

Version 2 Updated 4/23/2024

This document is meant as a guide to club officials to add their events to Livelox. This should be taken as "best practices" as there are multiple ways to accomplish the same task. I intend to update this as Livelox releases new features, and as OUSA uses the service more and we find better ways to do things.

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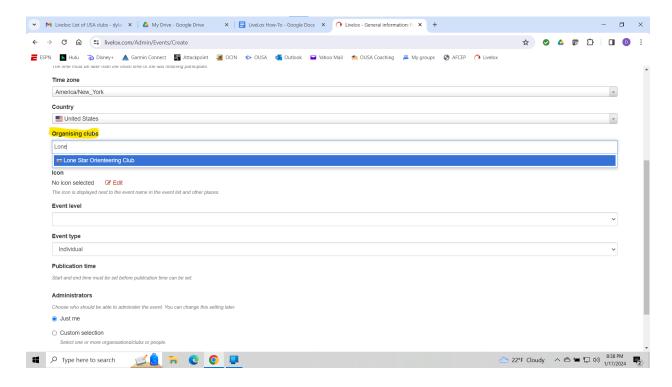
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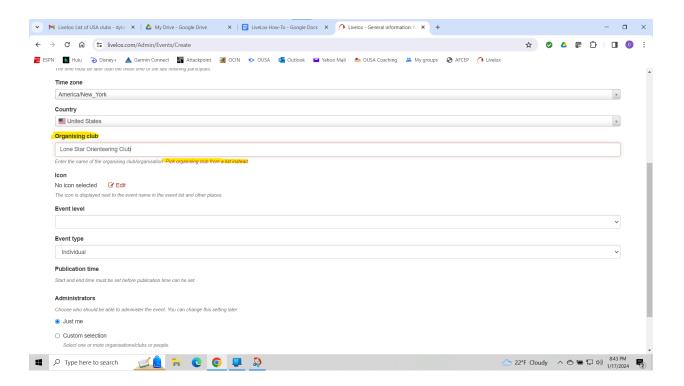
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Getting OUSA's subscription features on your club's event

Orienteering USA's recent purchase of a subscription to LiveLox means that all features are available on events added by OUSA clubs and supporting members. In order for clubs to have access to the features, they need to add their club by "List Mode" and by not "Free Text." If your club has not been created in LiveLox, see the next section "Creating a club." See example below:



When creating a new event, in the "Organizing Clubs" box, begin typing your club. When your club shows up, select the club by clicking on your club name. Don't add your club by free text, example below:



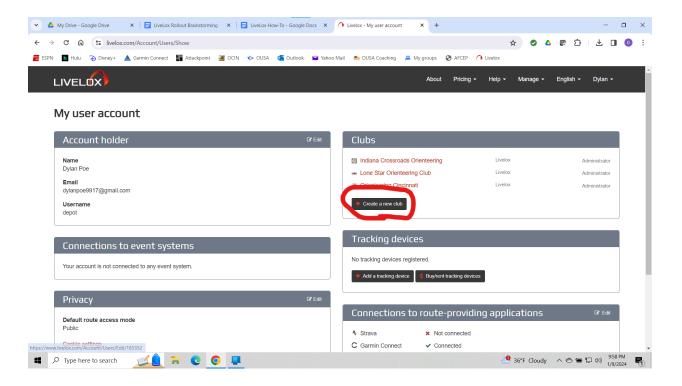
If you don't see your club showing up while typing, then click the "<u>Pick organising club from a list instead</u>" link, or it means you need to create your club in LiveLox first (next section).



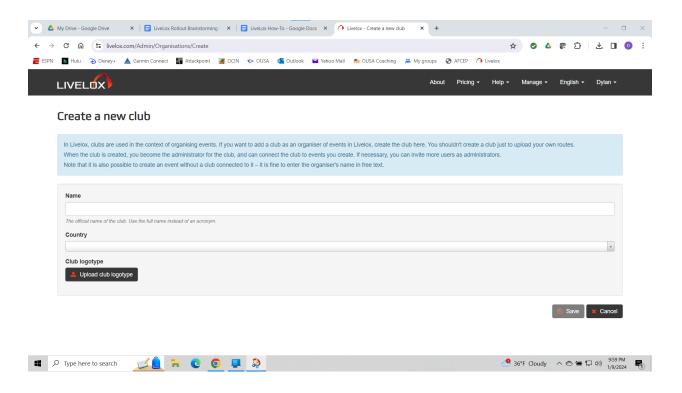
Creating a Club

Administrators for a club in LiveLox are able to add and edit the club's events in LiveLox, by adding maps, course files, results files, etc. There is no "club account." The club is created, and members of the club can "Follow" to see the club's events, and members can be added as "Admins" to the club on LiveLox.

To create a club, navigate to your LiveLox user account page, then select "Create a new club"



Give the club a name, select a country and give the club a logo, and click "Save"



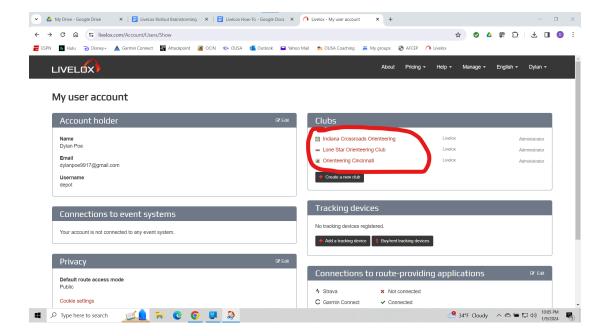
Once you create a club, you are the "admin" for that club. You can be admins for more than one club, and a club can have multiple admins. To add more admins see the next section.

NOTE: to get your club added to OUSA's subscription, please contact Dylan Poe - dylanpoe9917@gmail.com

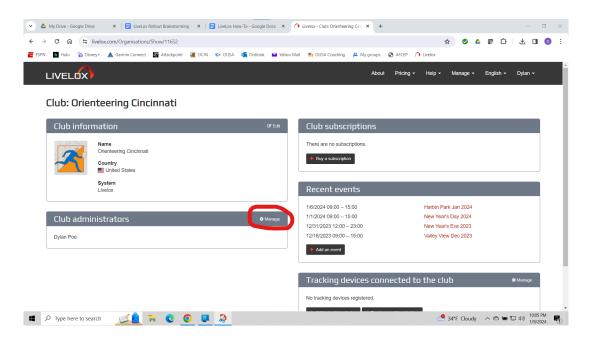


Adding Administrators

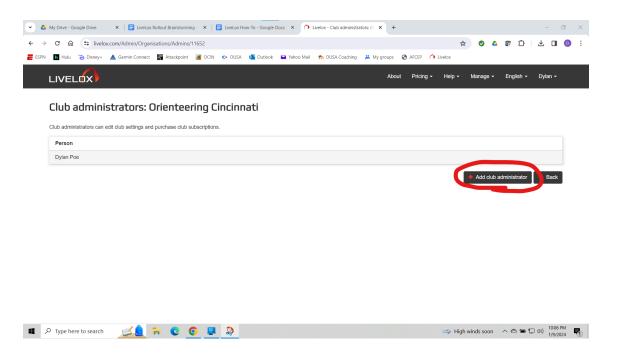
To add new admins to your club's LiveLox, navigate to your LiveLox user account and click on the club you want to add an admin for.



Click "Manage" in the "Club administrators" section.

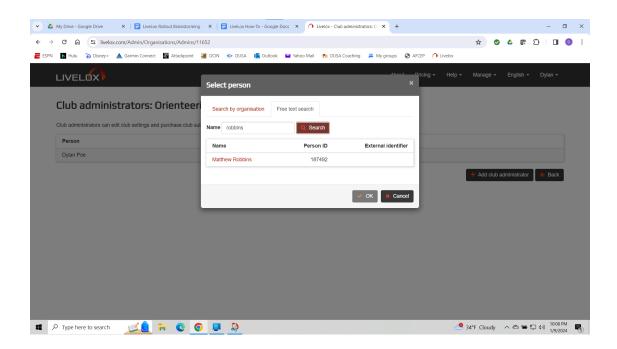


Click "Add club administrator"



Type the name of the person you want to add as an admin, search and select their name.





Creating an Event

LiveLox has a good help page for adding an event, linked below:

LiveLox: Creating an Event

One advantage to LiveLox is the ability to set up the event in LiveLox before the event, then setting the event to become available after the last start. This is helpful so participants can see and analyze routes as soon as they finish the course.

When setting up your event, set the "Start Time" and "End Time" to the start window, or close closing time, whichever you prefer. Then, under "Publication Time" choose a time appropriate for your event. For most events, publishing after the first start is optimal.

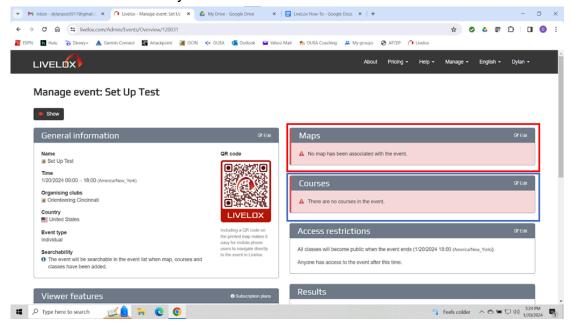
Adding Maps

LiveLox: Adding Maps

After creating the event in LiveLox and adding the general information, you will need to add a map(s). You will add maps in the red box, and courses in the blue box. This will



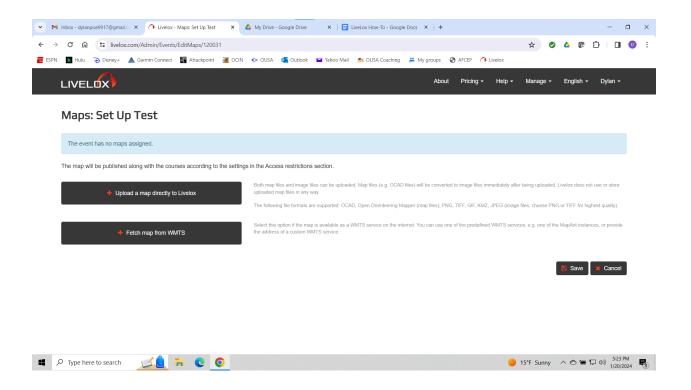
need to be done before participants can view and use the event in LiveLox. Clicking "Edit" in either box will allow you to add files.



Maps can be added to LiveLox as either OCAD or OOM files, or image files. LiveLox states that PNG or TIFF files are best if adding maps as image files. LiveLox is not able to add maps as PDF files. If map or image files are generated from a PDF file, this may cause issues when trying to georeference.

For the United States, we will select "Upload a map directly to LiveLox" and not "Fetch map from WMTS" unless your map is from Open Street Map or happens to be on one of the MapAnt services.







Georeferenced Maps

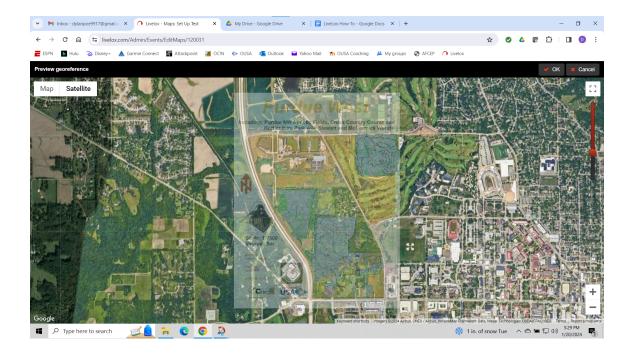
If you upload a georeferenced map file, then no other work is needed, click "Next" at the bottom of the page.

If you upload an image file with an associated world file, then LiveLox will ask for the world file.



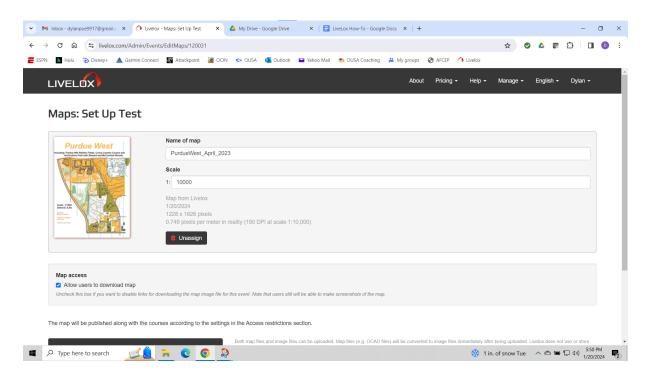
Click "Yes" to upload the associated world file, and click "Next" to continue to the next page.

The next page will show the map overlaid on a satellite image. Here you can check to verify the correct georeferencing. Use the slider on the right to adjust the visibility of the map. Click "OK" if the map looks correct.





If you uploaded an image of the map with a world file, then you will have to add the scale of the map.



The last step is to click "Save" at the bottom of the map.



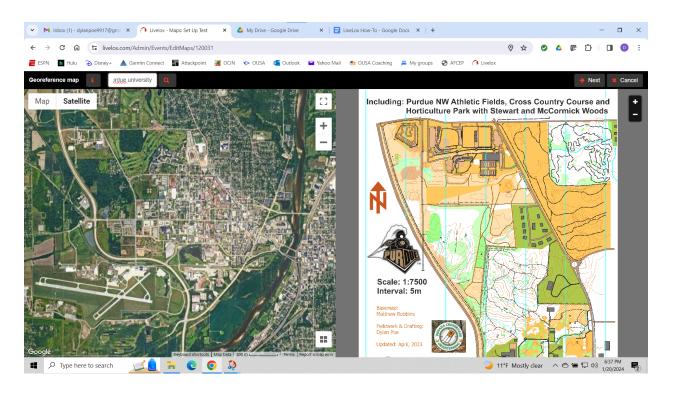
Non Georeferenced Maps

Adding a non georeferenced map is similar to the steps above, with an additional step. After clicking "Upload a map directly to LiveLox", select the map or image file of the nongeoreferenced map.

When asked if you have an associated world file, click "No"

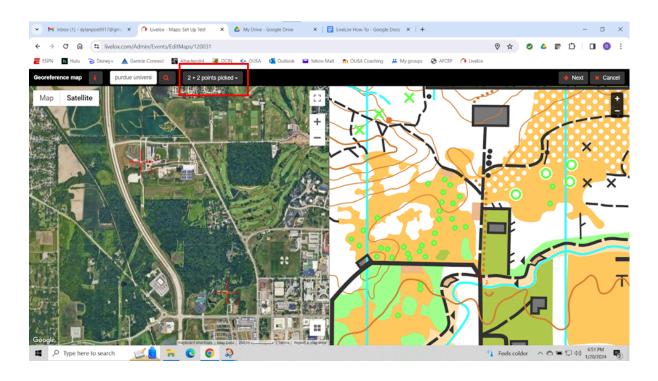
The next screen will allow you to georeference the file in LiveLox. NOTE: this process only georeferences the file for this event in LiveLox, and will not generate a world file or georeference the file you uploaded.

The satellite image will likely default to your current location. Use the search bar to help find the location of the map.

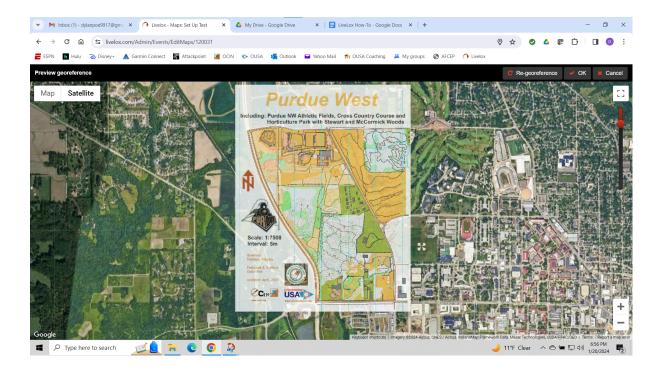


Choose 2-3 points on the satellite image and the map. Some older (non-Lidar) maps may appear stretched compared to the satellite image. Adding more points does not improve the georeferencing. Choose points at obvious locations, such as road crossings, building corners, etc. and choose points at different corners of the map for best georeferencing.





You can delete points by clicking the drop down menu next to the search bar, in the red box. Click "Next" to check the georeferencing.



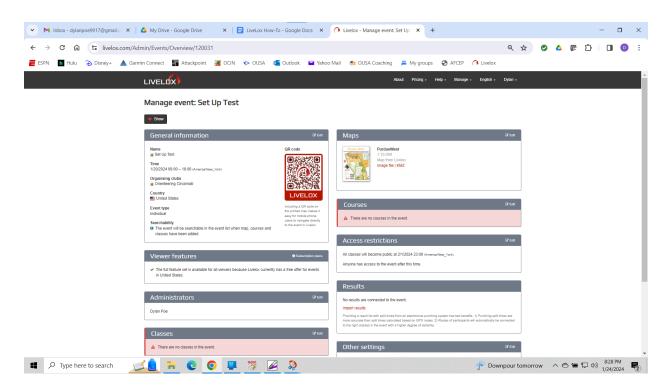


Use the slider on the right to adjust the visibility of the map. If the georeferencing looks good, click "OK" if not choose either "Re-Georeference" or "Cancel". "Cancel" will go back to the previous screen with the points you previously chose. "Re-Georeference" will remove the points you chose and will restart the process.

You will likely need to input the scale of the map, then click "Save"

Adding Courses

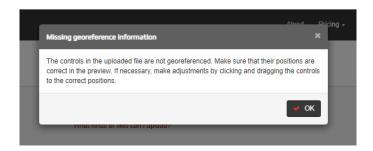
After adding the map(s), next is adding the courses. Click on "Edit" in the "Courses" box.



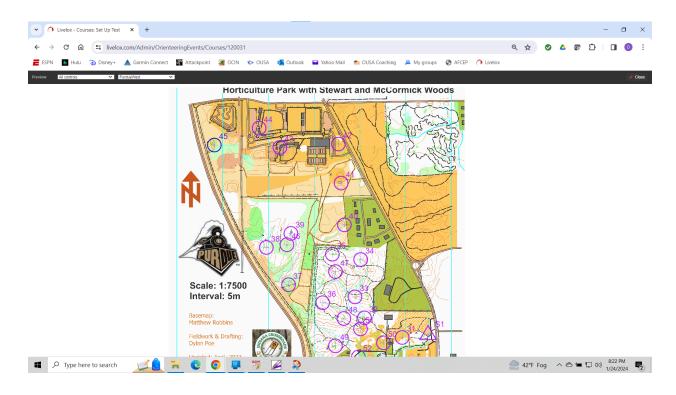
Click on "Select files to upload". Files can be OCAD, Purple Pen course setting files, XML or KMZ files from Condes. SVG/SVGZ files can also be used, but must be only course print, and no map image. I have not had any luck exporting a course directly from an OOM course file, the course must be designed in a course setting software, and saved/exported in one of the above formats.



After selecting your file, you will likely be prompted with this message:

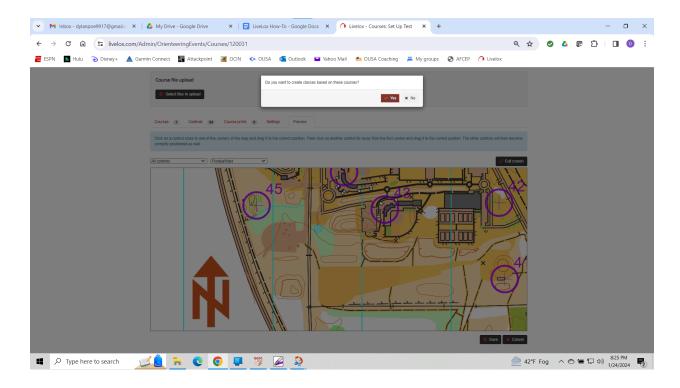


Most course setting files will not be georeferenced, so aligning the controls on the map will be necessary. Select one control on one edge/corner of the map, and place it correctly. That control will turn blue to signify that you have placed that control and it will no longer move. Pick another control away from the first one. Move it to the correct location. Now, all controls will be in the right spot. If needed, click the blue control again to be able to move it. If the course setting file is georeferenced, then no manual adjustment of control locations is necessary.





Then, click "Save". You will be prompted with a question about creating classes based on the courses uploaded. This is up to the admin uploading the event.

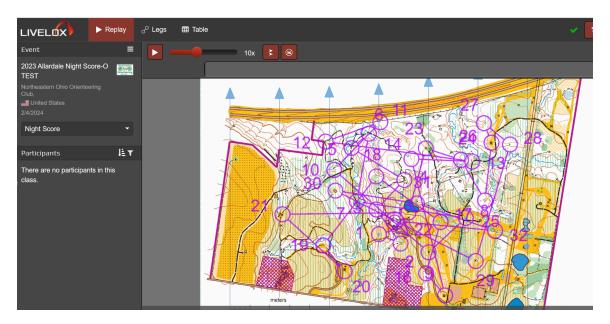


If you click "Yes" the required set up for an event is finished, participants will be able to see the event and add their route. Clicking "No" will require you to organize classes on to their courses before the event is able to be viewed.



Setting up a Score-O Event

Setting up a score-o/rogaine event in Livelox requires a little different approach to avoid meaningless leg lines being shown on the map during replays:



The way that seems to work best is to upload a map image with the control circles and other overdraw details shown directly in the map, and upload nothing at all in the Courses section..

Prerequisites

- Image file of the base map with control circles and other overdrawn detail shown in the image; one image file for each course in the event; png format in this example
- World file for each course in the event **Note**: If you don't have a world file, it is possible to georeference the map image file manually following the procedure explained earlier in this document.



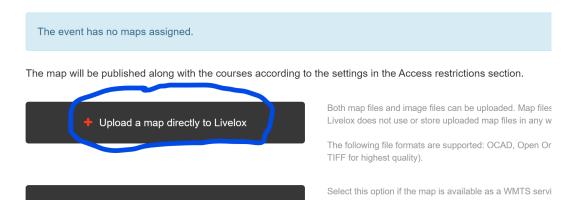
In the Livelox event, click on "Edit" in the Maps section:

Manage event: 2023 Allardale Night Score-O TEST



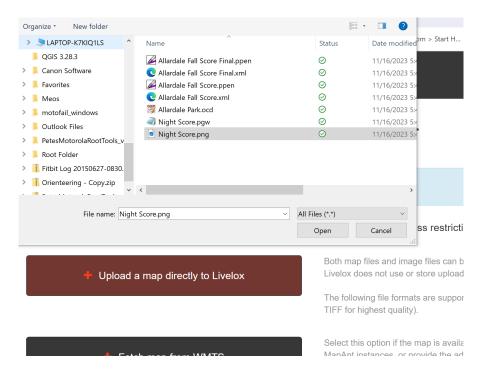
Click "Upload a map directly to Livelox"

Maps: 2023 Allardale Night Score-O TEST

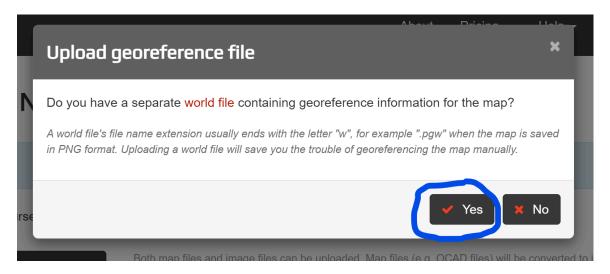




Select the map image file that you want to upload

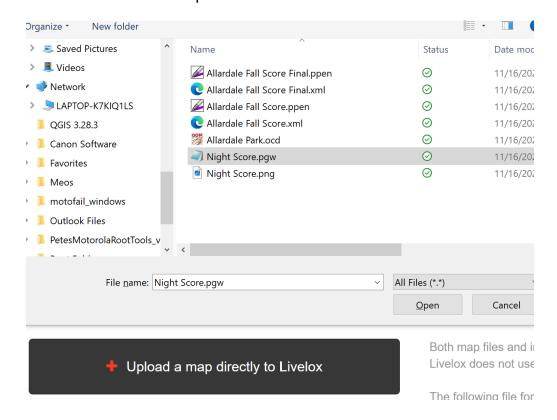


Click on 'yes' when asked if you would like to upload the world file that's associated with the map image file that was uploaded. (If a world file is not available, see procedure elsewhere in this document to georeference the map image)

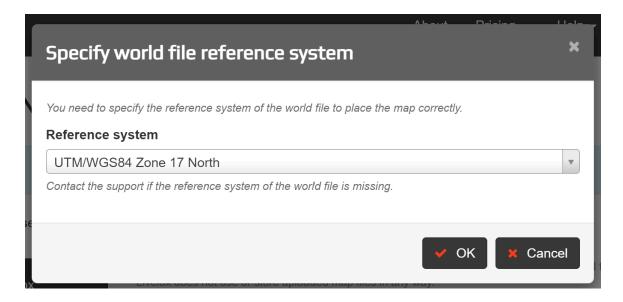




Select the world file and click "Open"



Confirm that the geographic coordinate system is correct, or update it as required; click "OK"



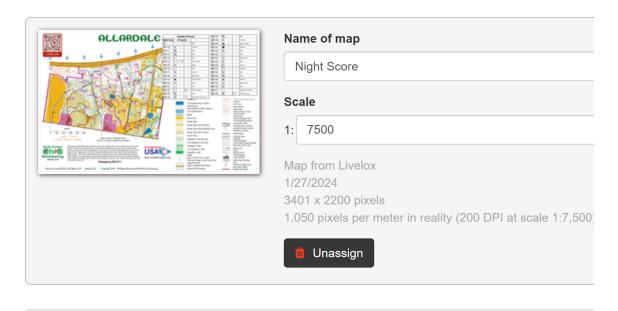


Confirm that georeferencing is correct; click "OK"



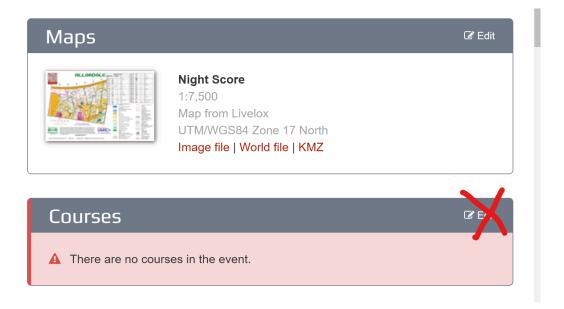
Enter the scale for the map being used, then scroll to the bottom of the page and click "Save"

Maps: 2023 Allardale Night Score-O TEST





Nothing should be entered under Courses



Go over to the Classes section and click "Edit"



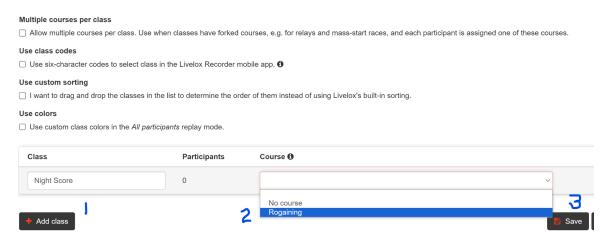


Click "+ Add class"

Classes: 2023 Allardale Night Score-O TEST Multiple courses per class ☐ Allow multiple courses per class. Use when classes have forked courses, e.g. for relays and mass-start races, and each participant is € Use class codes Use six-character codes to select class in the Livelox Recorder mobile app. 6 Use custom sorting ☐ I want to drag and drop the classes in the list to determine the order of them instead of using Livelox's built-in sorting. ☐ Use custom class colors in the *All participants* replay mode. Course 0 Class **Participants** Add class

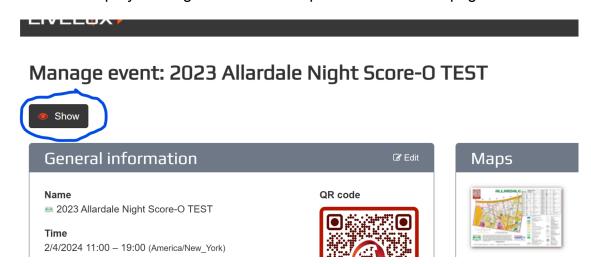
Type in the name of the class, select Rogaining in the Courses drop down, then click "Save"

Classes: 2023 Allardale Night Score-O TEST





Validate the setup by clicking "Show" at the top of the main event page



Click on "Replay" for each of the classes that need to be validated

Event: 2023 Allardale Night Score-O TEST 2/4/2024 11:00 - 19:00 Organising clubs Mortheastern Ohio Orienteering Club United States Number of classes Participants with routes Classes Class Course length **Participants A** Ac Night Score

LiveLox For Club Officials Orienteering USA Orienteering



Once all of the overprint details have been confirmed to be correct for all of the classes, you are done adding the event.



In my experience uploading score-o events to Livelox, Livelox will not automatically add routes to the event using this method. The admin will have to do that by clicking "Create participants from routes" from the "Actions" section of the event. Here, the participants who have auto uploading set up will have their routes.

Actions Copy event Create participants from routes Import participants from file Export IOF XML 3.0 results file Download maps for all classes



Click the drop down by each participant and choose the Score-O class you set up.

Create participants from routes: General Butler Score Mar 2024

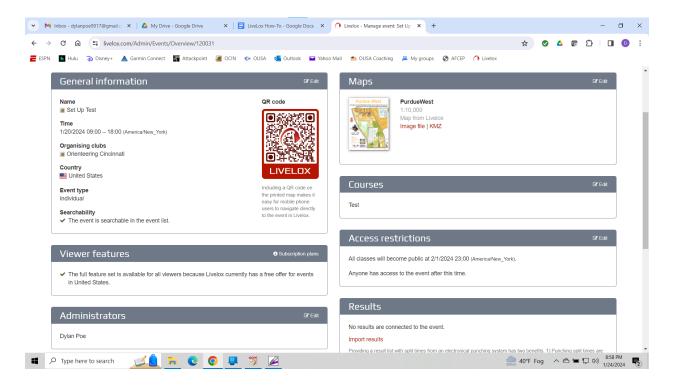


Be sure to double check that the route is from the actual course. Some participants may have multiple routes, and some may be warm ups/downs, etc.

Uploading Results

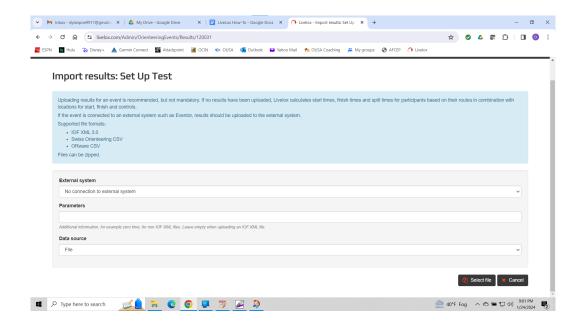
Uploading results is mostly optional, but for participants who do not have a GPS device and want to draw in their route to LiveLox, uploading results is necessary. If no results are uploaded, then LiveLox will estimate start, finish and split times. These times are usually within a few seconds of actual splits from electronic timing.

To start uploading results, click "Import results" in the "Results" box.

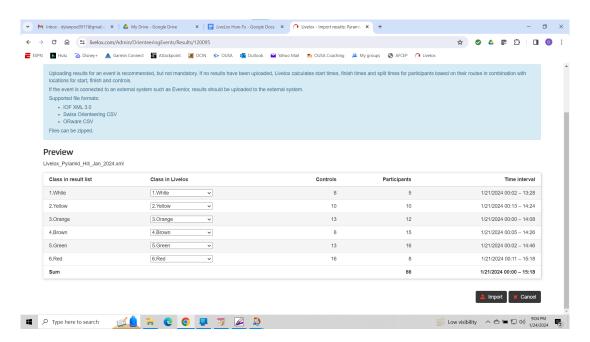




Then, click "Select file."



In most cases, we will upload results in XML format. You will get an error if the times in the selected file are not in the time window set in creating the event. After selecting the file, click "Import."

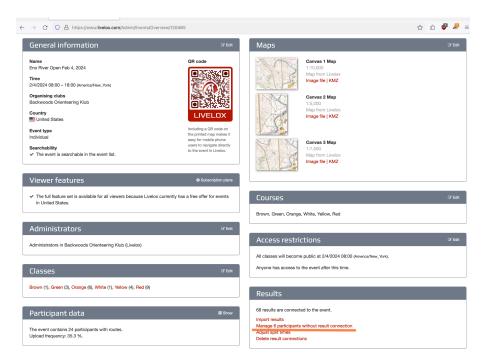




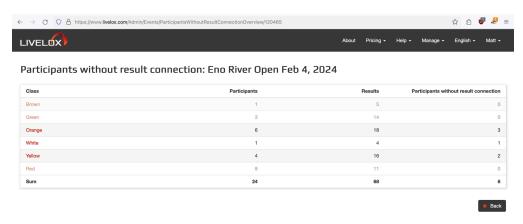
Linking Runners' Routes to Unconnected Results

For various reasons runners who have uploaded a route may not be connected to their result after the results are imported into the event.

The page to fix unconnected routes is accessible from the main edit page of the event, in the same place from which the results themselves were uploaded.



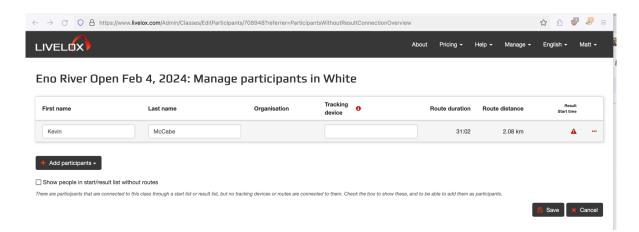
Click on "Manage [number] participants without result connection" and the page appears showing how many unconnected results there are per course.



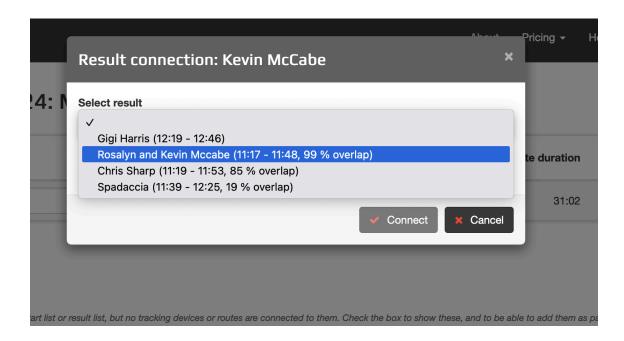
LiveLox For Club Officials Orienteering USA Orienteering



Selecting a course name provides another dialog showing uploaded runners who are not connected to a result with a red warning triangle.

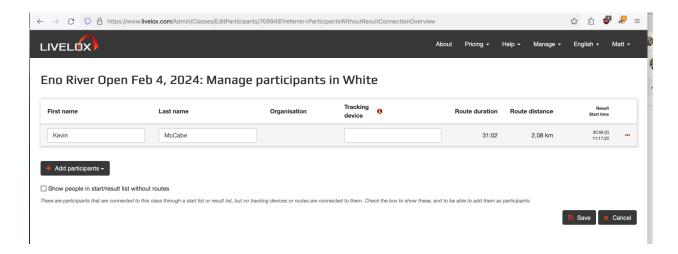


Clicking on the red triangle in the runner's row allows the correct result name to be matched to the uploaded route. Choose the name from the list and the connect button will activate.



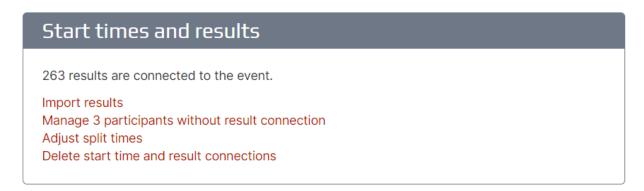


The red triangle then disappears and clicking "Save" will update the connection in the event.



Adjusting Times

When adding results, and the SI units have some time drift, the routes may appear to start or end too soon or too early. This can be fixed by using the "Adjust Splits" option under "Start times and results"



Follow the suggestions on the page to adjust the split times then check the replay to verify the routes appear correct.

Creating and Uploading Course Overlay Files

If you've been using Livelox long enough, you probably have seen courses with controls or legs that are so close together that the overdrawn course that Livelox automatically creates is confusing. In other instances, there may be out-of-bounds areas, etc. that

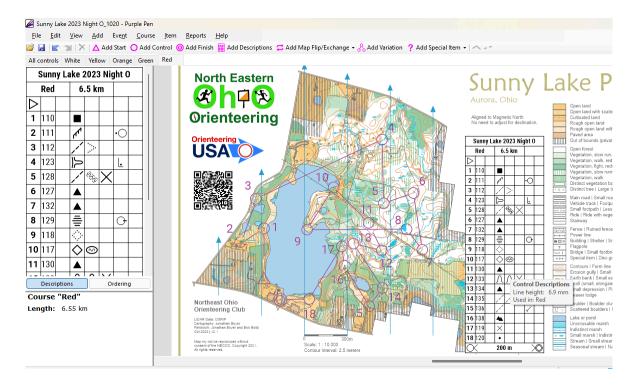


were shown on the maps used by the participants, but do not show up in Livelox. Fortunately, Livelox provides for a way to upload an image of just the control circles, leg lines and other overdrawn details to superimpose on top of the map image. This procedure shows a workaround using Purple Pen to create the images of just the map overdraw details.

Prerequisites

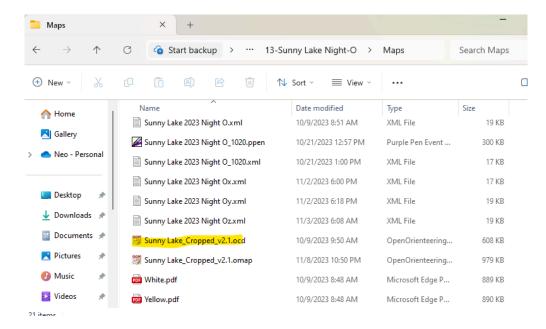
- Map already uploaded to Livelox and georeferenced
- Course details (files) uploaded to Livelox
- Base map file (OCAD, OOM, etc.)
- Course design file (Purple Pen in this procedure)

First, open up the Purple Pen file and display one of the courses



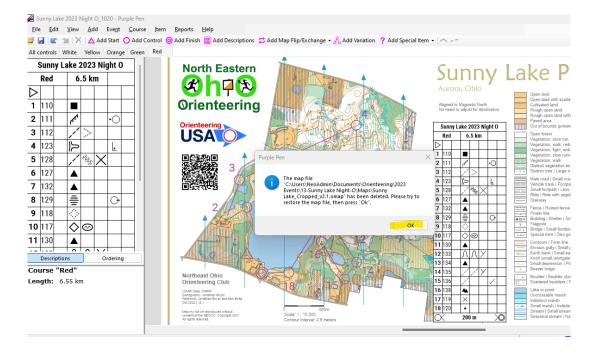


Next, go to the file folder where the base map for this course is stored



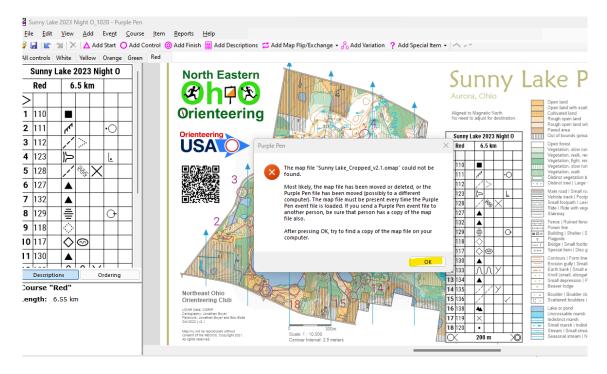
...and change the file name, temporarily (this will cause Purple Pen to "lose" the base map)

Go back to Purple Pen, where you will see the error message that is displayed, and click "OK"...

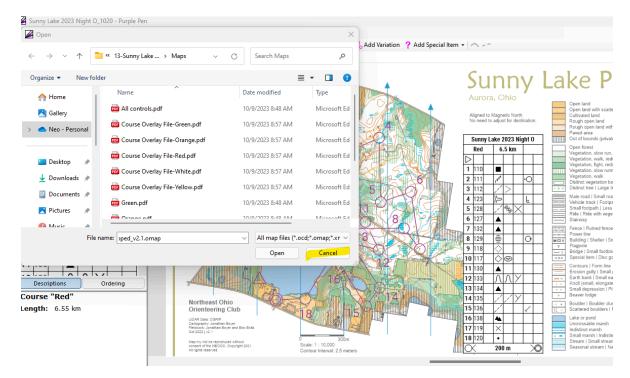




You'll get another error message. Click "OK" again...

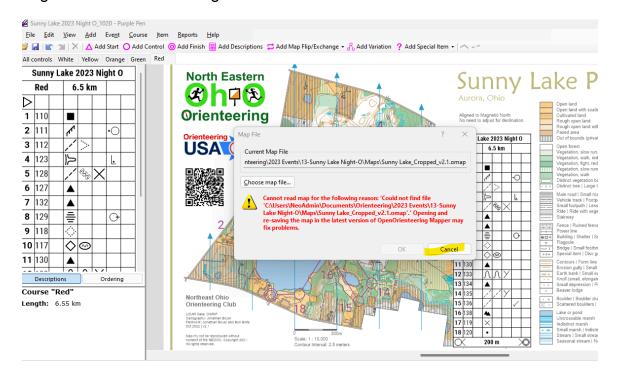


The folder with your map files will then be displayed. Click "Cancel"...

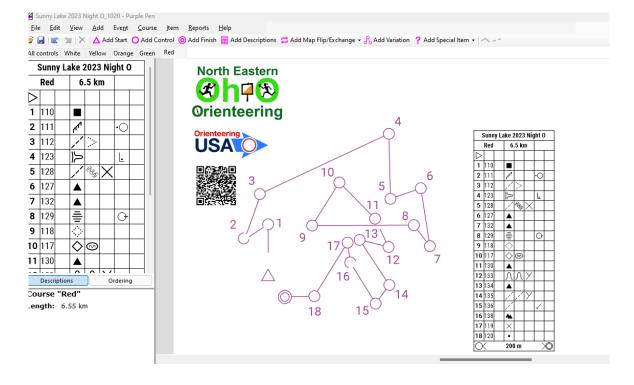




You'll get another error message. Click "Cancel" once more...

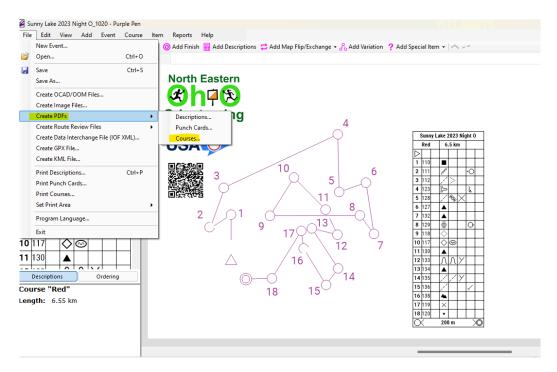


And you will be left with only the overprint detail for the course, without a map image...

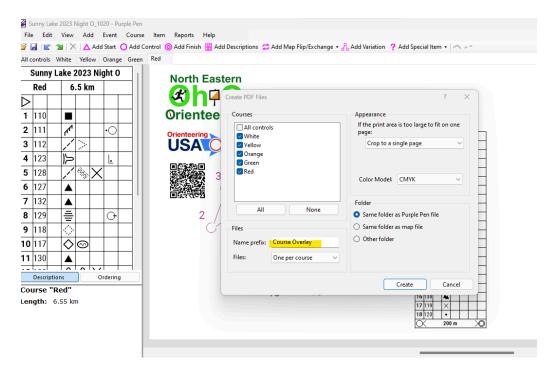




Open the File menu and click on "Create PDFs/Courses"...

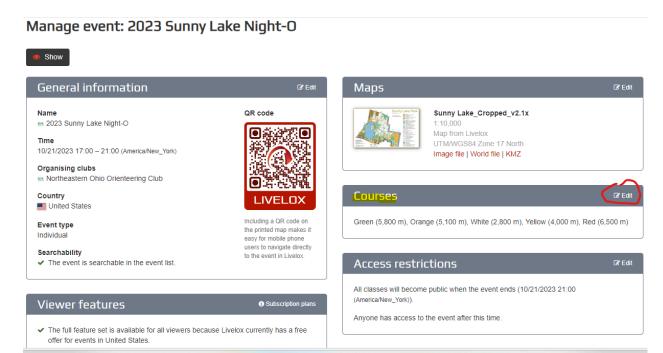


Click the tick box for all of the courses that you'd like an overlay for, and enter a descriptive prefix that will allow the files to be easily identified, then click "Create"...

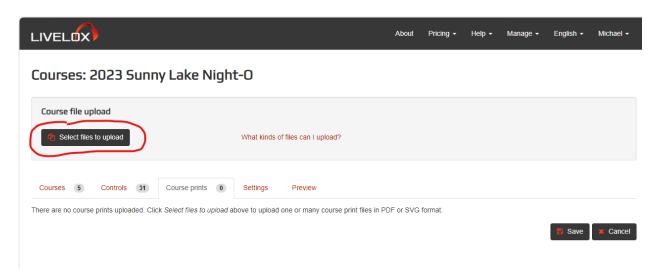




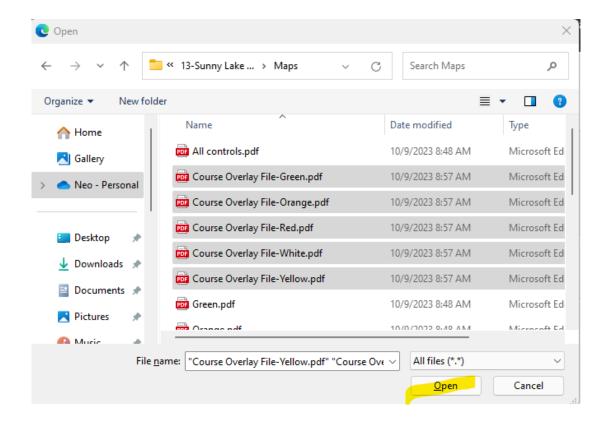
Go to the Manage page of the event that you are setting up, and Edit the Courses section...



Click on the "Course Prints" tab, then click on "Select files to upload"...

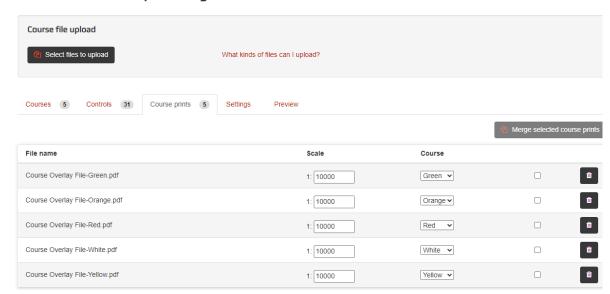


Navigate to the folder with your maps, select all of the course overlay files that you want to upload, and click "Open"...



You'll be returned to the Course prints tab in the Courses section, and a successful upload will show the files that you uploaded, their scale and the event courses that they each apply to. Change any of these as needed,

Courses: 2023 Sunny Lake Night-O





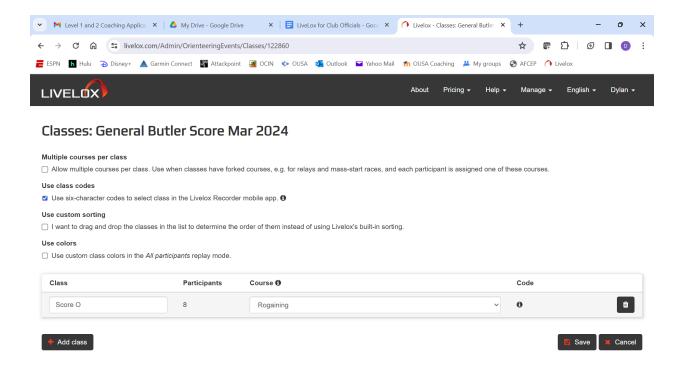
It's a good idea to click the "Preview" tab and check each course just to make sure everything is as it should be



Live Tracking

To set up live tracking, set up the event in LiveLox like normal, but before the event.

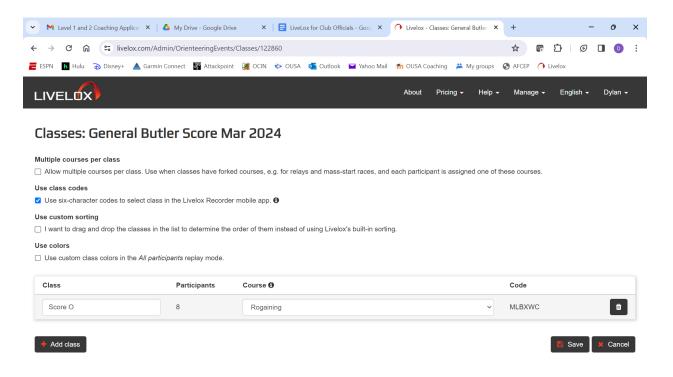
Once the map and courses (if needed) are added, then navigate to the "Classes" section. Check the box next to "Use six-character codes..."



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Click "Save" then go back into the "Classes" section.

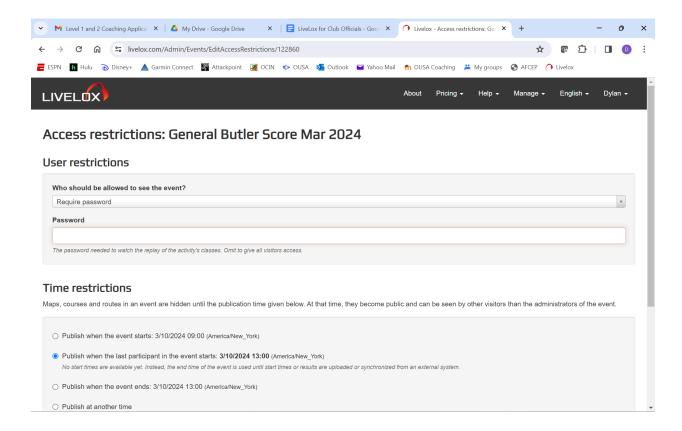


There will now be a Code next to each class. You will need this code at the event. Participants will enter this code in the "Class" section on the LiveLox app. Feel free to use this document as an example flyer to display your codes.

Next, you will probably want to restrict the access to the event, so people using the app can't see themselves on the live tracking and see where they are on the course. This can be accomplished by password protecting the event.



Click the "Access restrictions" section to password protect the event.



Choose "Require password" in the drop down, and enter a password below. This password will be required to view the event. After the event is over, navigate back to "Access restrictions" and select "Anyone" so everyone can view the event without the password.

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Display Live Tracking to Generate Interest

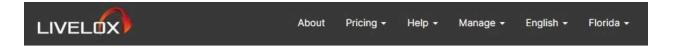
The live tracking display is incredibly useful for event staff during the event to keep track of where runners are. This allows us to watch for people illicitly crossing OB areas or straying out of the event boundaries. Watching for runners whose track "tail" disappears (meaning they haven't moved in a while) can identify someone injured or otherwise in distress. It's also very helpful in tracking down overdue runners when their coaches or friends come looking for them. But all this only works for the runners recording with Livelox, so to maximize the benefit we want as many people using the system as possible.

PSA emails and signage at the event can certainly help with getting people to adopt, as can demos during any training sessions your club offers. But one of the best ways to get people on board is to literally SHOW them what the system can do while they're at the event, by displaying the **All Participants** live tracking on the big screen at the finish area, side by side with the event results that everyone is watching. People always crowd around to see the live positions and movements of the runners still out on their courses, and chatter about what they're doing and how they themselves approached that part of the course. It generates a lot of interest, and motivates people to get set up to use Livelox the next time if they haven't tried it yet.

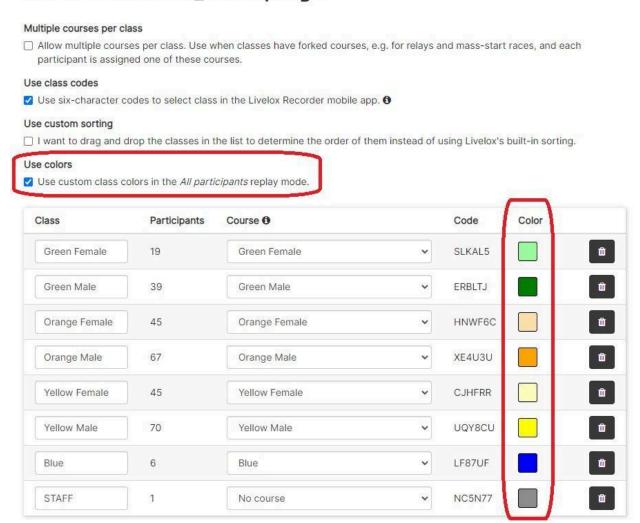
This can be done on a computer monitor for small events, but the bigger the screen, the bigger the draw. For a couple of years FLO has been using a 50" flatscreen TV on a stand for this purpose, and this year I began experimenting with using a projector on a 120" screen! Whatever hardware you have available, here's how to do it:

- First, when setting up the event, go to the Edit Classes screen. Check the checkbox for "custom class colors in All participants replay mode". This allows you to set a color for each class.
- You should establish a standard color scheme for the classes you typically use and stick to it so your display will be easy for people to read. FLO/SOAR still use the "old school" course color names (Yellow, Orange, Green, etc.) for our courses, so the color assignment does itself. At events big enough to have separate courses for male & female, I will typically use a lighter shade of the color for the female course and a darker one for the male so they can be differentiated.



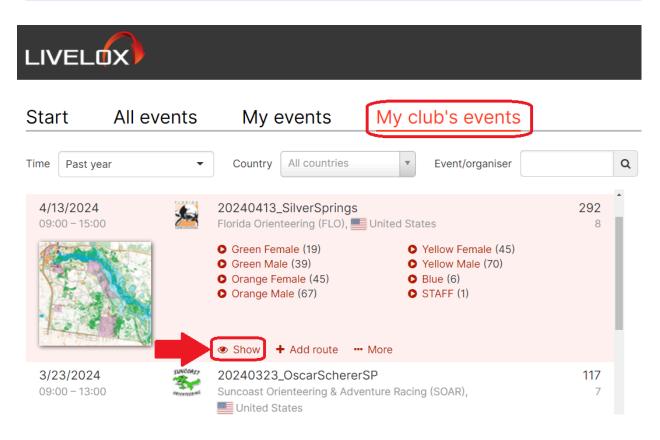


Classes: 20240413_SilverSprings



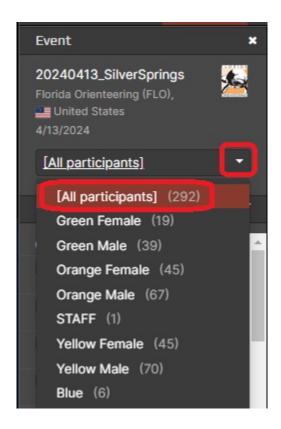
At the event:

- Connect your display to a laptop that has internet connection.
- On the laptop, bring up a browser window, go to livelox.com, sign into the club account.
- On the event selection page, select My Club's Events, pick the current event, and click "Show". Then Show Live on any active course.

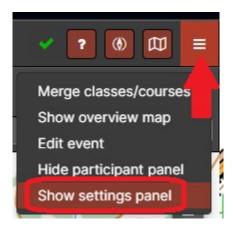


• At the top left of the display, where it shows the class/course you picked, click the dropdown arrow and choose "All Participants" to get Livelox to show all active runners on a single screen.





On the display, hit the burger stack menu at the top right and pick "Show settings panel" so you can tweak the display.

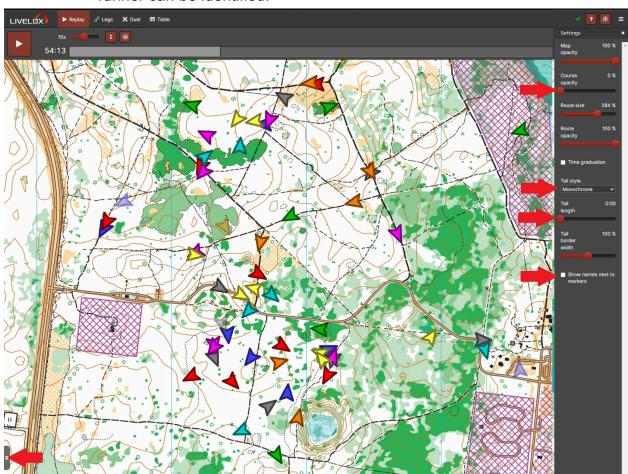


Depending on when in the event timeline you want to show the live tracking display, you must decide what info you will allow on it. Later in the event, after the last starters have been released onto their courses, you can safely show



everything, but if you want to show it before that point, you must redact information so no one who hasn't run yet can get an advantage by looking at the display.

- At FLO/SOAR events, here is what we're doing:
 - o Remove the name list by clicking on the "X" at the top right of the names panel (you can always get it back by clicking the little gray button that appears at the bottom left of where the panel used to be.
 - Redact all the control point locations by drawing the "Course opacity" slider down to 0.
 - o Leave the "Tail style" in the default "Monochrome" (random color) position.
 - o Set the "Tail length" slider to 0 so no tails are displayed just the runners' current positions.
 - Uncheck the "Show names next to markers" checkbox so no individual runner can be identified.

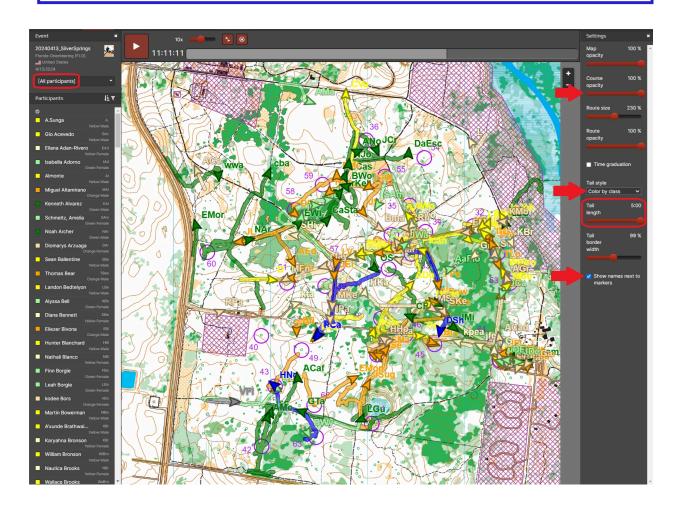




- Still interesting to watch, but not much advantage can be gained by seeing it before one's run. If you really want to be strict, such as for a state champs event for example, you can restrict access to the viewing area or not have the display up at all until all runners are released.
- Once the last starters have gone, the redacted information can be added back by altering the display settings
 - Add the name list back by clicking the little gray button that appears at the bottom left of where the panel used to be.
 - Add the control point locations back by drawing the "Course opacity" slider up to 100.
 - o Switch the "Tail style" to "Color by class". This will change the avatar and tail colors to the ones you set up for each class in the event settings. This way you can see who's on what course.
 - Set the "Tail length" slider to whatever time length you want from 0:00 to 5:00. FLO typically uses 5:00 but you can choose what works for you.
 - Check the "Show names next to markers" checkbox so each avatar will have an identifying label.

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- Refresh the display from time to time. Although it's constantly updating in theory, I sometimes find that it loses track of runners whose cellular connections go in and out.
- If you display live event results on a big screen as well, it can either be on a separate screen or displayed side by side with the live tracking. FLO typically does the latter because we have only 1 big screen (though we use Or for our events and so live results can also be viewed by participants on their phones in real time).
- Be sure everyone knows that the live tracking display will be up and where it will be. Parents and coaches who want to know where their people are can self-serve this information from the display without having to ask you.
- Also, be sure that you direct any park staff who come by to have a look at it. This goes a long way to convince staffers that the club knows what it's doing and is not a risk liability.



Use of a projector:

I love the projector when I can get it to work because the screen is so much bigger, but as you might expect this can be a real challenge in an outdoor environment with high ambient light. Projectors just aren't designed for this use case and the image can get washed out if it's too bright in the viewing area.

I've just started experimenting with this, but have done it successfully a couple of times and here are the lessons learned:

- Start with the brightest projector you can get your hands on. FLO is currently using a 3,500 lumen system, but I keep my eyes peeled for an even brighter one. These can be pricey but if you're patient you can sometimes pick one up on an auction site without breaking the bank.
- Choose a short-throw projector if you have an option so that your setup can have a small footprint. This makes it easy to get a crowd around your screen without blocking the projection. It also maximizes the brightness of the image.
- Usually a shelter is necessary to protect the screen from the wind as well as from ambient light. With screens of this size, even a light breeze can make it flutter a lot, which reduces its effectiveness. The ideal scenario is to set it up under a pavilion roof where it will be well shaded.
- The cheapie screens sold on Amazon are usually a semi-sheer stretchy cloth fabric that's easy to tension into a flat screen. These are lightweight and easy to work with, but the downside is that ambient light can penetrate the screen from both sides. Backlit screens wash out, so you really want to either hang an opaque tarp behind the screen, or spring for a nicer screen that has a black backing to it.
- Attach lines with line stoppers or other tensioners to the corners of the screen to make it easy to set up and tension flat.
- Light pollution is everything when it comes to projection! If you are fortunate enough to have an indoor area to display, that is the best scenario by far. Under a large pavilion roof can also work. If you have options, choose a pavilion in a shaded area so that the area outside the roof isn't super bright. A tent with side panels you can put on can also be effective, but most tent fabrics aren't fully opaque so the tent needs to be shaded as well.



