DataApex
Clarity™
CHROMATOGRAPHY SOFTWARE

CLARITY IN NETWORK

Clarity Software ENG

Code/Rev.: M215/100B
Date: 2025-11-04

DataApex Ltd.
Petrzilkova 2583/13
158 00 Prague 5
Czech Republic

Phone: +420 251 013 400
clarity@dataapex.com
www.dataapex.com

Author: MS

Contents

To facilitate the orientation in the **Clarity in Network** manual and **Clarity** chromatography station, different fonts are used throughout the manual. Meanings of these fonts are:

Open File (italics) describes the commands and names of fields in **Clarity**, parameters that can be entered into them or a window or dialog name.
WORK1 (capitals) indicates the name of the file and/or directory.
ACTIVE (capital italics) marks the state of the station or its part.
Chromatogram (blue underlined) marks clickable links referring to related chapters.

The bold text is sometimes also used for important parts of the text and the name of the **Clarity** station. Moreover, some sections are written in format other than normal text. These sections are formatted as follows:

Note: Notifies the reader of relevant information.

Caution: Warns the user of possibly dangerous or very important information.

Marks the problem statement or trouble question.

Description: Presents more detailed information on the problem, describes its causes, etc.

Solution: Marks the response to the question, presents a procedure how to remove it.

1 Clarity in Network

Clarity can be used in a network where multiple stations share the same data. The following chapters describe different approaches to this configuration.

1.1 Clarity in network overview

Clarity is not a client-server (C/S) solution, nonetheless it can be configured for use in multi-user, multi-instrument networked environment.

What does the Clarity in network solution offer?

- Allows to share and access data across multiple computers. Data and projects can be stored on a shared, backed-up network drive and opened from any Clarity or Clarity Offline station. The storage location can be defined in *Directories* window.
- Clarity Offline can be used to prepare methods and evaluate acquired data. It enables users to work with chromatograms on additional computers in the laboratory or at home.
- Instrument control (real-time signal monitoring and run control) is possible only through the local Clarity station, i.e. computer with installed Clarity must be connected to respective chromatography instrument. However, the local Clarity station can be operated remotely via a remote desktop connection (for more information, see Remote control of Clarity over a network.

Caution: Users must avoid accessing or modifying the same file (e.g., method, sequence, or chromatogram) from more than one Clarity station at the same time. Simultaneous access may lead to data loss or corruption.

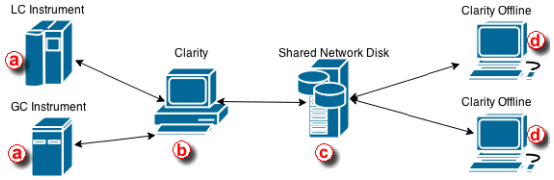
What does the Clarity in network solution not offer?

- Central management of users.
- Central management of documents such as chromatograms, calibrations and methods.
- Remote control of acquisition, i.e. run/stop/abort from other Clarity stations.
- Remote control of instruments from other Clarity stations.
- Viewing real time signal acquisition by detectors from other Clarity stations.

1.2 Multiple Clarity in a network

The simplest setup of Clarity in Network includes at least one Clarity, one Clarity Offline, and a shared network disk, which can either be located on the same PC or set up as a separate unit.

The diagram below shows an example of this setup. It is also possible to include more than one Clarity within the same network.



In the example configuration shown above:

- The LC and GC instruments ⓐ are controlled via Clarity ⓑ .
- Chromatograms, calibrations and methods are all saved on a shared network disk ⓒ using directory configuration.
- Clarity Offline ⓓ is then used for evaluation of acquired chromatograms and preparation of methods which are also saved on the shared network disk.
- Clarity ⓑ can then send these prepared methods to the corresponding instruments.

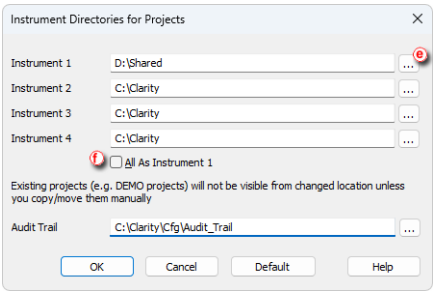
The shared network disk can be accessible to all computers in the network, allowing more complex configurations than the one shown above.

Caution: When using multiple Clarity stations in a network (e.g., one for instrument control and another Clarity Offline station for data evaluation), it is essential that all stations run the same version of Clarity.

The following step-by-step guide will help you configure the Clarity in network solution.

Procedure A: Configuring Clarity ⓑ - Data Acquisition station

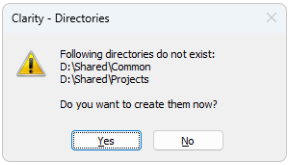
1. In the main *Clarity* window, go to *System* - *Directories* or use the icon . *Instrument Directories for Projects* dialog will open.
2. Select the *Instrument* that will share all the created files (chromatograms, calibrations, methods, sequences, reports etc.).
3. Use ... ⓔ to select the shared network disk. Once the location is selected, click *OK*. The path to the shared network disk is now filled in for the selected *Instrument*.
4. If you want to use the same directory for all Instruments, check the *All As Instrument 1* ⓕ option. This will copy the directory path from *Instrument 1* to all other *Instruments*.



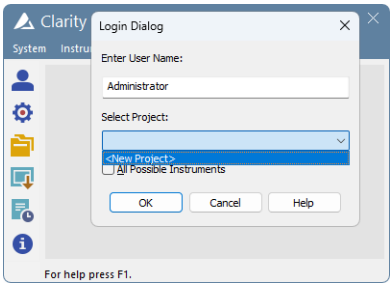
It is recommended to keep the *Audit Trail* locally and, if needed, you can set up an automatic export to a network drive (via the ***GLP options***).

If you decide to store the *Audit Trail* on a network drive, make sure that each Clarity station uses its own dedicated folder to ensure correct logging and to prevent overwriting or mixing of audit records.

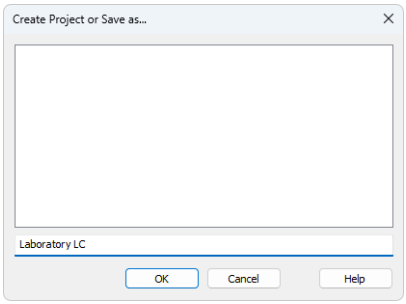
5. Click *OK* to save these settings.
6. When configuring the directory for the first time, a message appears asking to create the necessary structure. Click *Yes* to allow it. The COMMON and PROJECTS folders are created automatically with default files required for proper functionality.



7. When logging in for the first time using the new directory configuration, you will be prompted to create a new project.



8. Enter the project name and click *OK*.

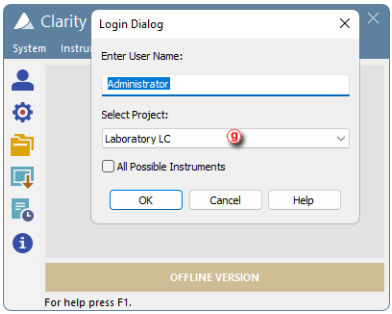


All files created or measured within this project will be stored on the shared network disk, making them accessible to other Clarity stations in the network.

Procedure B: Configuring Clarity Offline ⓓ - Data Evaluation Station

The directory must be configured so that Clarity Offline can access chromatograms, calibrations, and methods stored on the shared network disk.

1. Configure the directory according to step *1-6*, described in Procedure A.
2. When logging in, select the corresponding project (the one created in step 9 of Procedure A) from the drop-down ⓖ list and click *OK*.



If the project is visible in the list, the setup has been completed successfully. For additional confirmation, you can try acquiring a chromatogram in Clarity ⓑ and open it in Clarity Offline ⓓ .

1.3 Migrating Clarity project into a network

This step-by-step guide explains how to move your Clarity project, including measured chromatograms, calibrations, prepared methods, and other related files, to a shared network disk or a shared server backup drive.

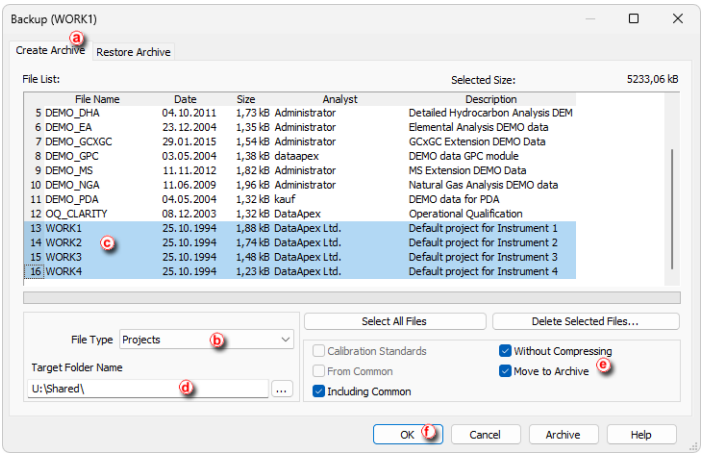
This guide assumes that the Clarity in network directories have already been set up and the required structure is available. If not, refer to **Procedure A** described in the chapter Multiple Stations in Network.

There are two ways to migrate a project. You can use the *Archive* function in Clarity, which automatically transfers the selected project to the new location, or you can copy the project directory and project file manually using tools such as *Windows File Explorer*.

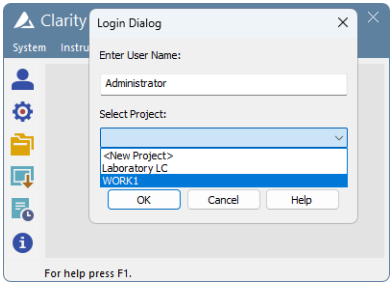
For installations operating under GLP or requiring full traceability, the migration must be performed using the *Archive* function, as only this ensures that the operation is properly recorded in the *Audit Trail*. Manual copying is not logged and is therefore suitable only for non-regulated environments.

Follow these steps to use the *Archive* function for this purpose:

1. Log in to any *Instrument* with a project you do not want to move (e.g. some demo project).
2. Use the *File - Archive...* command. *Backup* dialog opens on the *Create Archive* tab ⓐ .
3. In the *File Type* drop-down list ⓑ , select *Projects*.
4. In the *File List* section, select the project(s) to be migrated (e.g. WORK1 to WORK4) ⓒ .
5. Under *Target Folder Name* ⓓ , select the destination of the shared network disk.
6. Check the options *Without Compressing* and *Move to Archive* ⓔ . When moving projects to the new location for the first time, it is recommended to check *Including Common* option to also transfer files such as report styles.
7. Click *OK* ⓕ to start the migration. The selected projects will be moved to the specified location (e.g. U:\SHARED\) and *Backup* dialog will close.

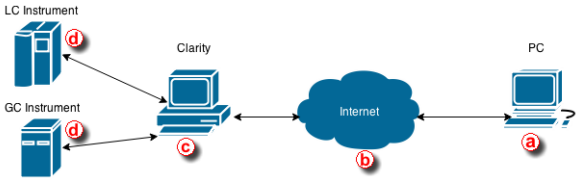


8. Log in to the *Instrument* that has its directory set to the shared network. In the *Login Dialog*, the *Select Project* drop-down list will display only the migrated projects as well as any projects you created in the previous steps.



Your Clarity project has been successfully migrated and is ready to use.

1.4 Remote control of Clarity over a network



This step-by-step guide describes how to remotely connect to a PC with Clarity ⓒ installed, from another computer, such as your home or office PC ⓐ . A remote connection allows you to take control of the entire computer, including Clarity and all connected instruments. The connection can be established either over the internet or within a local computer network using the *Remote Desktop Connection*, which is a standard application included in Windows operating systems.

This solution then enables you to:

- Control instruments directly connected to Clarity.
- Monitor data acquisition.
- Evaluate chromatograms in Clarity.
- Work on other projects while keeping the remote session open and periodically check that the system is running smoothly.

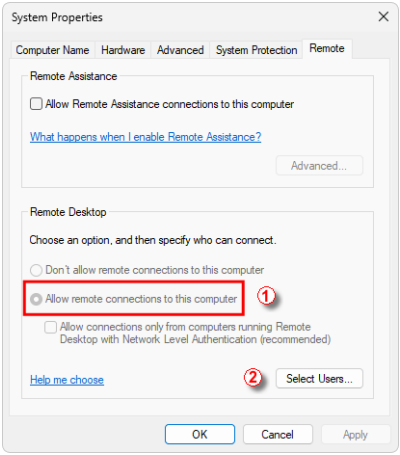
Requirements:

- ⓐ PC needs to have Remote Desktop Connection installed and allowed.
- ⓑ A stable internet connection or a reliable local network is required.
- ⓒ PC with Clarity needs to have Remote Desktop Connection installed.

This description is for setting up a remote connection in Windows 11. Dialogs may vary depending upon the Windows version used.

1. Enable remote connections on the PC with Clarity ⓒ .
    a. Open the *System Properties* dialog and switch to the *Remote* tab via *Control Panel - System and Security - System - Allow Remote Access*. (Administrator rights are required.)
    b. Under *Remote Desktop*, select *Allow remote connections to this computer* ① . If the *Remote Desktop* options are unavailable (grayed out), the computer is likely part of a domain, and the settings are restricted by domain policies. Contact your network administrator to resolve this issue.

c. Click *Select Users* ② .



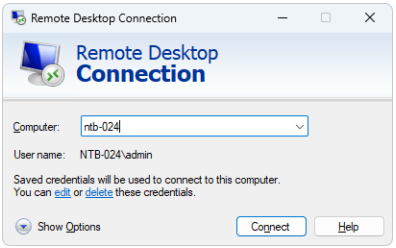
d. In the *Remote Desktop Users* dialog, click *Add*.

e. In the *Select Users or Groups* dialog:

- Click *Locations...* to specify where to search for a user.
- In *Enter the object names to select*, type the name of the user you want to add and then click *Check Name*. The user must have an existing profile on this computer. If the user exists, the name will be underlined. If it does not, a *User Not Found* dialog appears — verify the name and try again.
- When the correct user name is displayed, click OK twice to close the dialogs.

2. Find the name of the Clarity PC ⓒ . You will need this information in step 5.
   a. Go to *Settings - System - About*
   b. Locate the *Device Name* field and note the computer name.
3. Ensure the User Account has a password. The user account on the Clarity PC must be password-protected before you can connect via Remote Desktop.
   a. Go to the *User Accounts - Sign-in options.*
4. Allow Remote Desktop through Windows Firewall on the Clarity PC ⓒ .
   a. Open the *Control Panel* and navigate to *System and Security*.
   b. Click *Allow an app through Windows Firewall* under the *Windows Defender Firewall* section.
   c. Click *Change settings*, then select the checkbox next to *Remote Desktop*.
   d. Click *OK* to save the changes.
   e. If you're using another firewall, make sure the port for *Remote Desktop* (usually 3389) is open.

5. Connect to the Clarity PC ⓒ from the remote computer ⓐ .
    a. Open *Remote Desktop Connection*.
    b. In the *Computer* field, type the name (or IP address) of the Clarity PC ⓒ , and then click *Connect*.



Note: This guide has been taken from the How-to: "Connect to another computer using Remote Desktop Connection" created by Microsoft Windows.

After successfully connecting, you can work with Clarity as if you were at the laboratory PC. The remote desktop will be presented in a standard window. To end the session, simply close the window.

Possible situations that may arise when using the Remote Desktop Connection:

- If you connect remotely to a PC where you are already logged in, the session will automatically continue where you left it.
- If another user is currently logged in (for example, another analyst), a prompt will appear on that user's screen asking whether to allow the remote connection. If the user declines, the connection will not be established.
- The remote computer ⓐ must be turned on. It is not possible to connect to a computer that is off. However, there are applications and utilities that allow a remote computer to be started automatically, if such functionality is necessary.

1.5 Troubleshooting

The following sections describe how to identify and resolve issues that may occur during Clarity operation.

1.5.1 Network connection was lost during acquisition

Clarity in Network is able to tolerate short network outages (shorter than the duration of the currently running measurement).

If the connection is lost for a longer period of time or at the exact moment when chromatograms are being saved, an error message is displayed indicating that Clarity is unable to save chromatogram to the location indicated in Directories.

In that case, Clarity automatically stores the data locally to ensure no measurements are lost. The subsequent analysis, however, is not started automatically and must be started manually once the connection is restored.

These files can be recovered from C:\USERS\<USER NAME>\APPDATA\LOCAL\TEMP\CLARITY\.

To comply with GLP requirements, files should be transferred back to the network directory using the *Archive / Restore* command. This ensures that the process is correctly recorded in the *Audit Trail*.

For more information on how to restore data, please refer to *User Guide: Archive and Restore*.