use. Close ChromLab and shut down the system before launching ChromLab Administration.

**Important:** You will perform this task on each remote ChromLab computer as well as the central ChromLab computer. Ensure that the Administrator password for each ChromLab computer is unique. Keep the Administrator passwords for all ChromLab computers in a secure place.

### To change the default admin password

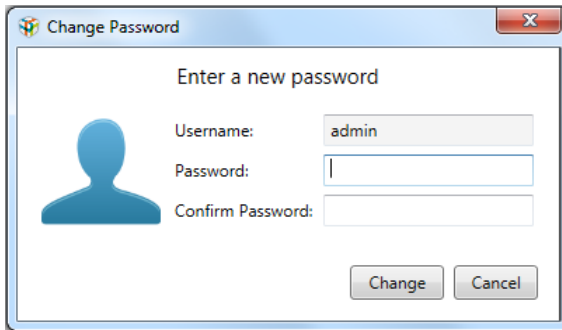
1. On the Start menu, select ChromLab > ChromLab Administration.

The Login dialog box appears.



2. Type the word admin for both the user name and password and click Login.

The Change Password dialog box appears.



3. Type a new password for the ChromLab administrator in the Password field, type it again in the Confirm Password field, and click Change.

## Activating User Management Edition on the Central Computer

**Note:** You cannot activate User Management Edition while either ChromLab or the NGC system are in use. Close ChromLab and shut down the system before launching ChromLab Administration.

Activating User Management Edition requires a license key. This key is located on the back of your User Management Edition installation package.

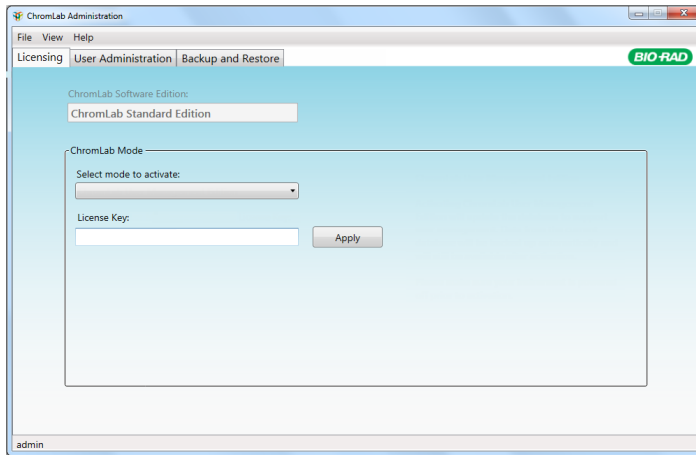
When you activate User Management Edition, the system prompts you to select a database location. This section explains how to activate User Management Edition on the central computer and designate its database as the shared database.

**Important:** ChromLab automatically backs up the current NGC database, creates an empty database, and then activates User Management Edition. Depending on the size of your current NGC database, this process can take some time.

### To activate User Management Edition on the central computer

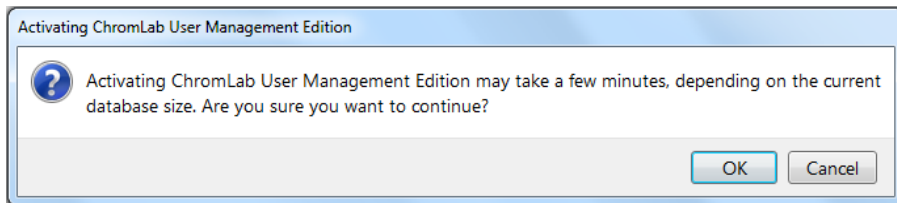
1. On the Start menu, select ChromLab > ChromLab Administration and log in as the ChromLab administrator.

ChromLab Administration opens, displaying the Licensing tab.



2. Select ChromLab User Management Edition from the Select mode to activate dropdown list.
3. In the License Key field, type the 18-character User Management Edition license key and click Apply.

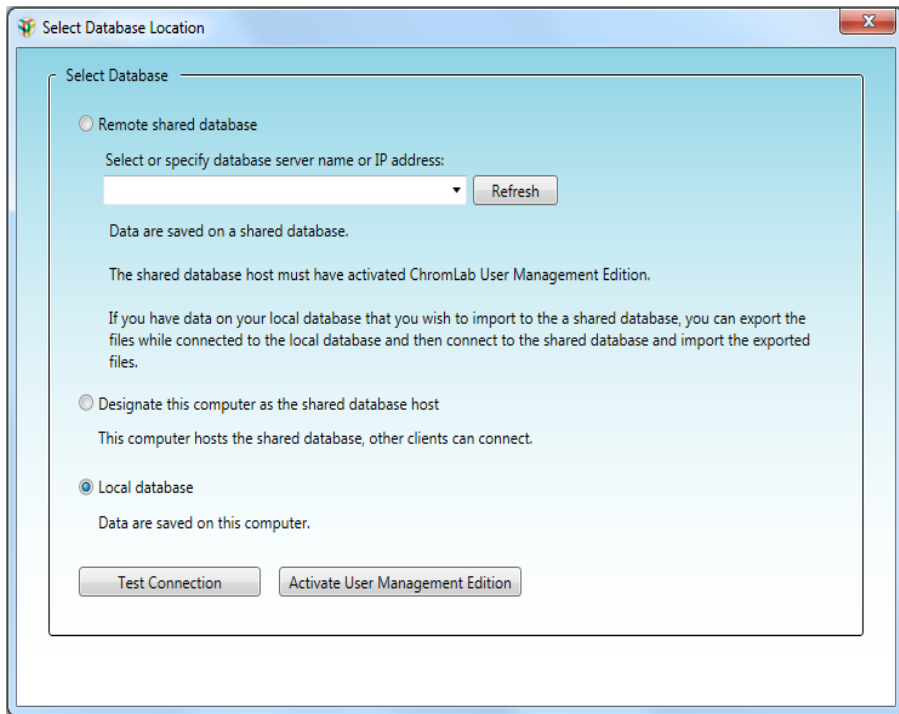
The Activating ChromLab User Management Edition dialog box appears.



4. Click OK. The Browse For Folder dialog appears.
5. In the Browse For Folder dialog box, select the NGC backup folder that you created and click OK to create and save the NGC backup (.ubk) file.



When the backup completes, the Select Database Location dialog box appears.



6. In the Select Database Location dialog box, select Designate this computer as the shared database host.
7. (Optional) Click Test Connection.
8. Click Activate User Management Edition to establish the shared database on this computer.

A message informs you that changing the database to sharing mode requires ChromLab to shut down. ChromLab connects to the shared database when you restart the application.

9. Click Yes to continue the connection process.

ChromLab Administration closes. The next time it is started, ChromLab connects to the shared database on this computer.

## Next Steps

After you activate User Management Edition on the central computer and before you connect the remote computers to the shared database, Bio-Rad recommends that you create users and groups and assign access levels to the NGC systems. Afterwards you can uninstall ChromLab software from the central computer.

### Creating Users and Groups

**Important:** In order to use ChromLab after User Management Edition has been activated on the remote computers, users must log in to the shared database. This requires each user to have a valid user name and password. If you have not yet done so, Bio-Rad suggests that you create users before activating User Management Edition on the remote computers.

For more information about creating and managing ChromLab user and group accounts, see [Chapter 7, Managing ChromLab Users and Groups in User Management Edition](#).

### Assigning Access Levels on NGC Systems

**Important:** Because this affects the user's ability to access NGC systems, perform this task on the central computer *after* you create user and group accounts and *before* you connect remote computers to it.

In User Management Edition, multiple ChromLab computers can simultaneously connect to the same NGC system. Access to the NGC system is granted at the user and group level.

User Management Edition provides three access levels to the NGC systems. Access levels determine the user's access rights to the NGC system.

For more information about assigning access levels to users and groups on NGC systems, see [Chapter 9, Connecting Multiple ChromLab Computers to One NGC System](#).

## Uninstalling ChromLab Software on the Central Computer

**Note:** This task is *optional*.

After you activate User Management Edition on the central computer, and have created users and groups and assigned access levels to them, you can uninstall ChromLab software from the central computer. Although uninstalling removes ChromLab software and ChromLab Administration from the computer, the ChromLab database remains and remote ChromLab computers and NGC systems can access it.

### Special Considerations

Uninstalling ChromLab from the central computer removes the Bio-Rad firewall settings and the backup and restore feature in ChromLab Administration. This section lists two important considerations to keep in mind if you choose to uninstall ChromLab software from the central computer.

#### Creating Inbound Firewall Rules for the ChromLab Database

You must create the following custom inbound firewall rules in order for the SQL Browser and SQL Server services to receive data from the network:

- Bio-Rad NGC SQLServer NG
- Bio-Rad NGC SQLServer Browser

**Important:** Contact your system or network administrator or Bio-Rad Technical Support for assistance. See [Manually Adding Inbound Firewall Rules on page 105](#) for more information.

## Backing Up and Restoring ChromLab Data

You will not be able to use ChromLab Administration to back up and restore the NGC database. You must use SQL Server Management Studio or a 3<sup>rd</sup> party tool to back up and restore the database. You require the password for the sa user to connect to the NGC instance and perform this task.

For more information, contact Bio-Rad Technical Support.

**Tip:** You can also reinstall the same version of ChromLab software on the central computer at any time to access ChromLab Administration and perform backup and restore functions.



# Chapter 5 Connecting Remote Computers to the Central Computer

When ChromLab is installed, by default it is set to run in standard mode (that is, only the local database is available). It continues to run in this mode until a user with ChromLab Administrator privileges activates ChromLab Software, User Management Edition.

The workflow for connecting remote ChromLab computers to the shared database consists of the following tasks. This chapter explains these tasks in detail.

1. Verify that ChromLab 6.1 is installed on each remote computer.
2. (Optional but recommended) Export existing 6.1 ChromLab data from all computers.
3. Verify date and location settings on the remote computers.

See [Locating the Date and Time Settings on ChromLab Computers on page 38](#).

4. Create an NGC database backup folder on all remote ChromLab computers.

See [Creating an NGC Database Backup Folder on page 39](#).

5. Change the local default admin password in ChromLab Administration.

See [Changing the ChromLab Default Password on page 41](#).

6. Activate User Management Edition on each remote computer.

See [Activating ChromLab Software User Management Edition on Remote Computers on page 43](#).

7. (Optional) Import existing data to the shared database.

**Important:** In order to use ChromLab after User Management Edition has been activated on the remote computers, users must log in to the shared database. This requires each user to have a valid user name and password. If you have not yet done so, Bio-Rad suggests that you create users at this time. For more information about creating and managing ChromLab user and group accounts, see [Chapter 7, Managing ChromLab Users and Groups in User Management Edition](#).

## Locating the Date and Time Settings on ChromLab Computers

In order for ChromLab to function correctly, the date and time settings on remote computers must be the same as those on the central computer.

Perform this task on the central ChromLab computer first. Verify that the settings on the remote computers are the same as those on the central computer.

### To locate the date and time settings

1. On the central ChromLab computer, open the Control Panel and select Date and Time.
2. In the Date and Time dialog box, note the current date, time, and time zone settings.
3. Close the Date and Time dialog box on the central computer.
4. On each remote computer, open the Date and Time dialog box.
5. Note the date, time, and time zone settings.
  - If the time zone is different from that on the central computer, click Change time zone and modify the settings as necessary.
  - If the date or time differ from those on the central computer, click Change date and time and modify the settings as necessary.
6. Close the Date and Time dialog box.



## Creating an NGC Database Backup Folder

ChromLab automatically backs up the existing NGC database when you activate User Management Edition. If you have not previously backed up your NGC database, consider creating the database backup folder at this time.

**Note:** Even if you are installing ChromLab for the first time, the system backs up the empty NGC database. A new, empty NGC database requires approximately 75 MB of free disk space.

Perform this task on all computers on which you plan to activate User Management Edition.

### To create the NGC database backup folder

1. Determine the size of the NGC database.
  - a. Navigate to C:\ProgramData\Bio-Rad\NGC\Database.
  - b. Right-click the Database folder and select Properties.
  - c. On the General tab, note the Size value.

Ensure that the disk on which you plan to save the backup zip file (the target disk) has free disk space that is at least equal to the size of the NGC database.

2. On the backup computer, right-click the target folder and select New > Folder.
3. Rename the new folder, for example, NGC Database Backup.

## Exporting Existing ChromLab Data

**Important:** ChromLab creates a backup of the database that resides on the local computer when you activate User Management Edition. Because restoring the backup data overwrites existing data, Bio-Rad strongly recommends that you *export* ChromLab data from the local ChromLab database that you want to use in the shared environment. Perform this procedure *after* you upgrade to ChromLab 6.1 and *before* you activate User Management Edition on remote computers. You can then import the data into the shared database after you set up the shared environment. This ensures you have access to all your necessary data files.

For more information about exporting and importing ChromLab data, see the NGC Chromatography Systems and ChromLab Software User Guide.

### To export ChromLab data

1. Start ChromLab.
2. Select File > Browse to open the Browse Data dialog box.
3. Choose Methods on the View by dropdown list.
4. Select the project that contains the target file in the Projects pane.
5. Right-click the file or files to export in the right pane and select Export <file\_type>.

The Browse for Folder dialog box appears.

6. Browse to a target folder or create a destination folder and click OK.

The Exporting NGC Files dialog box appears, showing the status of the export. When the export is complete, Completed appears in the Status column.

7. Click OK to close the dialog box.

## Changing the ChromLab Default Password

You activate User Management Edition through the ChromLab Administration tool. The first time you launch ChromLab Administration on each computer you must change the default admin password before continuing.

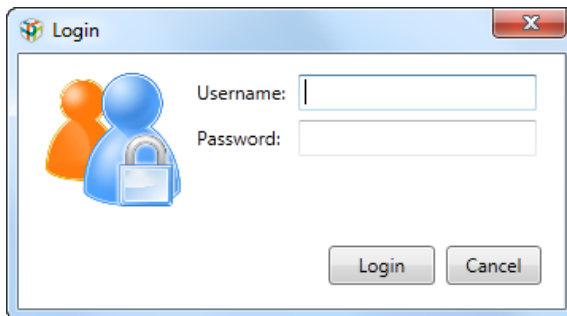
**Note:** You cannot activate User Management Edition while either ChromLab software or the NGC system is in use. Close ChromLab and shut down the system before launching ChromLab Administration.

**Important:** You will perform this task on each remote ChromLab computer as well as the central ChromLab computer. Ensure that the Administrator password for each ChromLab computer is unique. Keep the Administrator passwords for all ChromLab computers in a secure place.

### To change the default admin password

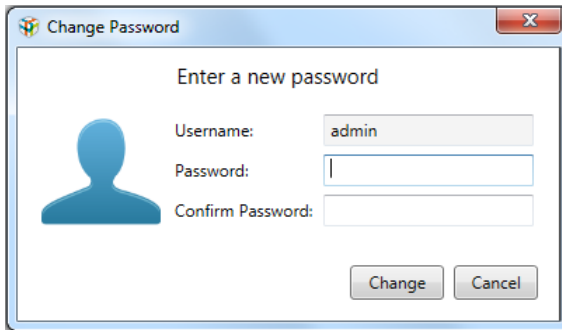
1. On the Start menu, select ChromLab > ChromLab Administration.

The Login dialog box appears.



2. Type the word admin for both the user name and password and click Login.

The Change Password dialog box appears.



3. Type a new password for the ChromLab administrator in the Password field, type it again in the Confirm Password field, and click Change.

## Activating ChromLab Software User Management Edition on Remote Computers

**Note:** You cannot activate User Management Edition while either ChromLab software or the NGC system are in use. Close ChromLab and shut down the NGC system before launching ChromLab Administration.

Perform this task on all remote computers that will access the shared database. This includes

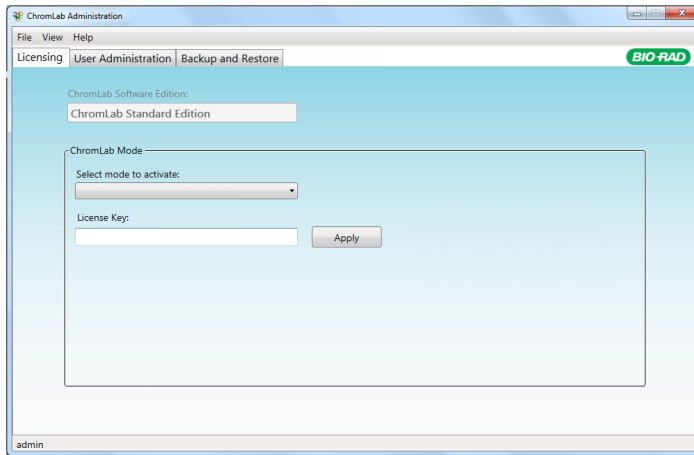
- ChromLab workstations
- ChromLab computers connected to NGC systems, including those in read-only mode

**Important:** ChromLab automatically backs up the current NGC database, creates an empty database, and then activates User Management Edition. Depending on the size of your current NGC database, this process can take some time.

### To activate User Management Edition on remote computers

1. On the Start menu, select ChromLab > ChromLab Administration and log in as the ChromLab administrator.

ChromLab Administration opens, displaying the Licensing tab.

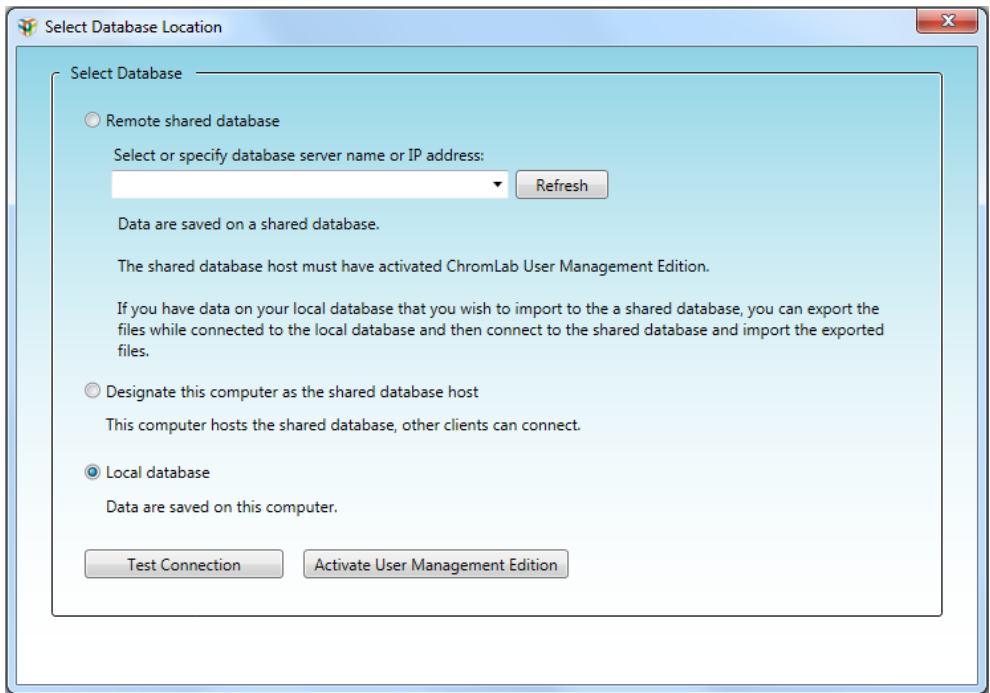


2. Select ChromLab User Management Edition from the Select mode to activate dropdown list.
3. In the License Key field, type the 18-character ChromLab User Management Edition license key and click Apply.

The Activating ChromLab User Management Edition dialog box appears.

4. Click OK. The Browse For Folder dialog appears.
5. In the Browse For Folder dialog box, select the NGC backup folder that you created and click OK to create and save the NGC backup (.ubk) file.

When the backup completes, the Select Database Location dialog box appears.



6. In the Select Database Location dialog box, select Remote shared database.  
**Tip:** Select Local database only if you want to save data to the local ChromLab database.
7. If it does not automatically appear, select the name or IP address of the central computer in the dropdown list. Alternatively, type the central computer's name or IP address in the dropdown list box.  
**Important:** You must use the same connection parameter for all remote computers that will access the shared database. That is, all remote computers should connect to the central computer using either its IP address or its computer

name. Bio-Rad *strongly* recommends that you connect to the central computer using a static IP address.

8. (Optional) Click Test Connection.
9. Click Activate User Management Edition to connect to the shared database.

A message informs you that changing the database to sharing mode requires ChromLab to shut down. ChromLab connects to the shared database when you restart the application.

10. Click Yes to continue the connection process.

ChromLab Administration closes. The next time it is started, ChromLab connects to the shared database on the central computer.

## Importing Existing ChromLab Data

To ensure that you can access your current data after you set up the shared database and connect to it from the remote computers, import the data from all remote computers into the shared database.

**Important:** Until the ChromLab administrator has created users on the central ChromLab computer, you will not be able to log in to ChromLab. Ensure that you have a valid user name and password before performing this task.

### To import ChromLab data

1. Start ChromLab and log in as a ChromLab user.
2. Select File > Import and choose NGC File.

The Import NGC File dialog box appears.

3. Click Select.

The Select Project dialog box appears.



4. In the Select Project dialog box, do one of the following:
  - Choose a destination project for the method or run and click Select Project.
  - Create a new project and click Select Project.
  - Right-click on an existing project and select New Project to create a subproject and then click Select Project.
5. In the Import NGC File dialog box, click Browse to display the Open dialog box.
6. Select the file or files to import and click Open.
7. (Optional) In the Name box, type another name for the file.

**Note:** This option is available only when you select a file to import.
8. (Optional) Select Open on Import to open in the Evaluation window upon import.

**Note:** This option is available only when you select a single file to import.
9. Click Import. During the import a status dialog box appears. When all files have successfully imported, the status displays Completed.
10. Click OK to close the dialog box.

The files are imported into the project you selected. Imported data files appear listed in the Open Run and Open Analysis dialog boxes available on the File menu in the Evaluation and Home windows.

For more information about exporting and importing ChromLab data, see the NGC Chromatography Systems and ChromLab Software User Guide.

## Rules for Sharing ChromLab Data

Once the remote computers are connected to the shared database, users can create and modify methods, run methods, and analyze runs. To ensure data integrity, ChromLab enforces the rules noted in [Table 2](#).

**Tip:** Remote users can log in to an NGC system while another user's run is in progress. However, only users with Take Control access can control an NGC system that is in use by another user. Users with View access must wait until the run completes before they can control the NGC system. As well, the run queue must be cleared of pending runs before users with View access can control the NGC system. For more information about controlling the NGC system, see [Chapter 9, Connecting Multiple ChromLab Computers to One NGC System](#).

**Table 2. Rules for sharing ChromLab data**

Action	Rule
<b>Methods</b>	
Add a method to a project that contains another method with the same name	Users are prompted to save the method with a unique name before saving it to the project.
Edit and save the same method at the same time (parallel editing)	Changes made by the first user are saved. The next user is prompted to do one: <ul style="list-style-type: none"> <li>■ Refresh the method then save</li> <li>■ Save the method with another name</li> <li>■ Cancel and discard the changes</li> </ul>
Edit and save the same method at different times (sequential editing)	Changes made by all users are saved.

**Table 2. Rules for sharing ChromLab data, continued**

Action	Rule
Edit a method that was recently deleted by another user	<p>The original method is deleted. The next user is prompted to do one:</p> <ul style="list-style-type: none"> <li>■ Save the method with another name</li> <li>■ Cancel and discard the changes</li> </ul>
Run the same method on different systems at the same time	The method is queued and run in parallel.
<b>Method Templates</b>	
Add a method template to the database if another template with the same name exists	Users are prompted to save the template with a unique name before saving.
Edit and save the same template at the same time (parallel editing)	<p>Changes made by the first user are saved. The next user is prompted to do one:</p> <ul style="list-style-type: none"> <li>■ Refresh the template then save</li> <li>■ Save the template with another name</li> <li>■ Cancel and discard the changes</li> </ul>
Edit and save the same template at different times (sequential editing)	Changes made by all users are saved.

**Table 2. Rules for sharing ChromLab data, continued**

Action	Rule
Edit a template that was recently deleted by another user	<p>The original template is deleted. The next user is prompted to do one:</p> <ul style="list-style-type: none"> <li>■ Save the method with another name</li> <li>■ Cancel and discard the changes</li> </ul>
<b>Runs</b>	
Save a run to the database if another run with the same name exists	Users are prompted to save the run with a unique name before saving it to the project.
Edit the same run at the same time (parallel editing)	Changes made by the first user are saved. The next user is informed the run was changed and the run is reloaded with the changes made.
Edit and save the same run at different times (sequential editing)	Changes made by all users are saved.
Edit a run that was recently deleted by another user	The run is deleted. The next user is informed the run was deleted and the window closes.
<b>Analyses</b>	
Save an analysis to the database if another analysis with the same name exists	Users are prompted to save the analysis with a unique name before saving it to the project.

**Table 2. Rules for sharing ChromLab data, continued**

Action	Rule
Edit and save the same analysis at the same time (parallel editing)	Changes made by the first user are saved. The next user is prompted to do one: <ul style="list-style-type: none"> <li>■ Save the analysis with another name</li> <li>■ Cancel and discard the changes</li> </ul>
Edit and save the same analysis at different times (sequential editing)	Changes made by all users are saved.
Delete an analysis if another user has it open	The original analysis is deleted. The next user is prompted to do one: <ul style="list-style-type: none"> <li>■ Save the analysis with another name</li> <li>■ Cancel and discard the changes</li> </ul>
<b>Fluidic Schemes</b>	
Delete a fluidic scheme that was used in a method run by another user	The user is informed that the fluidic scheme is in use and cannot be deleted.
Select or delete a fluidic scheme that was recently deleted by another user Create a new fluidic scheme based on a scheme that was recently deleted by another user	The original fluidic scheme is deleted. The next user is prompted to do one: <ul style="list-style-type: none"> <li>■ Save the fluidic scheme with another name</li> <li>■ Cancel and discard the changes</li> </ul>



# Chapter 6 The User Management Edition Workspace

ChromLab Software, User Management Edition is a licensed version of ChromLab software. When enabled, User Management Edition provides an intuitive interface enabling users to manage access to their ChromLab projects.

ChromLab software presents four primary workspaces.

- The Home window
- The System Control window
- The Method Editor window
- The Evaluation window

Each workspace and the NGC instrument touch screen are shown and described in detail in the NGC Chromatography Systems and ChromLab Software User Guide.

In User Management Edition, you use ChromLab Administration to

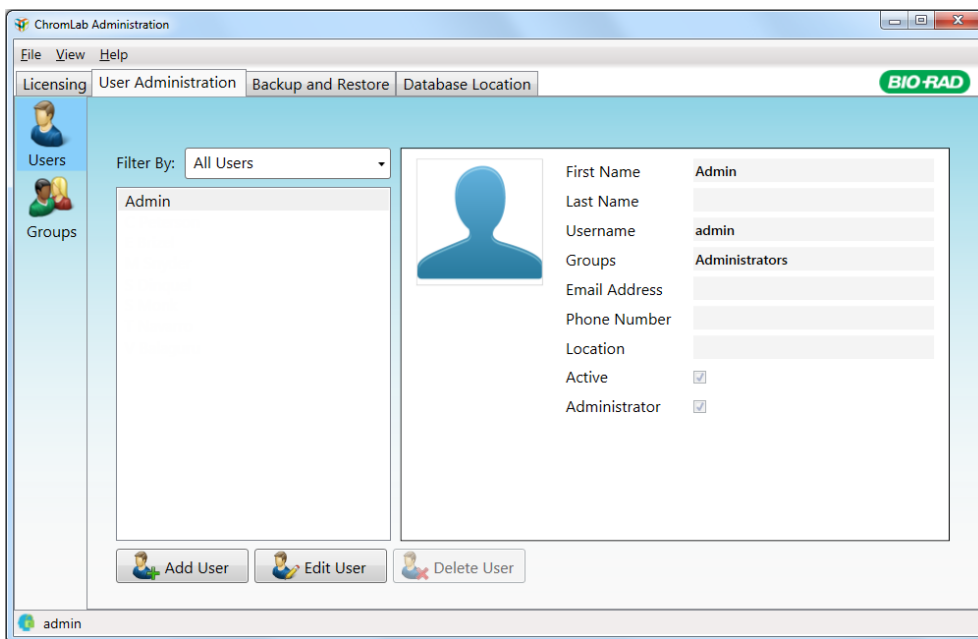
- Activate ChromLab User Management Edition
- Create and maintain user groups
- Create and maintain user accounts
- Change the ChromLab database location
- Back up and restore the ChromLab database

ChromLab Administration and the ChromLab Home window are shown and described in this chapter.

## ChromLab Administration

When ChromLab Administration is launched after User Management Edition is activated, it opens displaying the User Administration tab. The application also displays the Licensing, Backup and Restore, and Database Location tabs.

The Licensing, Database Location, and Backup and Restore tabs are available to users with the Administrator role. The User Administration tab is available to all users.



## Menu Commands

Each tab has the same menu commands. This section explains the menu commands for ChromLab Administration.



## File Menu Command

**Close** — closes ChromLab Administration.

## View Menu Commands

**Show Inactive Users** — displays currently active and deactivated User Management Edition users.

**Note:** This option is enabled only on the User Administration tab.

**Password Options** — displays the Password Options dialog box. See [Setting Password Options on page 64](#) for more information.

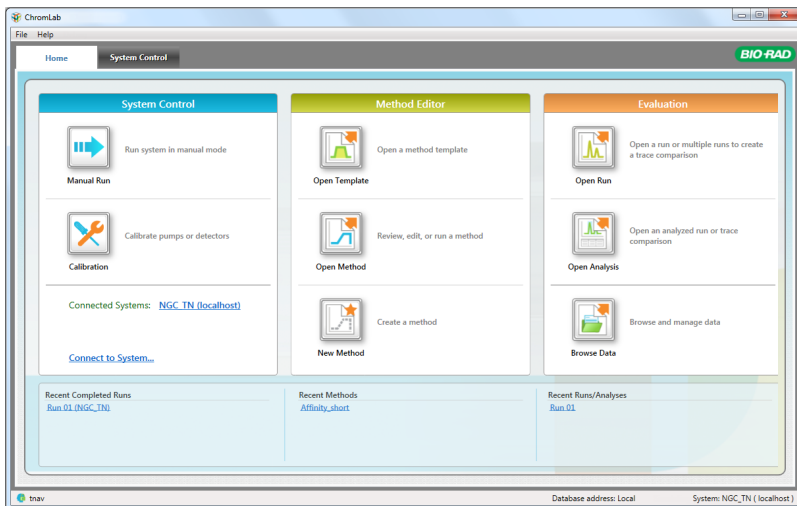
**Note:** This option is enabled only for users with the Administrator role.

## Help Menu Command

**About** — displays ChromLab Administration copyright and version information.

## The User Management Edition Home Window

ChromLab Software, User Management Edition opens with the Home window, which displays three panes and the System Control tab.



When User Management Edition is activated, a lock and the user name of the logged in user appear in the left corner of the status bar. The database location and NGC instrument name appear in the right corner. Links to files that the logged in user recently accessed appear listed at the bottom of the window.

# Chapter 7 Managing ChromLab Users and Groups in User Management Edition

To access the features in ChromLab Software, User Management Edition, each user must have a user account on the ChromLab computer. Each user can also be assigned to one or more ChromLab groups, although it is not necessary to create groups in order for users to access the features in User Management Edition.

**Important:** The user account *admin* is the default Administrator account, which you use to initially log in to ChromLab Administration. It is recommended that you create a specific user to administer User Management Edition. Assign this user the Administrator account and perform all administration tasks with this user. Do not use the *admin* user account to perform activities other than to log in and create this first user.

**Note:** If you have not yet done so, you must activate User Management Edition. See [Activating User Management Edition on the Central Computer on page 29](#) before continuing.

## Managing ChromLab Users

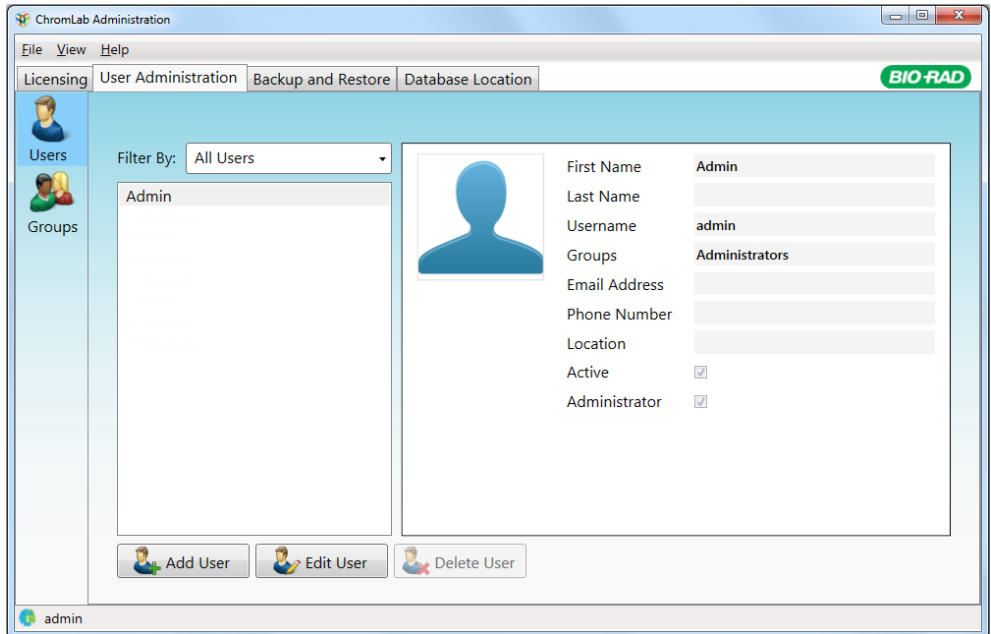
ChromLab user accounts can have any name or password. See [Setting Password Options on page 64](#) for information about setting password rules.

### Adding User Accounts

**Important:** Add users to the primary ChromLab database. In a shared database environment, add users after connecting to the shared database on the central computer. In a standard environment, add users after connecting to the local database.

## To add user accounts to ChromLab

1. On the Start menu, select ChromLab > ChromLab Administration and log in as a ChromLab administrator. ChromLab Administration opens, displaying the User Administration tab.



2. Click Add User. The Add User dialog box appears.

The screenshot shows the 'Add User' dialog box. It includes a 'Picture...' button, a 'First Name \*' field with 'User1', 'Last Name \*', 'Username \*', 'Password \*' (with 'Required' and 'Set Password...' buttons), 'Groups \*' (with 'Users' and 'Set Groups...' buttons), 'Email Address', 'Phone Number', 'Location', 'Active' (checked), and 'Administrator' (unchecked) checkboxes. 'OK' and 'Cancel' buttons are at the bottom. A note says 'Fields marked with \* are required'.

3. Enter identifying information about the user in the text boxes.

**Note:** Information provided in the first name, last name, and username boxes cannot include the following characters:

" / [ ] ; | = , + \* ? < >

- **First name** — required.
- **Last name** — required.
- **Username** — required. The username must be unique.
- **Password** — required. The initial password can be generic. Encourage users to change their passwords after they first log in. See [Setting Password Options on page 64](#) for more information.

- **Groups** — required. All active users are members of the default Users group. Click Set Groups to add the user to additional groups.

**Tip:** You can add the user to one or more groups at a later date. See [Editing a User Account on page 61](#) or [Adding Users to a Group on page 72](#) for more information.

- **Email address**
  - **Phone number**
  - **Location**
  - **Active** — by default, all user accounts are active when first created. Clear this checkbox to remove a user's access to ChromLab.
  - **Administrator** — by default, user accounts are not assigned the administrator role when first created. Select this checkbox to assign this role to the user.
4. Do one of the following:
    - Click OK. The user account is added to the ChromLab database.
    - Click Cancel to close the Add User dialog box without saving the user account to the ChromLab database.
  5. Create additional user accounts for each ChromLab user at your site.
  6. Close ChromLab Administration.

## Editing a User Account

### To edit a user account

1. On the Start menu, select ChromLab > ChromLab Administration and log in as a ChromLab administrator.
2. From the list of user accounts in the left pane in the User Administration dialog box, select the user account to modify.

3. Click Edit User.

The Edit User dialog box appears.

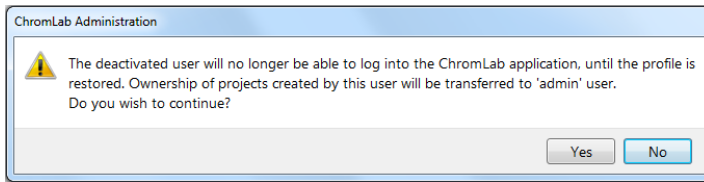
The screenshot shows the 'Edit User' dialog box with the following fields and values:

Field	Value
First Name *	T
Last Name *	Navarro
Username *	tnav
Password *	••••••••
Groups *	Users
Email Address	<my_email>@my_company.com
Phone Number	212-123-4567
Location	
Active	<input checked="" type="checkbox"/>
Administrator	<input type="checkbox"/>

4. Do one of the following:
  - Make the required changes to the account and click OK.
  - Click Cancel to close the Edit User dialog box without saving the changes.

**Note:** If you clear the Active checkbox to deactivate a current user account, the following message appears:





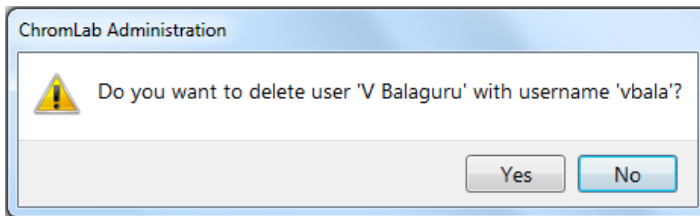
5. Click Yes to continue or No to cancel the action and close the dialog box.
6. Close ChromLab Administration.

## Deleting a User Account

**Note:** You can delete only user accounts for which no data files are stored in the User Management Edition database. That is, you cannot delete user accounts that created or modified methods, runs, or analyses. However, you can deactivate these accounts. See [Editing a User Account on page 61](#) for more information.

### To delete a user account

1. On the Start menu, select ChromLab > ChromLab Administration and log in as a ChromLab administrator.
2. From the list of user accounts in the User Administration dialog box, select the user account to delete.
3. Click Delete User. A message similar to the following appears.



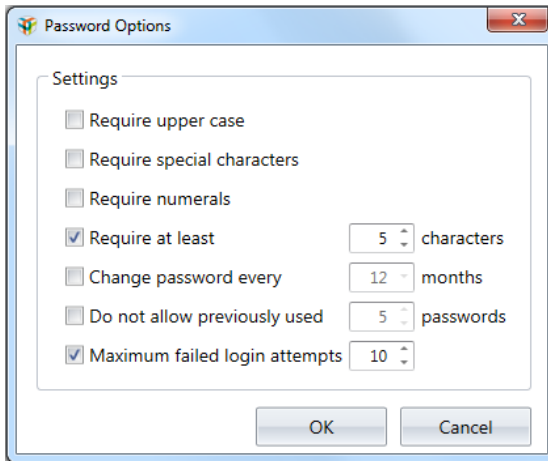
4. Click Yes to continue or No to cancel the action.
5. Close ChromLab Administration.

## Setting Password Options

In User Management Edition, ChromLab administrators can set password options.

### To set password options

1. On the Start menu, select ChromLab > ChromLab Administration and log in as a ChromLab administrator.
2. Select View > Password Options. The Password Options dialog box appears.



3. Select the checkbox to enable the password option.
  - **Require upper case** — the password requires at least one upper case letter.
  - **Require special characters** — the password requires at least one of the following characters:

!	[
@	]
%	\
&	?
*	/
(	:
)	;
{	_ (underscore)
}	- (hyphen)
.	(dot)

- **Require numerals** — the password requires at least one numeral (0–9).
  - **Require at least # characters** — the password requires at least the specified number of characters.
- The default is five characters. You can increase or decrease the value.
- **Change password every # months** — the password must be changed at least once every specified number of months.
  - **Do not allow previously used # passwords** — ChromLab stores the specified number of passwords for the user account and prohibits their reuse.
  - **Maximum failed login attempts** — the user can try the specified number of times to log in to the account with this password.

The default is ten attempts. You can increase or decrease the value.

**Note:** If the user fails to successfully log in within the specified number of attempts, the account is locked. A message informs the user to contact the ChromLab administrator to reset the password.

4. Select or clear the option checkboxes as appropriate.

The system enforces the selected password options.

5. Click OK to save the password settings and close the dialog box.

## Managing ChromLab Groups

ChromLab Administration includes two default groups: Administrators and Users. ChromLab Administration adds the default user *admin* to the Administrators group. You cannot remove this user from the Administrators group, and this user cannot be added to any other group. However, you can add or remove other user accounts to the Administrators group as necessary. All users added to this group are automatically assigned the Administrator account. Only users assigned the Administrator account can create, edit, and delete ChromLab users and groups.

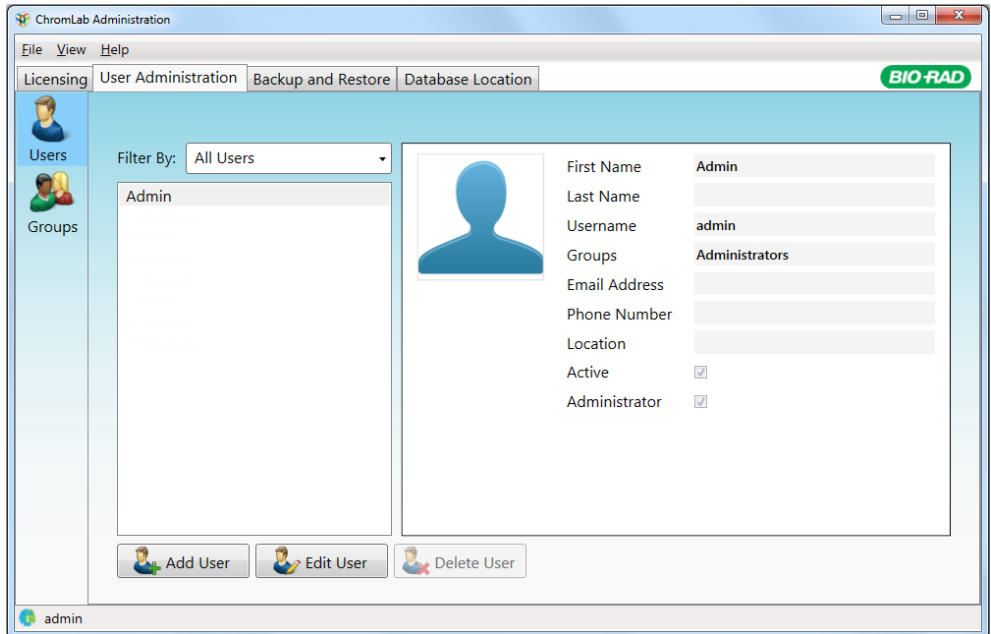
By default, ChromLab Administration adds all created user accounts to the general Users group. Users can be members of multiple groups, including the Administrators group.

### Adding a Group

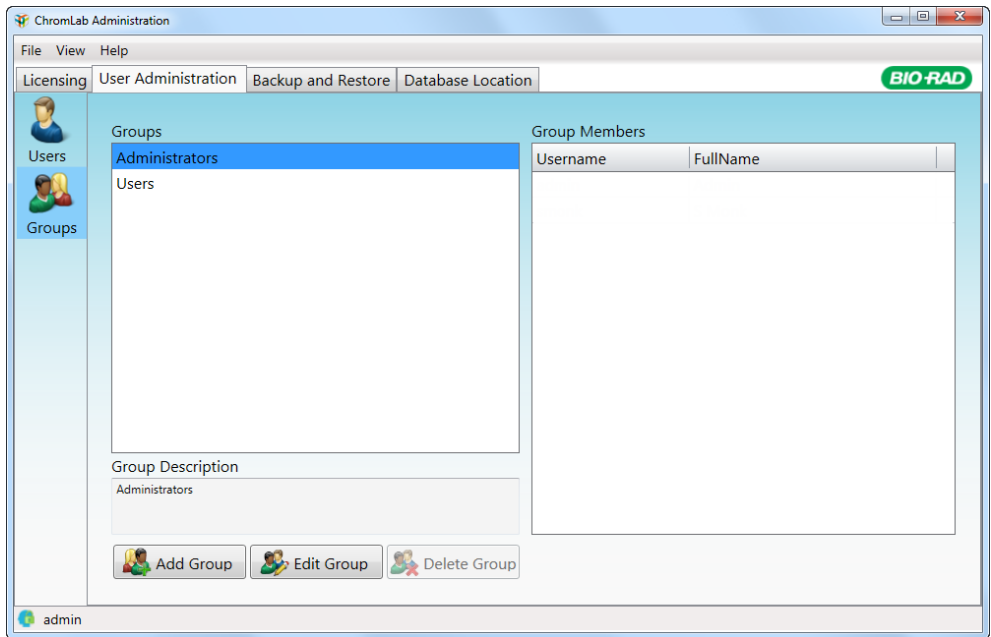
**Important:** Add user groups to the primary ChromLab database. In a shared database environment, add groups after connecting to the shared database on the central computer. In a standard environment, add groups after connecting to the local database.

## To add a group to ChromLab

1. On the Start menu, select ChromLab > ChromLab Administration and log in as a ChromLab administrator. ChromLab Administration opens, displaying the Users dialog box in the User Administration tab.

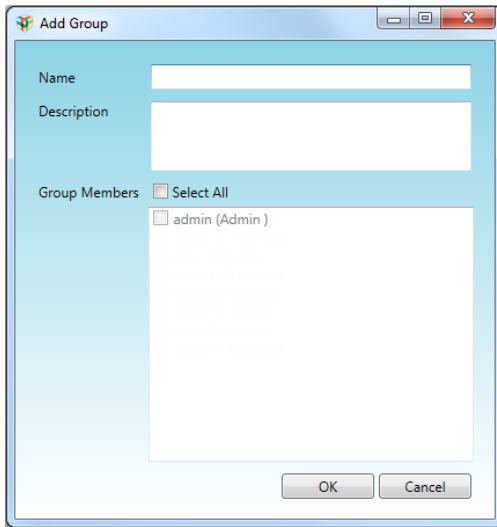


2. Click Groups in the left pane to display the Groups list box.



The two default groups, Administrators and Users, appear in the Groups pane.

3. Click Add Group. The Add Group dialog box appears.



4. Type a name for the group and an optional description.

**Tip:** The Name field is limited to 50 characters. The Description field has no character limit. You can enter any special character, numerals, and line breaks in this field.

5. If you previously added users to ChromLab, their user names appear in the Group Members box.

Select the users you want to add to the group, or click Select All to add all users to the group.

6. Do one of the following:

- Click OK. The group is added to the ChromLab database.
- Click Cancel to close the Add Group dialog box without saving the group to the ChromLab database.

7. Close ChromLab Administration.

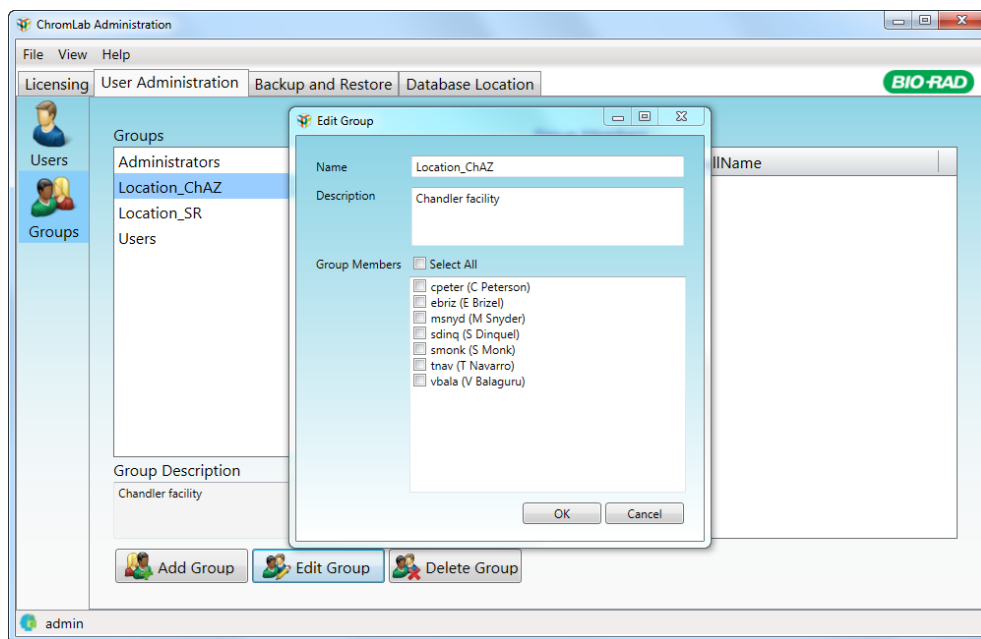
## Editing a Group

You can change a group's name or its description. You can also add members to or remove members from the group if you have already created users.

### To edit a group

1. On the Start menu, select ChromLab > ChromLab Administration and log in as a ChromLab administrator.
2. In the User Administration tab, click Groups to display the available groups.
3. From the list of groups, select the target group and click Edit Group.

The Edit Group dialog box appears.



4. (Optional) Change the name or description of the group.



5. In the Group Members section, do any of the following:
  - Select users to add to the group.
  - Clear the users to remove from the group.
  - Click Select All to add all users to or remove all users from the group.
6. Do one of the following:
  - Click OK to save the changes and close the Edit Group dialog box.
  - Click Cancel to close the Edit Group dialog box without saving the changes.
7. Close ChromLab Administration.

## Adding Users to a Group

This section assumes that you have created user accounts and plan to add multiple users to a group. If you are creating new user accounts, you can add the user to an existing group at that time. See [Adding User Accounts on page 58](#) for more information.

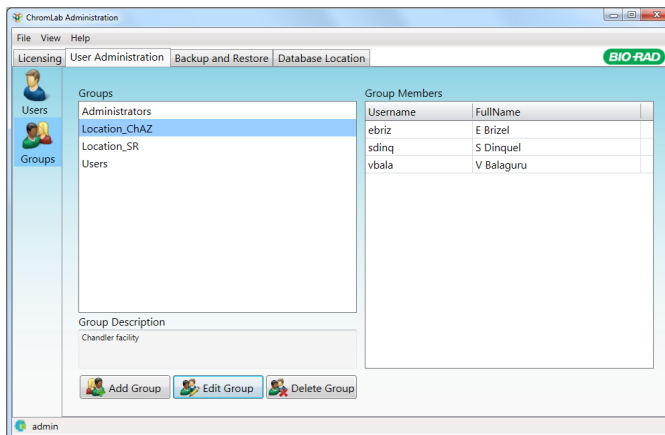
You can also modify an existing user account and add it to a group. See [Editing a User Account on page 61](#) for more information.

### To add users to a group

1. On the Start menu, select ChromLab > ChromLab Administration and log in as a ChromLab administrator.
2. In the User Administration tab, click Groups to display the available groups.
3. From the list of groups, select the target group and click Edit Group. The Edit Group selection box appears.
4. In the Group Members section, select the users to add to the group.

Alternatively, click Select All to select all available users and add them to the group.

5. Click OK. The user names appear in the Group Members list for the target group.



6. Close ChromLab Administration.

## Removing Users from a Group

### To remove users from a group

1. On the Start menu, select ChromLab > ChromLab Administration and log in as a ChromLab administrator.
2. In the User Administration tab, click Groups to display the available groups.
3. From the list of groups, select the target group and click Edit Group. The Edit Group dialog box appears.
4. In the Group Members section, clear the checkboxes of the users to remove from the group.

Alternatively, clear Select All to remove all users from the group.

5. Click OK and close ChromLab Administration.

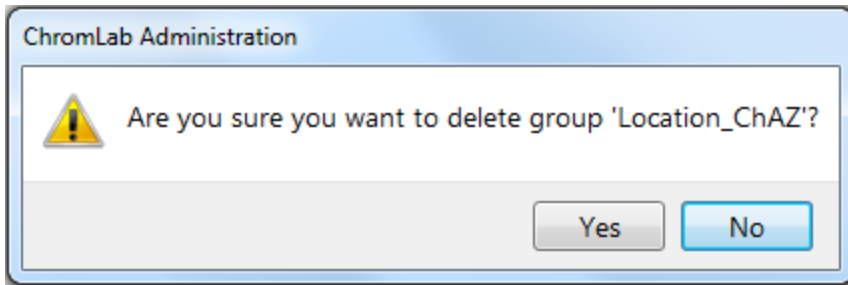
## Deleting a Group

**Note:** Deleting a group removes it from the list of available groups. Deleting a group does not delete the user accounts from the ChromLab database.

### To delete a group

1. On the Start menu, select ChromLab > ChromLab Administration and log in as a ChromLab administrator.
2. In the User Administration tab, click Groups to display the available groups.
3. Select the target group and click Delete Group.

A message similar to the following appears.



4. Click Yes to continue or No to cancel the action.
5. Close ChromLab Administration.

## Starting ChromLab Software User Management Edition

To start ChromLab Software, User Management Edition, each user must log in with a valid username and password.

### **To start User Management Edition**

1. Click the ChromLab icon to start the application.
2. In the Login dialog box, enter your username and password.
3. Click Login.



# Chapter 8 Users, Groups, and Permission Levels

ChromLab Software, User Management Edition has three permission levels:

- Read — identified in the Browse Data dialog box by small eyeglasses beside the project
- Read/Write — identified by a small pencil beside the project
- Full Control — identified by a small person beside the project

Permission levels determine the user's access rights to the objects within the project (that is, the methods, runs, and analyses).

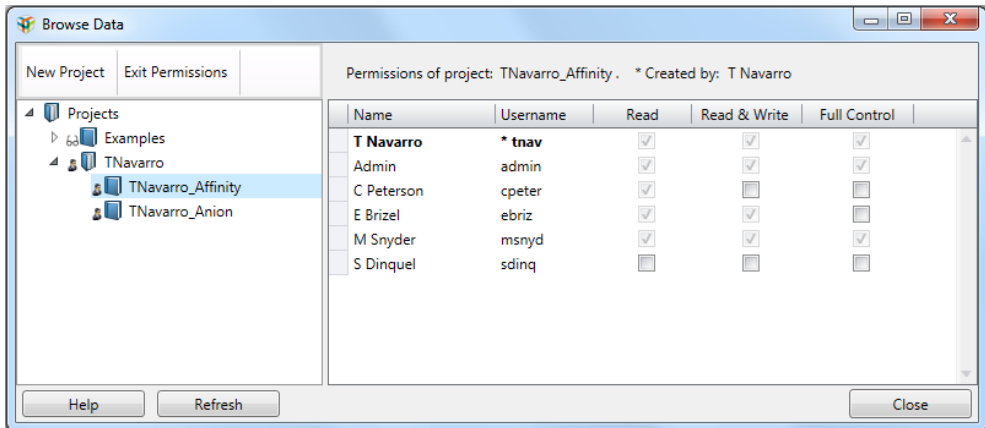
While the ChromLab administrator creates and manages the users and groups, the project owner (the user who creates the project) grants permissions on projects. Users and groups are granted one permission level per project. However, the users and groups can have different permission levels on each project to which they have access. For example, a user can be assigned Read access on Project A, Read/Write access on Project B, and Full Control access on Project C.

Permission levels can also be applied to subprojects. By default, a user's permission on a subproject is inherited from the permission set on the parent project. If the user belongs to a group, the user's permission level is inherited from the group. If the user belongs to multiple groups, all of which have different permission levels on the project, the user inherits the highest level permission.

For example, user EBrizel belongs to the groups Users, Location\_ChAZ, and Location\_SR. The group Users has Read permission on project TNavarro, the group Location\_ChAZ has

Read/Write permission, and the group Location\_SR has Full Control. As a member of all groups, user EBrizel has Full Control on TNavarro and its subprojects.

The owner of the project TNavarro can limit user EBrizel's permission level on the parent or any subproject as necessary.





## Permission Levels

[Table 3 on page 80](#) lists the ChromLab User Management Edition permission levels and the related access rights per object.

**Table 3. Permission levels and access rights**

Permission Level	Methods	Runs	Analyses
<b>Read</b>	<p><b>Users with read permissions can</b></p> <ul style="list-style-type: none"> <li>■ Open and view methods</li> <li>■ Edit and save the method with a new name into a project on which the user has Read/Write or Full Control permissions</li> <li>■ Run methods</li> <li>■ Export methods</li> </ul> <p><b>Users with read permissions cannot</b></p> <ul style="list-style-type: none"> <li>■ Save methods</li> <li>■ Import methods</li> <li>■ Move methods to another project</li> <li>■ Rename methods</li> <li>■ Delete methods</li> </ul>	<p><b>Users with read permissions can</b></p> <ul style="list-style-type: none"> <li>■ Open and view runs</li> <li>■ View and change attributes (for example, trace colors and scales)</li> <li>■ Export runs</li> </ul> <p><b>Users with read permissions cannot</b></p> <ul style="list-style-type: none"> <li>■ Import runs</li> <li>■ Edit runs</li> <li>■ Analyze runs</li> <li>■ Open two or more runs for trace comparison</li> <li>■ Add or delete attachments from runs</li> <li>■ Move runs to another project</li> <li>■ Rename runs</li> <li>■ Delete runs</li> </ul>	<p><b>Users with read permissions can</b></p> <ul style="list-style-type: none"> <li>■ Create analyses and trace comparisons</li> <li>■ Open and view existing analyses</li> <li>■ View and change attributes (for example, trace colors and scales)</li> </ul> <p><b>Users with read permissions cannot</b></p> <ul style="list-style-type: none"> <li>■ Edit existing analyses</li> <li>■ Copy analyses</li> <li>■ Rename analyses</li> <li>■ Delete analyses</li> </ul>

Table 3. Permission levels and access rights, continued

Permission Level	Methods	Runs	Analyses
<b>Read/Write</b>	<p>In addition to Read permissions, <b>users with read/write permissions can</b></p> <ul style="list-style-type: none"> <li>■ Edit methods and save them to the same project</li> <li>■ Rename methods</li> <li>■ Import methods</li> </ul> <p><b>Users with read/write permissions cannot</b></p> <ul style="list-style-type: none"> <li>■ Move methods to another project</li> <li>■ Delete methods</li> </ul>	<p>In addition to Read permissions, <b>users with read/write permissions can</b></p> <ul style="list-style-type: none"> <li>■ Edit runs</li> <li>■ Analyze runs</li> <li>■ Rename runs</li> <li>■ Import runs</li> </ul> <p><b>Users with read/write permissions cannot</b></p> <ul style="list-style-type: none"> <li>■ Move runs to another project</li> <li>■ Delete runs</li> </ul>	<p>In addition to Read permissions, <b>users with read/write permissions can</b></p> <ul style="list-style-type: none"> <li>■ Edit analyses</li> <li>■ Copy analyses</li> <li>■ Rename analyses</li> </ul> <p><b>Users with read/write permissions cannot</b></p> <ul style="list-style-type: none"> <li>■ Delete analyses</li> </ul>
<b>Full Control</b>	<p>In addition to Read/Write permissions, <b>users with full control can</b></p> <ul style="list-style-type: none"> <li>■ Move methods into any project that the user owns or has Read/Write permissions on</li> <li>■ Delete methods</li> </ul>	<p>In addition to Read/Write permissions, <b>users with full control can</b></p> <ul style="list-style-type: none"> <li>■ Move runs into any project that the user owns or has Read/Write permissions on</li> <li>■ Delete runs</li> </ul>	<p>In addition to Read/Write permissions, <b>users with full control can</b></p> <ul style="list-style-type: none"> <li>■ Delete analyses</li> </ul>

## Rules for Managing User Accounts

**Important:** By default, ChromLab administrators have Full Control privileges on all projects and subprojects.

- All users always have Read access to the default Examples project. You can increase the permission level on the Examples project to Read/Write or Full Control. However, you cannot remove access to the project. To limit access to specific files, move the files from the Examples project into another project and assign specific permissions on that project.
- Users granted Read access to a project can run methods and save the runs into the project. This enables technicians to review a method and run it without also having Write access to the project.
- The user *admin* is the sole owner of data files that are imported before the ChromLab administrator creates user accounts. This is the only user who can view the imported data. After user accounts are created, *admin* can grant appropriate access levels on existing projects to users who can then view and access data.

By default, the creator of imported data is always *admin*.

- After the ChromLab administrator creates user accounts, any user who imports data files owns that data and has full control. That user can grant appropriate access levels to other users who can then view and access data.

## Instrument Limitations for Read-Only Users

**Important:** The following only apply to users with Read access. Users with Read/Write and Full Control access have full access to the features on the NGC instrument.

- Read-only users cannot manually change the settings while a run is in progress.
- Read-only users cannot perform manual operations using the fraction collector and outlet valve dialog boxes.
- Read-only users cannot clear run fractions or racks using the Fraction Collector Viewer.
- Read-only users cannot configure trays using the Fraction Collector Viewer.

## Assigning Permission Levels on ChromLab Projects

**Important:** If you upgraded from ChromLab Software 3.1–5.x standard edition to ChromLab Software 6.1, User Management Edition, you must grant users access to existing projects. Ensure that you assign the appropriate permission level to each user.

**Note:** Only ChromLab administrators or users who have Full Control permission on a project can assign and change permission levels or remove user access to the project.

You can assign permission levels to groups or to individual users. Users inherit the group's permission on projects, however you can increase or decrease a user's permission on specific projects. You can also assign permission levels to a subproject or the parent project. Users and groups inherit the permission of the parent project, however you can increase or decrease the permission level as necessary.

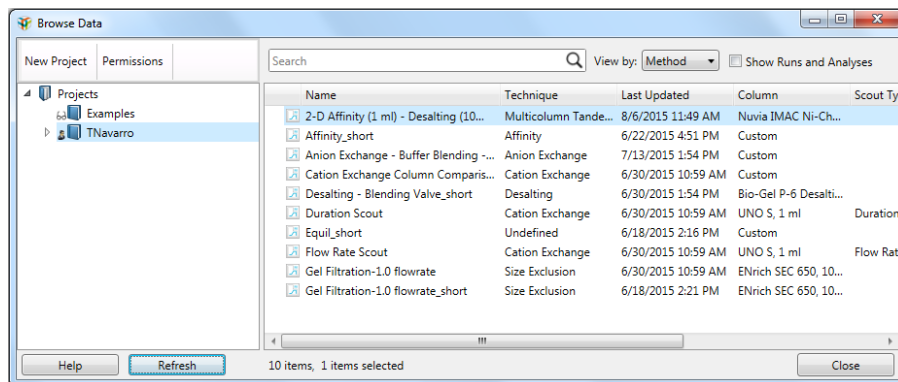
### To assign permission levels on ChromLab projects

1. Start ChromLab Software, User Management Edition as an active user.
2. If you have not already done so, create projects and subprojects to contain ChromLab methods, runs, and analyses.

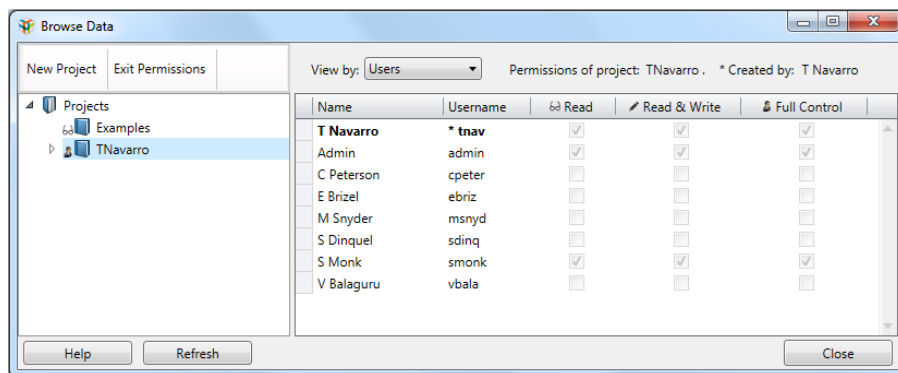
**Tip:** See the chapter Managing ChromLab Data in the NGC Chromatography and ChromLab Software User Guide for information about creating and managing ChromLab projects.

3. Select File > Browse Data to open the Browse Data dialog box.

Projects that you can access appear in the left pane.

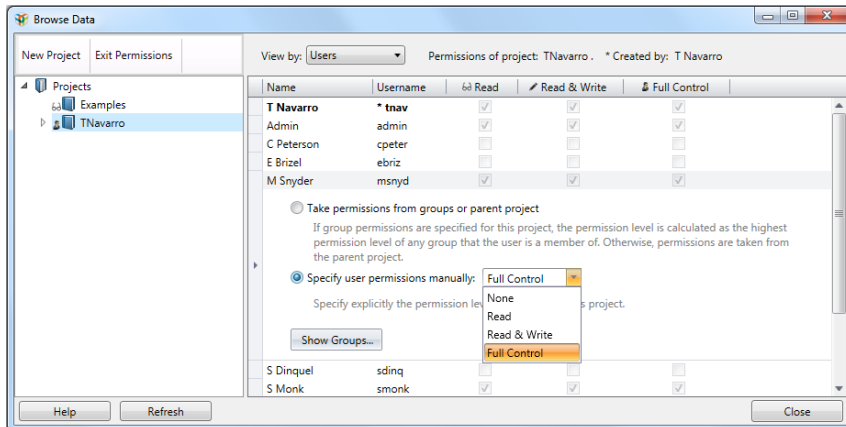


4. In the left pane, select the Permissions tab. ChromLab lists the active users in the right pane.



**Note:** ChromLab administrators account have Full Control access to the project. You cannot remove this permission from ChromLab administrators.

5. (Optional) In the left pane, expand the projects list to display subprojects.
6. Do one of the following:
  - To assign access permissions to groups, select Groups in the View by dropdown list.
  - To assign access permissions to users, select Users in the View by dropdown list.
7. Select the user or group you want to assign access to the project.
8. By default, ChromLab assigns permission levels from either the group or parent project. To assign a specific permission level to the user or group, select Specify permissions manually and select the permission level from the dropdown list.



**Tip:** Permission levels are inclusive. If you select Read & Write permission, ChromLab automatically selects the Read checkbox. Similarly, selecting Full Control automatically selects the Read and Read & Write checkboxes.

9. Do one of the following:

- To view the data files in the project, click Exit Permissions in the left pane.
- To close the Browse Data dialog box, click Close.

The permissions are saved to the User Management Edition database.



## Chapter 9 Connecting Multiple ChromLab Computers to One NGC System

With ChromLab software, multiple ChromLab computers can simultaneously connect to the same NGC system.

In ChromLab Software, User Management Edition access to the NGC system is granted at the user and group level. User Management Edition provides three access levels to the NGC systems. Access levels determine the user's access rights to the NGC system.

- View — the user can view activity on the NGC system but cannot start runs or make manual changes
- Control — the user can run and manually modify methods on the NGC system
- Take Control — the user can take control of the NGC system and override another user's control of an instrument

This is useful in the event that the controlling computer is locked or the user performing the run is not available and there is an immediate need to stop the instrument.

After creating users and groups, the ChromLab administrator can grant them access to the NGC systems. Users and groups can have different access levels on each instrument. If the user belongs to a group, the user's access level is inherited from the group. If the user belongs to multiple groups, all of which have different permission levels on an instrument, the user inherits the highest access level.

For example, user EBrizel belongs to the groups Location\_ChAZ and Location\_SR. The group Location\_ChAZ has View access to NGC 1, and the group Location\_SR has Take Control to NGC\_1. Conversely, group Location\_ChAZ has Take Control on NGC\_3 while

Location\_SR has View access. As a member of both groups, user EBrizel has Take Control access on both instruments.

The ChromLab administrator can limit user EBrizel's access level to either instrument as necessary.

## Rules for Managing Access to NGC Systems

**Important:** View mode applies only to users or groups connecting to an NGC system through a ChromLab computer. The NGC system's touch screen is never in View mode. All relevant features are available from the touch screen.

- ChromLab administrators have Take Control access to all NGC systems. You cannot change this access level for these users.
- The first user connecting to an NGC system from a ChromLab computer has full control of the instrument. The first user's computer retains control until a user with Take Control access overrides the instrument.
- In a shared database environment a user can take control any time except during system calibration or a Point-to-Plumb operation. Unsaved data from manual runs or current runs are saved to the shared database.
- In a standard environment (one in which each ChromLab computer saves data to its own database), a user cannot take control if any of the following conditions are true:
  - The NGC system has a run in progress
  - The system has queued runs pending
  - The system has unsaved manual data
  - A user is logged into the NGC system

## Accessing ChromLab Features in View and Take-Control Modes

The access level of the user (View access or Take-Control access) determines which features on the NGC system are available.

**Important:** View mode applies only to users connecting to the NGC system through a ChromLab computer. The NGC system's touch screen is never in View mode. All relevant features are available from the touch screen.

The following table lists the features and their availability depending on the user's access level.

**Table 4. Accessing ChromLab features in View and Take-Control modes**

Feature	View Mode	Take-Control Mode
Calibration menu item	Disabled in System Control > Tools	Taking control during calibration is disabled
Point-to-Plumb menu item	Disabled in System Control > Tools	Taking control during Point-to-Plumb operation is disabled
System Settings dialog box	Opens in read-only mode; users can view but cannot change system settings	If the System Settings dialog box is open and another user takes control while the first user is trying to save settings changes, the system displays a message notifying the first user that saving is not permitted because the control was taken by another user

**Table 4. Accessing ChromLab features in View and Take-Control modes, continued**

<b>Feature</b>	<b>View Mode</b>	<b>Take-Control Mode</b>
Map Fluidic Scheme menu item	Disabled in System Control > Tools	If the Map Fluidic Scheme dialog box is open and another user takes control while the first user is trying to save a mapping, the system displays a message notifying the first user that saving is not permitted because the control was taken by another user
Change Fluidic Scheme menu item	Disabled in System Control > Tools	If the Change Fluidic Scheme dialog box is open and another user takes control while the first user is trying to select and apply a fluidic scheme, the system displays a message notifying the first user that selecting is not permitted because the control was taken by another user
Manual edit dialog boxes	Manual edit dialog boxes in System Control Manual mode are disabled	Manual edit dialog boxes close when another user takes control
Chromatogram legend in System Control window	Legend can expand but users cannot edit trace settings	Legend collapses when another user takes control
System Control window toolbar buttons	Save, Clear, Autosave, and Annotate are disabled	

**Table 4. Accessing ChromLab features in View and Take-Control modes, continued**

Feature	View Mode	Take-Control Mode
System Control > Manual menu items	Disabled	
Queuing and executing runs in System Control window	Disabled	
Scheduling methods and scout methods	Disabled	System checks the status of the user when scheduling or starting a run

## Assigning Access Levels on NGC Systems

**Note:** Only administrators can assign and change access levels or remove a user's access to NGC systems. Perform this task on the central computer *after* you create user and group accounts and *before* you connect remote computers to the central computer.

You can assign access levels to groups or to individual users. Users inherit the group's access level on each NGC system, however you can increase or decrease a user's access level on specific systems as necessary. This procedure explains how to assign access levels by users and groups, and to set a user's specific access level on a system.

### To assign access levels on NGC systems

1. Start ChromLab and log in as a ChromLab administrator.
2. If connected, disconnect ChromLab from all currently connected NGC systems:
  - a. Save or clear any unsaved runs on the NGC system.
  - b. On the Home window, click File > Disconnect System and disconnect from the currently connected system or systems.
3. Click Connect to System and connect to all target NGC systems.

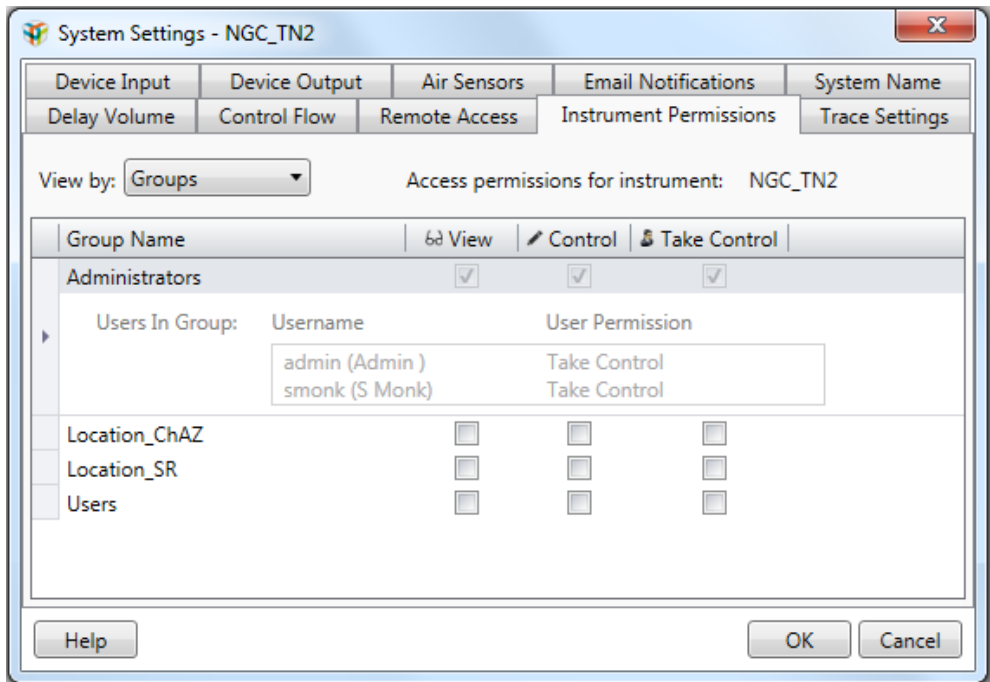
The names of the connected systems appear in the System Control panel on the Home window.

4. Click the link to a target system in Connected Systems.

The System Control window appears and displays tabs for each connected system.

5. Click the tab for a specific system and select File > System Settings to open its System Settings dialog box.

- Choose the Instrument Permissions tab.

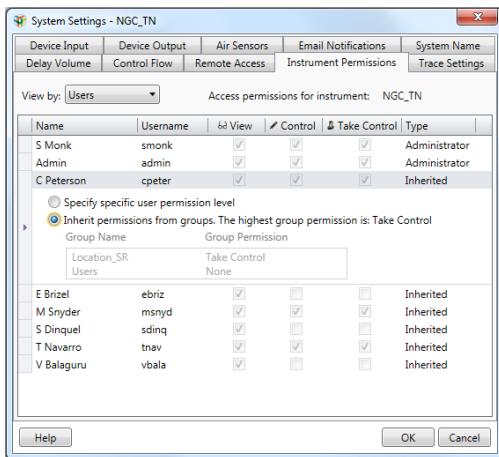


- Do one of the following:
  - To assign access levels to groups, select Groups in the View by dropdown list.
  - To assign access levels to individual users, select Users in the View by dropdown list.
- For each user or group you want to provide access to the system, select the appropriate checkbox.
- Do one of the following:
  - To assign a user specific access levels to a system, proceed to [Step 10](#).
  - To close the System Settings dialog box, click OK.

10. To assign a user specific access levels:

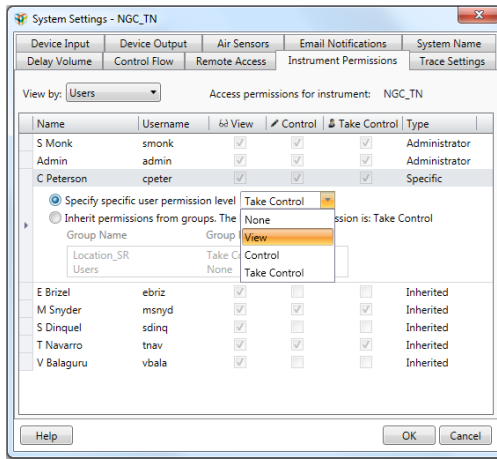
- a. Select Users in the View by dropdown list and select the target user.

ChromLab displays details about the user including the groups to which the user belongs and their access levels.



- b. By default, Inherit Permissions from groups is selected. Select Specify specific user permission level and choose the appropriate permission from the dropdown list.





- c. Click OK to exit the System Settings dialog box.

## Taking Control of an NGC System

Taking control of an NGC system is useful in the event that the controlling computer is locked or the user performing a run is not available and there is an immediate need to stop the instrument.

**Note:** Only users with the Take Control access level can perform this task. Take Control is disabled during system calibration or Point-to-Plumb actions.

### To take control of an NGC system

1. If you have not already done so, connect to the target NGC system as a user with Take Control access level.
2. Select File > Take Control.

If successful, ChromLab displays a message informing you that you have control of the system. ChromLab displays a relevant message to the user who lost control.

# Appendix A Troubleshooting Shared Database Connection Issues

This appendix lists potential causes and suggested solutions for resolving connection issues when remote ChromLab computers or NGC instruments cannot access the shared database.

**Important:** Bio-Rad strongly recommends that you regularly back up the shared ChromLab database and save the backup file in a safe location. For more information about backing up the ChromLab database, see the chapter Database Maintenance in the NGC Chromatography Systems and ChromLab Software User Guide.

## Possible Causes for Shared Database Connection Issues

[Table 5](#) lists possible causes and solutions for issues connecting to the shared ChromLab database.

**Table 5. Possible causes and solutions for shared database connection issues**

Possible Cause	Possible Solution
Database server settings have changed	<ul style="list-style-type: none"> <li>Change the database location properties on the central computer and then reconnect each remote computer.</li> </ul> <p>See <a href="#">Changing the Location Parameters of Shared Database on page 100</a>.</p>
NGC database service is not started	<ul style="list-style-type: none"> <li>Restart the database service on the central computer.</li> </ul> <p>See <a href="#">Restarting the NGC Database Service on page 101</a>.</p>
NGC database service fails to start	<ul style="list-style-type: none"> <li>Uninstall and then reinstall ChromLab on the central computer.</li> </ul> <p>See the NGC Chromatography Systems and ChromLab Software Installation Guide for specific information.</p>
	<ul style="list-style-type: none"> <li>Uninstall SQL Server on the central computer. Then reinstall ChromLab on the central computer.</li> </ul> <p>See <a href="#">Uninstalling Microsoft SQL Server on the Central ChromLab Computer on page 102</a>.</p>
	<ul style="list-style-type: none"> <li>Contact Bio-Rad Technical Support for assistance.</li> </ul>
Network connection fails	<ul style="list-style-type: none"> <li>Your site's DNS server might be down. If you connected to the central computer using its computer name, change the connection parameters to use its IP address.</li> </ul> <p>See <a href="#">Changing the Connection Parameters to the Central Computer on page 104</a>.</p>

**Table 5. Possible causes and solutions for shared database connection issues, continued**

Possible Cause	Possible Solution
	<ul style="list-style-type: none"> <li>■ Your site's firewall or antivirus tools require specific ports for network communication. SQL Server requires port 1433, which might not be allowed in your firewall environment.</li> </ul> <p>See Appendix D, Firewall Configuration in the NGC Chromatography Systems and ChromLab Software Installation Guide for specific information.</p> <p>See Article 287932 on Microsoft's Knowledge Base site for more information:  <a href="http://support.microsoft.com/kb/287932">http://support.microsoft.com/kb/287932</a></p>
	<ul style="list-style-type: none"> <li>■ You removed ChromLab software from the central computer and must manually add specific firewall rules.</li> </ul> <p>See <a href="#">Manually Adding Inbound Firewall Rules on page 105</a>.</p>
	<ul style="list-style-type: none"> <li>■ The shared database resides on another subnet, which is not accessible from a remote ChromLab computer or an NGC system. Verify that the central computer can ping the remote ChromLab computer or NGC system using ping command line.</li> </ul> <p>See <a href="#">Verifying that All NGC Systems Can Reach the Central Computer on page 23</a>.</p> <ul style="list-style-type: none"> <li>■ Verify that routing between subnets or virtual local area network (VLAN) is configured properly.</li> </ul> <p>Contact your system or network administrator for assistance.</p>

## Solutions for Shared Database Connection Issues

This section details possible solutions if remote ChromLab computers or NGC systems cannot connect to the shared ChromLab database.

### Changing the Location Parameters of Shared Database

If you moved the central ChromLab database to another computer, or changed the name of the computer on which it is located, you must change the connection location properties. You perform this task on the central computer through ChromLab Administration. Then you can reconnect the remote computers to the central computer.

#### To change the location parameters of the central computer

1. Determine the computer's name:
  - a. On the central computer, right-click the computer's desktop icon and select Properties.  
  
The System Information screen appears.
  - b. Locate and note the computer name and full computer name.
  - c. Close the System Information screen.
2. Determine the computer's IP address:
  - a. Open a command prompt window.
  - b. At the command prompt, type **ipconfig**.
  - c. Note the information on the line IPv4 Address.  
  
**Note:** Ensure that the computer's IP address is static.
  - d. Close the command prompt window.

3. Launch ChromLab Administration.

**Note:** If ChromLab Administration fails to connect, the Change Database Server dialog box appears. Use this dialog box to

- Change the server address
- Specify the new settings
- Provide the administrator's login credentials
- Connect to the central computer with the new settings you noted in Steps 1–2.

4. Exit ChromLab Administration.

5. On each remote computer, start ChromLab Administration and reconnect to the central computer.

For more information, see [Chapter 5, Connecting Remote Computers to the Central Computer](#).

## Restarting the NGC Database Service

**Important:** Ensure that ChromLab is not running before you restart the NGC database service.

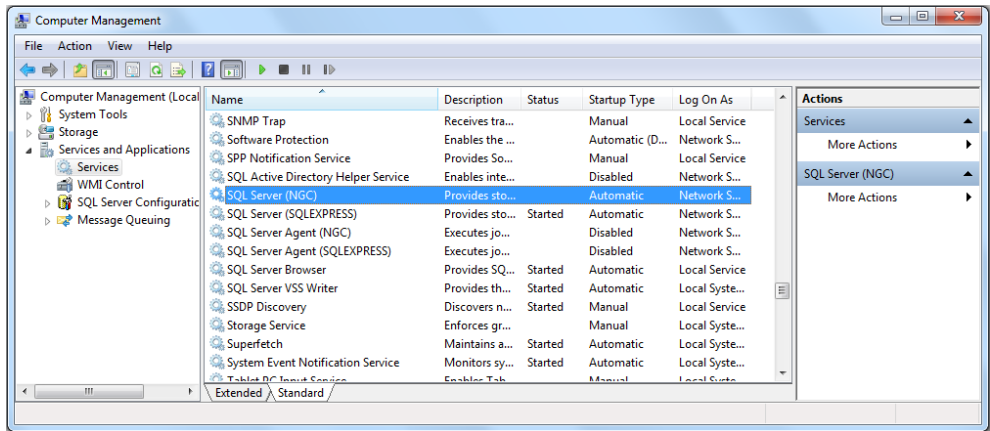
### To restart the NGC database service

1. On the central computer's desktop, right-click the computer's desktop icon and select Manage.

The Computer Management dialog box appears.

2. In the Computer Management dialog box, expand Services and Applications in the left pane and select Services.

A list of services appears in the right pane.



3. In the list of services, locate and right-click SQL Server (NGC).
4. Select Start in the list of actions that appears.
5. Close the Computer Management dialog box.

## Uninstalling Microsoft SQL Server on the Central ChromLab Computer

**Important:** You might need to uninstall SQL Server if it is corrupted. Bio-Rad strongly recommends that you back up all SQL Server databases you might have, close all applications that use SQL Server, and uninstall the applications before continuing.

### To uninstall Microsoft SQL Server

1. On the central computer, uninstall ChromLab first and then uninstall Microsoft SQL Server:
  - a. Select Start > Control Panel > Programs and Features.  
The Uninstall or change a program window appears.
  - b. In the list of installed programs, locate and select ChromLab.



- c. Click Uninstall/Change to uninstall ChromLab.
  - d. In the list of installed programs, locate and uninstall Microsoft SQL Server.
2. When the uninstallation is complete, locate and rename the NGC database folder.  

This folder is located at C:\ProgramData\Bio-Rad\NGC\Database. Rename the folder to Database\_old.
3. Reinstall ChromLab software on the central computer.  

**Tip:** The ChromLab software installer detects that SQL Server is not installed and installs the application.
4. Activate User Management Edition and designate the new database as the shared database.  

For more information, see [Activating User Management Edition on the Central Computer on page 29](#).
5. If you regularly backed up the original database, restore the data into the new database.
6. Do one of the following:
  - If you changed the name of the ChromLab central computer or its IP address, go to [Step 7](#).
  - If you retained the computer's name and IP address, go to [Step 9](#).
7. On all remote computers, start ChromLab Administration and select the Database Location tab.
8. Provide the required information and click Connect.
9. Start ChromLab on the remote computers and verify connection to the shared database.

## Changing the Connection Parameters to the Central Computer

If you selected the central computer's name as the connection parameter when you connected to the shared database, you might need to change the connection parameter to its IP address.

**Tip:** Skip [Step 1](#) if you know the IP address of the central computer.

### To change the connection parameters to the central computer

1. Determine the computer's IP address:
  - a. Open a command prompt window.
  - b. At the command prompt, type **ipconfig**.
  - c. Note the information on the line IPv4 Address.  
  
**Note:** Ensure that the computer's IP address is static.  
  
For more information about locating the IP address of a computer, see your system or network administrator.
  - d. Close the command prompt window.
2. On each remote computer, open a command prompt window and ping the central computer. For example:

```
> ping <Central_ChromLab_computer_IP_Address>
```

The central computer responds to the ping request if it is available on the network.

**Note:** See your system or network administrator if the central computer fails to respond to the ping request.

3. On each remote computer, start ChromLab Administration and select the Database Location tab.

4. In the Remote Shared Database dropdown list, select the IP address of the central computer.
5. Click Connect.
6. Start ChromLab and verify the connection to the shared database.

## Manually Adding Inbound Firewall Rules

**Important:** If you uninstall ChromLab from the central computer, you must create custom inbound firewall rules in order for the SQL Browser and SQL Server services to receive data from the network. Contact your system or network administrator or Bio-Rad Technical Support for assistance.

- Bio-Rad NGC SQLServer NG

Enables communication to the NGC database

- Bio-Rad NGC SQLServer Browser

Publishes data about SQL Server and is used during initial connection to the database

[Table 6](#) lists the required firewall settings for these rules. Ensure that your firewall tool follows these rules for the NGC database on the central ChromLab computer or server.

**Table 6. Firewall inbound rules for the ChromLab database**

Rule	Program	Protocol	Local Port	Remote Port
Bio-Rad NGC SQLServer NG	Any	Any	Any	Any
Bio-Rad NGC SQLServer Browser	Any	Any	Any	Any

**Tip:** See Appendix D, Firewall Configuration in the NGC Chromatography Systems and ChromLab Software Installation Guide for more information.



# Appendix B Configuration Checklists

This appendix comprises checklists that you can use to prepare your site for and set up the shared ChromLab database.

## Preparing Your Site

Use this checklist to prepare the computers to use the shared ChromLab database.

**Note:** Bio-Rad recommends that you set up the shared database on a new computer and connect your existing ChromLab computers to the new database.

**Table 7. Site preparation checklist**

Task	For Details
<input type="checkbox"/> 1. Determine the computer to host the shared database.	
<input type="checkbox"/> 2. Verify the site requirements for the central computer.	See the NGC Chromatography Systems and ChromLab Software Installation Guide.
<input type="checkbox"/> 3. Verify the central computer meets the system requirements.	See <a href="#">System Requirements on page 13</a> .

**Table 7. Site preparation checklist, continued**

Task	For Details
<input type="checkbox"/> 4. Install ChromLab software on all computers.	See the NGC Chromatography Systems and ChromLab Software Installation Guide. <b>Note:</b> You can upgrade ChromLab software standard or User Management Edition from version 3.x or higher to version 6.1. If you are running an earlier version of ChromLab software, you must first upgrade to 3.x before you can upgrade to ChromLab 6.1.
<input type="checkbox"/> 5. Prepare the ChromLab central computer and NGC systems.	See <a href="#">Preparing the Central Computer and NGC Systems on page 15</a> .
<input type="checkbox"/> 6. Prepare the remote computers.	See <a href="#">Connecting Remote Computers to the Central Computer on page 37</a> .

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## Setting Up the Shared Environment

Use this checklist to set up the shared ChromLab database and connect to it from the remote computers.

**Table 8. Setting up the shared environment**

	Task	Computer	For Details
<input type="checkbox"/>	1. Verify that ChromLab 6.1 is installed.	All computers	See the NGC Chromatography Systems and ChromLab Software Installation Guide for details.
<input type="checkbox"/>	2. (Optional) Restore NGC data to the shared database.	Central Computer	See <a href="#">Backing Up and Restoring ChromLab Data to the Central Computer on page 17.</a>
<input type="checkbox"/>	3. Create an NGC database backup folder.	All computers	See <a href="#">Creating an NGC Database Backup Folder on page 39.</a>
<input type="checkbox"/>	4. Change the default admin password in ChromLab Administration.	All computers	See <a href="#">Changing the ChromLab Default Password on page 41.</a>
<input type="checkbox"/>	5. Activate User Management Edition and designate the shared database.	Central computer	See <a href="#">Activating User Management Edition on the Central Computer on page 25.</a>
<input type="checkbox"/>	6. Create ChromLab users and groups	Central computer	See <a href="#">Next Steps on page 33.</a>

**Table 8. Setting up the shared environment, continued**

	<b>Task</b>	<b>Computer</b>	<b>For Details</b>
<input type="checkbox"/>	7. (Optional) Export existing data from all computers.	Remote computers	See <a href="#">Exporting Existing ChromLab Data</a> on page 40.
<input type="checkbox"/>	8. Activate User Management Edition and connect to the shared database.	Remote computers	See <a href="#">Connecting Remote Computers to the Central Computer</a> on page 37.
<input type="checkbox"/>	9. (Optional) Import existing data to the shared database.	Central computer	See <a href="#">Importing Existing ChromLab Data</a> on page 46.

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