

AC Lab System

Tracker v0.8.3

User Guide



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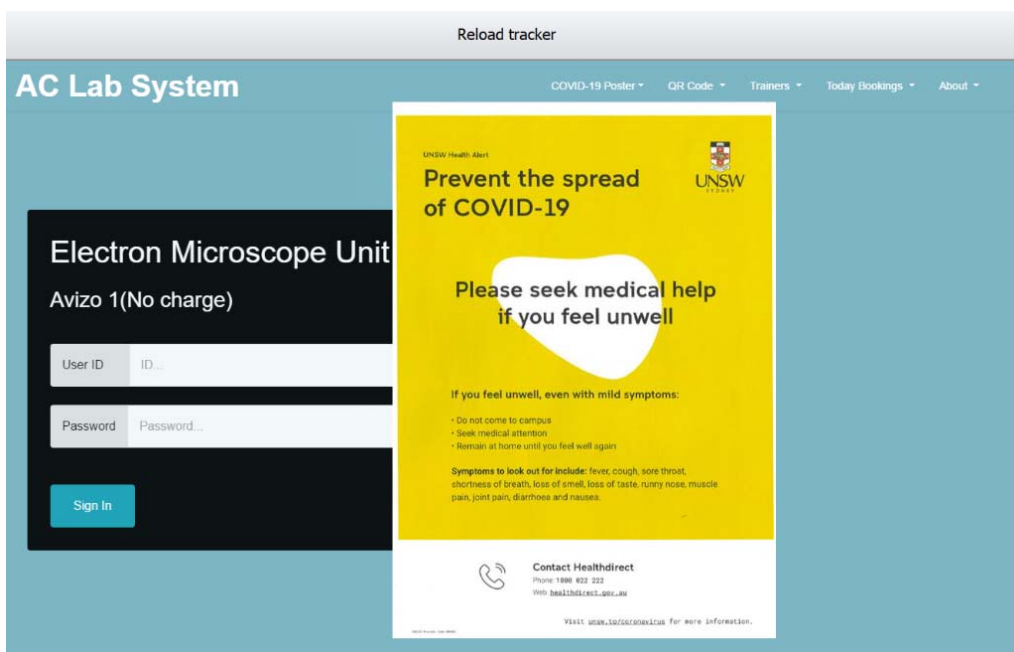
For further information about the Software, call the MWAC IT at +61 (0)2 9385 6680 or e-mail dm.zheng@unsw.edu.au.

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SOFTWARE DESCRIPTION

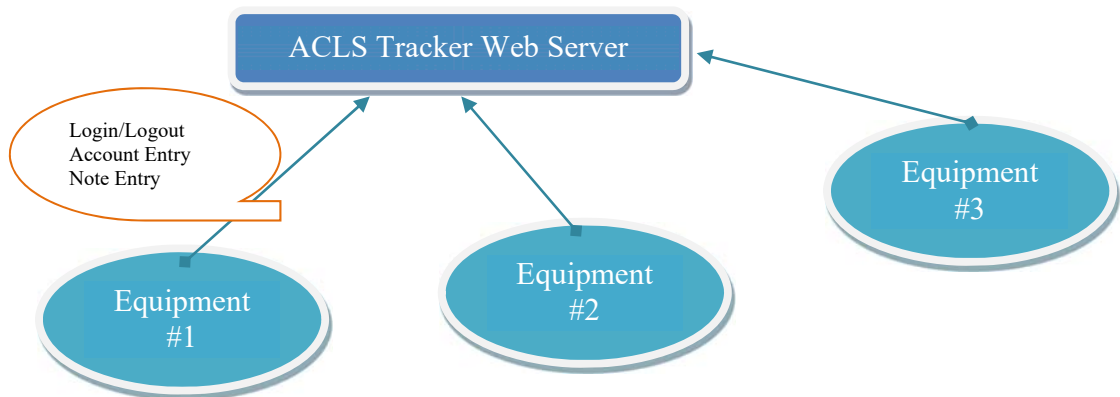
ACLS Python Tracker is a cross-platform software desktop app written in Python which working with ACLS web server to provide a web-based desktop app. The tracker is to record user's usage of the instruments, to restrict instrument access, to alert any OHS related issues in lab to the lab staff through the email, to show the next booking on the current day booking calendar, to show trainer contacts, to provide QR code for mobile device to scan and check lab resources, and also poster feature which is useful for today's COVID-19 outbreak.



Description

The tracker is able to run on Windows XP/7/8/10 and Linux.

1. Working Mechanism of Tracker with ACLS Server



Through the tracker, you can implement a secured access to instrument or equipment by “No Login, No Operation” policy.

Before user can operate the instrument or equipment, he needs to login through the tracker. The tracker checks if user has a valid account, if user has the valid certificate to operate the equipment by himself or require the supervision of the staff member before permitting. During the period of operation or experiment, user can record the experimental notes, see the next booking to better manager his time of operation, and receive the notification sent by staff.

2. Tracker Operation

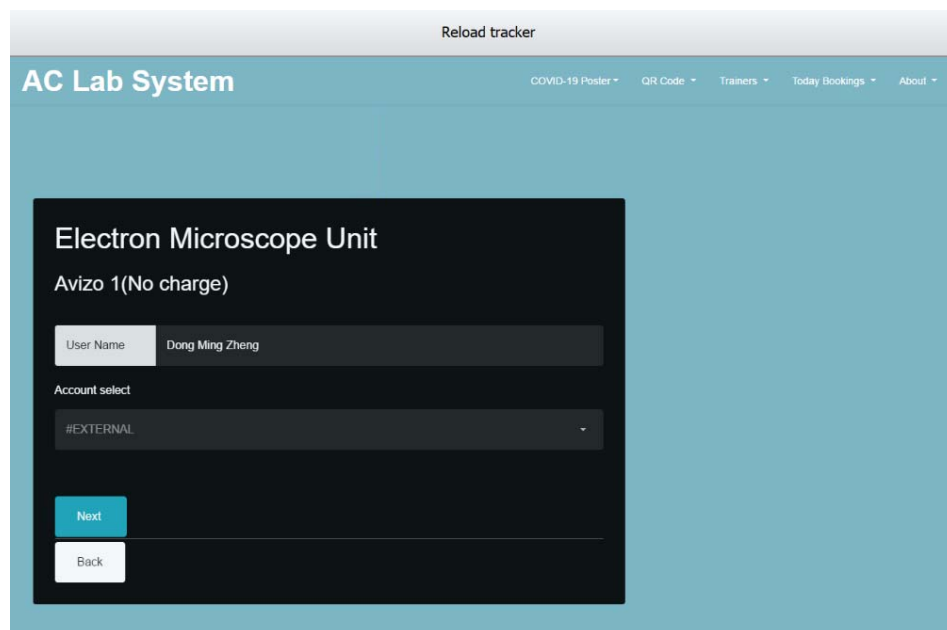
- Login process

Upon executing the tracker program, home page shows up as illustrated below. Home page indicates the following information:

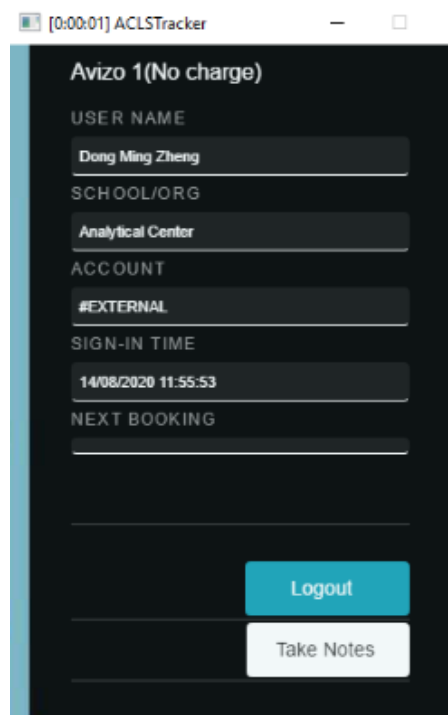
- Reload tracker: click Reload tracker button to refresh the home login page if you encounter any issues

- COVID-19 Poster: this is the default setting in ACLS resource manager. It can be customised by lab to set up different posters
- QR code: use mobile phone to scan QR code and access to resource dashboard
- Trainer: show the trainer contacts
- About: app name and version
- Lab name: ACLS Demo in the snapshot
- Resource name: 3D camera in the snapshot
- Last login: show last login user name, school or organisation name and login day timestamp

- Enter User ID and Password to sign in.
- Depending on the tracker settings in ACLS resource manager, you might need to select account or project to continue.

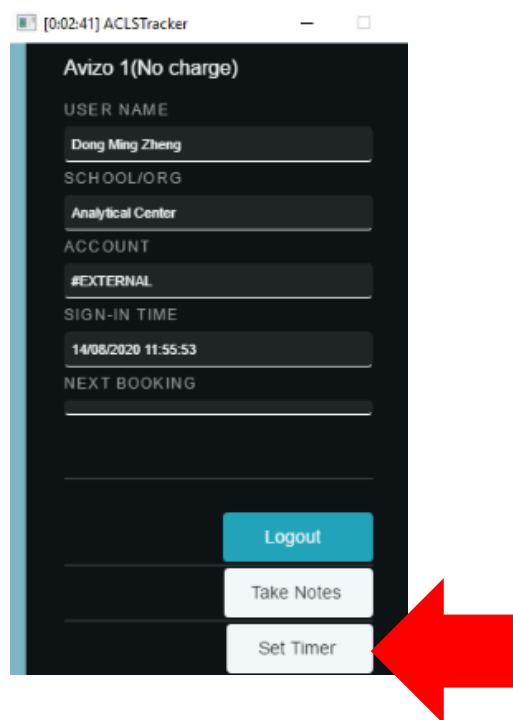


- Upon accepting the login, Tracker stays at the top corner of the right-hand side of the screen. Tracker shows the escaped time at the tracking app bar.

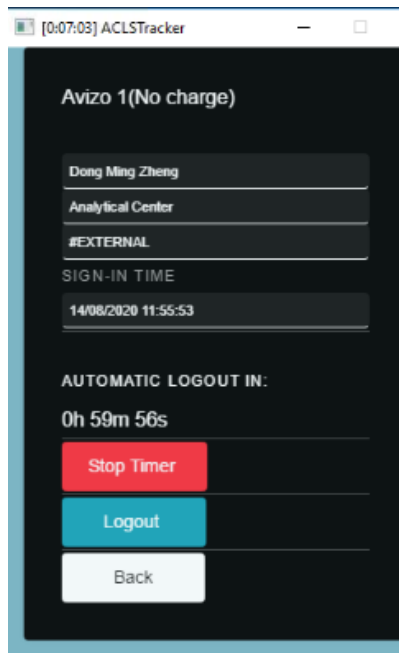
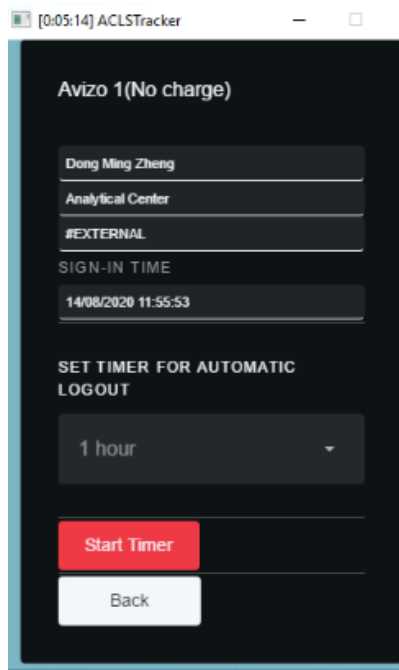


- **Logout timer (optional)**

A logout timer can be activated to logout the tracker automatically when timer runs out of the pre-set hours. It is featured to give the option control to the labs where instrument or equipment operation may need to end at midnight without the human interference.



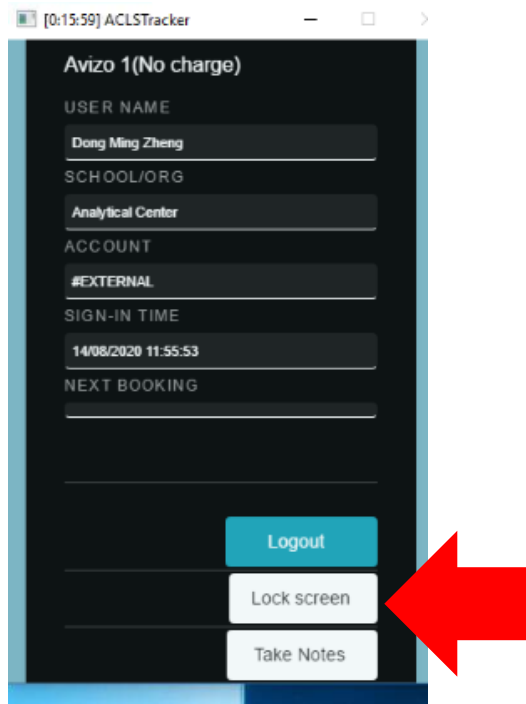
- Select the desired hours, and click 'Start Timer' to begin the countdown. Tracker logs out user automatically when countdown ends.



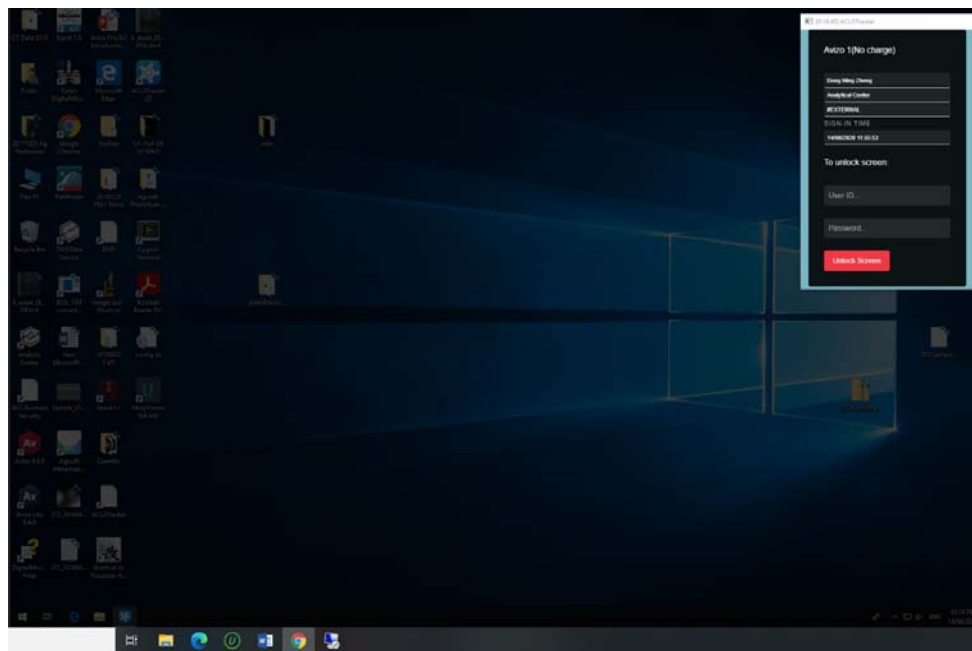
To stop timer, simply click on 'Stop Timer'.

- **Lock screen (optional)**

Lock-screen feature is available as an option. The lock screen is useful for staff and users to lock screen while they are away for lunch break or any other short break. Staff can unlock screen anytime no matter whoever login.



- Click Lock Screen to get the screen locked. The entire screen becomes semi-transparent in lock-screen mode.



- Record Notes

You can record and submit notes during an experiment by clicking the 'Note' button.

- Enter your experiment notes in the textbox provided, and click 'Submit' to save the notes.

Enter notes ...

Submit Notes

Close

The user can make simple notes by clicking the ‘Submit Notes’ button. Once the submit button is clicked the note will be submitted to the server, saved and available in ACLS web tracker notes.

- **Logging Out**

Once you are finished using the instrument, click the ‘Logout’ button to terminate the session.

The screenshot shows a window titled "[0:00:01] ACLSTracker". Inside, the header is "Avizo 1(No charge)". The form contains the following fields and buttons:

- USER NAME:
- SCHOOL/ORG:
- ACCOUNT:
- SIGN-IN TIME:
- NEXT BOOKING:
- Logout button (blue)
- Take Notes button (white)

3. Tracker Configuration in ACLS Web Portal

This is for lab admin or system administrator to set up. Login to ACLS, go to Resource Manager to edit the resource property.

The screenshot shows the configuration page for "Avizo 1(No charge)" in the ACLS Web Portal. The page has a tabbed interface with the following tabs: General Profile, Booking Profile, Lab Space, Catalogue Profile, Booking Form, Training Certificate, Trainer, Certified Users, Java Tracker, and Python Tracker. The "Python Tracker" tab is selected.

Resource	Avizo 1(No charge)
Host ID	da904634
ID Type	<input checked="" type="radio"/> Host ID
Block Hot-Keys	<input checked="" type="radio"/> Blocked
Block Task Manager	<input checked="" type="radio"/> Blocked <input type="radio"/> Unblocked
Enable Account/Project Selection	<input checked="" type="checkbox"/> (Enabled, users must select account/project on tracker login)
Enable Locking Screen	<input checked="" type="checkbox"/> (Enabled, lock screen feature is enabled so users can lock screen after tracker login)
Enable Auto-Logout	<input type="checkbox"/> (Disabled, auto-logout feature is disabled)
Allow Connection	<input checked="" type="checkbox"/>
Note	<input type="text"/>
Tracker Installation Status	Installed
Tracker Connection Status	Connected

Accept

The obsolete Java tracker is still on the page for information. The new tracker is configured with the Python tracker page. Here is the explanation of the configuration parameters.

- **Resource:** instrument or equipment name
- **Host ID:** it is auto-generated by system used for tracker connection, you can reset the ID if needed. However, if the tracker is already connected, ID reset will make the tracker disconnected.
- **ID Type:** fixed and not changeable
- **Block hotkeys:** block all the hotkey combination to stop users from bypassing the tracker login. However, this is only effective if the tracker runs on pc admin account on the instrument or equipment Windows pc.
- **Block task manager:** tick to block task manager on Windows pc when running Tracker on pc admin account.
- **Enable account/project selection:** tick to enable account/project selection if you simply use tracker to record instrument/equipment access, or/and safeguard the access.
- **Enable locking-screen:** tick to enable locking screen feature.
- **Enable auto-logout:** tick to enable auto-logout. This is different from the timer feature. Timer is controllable on site by staff and users. If auto-logout is turned on, tracker logout upon auto-logout timer countdown is over.

Enable Auto-Logout	<input checked="" type="checkbox"/> (Enabled, auto-logout feature is enabled, upon login, tracker logout automatically after pre-defined logout hours)
Auto-Logout Hours	2 ▾
Allow Connection	<input checked="" type="checkbox"/>
Note	
Tracker Installation Status	Installed
Tracker Connection Status	Connected

- **Enable Full-Screen Mode:** This option is enabled by default. If it is ticked, the tracker will be full screen on the login page and the user cannot bypass it. If it is

unticked, the user can freely bypass the tracker without logging in. You should only untick this if you plan on disabling the tracker temporarily.

- **Allow connection:** If you don't tick this checkbox, tracker connection would be declined.
- **Notes:** for admin use

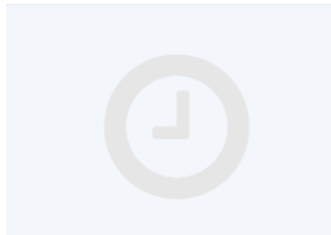
Since the tracker is web based, a web URL is available for demo purpose, or used for the other devices such as tablets. Please contact us for the further discussion if you want to run the tracker for the non-computerised equipment or tools.

Tracker installer	Please contact ACLS support team for ACLS tracker installer. ACLS tracker can be used to safeguard the equipment and resources. Tracker supports Windows, MAC and Linux OS.
Tracker demo	Tracker for 4000 QTRAP LC-MS (C27)
Important notes	Please do not sign in the tracker demo after you install the tracker onto this resource as your login/logout might be conflicted with the true login/logout on the tracker of the resource

- The tracker adds back the missing logout when the next user login. However, this might cause the incorrect usage time. For example, user A login at 12pm, then reboot pc when leaving without logout at 1pm. User B login at 3pm, tracker automatically adds the logout for user A at 3pm instead of 2pm.
- Connection logs are available for cross-check for the situation that users might reboot pc after usage and system logs the longer time session than the actual usage.

4. ACLS Tracker Status

You are able to check tracker status including installation status, connection status and IP address of the connected equipment/devices and tracker version.

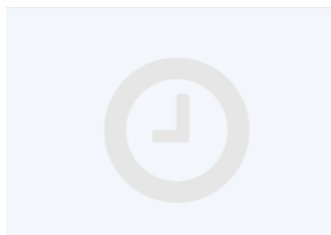


Resource Tracker Setting & Status

Resource	IP Address	Tracker Installation	Tracker Connection	Tracker Version
Avizo 1(No charge)	129.94.164.57	Installed	Connected	0.7
Avizo 2(No charge)	129.94.164.77	Installed	Connected	0.7
EPMA 8500	129.94.165.3	Installed	Connected	0.7
FIB Auriga	129.94.164.105	Installed	Connected	0.7
FIB Auriga - Oxford	129.94.165.77	Installed	Connected	0.7
FIB NanoLab	129.94.164.64	Installed	Connected	0.7
Leica Lift-Out	129.94.165.181	Installed	Connected	0.7

5. ACLS Poster

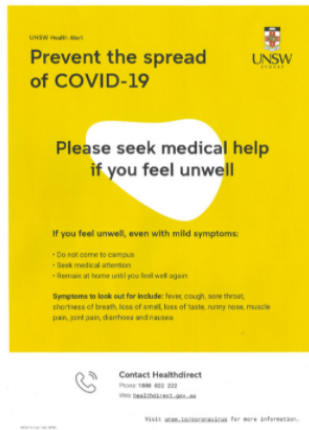
You are able to change poster menu and poster image at tracker status page.



Resource Tracker Setting & Status

Post Menu Name	COVID-19 Poster	(if you set to none, the poster menu is disabled on tracker menu)
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Accept



[Upload Poster Image \(.jpg\)](#)

6. ACLS Tracker Server

ACLS tracker server requires the special configuration with Abyss Web Server X2. ACLS tracker is web based and https connection on the separate port. Please contact ACLS team for assistance.

7. Automatically setting up user folders with ACLS Tracker

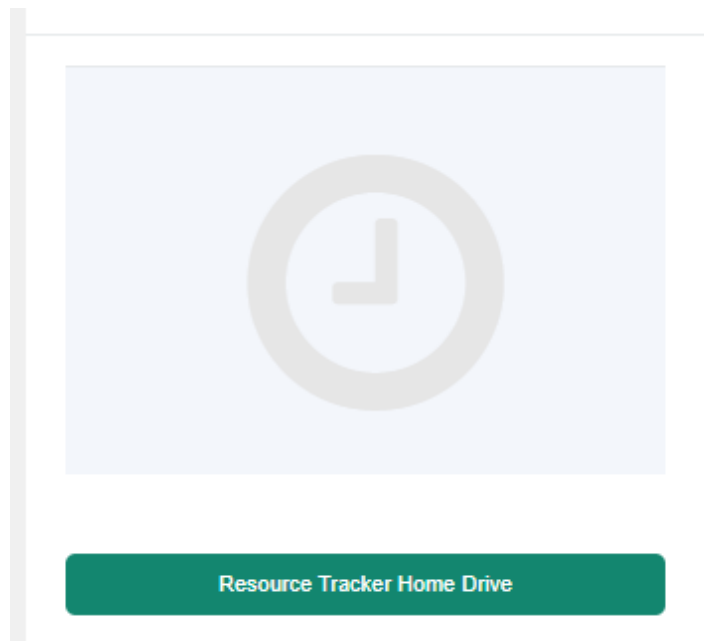
ACLS Tracker can automatically create folders for each user that logs onto the lab computer. The user can store their files in the folder designated for them.

To enable folder creation:

1. Log into ACLS
2. Navigate to Staff, then System Settings, then “User Data Folder Setting (Tracker)” in the bottom right corner
3. Tick “Create user folder” and press save.

After these steps, you will need to set up a default directory for the user folders to reside in.

1. Log into ACLS
2. Navigate to Staff, then Utilities -> Resources, then “Resource Tracker Home Drive” at the bottom

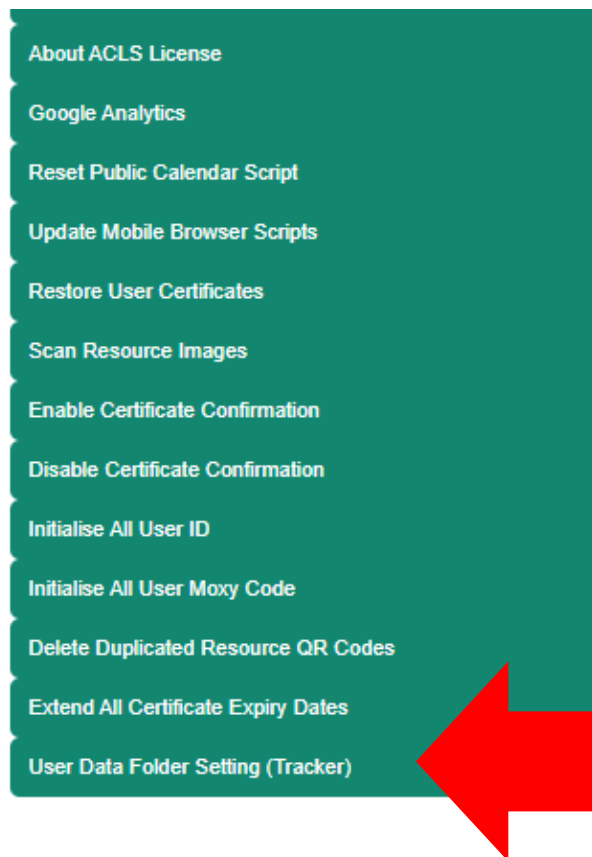


3. A list of resources will be displayed. For each resource, you must input a directory that will contain all the user folders. This directory will be created on the resource computer. The director can be local folders or on networked drives.

For example, to have all the user folders placed into the data drive, input “D:\”.

Resource	Home Drive Folder
Avizo 1(No charge)	<input type="text" value="D:\"/>
Avizo 2(No charge)	<input type="text" value="D:\users"/>

4. System admin will need to select a naming format for the user folder on System Settings -> Configure System -> User Folder Setting (Tracker). The green button on the right.



There are three options available:

- “User name” will create folders based on the user’s first and last name
- “Login name” will create folders based on the user’s login e.g their zid
- “Alias” will create folders based on their provided alias, if it is registered in ACLS.

User Data Folder Settings

- The settings work with ACLS tracker only
- This feature helps to create the standard format user data folder on resource/instrument computers according to the defined format
- Admin could view all the user folders on the targeted drive on resource/instrument computers

Create user data folder	<input checked="" type="checkbox"/> (tick to enable)
Select user data folder name format	<input type="radio"/> user name <input checked="" type="radio"/> login name <input type="radio"/> Alias

Save

5. Press Save to accept the changes

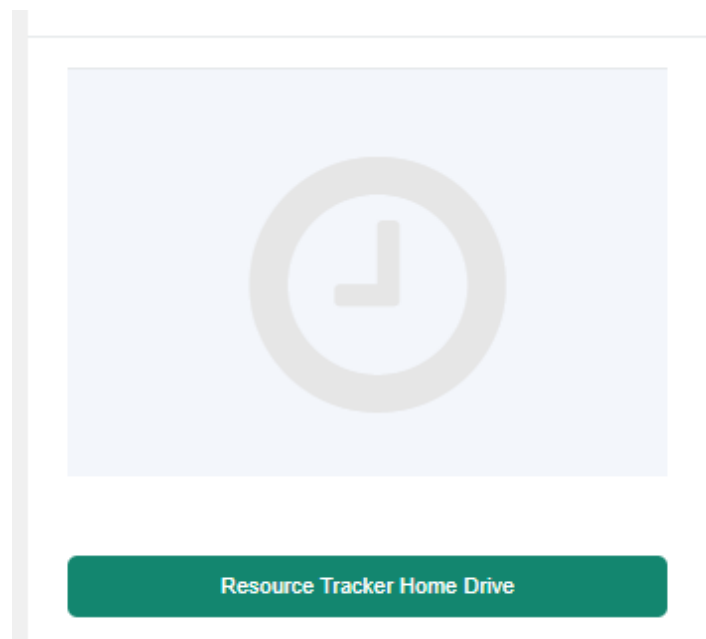
After these steps, ACLS Tracker will automatically create user folders for users to store their data in.

8. ACLS Sensor: keeping track of user folders

If automatic folder creation is enabled (see previous section), then the ACLS Sensor feature can be enabled in order to keep track of user folders. The folders are regularly scanned by ACLS Sensor to keep track of how large they are. This information is uploaded to the ACLS website, allowing you to keep track of disk usage on each lab computer.

To enable ACLS Sensor:

1. Log into ACLS
2. Navigate to Staff, then Utilities -> Resources, then “Resource Tracker Home Drive” at the bottom



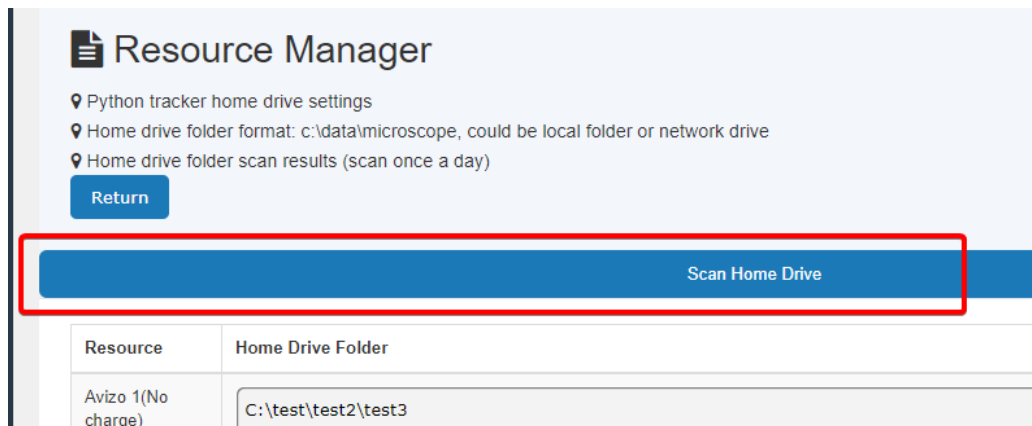
3. For each resources that you want this feature enabled on, tick “Scan user data folder”

Scan Home Drive	...
<input checked="" type="checkbox"/>	Accept

4. Press Accept

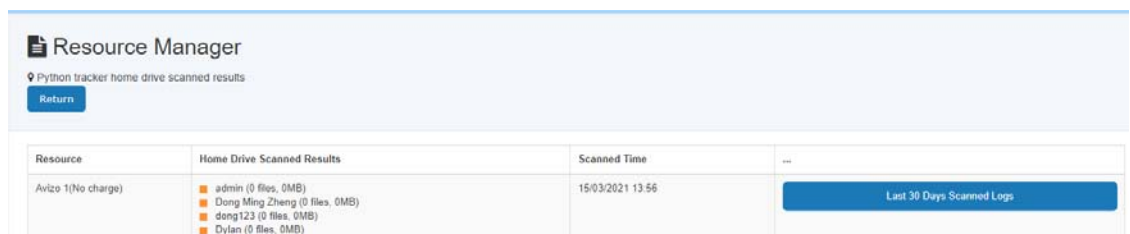
ACLS Sensor scans once every 24 hours. The scan takes place overnight.

To view scan results, press “Scan Home Drive” on the Resource Tracker Home Drive page.



This will take you to a page showing:

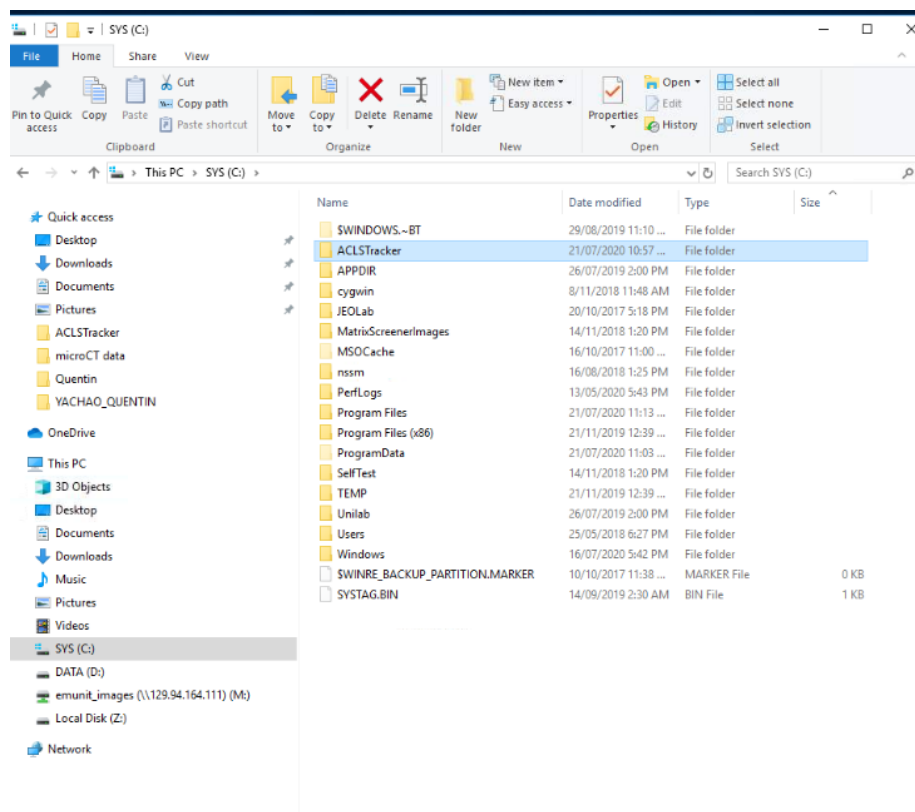
- User folders
- The size of each user folder
- The number of files in each user folders
- Scan time
- Last 30 days scan logs: By clicking this button, you will see a list of all scans in the last 30 days.

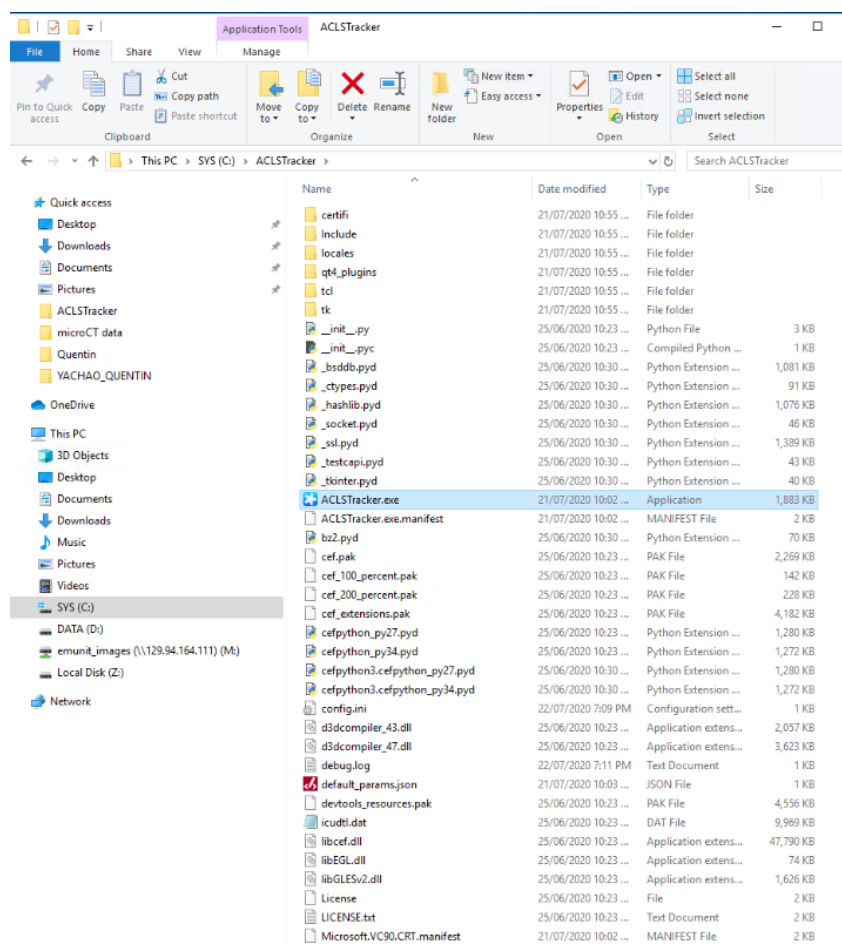


9. ACLS Tracker Installation: Windows XP/7/8/10

ACLS tracker can be downloaded with the dedicated download link provided by ACLS team. Please contact ACLS team if you want to try out.

- Upon download, unzip the package, Copy ACLSTracker to System Drive C. The new python tracker does not require installation, it simply double click and run.





- Create a shortcut to the desktop

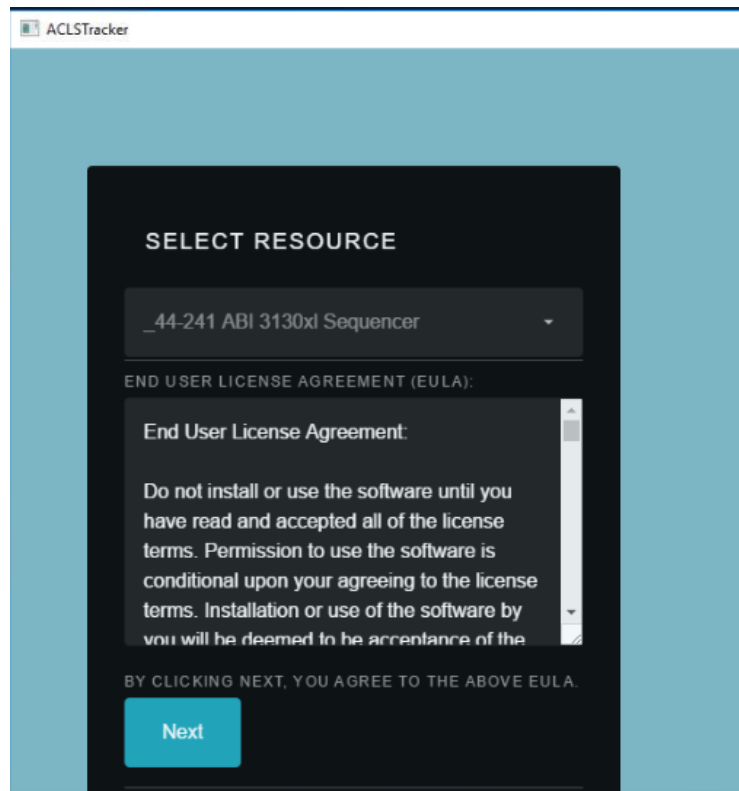


- Set up ACLS tracker as the startup program app.
 1. Press START + R to open the Windows Run window.
 2. Type in “shell:startup” and press OK.

3. Copy the desktop shortcut and paste it in this folder.

This will make the computer run ACLS Tracker automatically every time it turns on.

- For the first time run, tracker brings up the resource selection page, simply select and save the selection, and close the tracker. If the resource is not listed, you need to go to ACLS web portal to check the resource tracker settings s described in the Tracker Configuration chapter.



- Tracker is ready to run.

10. Disable Task Manager for Windows 7 and Windows 10

The tracker needs administrator rights to disable the task manager on Windows 7 and Windows 10. Instead, you can manually disable it by following these instructions.

1. Press WINDOWS key and R (WIN+R) to open the Run window.

2. Type in regedit.exe and press OK.
3. Click and expand the folder named 'HKEY_CURRENT_USER'.
4. Click and expand the folder named 'Software'.
5. Click and expand the folder named 'Microsoft'.
6. Click and expand the folder named 'Windows'.
7. Click and expand the folder named 'CurrentVersion'.
8. Click and expand the folder named 'Policies'.
9. Click and expand the folder named 'System'.
10. On the right panel, double click 'DisableTaskMgr' and change the value data from 0 to 1. Press OK.

NOTE: If there is no 'DisableTaskMgr' in the right panel, then follow these steps:

1. Right click an empty space in the right panel.
2. Select New > DWORD.
3. Give it the name DisableTaskMgr.

To re-enable task manager, follow the above steps but in step 10, change the value data from 1 to 0 instead.

11. Frequently Asked Questions

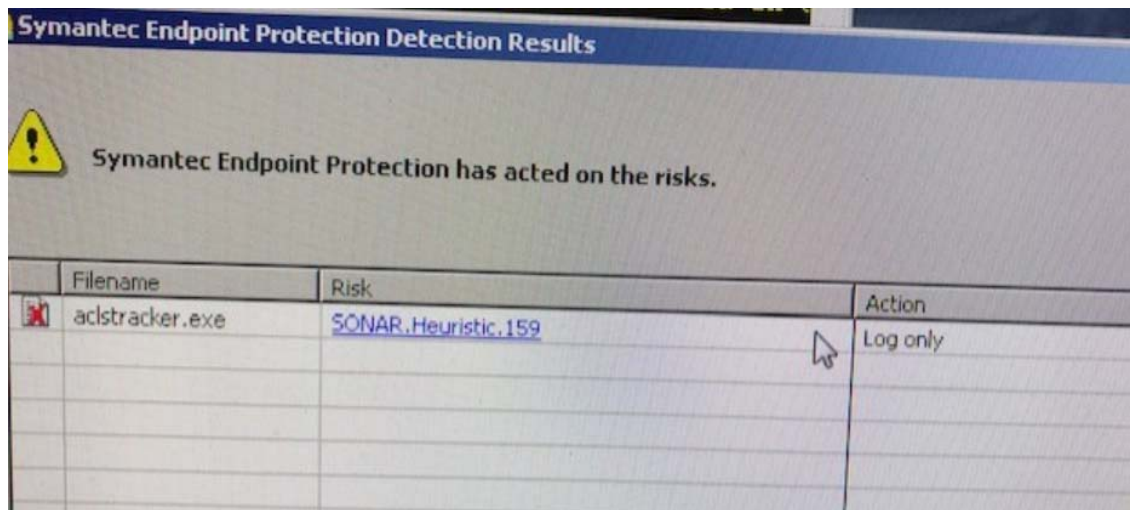
[Tracker can't connect to the ACLS tracker server, why?](#)

Answer:

There are a number of causes for that as followings:

- o Loss of network
- o ACLS server down
- o ACLS server reject tracker request due to the wrong Host ID setting in tracker configuration file
- o Firewall of network

[My antivirus software says the tracker is a virus.](#)



Answer:

This is an uncommon false positive on some machines, caused by the compilation process. You will need to add aclstracker.exe to an exception list.

For technical details for why this happens, refer the following link about PyInstaller, the compiler used by this application:

<https://github.com/pyinstaller/pyinstaller/issues/2501>

The Task Manager isn't disabled even though I chose that option.

Answer:

See Section: 'Disable Task Manager for Windows 7 and Windows 10'

12. ACLS Tracker for Linux

ACLS Tracker is available to run on Linux platforms such as Ubuntu and CentOS. Please contact the ACLS team if you would like to inquire about specific Linux platforms.

The Linux tracker supports the main ACLS Tracker functionality of logging in and tracking login time.

The Linux Tracker does not support the following advanced features:

- Automatic network drive mounting
- Hotkey blocking
- Automated folder creation and ACLS Sensor functionality

ACLS Tracker Installation: CentOS 7

ACLS tracker can be downloaded with the dedicated download link provided by ACLS team. Please contact the ACLS team for a download link at acls.analytical@unsw.edu.au

- Place the application folder in the home directory (/home/[user])
- Open the terminal
- This step will add a desktop launcher for ACLS Tracker.
Type and run “sudo nano /home/[user]/Desktop/ACLSTracker.desktop”, substituting [user] with the user of your account.
In the text editor that appears, type in the following bolded block. Substitute [user] with the user of your account. When you finish, save the file by pressing CTRL+O and then enter. Then exit by typing CTRL+X.
[Desktop Entry]
Type=Application
Name=ACLS Tracker
Icon=/home/[user]/ACLSTracker-0.8.3-CentOS7/icon.png
Exec=/home/[user]/ACLSTracker-0.8.3-CentOS7/ACLSTracker
- Run the desktop launcher at least once, and select Trust so that the launcher will be usable. If the application fails to launch, see the troubleshooting section.
- This step will make ACLS Tracker launch automatically on login, so it can be skipped if it is not required.
Type and run “sudo nano /etc/xdg/autostart/ACLSTracker.desktop”.
In the text editor that appears, type in the following bolded block. Substitute [user] with the user of your account. When you finish, save the file by pressing CTRL+O and then enter. Then exit by typing CTRL+X.

[Desktop Entry]
Type=Application
Name=ACLS Tracker

Icon=/home/[user]/ACLSTracker-0.8.3-CentOS7/icon.png
Exec=/home/[user]/ACLSTracker-0.8.3-CentOS7/ACLSTracker
X-GNOME-Autostart-enabled=true

Troubleshooting (Linux)

Confirm the tracker is compatible with the operating system by manually running it. This can be done by opening a terminal and running “/home/[user]/ACLSTracker-0.8.3-CentOS7/ACLSTracker”.

If the tracker is able to run manually, then ensure the [Desktop Entry] files are formatted correctly.

If the tracker does not run manually, then the Linux system may not have the correct package prerequisites. These prerequisites are met by most Linux distributions, but some systems may not meet requirements.

One required package is libXScrnSaver. This is a small utility package with few requirements and it comes preinstalled on most Linux systems, so it should not cause any disruption to existing systems. It can be installed through a package manager e.g On CentOS, type and run “sudo yum install -y libXScrnSaver”.