

***Cleo* LexiCom[®]**

Installation and Configuration Guide

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About Cleo Harmony, Cleo VLTrader, and Cleo LexiCom

VersaLex software is the platform that powers the Cleo family of Secure Data Integration (SDI) products—the Cleo LexiCom® application is a desktop-based client solution for communication with major trading networks. The Cleo VLTrader® application is a server-level solution designed to meet the needs of mid-enterprise organizations. The Cleo Harmony® application is tailored for large enterprise needs.

Cleo Technical Support

Standard Cleo Technical Support is available from 7am - 7pm CST, Monday through Friday. Support availability might differ depending on your support package.

Training and a support subscription are required to work with a Cleo technical support analyst for all products, except Cleo LexiCom.

When contacting the Cleo support team, have your contact information, the name of product you are calling about, and your serial number, if available. During the support process we may request additional information (for example, a support bundle) that will vary depending on the type of request or issue.

Requests are handled on a callback basis in the order they are received. The Cleo support answering service or web form will collect your information and your request will be placed in our callback queue.

To contact Cleo Technical Support:

- Use the request form at: <http://www.cleo.com/support/request.php>.
- Call us:
 - 1-815-282-7894
 - US (toll free): 1-866-444-CLEO(2536)
 - UK: 02038653439

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Cleo LexiCom system requirements and recommendations

Your system must meet certain minimum hardware and software requirements to install and run Cleo LexiCom software. Your particular hardware and software needs might vary depending on your operating system and the number of simultaneous connections you expect.

For more information, visit <http://www.cleo.com/support/byproduct/lexicom/sysreqs.php>.

Here are some additional recommendations for your system configuration:

- The server should have a static IP address.
- If the server is behind a firewall, appropriate IP addresses and ports must be open based on Cleo LexiCom configuration. Only port 5080 is enabled by default and must be open inbound on your firewall to allow access to the web admin UI from outside the firewall (although if using Cleo VLProxy, it offers an alternative to opening inbound ports). All other ports must be explicitly opened from within the product after installation. See [Configure your firewall](#) on page 12.
- To ensure optimal performance, the Cleo LexiCom product should be run on a dedicated server. For example, Cleo LexiCom software should not be run on the same server as a Web Server.
- **For Windows:** The Cleo LexiCom software is installed as a Windows service. By default, Windows services run under a local system account and do not see mapped network drives. If you must access a network drive through the product, there are several options:
 - Activate an SMB host connection within the product and use URI smb: paths.
 - Use full network path names (UNC paths) and either provide the credentials through Windows/Unix Folders configuration within the product or change the account running the service to one that can access the network drive.
- **For Linux/Unix:** The Cleo LexiCom software must be run as a daemon. For information about setting up Cleo LexiCom software as a daemon, see *Run as a Unix Daemon* in the Cleo LexiCom User Guide.

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Installing and configuring Cleo LexiCom

Installing your Cleo software requires that you download and run the installer, and then perform certain tasks depending on which configuration you want.

Downloading the installer

Before you can use the Cleo LexiCom software, you must download the installer file to your system.

- Open the email you received from Cleo, and click the download link. The compressed installation file is downloaded to your local system.

Continue with running the installer.

Running the installer

The downloaded installer comes bundled with a Java Runtime Environment (JRE), so Java should not need to be installed on the operating system prior to installing Cleo LexiCom and Cleo LexiCom will not interfere with other versions of Java that may already be installed on the system.



Note: On both Linux/Unix and Windows, you can run the installer strictly in command line mode by adding `-i console` arguments when you run the installer. For example, on a Linux system:

```
./install.bin -i console
```

Running the Cleo LexiCom installer for Windows

- The Cleo LexiCom installation program is named `install.exe`. Go to the directory where the installer file resides, double-click `install.exe`, and follow on-screen instructions to complete installation.

Running the Cleo LexiCom installer for Linux/Unix

1. Navigate to the directory where the `install.bin` resides.
2. Add the execute permission to `install.bin`:

```
chmod +x ./install.bin
```

3. Run the installer command:

```
./install.bin
```

4. Follow the on-screen instructions to complete installation.

Running the Cleo LexiCom installer for AS/400

- If you are installing Cleo LexiCom software directly on the AS/400, see *AS/400 Setup and Installation* section in the *Cleo LexiCom User Guide*.
- If you are installing on a Windows PC and mapping to the AS/400 through a networked drive, see *AS/400 Network Access Setup* in the *Cleo LexiCom User Guide*.
- After referring to the appropriate section in the *Cleo LexiCom User Guide* and the installation is complete, continue with configuring Cleo LexiCom.

Installing on an Integrated File System

This section will guide you through the procedure required to complete the first-time installation of Cleo LexiCom in the AS/400 Integrated File System.

1. Create the IFS folder.

On a client PC within your Local Area Network that has the Client Access Express for Windows installed and running, use the **System i Navigator** to create a new folder named `LexiCom` under the AS/400's Root ('/') directory.

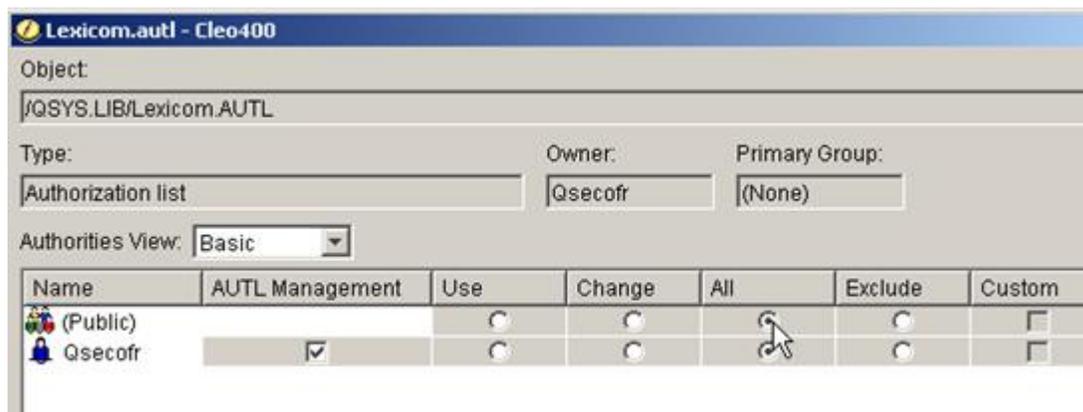
Warning: You will not be able to run Cleo LexiCom software on the AS/400 if you name this folder anything other than `LexiCom`!

2. Define the **Authorization List** for accessing the IFS Folder.

To allow multiple users to successfully run Cleo LexiCom and share access to all log and host files (even to those who did not originally create the files) without needing to give "All Object" access to any of these users, an **Authorization List** is used to assign Read, Write and Execute privilege to the `/LexiCom` folder and all of its subfolders. To do this, choose the **Security** icon in the **System i Navigator**, select **Authorization Lists** and choose **New Authorization List**.

a) Create a **LexiCom Authorization List** and select **All** under **Public** authority.

A screen similar to the following will be displayed. Verify that the **All** privilege is selected.



b) Add the users who will be running Cleo LexiCom to the **Authorization List** and assign them the same **All** privilege.

Note: The previous steps may also be performed using the `CRTAUTL` and `ADDAUTLE` (green screen) commands, if preferred.

c) Next the `/LexiCom` folder and all its subfolders must be linked with the newly created **Authorization List**. Since the **System i Navigator** can only link the `/LexiCom` folder and none of its subfolders, it is necessary to open an AS/400 (iSeries/i) green screen as the owner of the `/LexiCom` folder or a user with either `*ALLOBJ` or `*ALL` access and enter the `CHGAUT` command as follows:

```
CHGAUT OBJ ('/LexiCom') DTAAUT (*RWX) AUTL (LEXICOM) SUBTREE (*ALL)
```

If desired, the **System i Navigator** may be used to verify that the Cleo LexiCom **Authorization List** has been properly assigned to the `/LexiCom` Object.

To do this, open the **File Systems** tree and expand the **Integrated File System** entry. Under the **Root** entry, right-click the `/LexiCom` folder and choose **Permissions**.

For additional information refer to the following IBM resources:

- Authorization lists concepts:
https://www.ibm.com/support/knowledgecenter/en/ssw_ibm_i_73/rzamv/rzamvauthlists.htm
- Authorization list security:
https://www.ibm.com/support/knowledgecenter/en/ssw_ibm_i_71/rzarl/rzarlauthsec.htm

3. Create the Cleo LexiCom File Share.

Open IBM i Net Server and create a file share for the Cleo LexiCom folder that you created above. Make sure that the file share has Read/Write access.

4. Map the File Share to a Network Drive.

Using Windows Explorer, map the new Cleo LexiCom file share to any available network drive.

The contents of the shared IFS drive (which will be empty) should appear.



Note: Due to IBM i compatibility issues, Cleo does not guarantee a desirable user experience while using Windows 10 mapped drives to display the LexiCom UI and therefore does not support mapping file shares on Windows 10 network drives.

5. Install Cleo LexiCom to the Network Drive.

Click on the `install.exe` file that you downloaded from the Cleo website.



Warning: As you are installing Cleo LexiCom, when prompted to **Choose Install Folder**, do not accept the default value of `C:\Program Files\LexiCom`. You must either use the network drive (for example, `L:\`) or the network share (for example, `\\cleo400\LexiCom`) that you mapped in the previous step as the install target.

6. At the **Install As A Service** prompt, make sure the **Start service automatically at system startup** checkbox is *not* selected and then click **Next**. Optionally you can remove the **Service** name, blanking it out, so that a Windows service will not be created.

7. Register Cleo LexiCom.

Start Cleo LexiCom (from either the Start menu or by double-clicking the `LexiCom.exe` application in the `/LexiCom` IFS folder through Windows Explorer) from your PC and register your serial number. See .



Note: Once you have Cleo LexiCom installed into its final production destination, and before the end of your 30-day trial period, request your Permanent License. See .

8. When the software registration has completed, verify that the `LexiCom.savf` file has been copied to the `/LexiCom` folder on the IFS, then continue to the next section.

Post-installation configuration

After you run the installer, there is some additional configuration you need to perform.

Registering your serial number

For your Cleo LexiCom software to be fully operational, you must register your serial number.

The first time you launch the Cleo LexiCom native admin UI, it will automatically prompt you to register. The first time you launch the Cleo LexiCom web admin UI, it will prompt you for a password (which, by default, is your serial number) and then prompt you to register.



Note: The Cleo LexiCom software must be running as a service or daemon to use the web admin UI.

The following is a summary of the steps to register.

1. Launch the Cleo LexiCom admin UI.
2. Enter your serial number and contact information.
3. If the registration is successful, a Cleo LexiCom temporary license is activated. If you have trouble connecting during the registration process, you might need to configure Cleo LexiCom software for a proxy. Click **Help** on the registration panel for instructions on configuring for a proxy.

Once you have purchased and installed the Cleo LexiCom product into its final production destination, and before the end of the evaluation period, you should request your **Permanent License**. For a description of how to do this, see *Request a Permanent License* in the *Cleo LexiCom User Guide*.

The Cleo LexiCom software must be running as a service or daemon to use the web admin UI. Once it is running as a service/daemon, you can access the web admin UI at `http://<LexiCom-server>:5080/LexiCom`, where `<LexiCom-server>` is the name of the computer where Cleo LexiCom software is installed. You can also use the server's IP address instead of the server's name.

If the Cleo LexiCom software is not already running as a service or daemon, you can temporarily run it for the duration of your session from the command line as follows:

```
LexiComc -s service -m
```

If port 5080 is already being used by another application, you can specify a different port using the following command line; where `nnnn` is the new port number.

```
LexiComc -p "Local Listener" -t "<Host><Httpport>nnnn"
```

After changing the port number, restart the Cleo LexiCom service/daemon. Then use the new port number when starting the web UI: `http://<LexiCom-server>:nnnn/LexiCom`.

Configure your firewall

The Cleo LexiCom product depends on your firewall configuration, which depends on your connection method and host requirements. Make sure you have configured your hosts before you configure your firewall. Generate the Cleo LexiCom TCP/IP Port Usage Report for a description of firewall requirements for the activated and configured host(s). Present the information from this report to your system administrator to verify that your firewall has been configured properly.

1. Start the Cleo LexiCom software, if necessary.
2. Configure your usage report. In the web admin UI, go to **Administration > Network > Ports**. In the native UI, go to **Tools > TCP/IP Port Usage**.

Native UI only: In the native UI, the Cleo LexiCom software displays a dialog box where you can select the folders you want to report on. Select the appropriate folders and then click **Continue**.

3. The Cleo LexiCom software displays the report.
4. Click **Save As** to save your report.
5. Review the report with the system administrator responsible for your firewall to make sure your configuration is correct.

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Test your installation

Cleo provides a test host for many of the common protocols. Clone and activate the appropriate test host, then run the test action for that host. A successful result confirms that the firewall is generally configured correctly and that you are ready to test directly with your partner(s).

Perform the following steps in the admin UI:

1. Configure your local listener. It must be fully configured for your protocol of choice. Make sure you have a local certificate defined - either a self-signed certificate or an imported certificate of user choice. See the *Cleo LexiCom User Guide* for information about configuring your local listener.
2. Activate the appropriate test host. Right-click the Cleo Test host you want to use on the **Templates** tab within the Cleo LexiCom UI and select **Clone and Activate**.
The test host is added to your **Active** tab.
3. Make sure an outbound connection to `test.cleo.com` is available.
4. On the **Active** tab, expand your test host and run the `test` action.
5. Verify results. Look for a success or error message in the message pane.

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Optional configuration

This section describes some optional configuration tasks.

Customizing your admin UI login page splash image

You can replace the default login page splash image with your own.

Place your custom splash screen in the `conf/images` directory in the Cleo LexiCom home directory. The filename must start with `splash`. That is, the word, `splash`, followed by a period. For example, `splash.companyABC.png`. Supported formats include JPEG, GIF, and PNG. The image can be no larger than 525px x 340px and no smaller than 250px x 100px.

To see the new splash screen, if you are using the web UI, you must restart the service. If you are using the native UI, you must restart the application.

Naming your installation

You can name your Cleo LexiCom installation.

1. The **Synchronization** page appears.
2. On the **Synchronization** page, double-click on the first entry in the sync table (the dot entry), and enter the optional alias.

Even if you fully synchronize this instance with another (see *Synchronize User Configuration on Multiple Instances* in the *Cleo LexiCom User Guide*), the optional alias will remain unique to this instance.

Customizing the Cleo Portal logo and background

Follow this procedure to customize the background, logo, and navbar images displayed by Cleo Portal.

 **Note:** This section applies to the Cleo Harmony and Cleo VLTrader applications only.

1. Copy the following code into `.../Harmony/webserver/mftportal/styles/custom.css`

```
#LogIn {
  background-image: url("../background.png");
  background-position: right;
  background-repeat: no-repeat;
}

#LogIn .login-image {
  background-image: url("../logo.png");
  background-repeat: no-repeat;
  width: 100%;
  background-size: contain;
}

app.portal .navbar-brand {
  background-image: url("../navbar.png");
  background-size: contain;
  background-position: left bottom;
  background-repeat: no-repeat;
  width: 200px;
  margin-top: 5px;
}
```

 **Note:** The CSS code indicates files are in the `mftportal` directory one level up from the `styles` directory.

2. Copy the background image you want to use to `.../Harmony/webserver/mftportal/` and name it `background.png`.
The new background image file should have dimensions similar to `.../Harmony/webserver/mftportal/images/layout/background.png` (1500px x 890px).
3. Copy the logo image you want to use to `.../Harmony/webserver/mftportal/` and name it `logo.png`.
The new logo image file should have dimensions similar dimensions to `.../Harmony/webserver/mftportal/images/layout/logos/blue/cleo.png` (139px x 61px).
4. Copy the navbar image you want to use to `.../Harmony/webserver/mftportal/` and name it `navbar.png`.
The new logo image file should have dimensions similar to `.../Harmony/webserver/mftportal/images/layout/logos/white/portal.png` (145px x 28px).
5. Refresh Cleo Portal to see the updated images.

An alternative to naming the files as described above is to change the CSS code to point to your files.

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Uninstalling your Cleo software

If you encounter problems after installation, it is possible to uninstall your Cleo LexiCom software.

Uninstalling Cleo LexiCom

Do one of the following:

- **For Windows:** do either of the following:
 - Navigate to the directory in which the Cleo LexiCom software is installed and execute the `UninstallLexiCom.exe` program.
 - Use the Windows Control Panel to uninstall the Cleo LexiCom software.
- **For Linux/Unix:** Navigate to the directory in which Cleo LexiCom software is installed, and then enter the uninstall command as follows:

```
./Uninstall LexiCom
```

