

Instructions for Installing Ciao Prolog

Linux/Ubuntu

At a terminal:

1. Install dependencies:

```
sudo apt-get update
sudo apt-get install build-essential emacs rlwrap curl
```

2. Install Ciao (interactive):

```
curl https://ciao-lang.org/boot -sSfL | sh
```

Accept all the **default** options (press <enter> for all questions).
The system is compiled automatically.

3. Check the installation. Open Emacs from a terminal:

```
emacs &
```

Inside Emacs, typing:

```
M-x ciao <enter>
```

should open a Ciao toplevel. “M-x” means pressing the <alt> or <command> key (depending on keyboard) and, *while it is pressed*, pressing x. Another equivalent option is to press <escape> and *then* x.

MacOS

1. Install dependencies:

- Install Xcode from the App Store:
<https://itunes.apple.com/es/app/xcode/id497799835?l=en&mt=12>
- Install homebrew (<https://brew.sh/>).
- At a terminal:

```
brew update
brew upgrade
brew tap railwaycat/emacsmacport
brew install emacs-mac rlwrap curl
```

2. Continue with step 2 from the Ubuntu installation.

Reporting errors or asking questions about installation, etc.:

<https://github.com/ciao-lang/ciao/issues>

Detailed instructions:

<http://ciao-lang.org/ciao/build/doc/ciao.html/Install.html>

Instructions for Installing Ciao Prolog – Windows 11

1. Install Windows Subsystem for Linux (WSL) with Ubuntu:

<https://learn.microsoft.com/en-us/windows/wsl/install>

To this end, open a PowerShell window and do:

```
wsl --install
```

and accept. Once WSL/Ubuntu installation finishes, *restart the computer*. If after this restart you do not see the Ubuntu installation starting, open PowerShell as administrator and restart it with the previous command.

```
wsl bash -c "echo 'export DISPLAY=:0' >> $HOME/.profile"
```

```
wsl bash -c "sudo apt-get update"
```

```
wsl bash -c "sudo apt-get install build-essential emacs rlwrap curl"
```

```
wsl bash -c "curl https://ciao-lang.org/boot -sSfL | sh"
```

pause

2. Install an X windows server, VcXsrv: <https://sourceforge.net/projects/vcxsrv/>

Check that VcXsrv is correctly installed. When correctly installed normally a link appears on the desktop with an “XLaunch” icon.

3. Configure VcXserv and install Ciao via .bat script

Download the following script: <https://cliplab.org/logalg/doc/install-ciao-win10.bat> and execute it to install Ciao.

This script assumes that VcXsrv has been installed in C:\Program Files\VcXsrv\. You need to edit the script if it is installed somewhere else.

4. Check the installation.

Open a new PowerShell and type **bash** to enter a bash shell. Once in bash (different prompt) do **cd** to go to **/home/user** in Ubuntu and start Emacs:

```
emacs &
```

Emacs should start in a different window. Inside Emacs, typing:

```
M-x ciao <enter>
```

should open a Ciao toplevel. “M-x” means pressing the <alt> or <command> key (depending on keyboard) and, *while it is pressed*, pressing x. Another equivalent option is to press <escape> and *then* x.

Common issues:

- If Emacs only starts in text-only mode (it reports **display :0 unavailable**, etc.) this means that that VcXsrv is not installed or working properly. A common source of this problem is that in some versions of Windows the WSL version that installs by default is version 2. Although it is possible to configure VcXsrv in WSL 2, it is much more complicated, and therefore we recommend installing version 1. To see which WSL version is installed you can type in a PowerShell

```
wsl --list -v
```

. To change to version 1 if version 2 is already installed, do

```
wsl --set-version Ubuntu 1
```
- It may also be necessary to allow in the firewall access for private networks rather than public (this is normally requested by the X server when it starts for the first time). In **Control Panel\System and Security\Windows Defender Firewall\Allowed apps** execute **Change Settings** as administrator, look for VcXsrv, change to private and deactivate public, and restart the computer.
- The script in step 3 configures the register so that VcXsrv starts automatically, it modifies your **.profile** file so that the **DISPLAY** environment variable is defined, it installs dependencies, and installs Emacs and Ciao. In case of problems with the script (Ciao is not installed, Emacs starts in text mode, etc.) you can try and do manually the steps in the script:
 - a) Open a new PowerShell and do

```
wsl bash
```

 to start bash.

- b) Install (typing in bash) the dependencies and Ciao:

```
sudo apt-get update
sudo apt-get install build-essential emacs rlwrap curl
curl https://ciao-lang.org/boot -sSfL | sh
```

In the Ciao installation accept all the **default** options (press <enter> for all questions).
The system is compiled automatically.

- c) Start the X server double-clicking the Xlaunch icon on the desktop. In general accept all the default options in the panels. It may be necessary to activate the “disable access control” option.
- d) In bash, type **export DISPLAY=:0** (this establishes the connection with the X server).
- e) Go again to step 4 to check the installation.

Reporting errors or asking questions about installation, etc.:

<https://github.com/ciao-lang/ciao/issues>

Instructions for Installing Ciao Prolog – Windows 10

1. Install Windows Subsystem for Linux (WSL) with Ubuntu:

<https://learn.microsoft.com/en-us/windows/wsl/install>

To this end, open a PowerShell window **as administrator**, and do:

```
wsl --set-default-version 1
wsl --install -d Ubuntu
```

Restart the computer. If after this restart you do not see the Ubuntu installation starting, open PowerShell as administrator and restart it with the previous command.

2. Install an X windows server, VcXsrv: <https://sourceforge.net/projects/vcxsrv/>

Check that VcXsrv is correctly installed. When correctly installed normally a link appears on the desktop with an “XLaunch” icon.

3. Configure VcXserv and install Ciao via .bat script

Download the following script: <https://cliplab.org/logalg/doc/install-ciao-win10.bat> and execute it to install Ciao.

This script assumes that VcXsrv has been installed in `C:\Program Files\VcXsrv\`. You need to edit the script if it is installed somewhere else.

4. Check the installation.

Open a new PowerShell and type `bash` to enter a bash shell. Once in bash (different prompt) do `cd` to go to `/home/user` in Ubuntu and start Emacs:

```
emacs &
```

Emacs should start in a different window. Inside Emacs, typing:

```
M-x ciao <enter>
```

should open a Ciao toplevel. “M-x” means pressing the `<alt>` or `<command>` key (depending on keyboard) and, *while it is pressed*, pressing `x`. Another equivalent option is to press `<escape>` and *then* `x`.

Common issues:

- If Emacs only starts in text-only mode (it reports `display :0 unavailable`, etc.) this means that that VcXsrv is not installed or working properly. A common source of this problem is that in some versions of Windows the WSL version that installs by default is version 2. Although it is possible to configure VcXsrv in WSL 2, it is much more complicated, and therefore we recommend installing version 1. To see which WSL version is installed you can type in a PowerShell

```
wsl --list -v
```

.

To change to version 1 if version 2 is already installed, do `wsl --set-version Ubuntu 1`

- It may also be necessary to allow in the firewall access for private networks rather than public (this is normally requested by the X server when it starts for the first time). In **Control Panel\System and Security\Windows Defender Firewall\Allowed apps** execute **Change Settings** as administrator, look for VcXsrv, change to private and deactivate public, and restart the computer.
- The script in step 3 configures the register so that VcXsrv starts automatically, it modifies your `.profile` file so that the `DISPLAY` environment variable is defined, it installs dependencies, and installs Emacs and Ciao. In case of problems with the script (Ciao is not installed, Emacs starts in text mode, etc.) you can try and do manually the steps in the script:

a) Open a new PowerShell and do `wsl bash` to start bash.

b) Install (typing in bash) the dependencies and Ciao:

```
sudo apt-get update
sudo apt-get install build-essential emacs rlwrap curl
curl https://ciao-lang.org/boot -sSfL | sh
```

In the Ciao installation accept all the **default** options (press `<enter>` for all questions). The system is compiled automatically.

- c) Start the X server double-clicking the XLaunch icon on the desktop. In general accept all the default options in the panels. It may be necessary to activate the “disable access control” option.
- d) In bash, type `export DISPLAY=:0` (this establishes the connection with the X server).
- e) Go again to step 4 to check the installation.

Reporting errors or asking questions about installation, etc.:

<https://github.com/ciao-lang/ciao/issues>