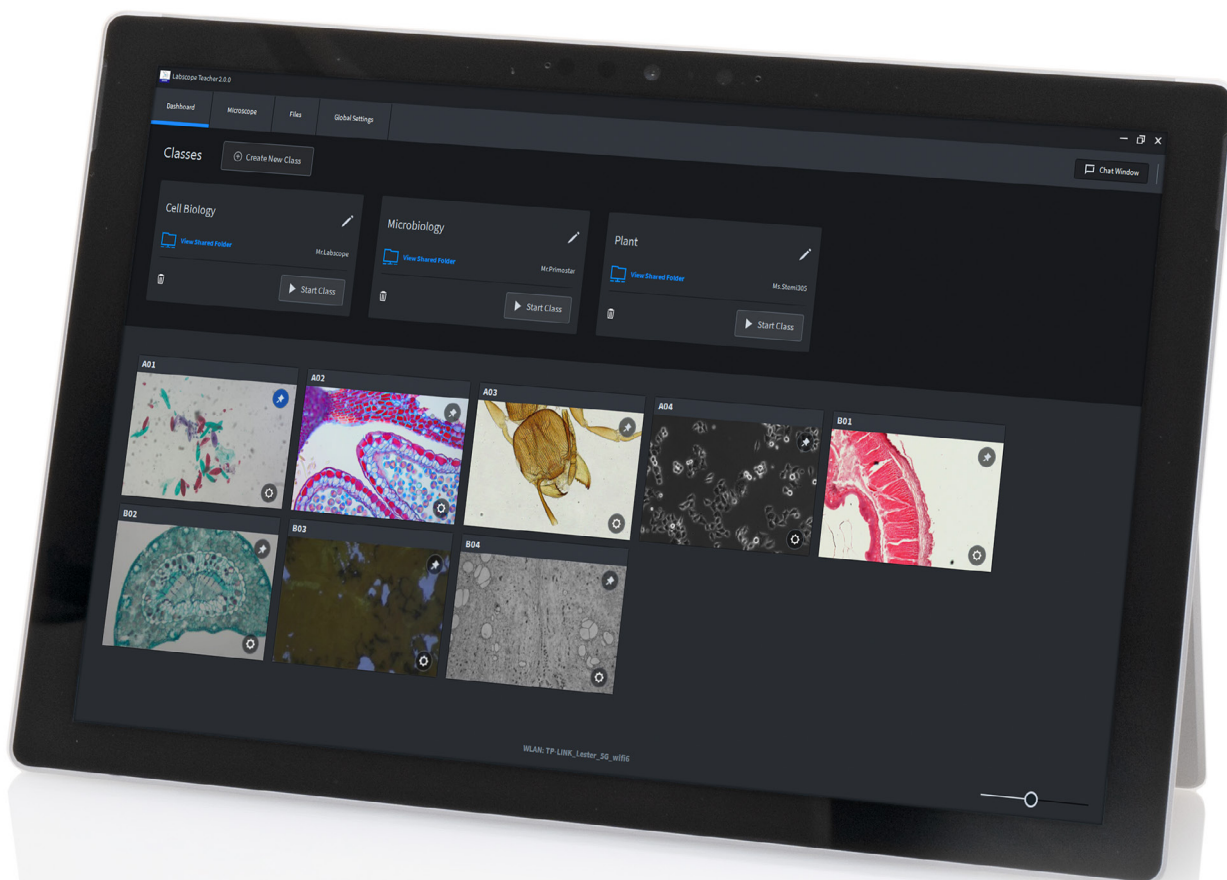# ZEISS Labscope Teacher
Quick Guide

Seeing beyond

About ZEISS Labscope Teacher

Labscope Teacher is a licensed server software for ZEISS Digital Microscopy Classroom management and interactive teaching and learning, it provides the following features:

- Broadcast of teacher's microscope view to students in real time
- Chat function including text and emojis
- Shared class folders for easy file sharing and storage
- Students can use any iOS, Android or Windows device to participate in class
- The very similar GUI to students' software provides a seamless knowledge sharing for all software operations.
- Simple preparation and easy to start and join a class
- Overview of microscopes, thumbnails and students' info all together

System requirements and hardware compatibility

| System requirements	
System requirements	Labscope Teacher 2
Operating system	Windows 11 64-bit, Windows 10 64-bit
Minimum hardware	CPU: i5 (10th generation) Hexa-core @ 3.0 GHz RAM: 16 GB GPU: GTX980Ti (6 GB) or above Network interface: Gigabit wired network card Hard disk: SSD 2 TB or above
Recommended hardware	CPU: i7 (10th generation) Octa-core @ 4.0 GHz or above RAM: 32 GB or above GPU: RTX3060Ti (8 GB) or above Network interface: 2.5 Gigabit wired network card Hard disk: SSD 4 TB or above
Compatible ZEISS microscopes	Primostar 3 HD, Primo Star HD, Primotech, Primovert HD, Stemi 305 cam, Axioscope 5/7/vario, Axiolab 5 and Axiovert 5
Compatible ZEISS cameras	Axiocam ERc 5s, Axiocam 202 mono and Axiocam 208 color
Languages	English, Czech, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian, Simplified Chinese, Spanish

Installation

The Labscope Teacher installation consists of two parts: the Server Part and the teacher Client Part. You can choose "full installation" on the same PC/laptop. And this type of installation is for the case that a few teachers are sharing one PC/laptop for the digital classroom.

Or install the Server Part on a PC and the teacher Client Part on each teacher's laptop. Such split installation supports the case when each teacher brings their individual Laptops to have class each time.

The license must be activated via the license management tool on the Server Part of the PC/laptop. And the teacher Client Part does not require a license. Please see in the next chapter: Activate a license for Labscope Teacher.

Please go through the installation wizard, and during the installation, it will pop up a few windows for confirming the ZEISS Axiocam driver installation.

After a successful installation, you will see two icons on your desktop, LabscopeTeacherClient and ServiceConfigTool:
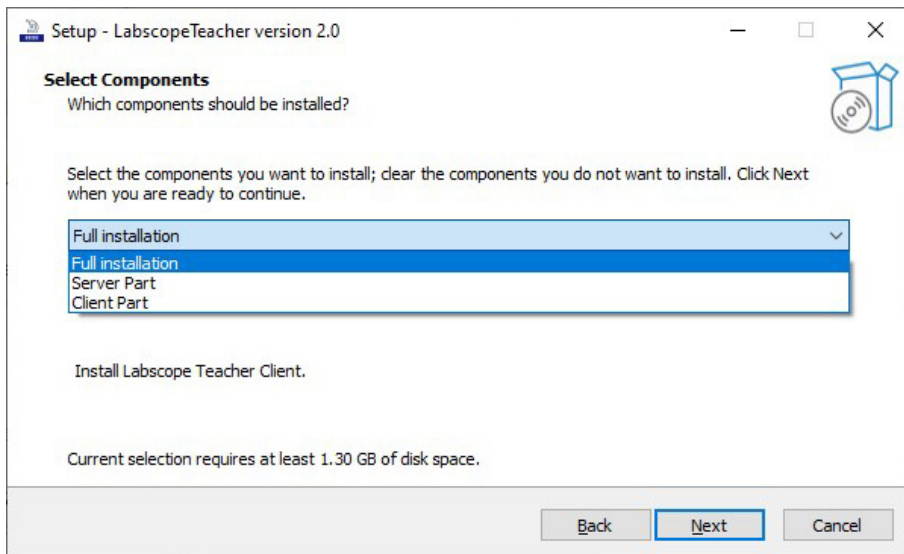
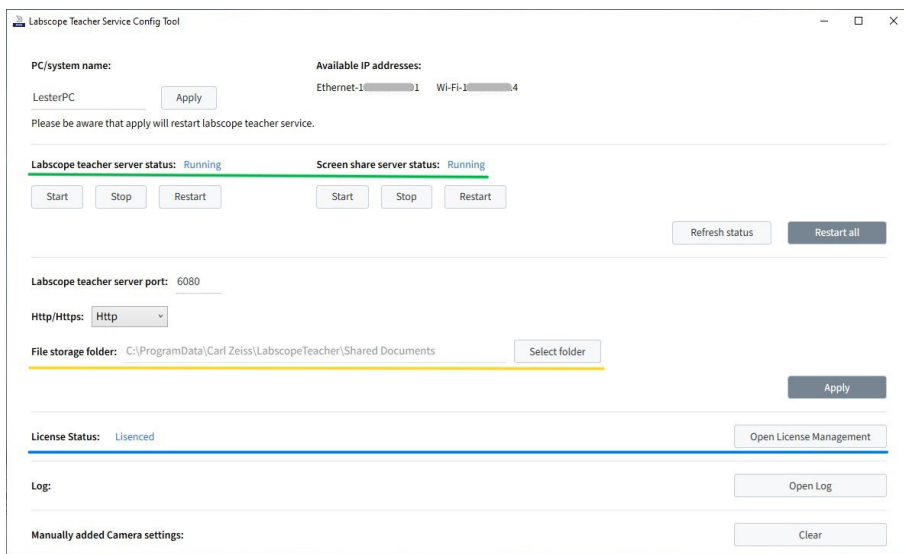*Screenshot of Labscope Teacher installation selections*

Check server status, configure shared folder, and activate a license. Please note this chapter is only mostly needed to be checked and configured for the 1st time right after installation.
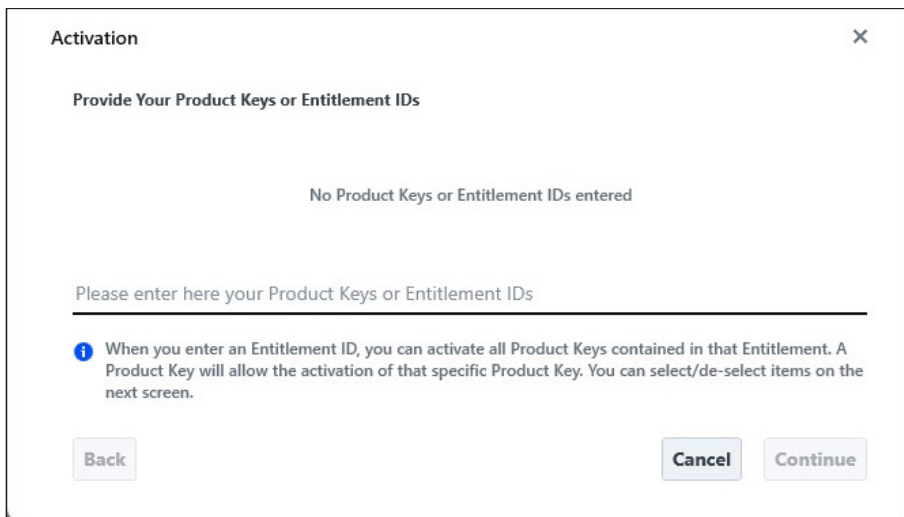
Open the ServiceConfigTool.exe. You'll see the server status, marked with green line in the right screenshot, and you can click on "start" if it is not running.

And you can choose a different storage folder path for Shared Class Folders, marked with yellow line, and the path can be on this server PC / laptop hard drive disks, or on a network drive.

Screenshot of Labscope Teacher Service Config Tool

As indicated with the blue line in above screenshot, it is to reflect the license status or to activate a license. Click on "Open License Management", then another tool ZEISS License Management Tool will pop up. When this Labscope Teacher server PC / laptop has an internet connection, you can click on "Activate", then input your Product Key (License Key) of Labscope Teacher and activate it on this PC / laptop.

Screenshot of activate a license through License Management Tool

After the activation succeed, you need close the ServiceConfigTool and open it again to check the license status. Please note, the "start class" will not function when the server PC/laptop has not a valid license or trial license.

Create a class
Open LabscopeTeacherClient.exe.
In the Dashboard, you will see Classes and all available microscopes automatically discovered in the current network.
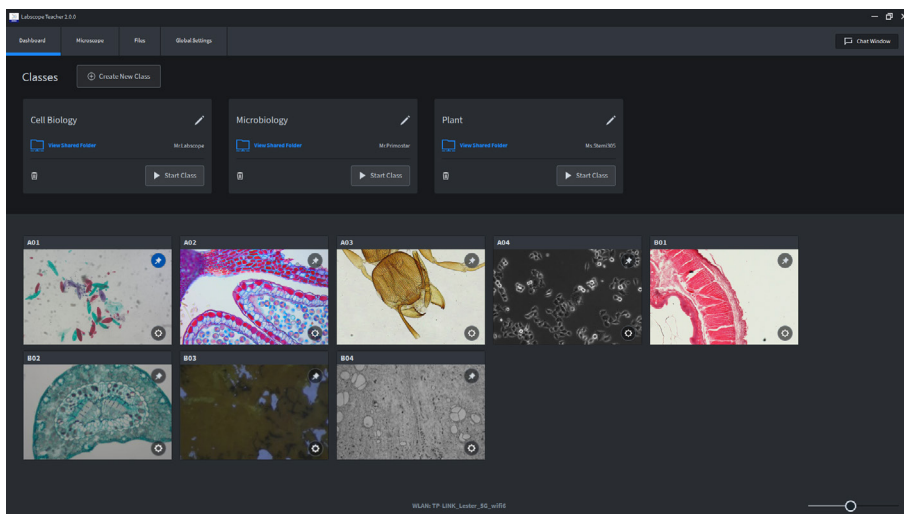
Click on "Create New Class" and input necessary information. You could create multiple classes.

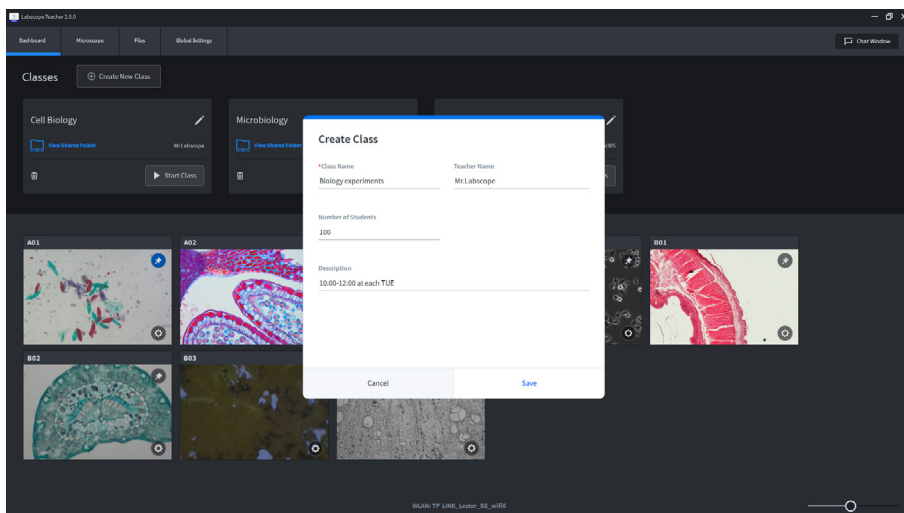**Start a class and students join the class**
Preparations: please make sure all microscopes and Labscope devices for teacher and students are connected. Each microscope has a label with a sequential numbering, like A01-A10; B01-B10; etc. And those microscope names have been configured through Labscope Microscope Configuration Settings.

Screenshot of Dashboard of Labscope Teacher

Screenshot of Create Class

Students' Labscope on tablets/mobiles/ laptops have activated the free module in Global Settings, module manager: "Connect to Labscope Teacher", and need a restart of Labscope to apply the change.
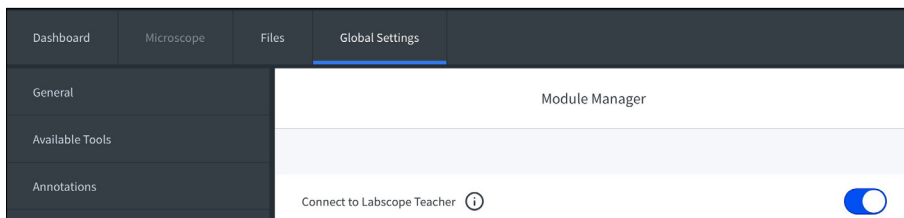

Screenshot of students' Labscope module manager, example from iPad

Teacher clicks on "Start Class" from Labscope Teacher Dashboard.
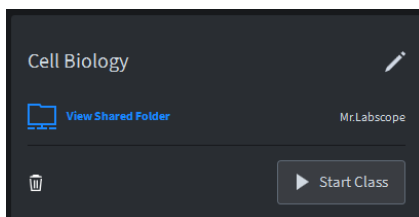

Screenshot of Start Class in Dashboard

Students will receive a notification with name input option for joining the class.

And for the 1st time of joining a class, students need to click on the "star" icon to apply the class joining. This is to mark the correlation between the specific Labscope device and the microscope.
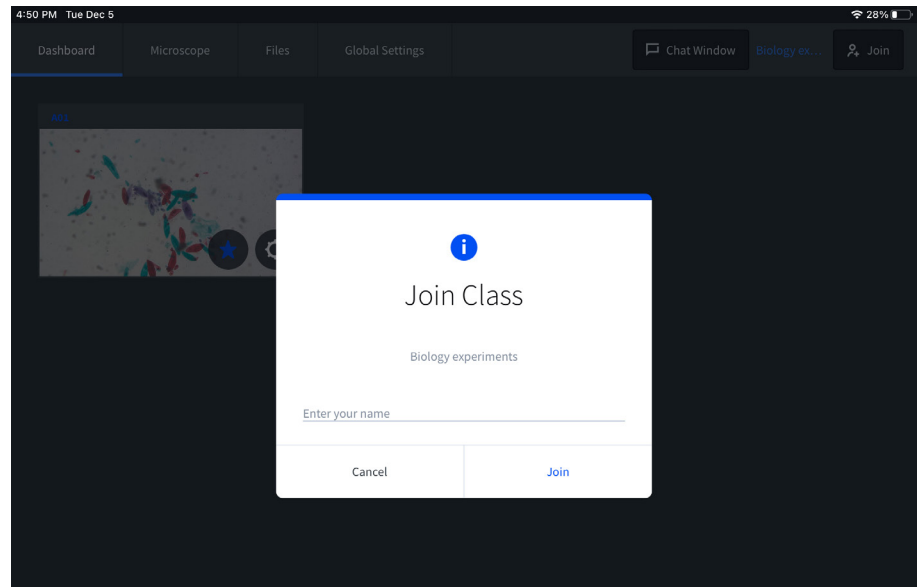

Screenshot of Join Class from students' Labscope, example from iPad

For students who come later or exit in the middle of the class, they could click on the "Join" button to manually join the running class again.
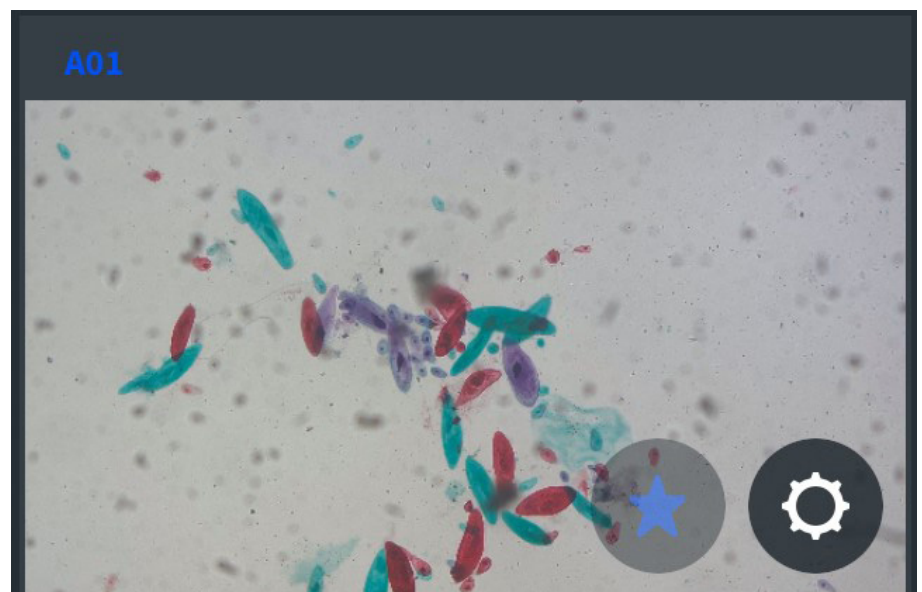
Screenshot of "Star" icon for choosing students' individual microscope.

After students joined the class, teacher would be able to see how many students have joined and see the microscope name has a suffix with students' input names. Now teacher gets a clear overview of all joined students, also with their individual microscope thumbnails.
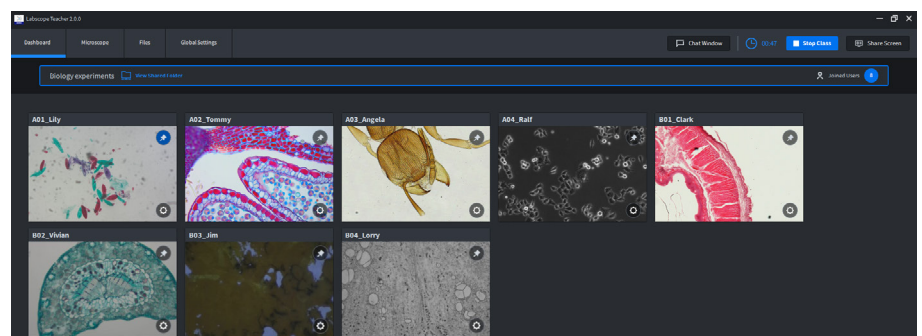
Screenshot of Labscope Teacher with joined students and all thumbnail overview

Interactive functions

1) Overview of joined users with mic thumbnail

Teacher will have an overview in dashboard to see how many students have joined, who is on which microscope and on which sample slide in thumbnail. This provides the central overview to teacher so that all the status are known. Whenever a student exits the class or the app, teacher would be able to see from the dashboard.

If there are two or more students are sharing one microscope, there will be two or more usernames behind the microscope name.
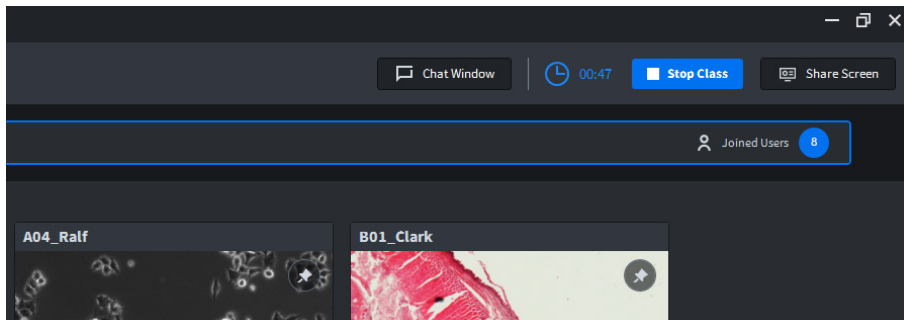

Screenshot of Overview of joined users with microscope thumbnails

2) Screen share

By clicking on "Share Screen", your complete Labscope Teacher PC/laptop screen will broadcast to all joined students Labscope devices, no matter they are mobiles, tablets, or laptops. No matter in any microscopy live view, image view, doing annotations, reporting, or showing a video or learning materials like PowerPoint, students can always follow clearly on their devices in front of them. This provides the very flexible way for delivering the teaching contents, and help students focus on the teaching and demo part.
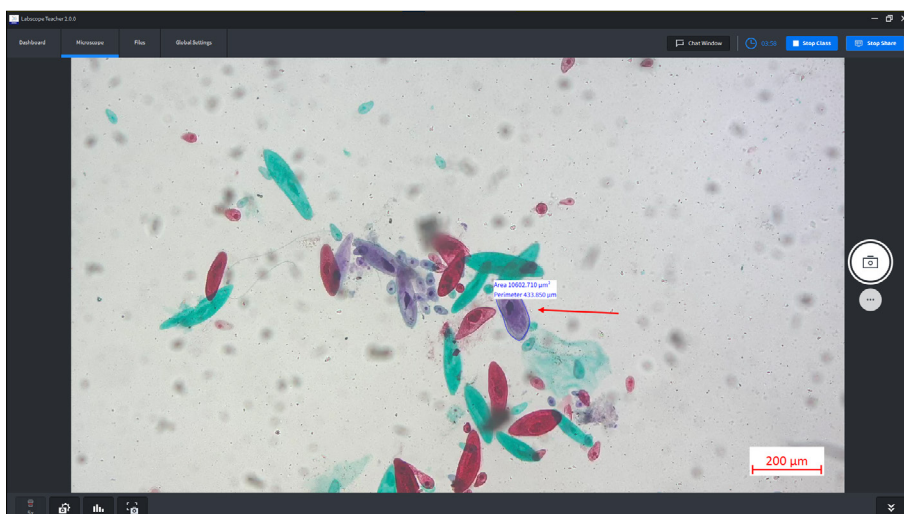

Screenshot of Labscope Teacher view when teacher is sharing
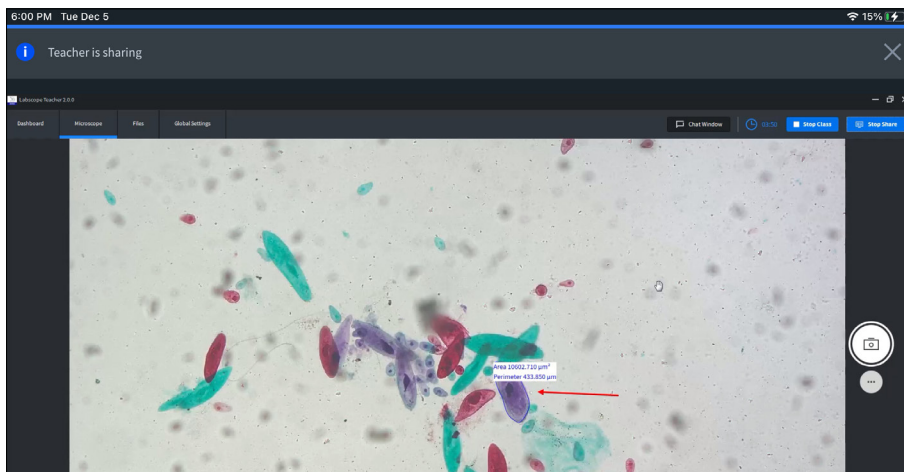
Screenshot of Students' Labscope view by following teacher's sharing

6

3) Class chat

Collect and answer questions easily in Class Chat function. No need to be distracted anymore by jumping questions one after another, just collect questions or even leave them task notes in Class Chat. After the class is finished, the current class chat history will be cleared automatically.
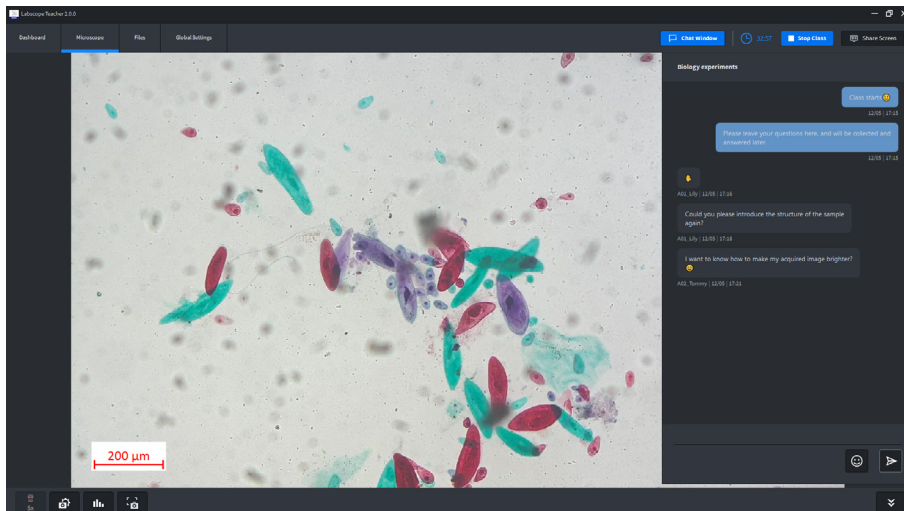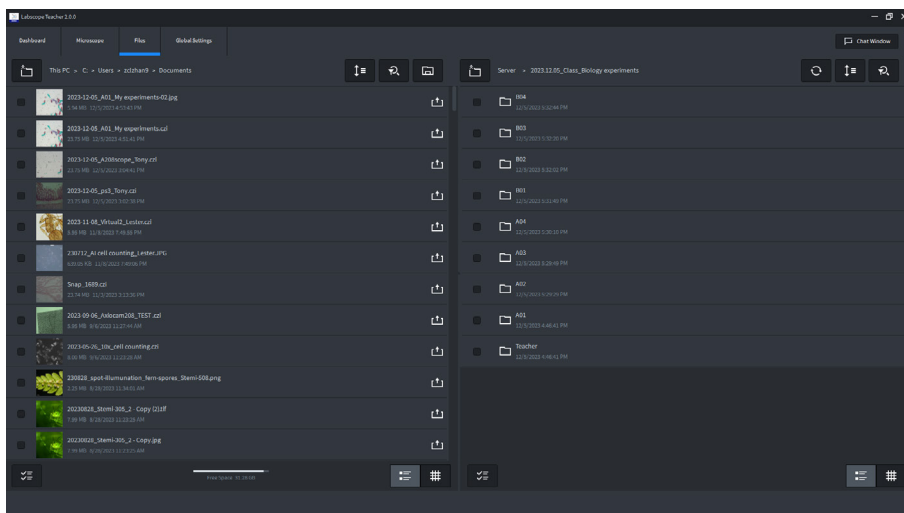

Screenshot of Class Chat

4) Files upload, download and sharing

Automatically created class shared folders are quite convenient for sharing any files. Teacher can check students' upload images, videos or other files immediately after uploading to the shared folder. Teacher can also put early prepared class materials in class shared folder, so that students can check them during the class. It supports also users' own customized sub folders, change the class shared folder path to other disk or even network drive. When enter the Files tab, Teacher and students will all see the same structure, see below screenshot, left side is the local PC/laptop/mobile/ tablet storage where each snapped image is saved. Right side is the shared folder from server PC or network drive, please see the chapter of configuring the shared folder. And the shared folders are automatically created when you start a class, the root folders will have the names of "Date_Class_Classname xxx", and the subfolders will be the microscope names and a teacher's folder.

For the files in Teacher's folder, teacher has full permission to upload, download, and delete. Students can only view or download the files, cannot upload, or delete.

Screenshot of Class Shared Folder structures
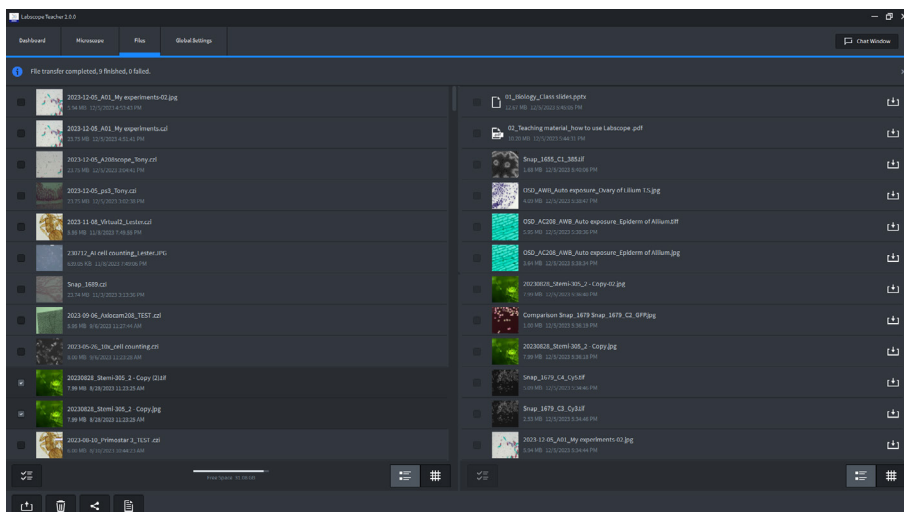
Screenshot of file transferring and sharing

For the files inside each folder with microscope names, all users have same full permission to access, upload, download and delete those files.
For the folder level, teacher can delete shared folders and subfolders from Labscope; but students cannot delete shared folders and subfolders.

Whenever teacher and students uploaded their images, pdf reports, or other format files, the other users can refresh and see the changes. The images can be viewed directly from the shared folder, and other files formats may ask for a download then user can check it from local storage.

In the Labscope Teacher Settings from global settings, you will see the displayed shared class folder path of the server PC.

Screenshot of shared class folder path display

So, additionally, you can go to the server PC's relevant path and manage all files through Windows File Explorer.
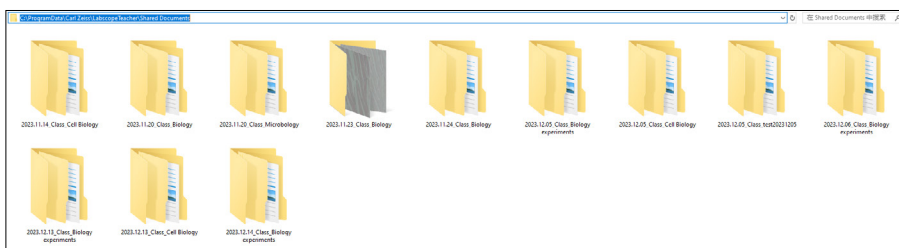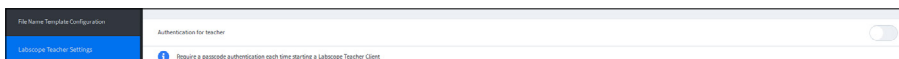

Screenshot of opening the shared class folder via File explorer

5) Others

5.1) Authentication for Labscope Teacher clients.
For data security reasons, you have the option to set a 4-digit pin password for opening Labscope Teacher. It can be set from Global Settings >> Labscope Teacher Settings.


Screenshot of authentication setting in Labscope Teacher settings

When a password is set, people who attempt to open Labscope Teacher Client would require the authentication. Please remember the password carefully, If the password is forgot, you need to consult with ZEISS service to get a universal password.

5.2) Customize your shared folders.
Besides the way of choosing a different shared folder storage path, you can also go to the file explorer and create additional shared sub-folders. E.g.: Class slides; Quiz files, etc.
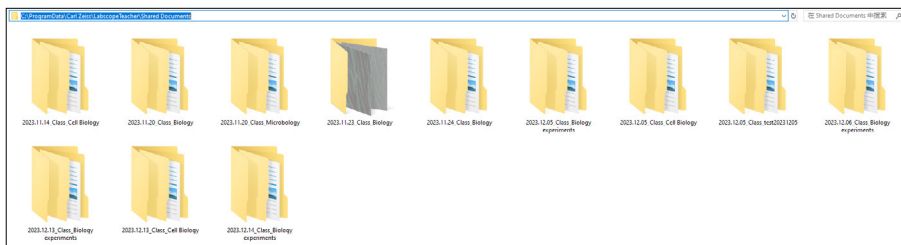
Screenshot of manually creating folders

Then teacher and students would be able to see and use the manually created folders. You can store dedicated materials or let students do additional tasks and submit accordingly.
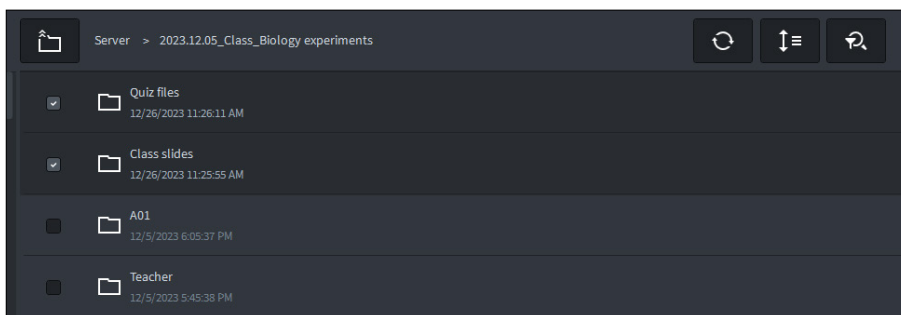
Screenshot of viewing the created folders)

FAQ

1. How to solve when the Labscope Teacher server is not running?

Try to reboot the server PC / laptop; or in the service of Windows task manager, try to manually start the LabscopeTeacherService. If it is still failed, please try to reinstall Labscope Teacher or call for a service ticket.

2. How to solve when Labscope Teacher Client and student Labscope cannot find the server?

Please firstly check whether the Labscope Teacher server is running via Labscope Teacher Service Config Tool. If it is running, check whether the Teacher Client or students Labscope are connected to the same network of the server PC.

If they are in different VLan or Subnets, teacher would need to manually input the server PC's IP address into the Labscope Teacher Settings from Global Settings. Students would also need to do the same step in "Connect to Labscope Teacher" from Global Settings. And this only needs to be done for the 1st time.

3. How to solve when no microscopes have been found in Labscope Teacher and students Labscope?

When the microscopes are set to different VLan or subnets to the Labscope and Labscope Teacher devices, users would need to manually add microscopes into Labscope. Here are the steps:

For Labscope Teacher, activate the option of "Microscopes can be manually added" in General of Global Settings, then in the Dashboard, click on the "Manually Add Microscope" and then you can add one by one or a batch import from the displayed csv template.

For Students' Labscope, after the Labscope Teacher has added all microscopes, open students' Labscope and click on "Get" the microscope list from Labscope teacher, in Global Settings >> Connect to Labscope Teacher. Then student will connect to all the same microscopes as Labscope Teacher. And student can then choose a "star" microscope from Dashboard.

4. How to start two classes at same time in one classroom?

For such case that one room might be divided by two at sometime and have two classes running in parallel, two server PCs are required. Therefore, you will need two server PCs plus two available Labscope Teacher licenses. And you can set two different server names respectively during the installation wizard, or via the Labscope Teacher Service Config Tool, then when the students Labscope devices are connected to the network, they can switch between connecting to one of the server for their respective class.

Another way is to set two different VLANs for these two separate rooms, and when you want to have big class for these two separate rooms together, use the "Manually Add Microscope" function, see FAQ 3).

5. How to switch the connection to another server or another IP address?

In Global settings, Labscope Teacher settings or the setting of "Connect to Labscope Teacher" for students, clear the existing IP address, and then restart Labscope Teacher and Students' Labscope, then it will re-discover the server automatically.

6. How to have two class folders for one same class topic which will happen in one day?

You can create two classes, e.g. Biology morning session, and Biology afternoon session, then two different class folders will be generated automatically after starting the classes.

7. How to let students copy their images and reports to their own devices and to be used for their homework after the class?

There are multiple ways to achieve this: Use the Labscope's share function based on tablet or mobile's function or other apps, e.g. Share via Airdrop, share via email, social media apps, etc. to their own devices.

Or, all students upload their files to the Class Shared folder, if it is a network drive, then they can visit and download after class. If it is a local drive, then can ask class representatives to copy the folders to external hard drive disks and deliver to relevant students after class.

Or, students can install a Labscope on their own mobile, connect to the classroom network and snap or download the images to their own device.

8. Can Labscope Teacher have a remote class that teacher and students are in different locations?

You will need additional tools like some remote desktop control tools or online meeting tools to implement such remote class with Labscope Teacher and Students' Labscope.

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